

► TECHNICAL PROGRAMME
EXHIBIT GUIDE

SPIE. PHOTONICS
EUROPE

SPIE. OPTICAL
SYSTEMS
DESIGN

12-16 April 2026 | Palais de la Musique et des Congrès | Strasbourg, France



SPIE. PHOTONICS EUROPE

THE PREMIER EUROPEAN OPTICS AND PHOTONICS RESEARCH
AND DEVELOPMENT EVENT

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#SPIEPhotonicsEurope

PHOTONICS EUROPE SYMPOSIUM CHAIRS



Paul Montgomery
Univ. of Strasbourg
(France)



Anna Mignani
Istituto di Fisica Applicata
"Nello Carrara" (Italy)



Thierry Georges
Oxxius (France)

Cutting-Edge Research | Exhibition | Industry Programme



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#SPIEOpticalSystems

OPTICAL SYSTEMS DESIGN SYMPOSIUM CHAIRS



Marta C. de la Fuente
ASE Optics Europe (Spain)



Thierry Lépine
Institut d'Optique &
Hubert Curien Lab
(France)



Tina Kidger
Kidger Optics Associates
(United Kingdom)

Experience the energy of SPIE Photonics Europe + SPIE Optical Systems Design

Get ready to enjoy real conversations, hear the latest breakthroughs, and make important connections in person. Hear cutting-edge research at the only cross-disciplinary event highlighting compelling optics and photonics technologies.

Conferences: 12-16 April 2026

Exhibition: 14-15 April 2026

Palais de la Musique et des Congrès
Strasbourg, France

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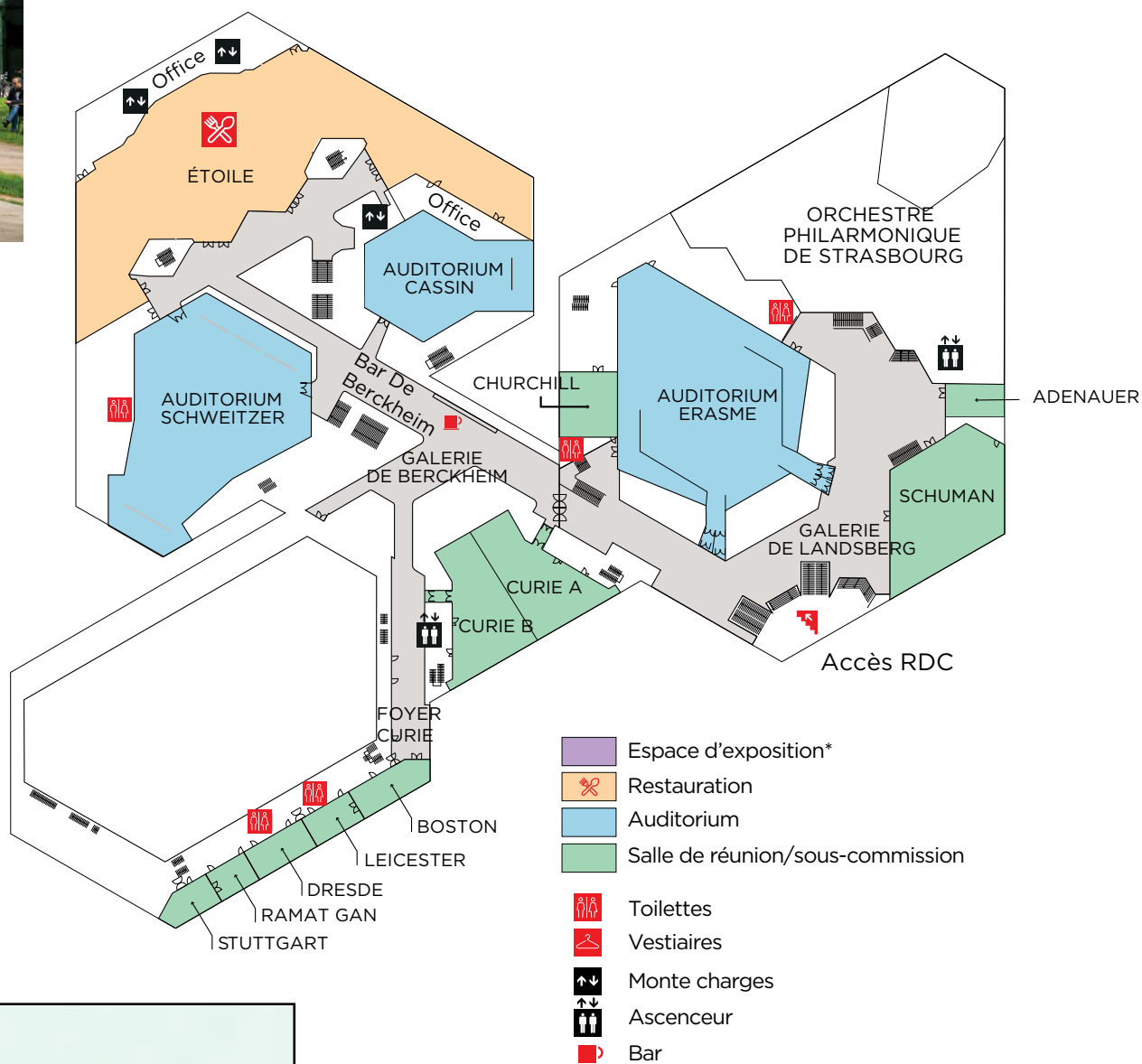
PALAIS DE LA MUSIQUE ET DES CONGRÈS

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ONSITE SERVICES

Badge pick-up and registration hours

Palais de la Musique et des Congrès
Main Foyer

Sunday 12 April	10:00 - 18:00
Monday 13 April	7:30 - 17:00
Tuesday 14 April	8:00 - 17:00
Wednesday 15 April	8:00 - 17:00
Thursday 16 April	8:00 - 16:00

(Thursday is conference registration only.)

SPIE Cashier

Palais de la Musique et des Congrès, Entrance Schweitzer
- Open during registration hours

Registration payments

If you are planning to register onsite, your credit card payment will be processed during registration. If you wish to pay with cash or check, register at the "Need to Register" stations; you will be directed to the Cashier once you have completed registration except for final payment.

If you have already registered and wish to add a course, workshop or special event, you may do this online by signing into your SPIE account.

Receipt and Certificate of Participation

Preregistered attendees who need an SPIE-stamped receipt or attendees who need a Certificate of Participation may obtain those at the Cashier.

Badge Corrections

Badge corrections can be made at the Cashier. Please mark your badge with your changes before approaching the counter.

Speaker Ready Room

Location: Galerie Schweitzer - Open during registration hours

All speakers must stop at the Speaker Ready Room to upload and preview their slide presentation files at least two hours before their scheduled session or the day before if they present in the first session. Speakers are not able to present using their own devices. All conference rooms have a laptop, projector, screen, lapel microphone, and laser pointer.

SPIE will record the audio plus screen content of all presentations; Recordings will be published on the SPIE Digital Library with author permission only.

Sunday 12 April	10:00 - 18:00
Monday 13 April	7:30 - 17:00
Tuesday 14 April	8:00 - 17:00
Wednesday 15 April	8:00 - 17:00
Thursday 16 April	8:00 - 16:00

SPIE Conference and Exhibition App Information

Search and browse the programme, special events, participants, exhibitors, courses, and more. Build your personalized schedule and sync with the online MySchedule tool. Free SPIE Conference App available for iPhone and Android phones. Information about restaurants and food options is also available on the App.

Our SPIE App developer will be onsite and available to answer any questions on its use or navigation and how to get the best user experience. We welcome your feedback.

SPIE Luggage & Coat Check

Vestiaire Schweitzer Daily: 8:00 - 20:00

Complimentary luggage, package, and coat storage are available. Please note the posted hours; no late pickup is available.

Privacy Room

Location: Open during registration hours. Please see SPIE Cashier for access.

This room is available for nursing mothers, silent meditation, reflection, or prayer. There is no storage, running water, or refrigeration available in this space.

SPIE Health and Safety products

Registration desk

Stop by to pick up face masks, hand sanitizer, and other safety products all free from SPIE.

Urgent Message Line

An urgent message line is available during registration hours: +44 29 2089 4747.

Lost and Found

Location: Palais de la Musique et des Congrès, Cashier - Open during registration hours

Found items will be kept at SPIE Cashier in the Registration area during the meeting and available only during registration hours. At the end of the day, all items will be turned over to the security team of the Palais.

Food and Beverage Services

Complimentary coffee will be available at coffee stations in the following locations:

Monday and Thursday open during registration hours

Location: Galerie Schweitzer

Tuesday and Wednesday open during registration hours

Location: Exhibition Hall, Hall Rhin

COFFEE SPONSORS:



Food & Refreshments for Purchase

Location: Palais de la Musique et des Congrès Location

Monday and Thursday

Food Trucks will be located near the front entrance of the facility for attendees to purchase lunch.

Tuesday and Wednesday

Food stations will be available in Hall Rhin on Tuesday and Wednesday. Sandwiches, salads, and beverages will be available.

Restaurants

Strasbourg city centre has a great range of restaurants in many price categories, and the Groupe Grandes Brasseries is offering attendees a complimentary Welcome Cocktail when the badge is shown. Visit <https://map.grandesbrasseries.fr> for information.

EVENT SCHEDULE

Sunday 12 April	Monday 13 April	Tuesday 14 April	Wednesday 15 April	Thursday 16 April
		PhoBioS COST Action Session: Biophotonic Surfaces and Light-Matter Interactions for Biomedical Sensing and Imaging 8:00 - 12:45 <i>Varsovie/Salon 1 (Niveau/Level 0)</i>		
		SPIE MEMBER LOUNGE 8:30 - 17:00 <i>Galerie Rhin (Niveau/Level 0)</i>		
	Hot Topics I 8:45 - 11:00 <i>Auditorium Erasme Niveau/Level 0</i>	Tuesday Plenary Session 9:00 - 10:35 <i>Auditorium Erasme, Niveau/Level 0</i>	Understanding interaction light - biological surfaces: possibility for new electronic materials and devices (PhoBioS) 8:00 - 16:00 <i>Londres 1, Niveau/Level 0</i>	
		Exhibition Tuesday, 14 April * 10.00-17.00 Wednesday, 15 April * 10.00-16.00 See the latest innovations in detection, imaging, sensing, lasers, and their supporting components and devices		Hot Topics III 9:00 - 10:35 <i>Auditorium Erasme, Niveau/Level 0</i>
		Photonics Marketplace I 10:00 - 17:00 <i>Photonics Marketplace, Hall Rhin</i>	Photonics Marketplace II 10:00 - 16:00 <i>Photonics Marketplace, Hall Rhin</i>	
	LIGHT INTERFERENCE ART-SCIENCE EXHIBITION 10:00 - 17:00 <i>Palais des Congres, Throughout</i>			
	SPIE Fellow & Senior Member Luncheon 12:00 - 13:30 <i>Galerie de Landsberg</i>	Many Paths, One Light: Diverse Careers with SPIE Leaders 12:00 - 13:00 <i>Galerie De Landsberg (Niveau/Level 1)</i>	Breaking Through the Noise: Navigating Career Challenges with Confidence 12:00 - 13:00 <i>Galerie De Landsberg (Niveau/Level 1)</i>	
	Monday Plenary Session 13:30 - 15:15 <i>Auditorium Erasme, Niveau/Level 0</i>	Fireside Chat - Illuminating the Realities of Careers in Photonics 15:00 - 16:00 <i>Palais des Congres, Hall Rhin</i>	SPIE Student Chapter Office Hours 14:30 - 16:00 <i>Galerie Rhin (Niveau/Level 0)</i>	
First-Timers Reception 15:00 - 16:00 <i>Galerie De Landsberg (Niveau/Level 1)</i>		SPIE Student Mentoring Mixer 15:00 - 16:00 <i>Galerie De Landsberg (Niveau/Level 1)</i>		
		Hot Topics II 16:30 - 18:10 <i>Auditorium Erasme, Niveau/Level 0</i>	Posters-Wednesday 17:45 - 19:30 <i>Galerie Schweitzer, Niveau/Level 0</i>	
	Welcome Reception 18:00 - 20:00 <i>Parc des Expositions, Exhibition Hall 1</i>	Posters-Tuesday 18:10 - 20:00 <i>Galerie Schweitzer, Niveau/Level 0</i>		

SPIE OPTICAL SYSTEMS DESIGN PLENARY PRESENTATIONS

Hear from world-class speakers sharing their research and perspectives.

Monday Plenary Session

13 April 2026 • 13:20 - 15:15 | Auditorium Erasme (Niveau/Level 0)

Hear world-class experts discussing the development and application of 3D metrology tools, and advances in efforts to prepare for the next generation of optical Earth observation missions.

13:30 - 13:40

Welcome and Opening Remarks

Thierry Lépine

Institut d'Optique & Hubert Curien Lab (France)
2026 Symposium Chair



13:40 - 13:45

Speaker Introduction

Marta C. de la Fuente

ASE Optics Europe (Spain)
2026 Symposium Chair



13:45 - 14:30

The active alignment of large astronomical telescopes with 3D metrology tools

Andrew Rakich

Mersenne Optical Consulting (New Zealand)
Kiwistar Optics (New Zealand)



The 20th and early 21st centuries have seen significant growth in the physical size and complexity of astronomical land-based telescopes. These scale increases, combined with tighter image-quality requirements arising from a combination of scientific demands and improvements in technology, have led to the development of active optics for telescope control, where wavefront sensors combine with actuators to drive the shape and position of optics in closed loop, correcting for deflections caused by gravity orientation and temperature changes. Active optics for large telescopes was conceived and developed in the late 1970s, 1980s, and 1990s, and, arguably, only brought to full maturity in the early 2000s.

At this point in time, we stand poised on the brink of the Extremely Large Telescope (ELT) era, where apertures in the 10 m range from the 1990s generation of optical-infrared telescopes have leaped by factors of two to four in the upcoming generation of telescopes. At this scale, optical flexures and deflections are amplified compared to the current generation of telescopes, and the combination of open-loop modelling for initial optics positions and shapes, and wavefront sensing for closed-loop control and convergence, is seriously challenged. Since the late 2000s, a new approach, based on the direct metrology of optical components and instrument interfaces, has been developed. Direct metrology offers an interesting intermediate alignment stage between open-loop modelling of positions and closed-loop wavefront sensing. This paper discusses the development and application of these approaches to a range of large telescopes, including optical and radio telescopes.

14:30 - 15:15

Future ESA Earth observation missions

Christophe Buisset

European Space Agency (Netherlands)



This presentation will provide a comprehensive overview of European Space Agency (ESA) on-going efforts to prepare for the next generation of optical Earth Observation missions. First, we will present the science-driven Earth Explorers and Scout missions addressing key scientific issues, followed by an update on preparations for future Meteorology and Copernicus missions. Second, we will present the pre-development activities of innovative instrumental concepts and associated technologies engaged to prepare the future of Earth Observation optical missions. Finally, we will highlight the activities focused on the preparation of compact optical payloads for small satellites.

Tuesday Plenary Session

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Tuesday plenary session showcases the progress in multi-LED illumination systems, and the advances in optical engineering design.



9:00 – 9:05

Welcome and Opening Remarks

Thierry Lépine

Institut d'Optique & Hubert Curien Lab (France)
2026 Symposium Chair



Speaker Introduction

Marta C. de la Fuente

ASE Optics Europe (Spain)
2026 Symposium Chair



9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing

Lien Smeesters

Vrije Univ. Brussel (Belgium)

LED-based illumination has become increasingly attractive for spectroscopy, imaging, and sensing applications thanks to their spectral diversity and compactness. However, efficiently combining the emission from multiple LEDs into a single, well-defined output remains a major optical design challenge. The overlap of multiple LED sources often leads to significant étendue mismatch, non-uniform illumination, and reduced optical efficiency.

We present an overview of recent advances in the optical design of multi-LED systems, from state-of-the-art methodologies to a novel compact illumination architecture employing a single freeform mirror to collect and combine the LED emission beams. Particular attention is given to the role of the freeform mirror to spatially and angularly merge different LED channels, alongside an evaluation of the system's optical efficiency, compactness, spectral homogeneity, and robustness. This design performance is supported by experimental validation within a proof-of-concept demonstration, paving the way towards its implementation in spectroscopic sensing applications.



9:50 - 10:35

An optical design journey through the computer age

Philip J. Rogers

VNF Ltd. (United Kingdom)
Wrexham Univ. (United Kingdom)

The design of optics has seen very significant advances over the last seven decades or so, a lot of which has been due to the tremendous increase in the power of computing & software.

In 1675, Isaac Newton said that “If I have seen further, it is by standing on the shoulders of giants”. The same is true of the optical designers of my generation in that we have benefitted so much from the work of the “giants” of previous generations. The presentation will therefore include brief synopses of the contributions of a few of these giants.

Some selected examples will be given of the advances over the computer age in the means of designing optics and also the developments in specific optical devices. The presentation will be dedicated to the memory of John Greivenkamp, a great educator in optics, who was to have been its joint author.



SPIE PHOTONICS EUROPE HOT TOPIC PRESENTATIONS

Hear from world-class speakers sharing their research and perspectives.

Hot Topics I

13 April 2026 • 8:45 - 11:00
Auditorium Erasme (Niveau/Level 0)

Join us for the Symposium welcome and outstanding experts discussing the newest research in photonics in agrifood sector, and the newest on how computational biophotonics and machine learning are reshaping spectral imaging.



8:45 – 8:50

Welcome Address

Paul Montgomery
Univ. of Strasbourg (France)
2026 Symposium Chair



8:50 – 8:55

Univ. of Strasbourg Welcome

Michel de Mathelin
Présidente de l'Eurométropole (France)

8:55 – 9:05

Extra/Ordinary Light: Invitation to Art Exhibition

Paul Montgomery
Univ. of Strasbourg (France)
2026 Symposium Chair

9:05 – 9:10

City of Strasbourg Welcome



9:10 – 9:15

Presentation of the 2025 SPIE María J. Yzuel Educator Award

Dan Curticapean
Offenburg Univ. (Germany)

for a lifelong dedication to teaching optics and photonics with infectious passion, and a lifelong dedication to the SPIE community

SPIE New Fellows Announcement

9:15 – 9:20

Introduction to Hot Topics

Paul Montgomery
Univ. of Strasbourg (France)
2026 Symposium Chair



9:20 – 10:05

Photonics and A(G)I innovations will enable industry 5.0 & 6.0 in the agrifood sector

Chris van Hoof
Imec (Belgium)
OnePlanet Research Ctr. (Belgium)

Climate change is one of the greatest and most urgent challenges of our time. This presentation will show how optical sensing in general and photonic integrated circuits in particular are unique and indispensable technologies that provide solutions for farmers, food processing industry and consumers, and will help guide the transition of our food ecosystem to a more secure and sustainable industry. New tools in barns, in greenhouses, in orchards, in protein bioreactors and the accompanying digital twin AI technology will be shown.

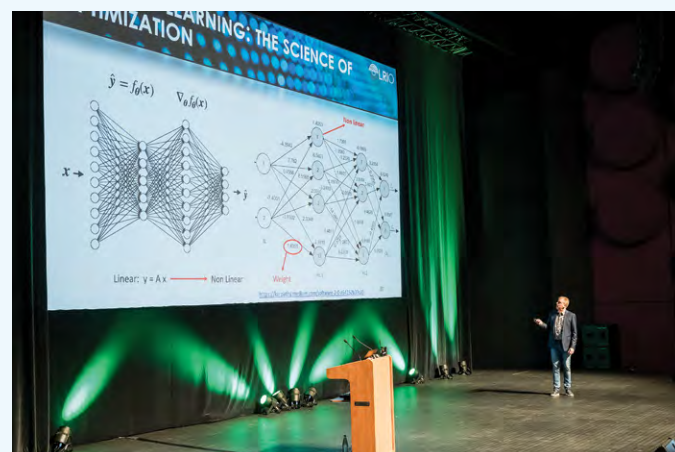


10:10 – 10:55

Failing forward in deep spectral imaging

Lena Maier-Hein
German Cancer Research Ctr. (DKFZ)
(Germany)
Heidelberg Univ. (Germany)

Spectral imaging has long promised to uncover physiological and molecular information invisible to the human eye. In this keynote, I will present recent breakthroughs at the intersection of computational biophotonics and machine learning that are reshaping the field. I will discuss how we combine spectral imaging with deep learning to achieve real-time tissue characterization in surgery and intensive care. Case studies will illustrate how spectral imaging can enable context-sensitive, clinically actionable support during interventions, transforming invisible spectral signatures into robust biomarkers.



Hot Topics II

14 April 2026 • 16:30 - 18:10
Auditorium Erasme (Niveau/Level 0)

Hear the world-renowned speakers present the latest breakthroughs in quantum-enhanced imaging, and in advanced photonic integrated circuit technologies and processes



16:30 – 16:40

Welcome and Opening Remarks

Anna Mignani

Istituto di Fisica Applicata “Nello Carrara”
(Italy)
2026 Symposium Chair



Presentation of the 2026 SPIE Director’s Award

for exceptional leadership in founding the high-impact journal Advanced Photonics as co-editor-in-chiefs

Anatoly Zayats

King’s College London (United Kingdom)

and



Xiao-Cong Yuan

Shenzhen Univ, and the Zhejiang Lab (China)

Introduction of Plenary Speakers

Anna Mignani

Istituto di Fisica Applicata “Nello Carrara”
(Italy)
2026 Symposium Chair



16:40 - 17:20

Time-of-flight imaging using quantum technologies

Gerald S. Buller

Heriot-Watt Univ, Institute of Photonics and Quantum Sciences (United Kingdom)
EPSRC Quantum Technology Hub (United Kingdom)

Quantum-enhanced imaging is an emerging area of research with relevance to a wide variety of application areas, including transport, gaming, environmental research, and security and defence. This subject encompasses a range of techniques and utilizes a number of developing quantum technologies. Time-resolved single-photon imaging approaches have been used to reconstruct high-resolution three-dimensional images, including challenging scenarios such as imaging through atmospheric obscurants and clutter. Critically, this approach has been extended to imaging in turbid underwater conditions. In the past, image reconstruction often proved to be time-consuming due to the inherent computational complexity, however advances in algorithms and hardware have allowed examples of “real-time” reconstruction of moving targets. Single-photon imaging has been used in demonstrations of moving target identification and human activity recognition with the aid of artificial intelligence approaches. Alternative single-photon imaging approaches, such as ghost imaging, will also be discussed.



17:25 - 18:10

Photonic integrated circuits in PIXEurope Pilot Line and quantum technologies

Valerio Pruneri

Institute of Photonic Sciences, ICFO (Spain)

I will present the PIXEurope Pilot Line, a recently started 400MEuro initiative under the Chips JU, that aims at developing and transferring advanced photonic integrated circuit (PIC) technologies and processes. Through Open Access, PIXEurope will support end-users in increasing the readiness level of their products. I will also present some technologies, leveraging PICs, that were developed at ICFO and transferred to spin-offs, now commercializing quantum random number generators, cryptography systems and phase imagers.

SPIE PHOTONICS EUROPE HOT TOPIC PRESENTATIONS

Hear from world-class speakers sharing their research and perspectives.

Hot Topics III

16 April 2026 • 9:00 - 10:35

Auditorium Erasme (Niveau/Level 0)

Top the week with the latest news on tomographic volumetric additive manufacturing, and the newest discoveries in hollow core fibre technology.



9:00 – 9:05

Welcome and Opening Remarks Speaker Introduction

Thierry Georges

Oxxius (France)

2026 Symposium Chair



9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing

Christophe Moser

École Polytechnique Fédérale de Lausanne
(Switzerland)

Volumetric printing by reverse tomography—commonly referred to as tomographic volumetric additive manufacturing (TVAM), or simply VAM—is a layerless 3D printing approach that creates solid objects by projecting sequences of light patterns into a rotating photosensitive resin. The cumulative energy deposition leads to localized photopolymerization, enabling the fabrication of complex 3D structures within seconds.

Beyond these technical hurdles, TVAM also opens unique opportunities not accessible to traditional additive manufacturing techniques—for example, the ability to fabricate directly around existing structures. This talk will review the progress of the field, highlight key developments, and explore emerging strategies to address current limitations while pointing toward new application domains.



9:50 - 10:35

From glass to gas: advances, applications and new challenges in hollow core fibre technology

Natalie Wheeler

Univ. of Southampton, Optoelectronics
Research Ctr. (United Kingdom)
Technical Univ. Munich (Germany)

Hollow core fibres (HCFs) guide light through a gas-filled core rather than solid glass and offer unique optical properties and transformative potential. Recent breakthroughs have reduced losses to levels below those of conventional silica fibres across a broad spectrum—from the ultraviolet to the mid-infrared. While these advances were primarily driven by applications in high-capacity data transmission, the capabilities of HCFs extend far beyond communications. They enable enhanced light-matter interactions, exceptional radiation hardness and low non-linearity for sensing applications such as gas detection and precision gyroscopes. There is even the prospect of light transmission in vacuum, pushing towards ultimate waveguide performance. As fibre designs improve, controlling the internal gas composition and pressure becomes critical, driving progress in gas dynamics modelling, advanced characterisation, and post-processing techniques. This talk will explore recent progress in HCF technology, the pivotal role of gas in transmission, and the opportunities and challenges of guiding light through a hollow core.



TECHNICAL EVENTS



Posters-Tuesday

14 April 2026 • 18:10 - 20:00

Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe and Optical Systems Design poster session on Tuesday evening. Feature posters from selected conferences will be represented. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30

Poster authors, view poster presentation guidelines and set-up instructions at:

<http://spie.org/EPE/poster-presentation-guidelines>

Posters-Wednesday

15 April 2026 • 17:45 - 19:30

Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Feature posters from selected conferences will be represented. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30

Poster authors, view poster presentation guidelines and set-up instructions at:

<http://spie.org/EPE/poster-presentation-guidelines>

PROFESSIONAL DEVELOPMENT EVENTS

Enhance your career and hone your skills through these development events

Fireside Chat - Illuminating the Realities of Careers in Photonics

14 April 2026 • 15:00 - 16:00

Palais des Congres, Hall Rhin

Join us for an open discussion between future employers and jobseekers! Careers in photonics span academia, startups, large industry, and research organisations—but expectations on both sides don't always align. This fireside chat brings together leaders from across the photonics ecosystem to openly discuss what students expect from photonics careers, what employers are really looking for, and how both can better prepare for a rapidly evolving workforce.

Breaking Through the Noise: Navigating Career Challenges with Confidence

15 April 2026 • 12:00 - 13:00

Galerie De Landsberg (Niveau/Level 1)

Join us for an energizing Lunch and Learn dedicated to supporting and advancing women in science. This interactive discussion will explore some of the most common challenges women face in optics and photonics including imposter syndrome, navigating career pathways, and maintaining a healthy work-life balance. The session will also discuss the role of meaningful allyship in creating more inclusive, supportive scientific communities. We'll share practical strategies for building inner resilience, offer insider tips on positioning yourself for promotion and long-term success, and highlight ways allies can actively contribute to equity and empowerment.

Whether you're early in your career or looking to take the next step, this session creates a supportive space to reflect, learn, and connect with others committed to equity and empowerment in scientific careers.

MODERATOR:

Jess Wade, Imperial College London

PANELISTS:

Natalie Wheeler, Optoelectronics Research Ctr.

Justina Jovaišaitė, Light Conversion, UAB

Miles Padgett, Univ of Glasgow



PHOTONICS MARKETPLACE

Valuable industry information for anyone — from engineers to programme managers — looking for the latest on business insights

Photonics Marketplace I

14 April 2026 • 10:00 - 17:00 | Palais des Congres, Hall Rhin

Listen to a wide range of opportunities and developments in the photonics industry - industry trends, European, National, and Regional funding and networking, technical overviews, and exhibitor product demonstrations!

PRODUCT DEMONSTRATIONS

10:20 - 10:40

Ultra Black to Ultra white coatings for light control and thermal management.

Stefan Lovsky

Acktar Ltd. (ACM Coatings GmbH)

MARKET OVERVIEW

11:00 - 12:00

Session Chair: **Amy Hanlon**, SPIE



11:00 - 11:30

The Global Photonics Industry: Scale, Growth, and Economic Research

Amy Hanlon

Director Technology Outreach, SPIE



11:30 - 11:45

Photonics for Defence

Thierry Robin

Partner and Co-Founder, TEMATYS (France)



11:45 - 12:00

Photonics for AI

Benoît d'Humières

Partner and Co-Founder, TEMATYS (France)

PHOTONICS RESEARCH SUPPORT

13:00 - 15:00

Session Chair: **Amy Hanlon**, SPIE



13:00 - 13:20

Qu-Pilot Quantum Pilot Line

Mika Prunnila

VTT Technical Research Center of Finland, Finland



13:20 - 13:40

The UK Quantum Technology Research Hub in Sensing, Imaging and Timing: an engine for the creation and growth of startup and spinout companies

Miles Padgett

Royal Society Research Professor, The University of Glasgow, UK



13:40 - 14:00

PhotonHub: the gateway to photonics innovation for European entrepreneurial researchers and companies

Hugo Thienpont

Director, Brussels Photonics B-PHOT, Belgium



14:00 - 14:20

Open-source foundry approach for accelerating research in silicon photonics

Emre Kaplan

PDK Manager, CORNERSTONE, UK



14:20 - 14:40

Photonics Innovation scaled at the Institute for Microelectronics Stuttgart

Niels Quack

Director and Chairman of the Board, IMS CHIPS (Germany)

14:40 - 15:00

Patenting your inventions in the fields of Optics and Photonics



Claire Speiser

SATT
Conectus



Anne-Sophie Auriol

Lavoix



Arnaud Pouderaus

Lavoix (France)

15:00 - 16:00

Fireside Chat - Illuminating the Realities of Careers in Photonics

Join us for an open discussion between future employers and jobseekers! Careers in photonics span academia, startups, large industry, and research organisations—but expectations on both sides don't always align. This fireside chat brings together leaders from across the photonics ecosystem to openly discuss what students expect from photonics careers, what employers are really looking for, and how both can better prepare for a rapidly evolving workforce.



Chair: Lewis Hill
Max Planck Institute, Erlangen, Germany

GUESTS:



Simon Andrews
Executive Director,
Fraunhofer UK Research
Ltd



Caroline Boudoux
Co-Founder, Castor Optics
& Peregrine Photon,
Professor, Polytechnique
Montréal



Agnes Hübscher
Senior Director Corporate
Affairs, Communications
& Industry Relations,
Edmund Optics



Frédérique Vanholsbeeck
Director, Dodd-Walls Centre
for Photonic and Quantum
Technologies, Professor,
University of Auckland

In Cooperation with
University of Strasbourg SPIE Student Chapter
Regional and National Photonics Support

REGIONAL, NATIONAL AND INTERNATIONAL PHOTONICS SUPPORT

16:00 - 17:00



16:00 - 16:20 **Photonics France**

Thierry Georges
CEO, Oxxius



16:20 - 16:30 **Grand Est**

Marc Sciamanna
Photonics Chair, CentraleSupélec, Metz



16:30 - 16:40 **Funding opportunities in the Grand Est Region**

Patricia Hateseur
Grand Est Développement



16:40 - 17:00 **Photonics in Germany: Cluster Landscape, Market Insights & Future Strategies**

Andreas Ehrhardt
Executive Director, PhotonicsBW



Photonics Marketplace II

15 April 2026 • 10:00 - 16:00 | Palais de Congres, Hall Rhin

Listen to a wide range of opportunities and developments in the photonics industry - industry trends, European, National, and Regional funding and networking, technical overviews, and exhibitor product demonstrations!

EUROPEAN SUPPORT MECHANISMS

10:00 - 10:40

Session Chair: Anna Mignani, CNR



10:00 - 10:20

European Innovation Council - EIC: How the Programme Supports Deep Tech Innovators from Idea to the Market

Andreas Lymberis

Head of Sector, EIC Challenge-based Pathfinder, European Innovation Council and SMEs Executive Agency (EISMEA), Belgium



10:20 - 10:40

Funding opportunities for frontier research in Europe

Janne Salo

Scientific Officer, ERC Executive Agency, Belgium

HORIZON EUROPE PROJECT OVERVIEW

10:40 - 12:00

Session Chair: Anna Mignani, CNR



10:40 - 11:00

OPTIPATH: Adaptive Optical Metasurfaces for Real-Time, Label-Free and Non-Destructive 7D Digital Pathology

Christopher Dirdal

Research Manager, SINTEF Digital



11:00 - 11:20

WAVETAILOR: Modular Laser Sources Enabling Sustainable Production of Short, Personalized Production Series

Danijela Rostohar

Coventry University, UK



11:20 - 11:40

QU-PIC: Quantum Universal Photonic Integrated Circuit Platform

Kai Wang

University of Twente, Netherlands



11:40 - 12:00

OPTIMAL "all-in-one" laser lithography platform

Markus Postl

Joanneum Research, Austria

PANEL DISCUSSION

12:00 - 13:00

3D printed microoptics

Join panelists from academia and industry to discuss the advantages of tomographic printing vs classical point by point 2 photon printing.



HOST:

Georg von Freyman

Technische Universität Kaiserslautern RPTU, Germany

PANELISTS:



Christophe Moser

École Polytechnique Fédérale de Lausanne, Switzerland



Martin Hermatschweiler

Nanoscribe, Germany



Reinhard Voelkel

SalesPro4U SA, Switzerland

PRODUCT DEMONSTRATIONS

13:00 - 14:00

13:00 - 13:20

Metaoptics design using PlanOpSimSW
Lieven Penninck, PlanOpSim

13:30 - 13:50

FPGA Based Instrumentation
Victor Larsson, Liquid Instruments



STATE OF THE ART OVERVIEW: EVERYDAY AI IMPLICATIONS

13:00 - 14:00:

Session Chair: **Amy Hanlon**, SPIE



14:00 - 14:25

Integrating AI into Clinical Research: Challenges and Strategies under the European AI Act

Roberto Pini

Andrea Barucci, Valentina Colcelli, CNR-IFAC,
Italy



14:25 - 14:50

How is AI changing Photonics and Microscopy

Giovanni Volpe

Göteborgs University, Sweden



14:50 - 15:15

From Clinical Raman Diagnostics to Personalized Optical Digital Twins Enabled by Everyday AI

Jürgen Popp

Friedrich-Schiller-University, and Leibniz
Institute of Photonic Technology, Germany



15:15 - 15:40

AI-accelerated Optics Design, Faster AI

Anni Lehmuskero

Professor of Practice in Optics Design and
Senior Optics Specialist, University of Eastern
Finland and Entangly, Finland

15:40 - 16:00

Panel Discussion: Everyday AI Implications

MEMBERSHIP EVENTS

Join your community in the various membership events offered.



Fellow and Senior Member Networking Lunch

13 April 2026 • 12:00 - 13:30

Parc des Expositions, Salle Événementielle

All Fellow and Senior Members of SPIE are invited to join your colleagues for an informal SPIE hosted lunch.

SPIE Member Lounge

Galerie Rhin (Niveau/Level 0)

Tuesday, 14 April 2026 8:30 - 17:00

Wednesday, 15 April 2026 8:30 - 17:00

Our Members are at the heart of everything we do, and we're committed to giving them nothing but the best.

You'll find refreshments, massage chairs, charging stations, workstations, a private meeting space, a selfie station, concierge-style support, and community-building activities all in a comfortable environment. You can also take a short survey for a chance to win curated raffle prizes.

Come to unwind or build community. Make this your home base during the conference!

Many Paths, One Light: Diverse Careers with SPIE Leaders

14 April 2026 • 12:00 - 13:00

Galerie De Landsberg (Niveau/Level 1)

SPIE Members: Join us for an inspiring and candid conversation with the SPIE President, President-Elect, Immediate Past President, Vice President, and Secretary/Treasurer as they reflect on the moments that shaped their careers. From unexpected turns to hard-won successes, the panelists will share personal stories of professional highs and lows, lessons learned, and how setbacks became catalysts for growth. Whether you're just starting out or looking to navigate your next career step, this session offers wisdom, encouragement, and real-world insight from some of the Society's most accomplished leaders. Light lunch will be provided to the first 50 attendees.

SOCIAL AND NETWORKING EVENTS

Connect with your colleagues in relaxed gatherings throughout the event

First-Timers Reception

12 April 2026 • 15:00 - 16:00

Galerie De Landsberg (Niveau/Level 1)

First-time attendees are invited to join this reception for an opportunity to network with other first-timers and learn tips to enrich your conference experience.

Welcome Reception

13 April 2026 • 18:00 - 20:00

Parc des Expositions, Exhibition Hall 1

Open to all registered attendees. Relax, socialize, and enjoy the refreshments. Please remember to wear your registration badge. Dress is casual.

SPIE Student Mentoring Mixer

14 April 2026 • 15:00 - 16:00 CEST | Galerie De Landsberg (Niveau/Level 1)

All Student Attendees, Student Conference Support Award Winners, and Student Chapter Members are welcome!

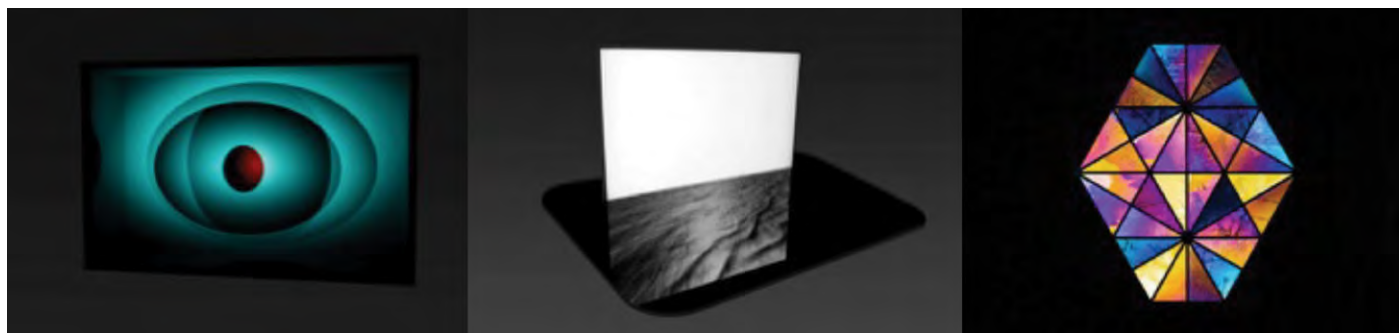


SPIE Student Chapter Office Hours

15 April 2026 • 14:30 - 16:00

Galerie Rhin (Niveau/Level 0)

Are you in an SPIE Student Chapter and have questions? Are you a student interested in starting a chapter? Come by and chat with SPIE Staff to have your questions answered!



EXTRAORDINARY LIGHT

1 Palais des Congrès, Throughout

13 April 2026.....10:00 - 17:00

14 April 2026.....10:00 - 17:00

15 April 2026.....10:00 - 17:00

“Extraordinary Light” explores different aspects of light polarization, a theme that often comes up at SPIE Photonics Europe, bringing together art and research and raising fundamental questions on how we understand physical phenomena and how they can be used to tackle some of today’s challenges in society. In parallel, there will be information boards associated with the different works of art discussing the related artistic and scientific aspects.

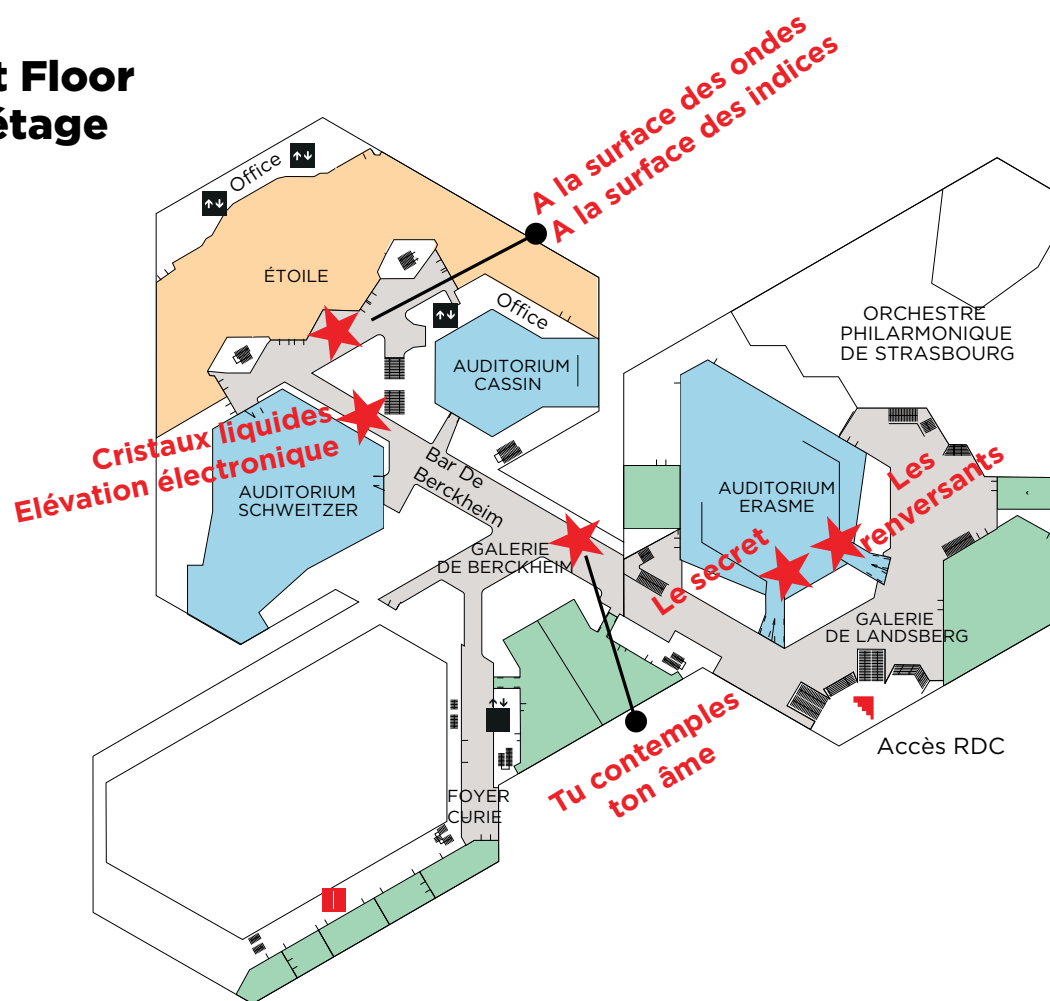
The following exposés can be viewed:

- » A la surfaces des Ondes
- » A la surface des indices
- » Cristaux liquides
- » Elévation électroniques
- » Tu contemples ton âme
- » Le secret
- » Les renversants
- » Dear Brewster

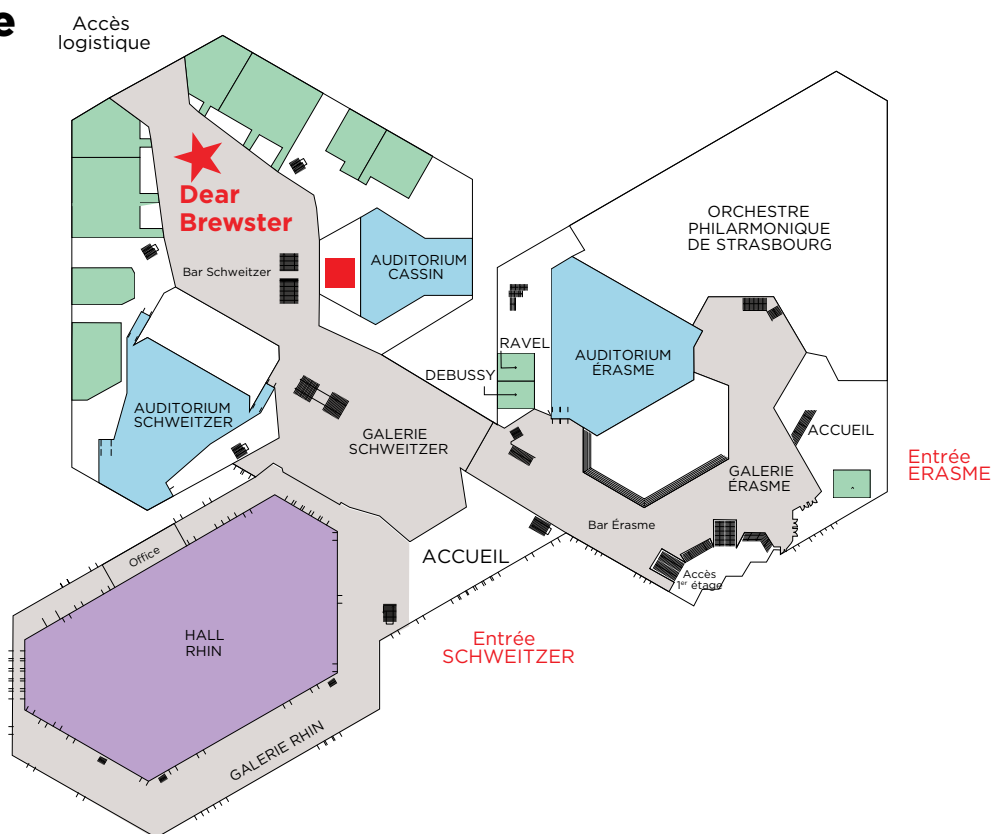
The exhibition is organized by Christine Montgomery in collaboration with ICube and SPIE.

View the maps for exact locations of the exhibit on the next page.

First Floor 1er étage



Ground Floor Rez-de-chaussée



Sunday 12 April	Monday 13 April	Tuesday 14 April	Wednesday 15 April	Thursday 16 April
	Hot Topics I 8:45 - 11:00 Auditorium Erasme (Niveau/Level 0)	Hot Topics II 16:30 - 18:10 Auditorium Erasme (Niveau/Level 0)		Hot Topics III 9:00 - 10:35 Auditorium Erasme (Niveau/Level 0)
Nano- and Quantum Sciences				
Conference 14075: Metamaterials XV , Chairs: Kevin F. MacDonald; Isabelle Staude; Anatoly V. Zayats <i>Etoile B (Niveau/Level 1)</i>				
Conference 14076: Nanophotonics XI , Chairs: David L. Andrews; Angus J. Bain; Antonio Ambrosio <i>Auditorium Schweitzer (Niveau/Level 0)</i>				
			Conference 14077: Advances in Ultrafast Condensed Phase Physics V— Chairs: Stefan Haacke; Markus Ossiander <i>Dresde/Salon 13 (Niveau/Level 1)</i>	
	Conference 14078: Quantum Technologies 2026 , Chairs: Florent Baboux; Virginia D'Auria; Tom Bienaimé <i>Bruxelles/Salon 10 (Niveau/Level 0)</i>			
Conference 14079: Terahertz Photonics IV, Chairs: Mona Jarrahi; Sascha Preu; Dmitry Turchinovich <i>Ramat Gan/Salon 14 (Niveau/Level 1)</i>				
			Conference 14080: Functional Materials: Advances and Applications , Chairs: Alistair Kean; Nikhil Bhalla; Riccardo Funari <i>Ramat Gan/Salon 14 (Niveau/Level 1)</i>	
Conference 14081: Spintronics and Nanomagnetism , Chairs: Jean-Eric Wegrowe; Henri Jaffrès <i>Londres 2/Salon 7 (Niveau/Level 0)</i>				
Optical Imaging and Sensing				
Conference 14082: 3D Printed Optics and Additive Photonic Manufacturing V , Chairs: Alois M. Herkommer; Georg von Freymann; Manuel Flury <i>Dresde/Salon 13 (Niveau/Level 1) Sun-Tues, Bruxelles/Salon 10 (Niveau/Level 0)</i> <i>Wed 12 - 15 April 2026</i>				
	Conference 14083: Unconventional Optical Imaging V , Chairs: Irene Georgakoudi; Marc P. Georges; Nicolas Verrier <i>Curie B (Niveau/Level 1)</i>			
			Conference 14084: Optics and Photonics for Advanced Dimensional Metrology IV , Chairs: Felipe Guzman; Pascal Picart; Thomas Kissinger <i>Amsterdam/Salon 6 (Niveau/Level 0)</i>	
		Conference 14085: Optics, Photonics and Digital Technologies for Imaging Applications IX , Chairs: Peter Schelkens; Tomasz Kozacki <i>Luxembourg/Salon 2 (Niveau/Level 0)</i>		
Conference 14086: Optical Sensing and Detection IX , Chairs: Francis Berghmans; Ioanna Zergioti; Francesco Chiavaioli <i>Schuman (Niveau/Level 1)</i>				
			Conference 14087: Real-time Processing of Image, Depth and Video Information 2026 , Chairs: Gian Domenico Licciardo; Viktor J. Schneider; Matthias F. Carlsohn <i>Stuttgart/Salon 15 (Niveau/Level 1)</i>	
	Conference 14088: Optical and Photonic Microsystems: Technology and Applications , Chairs: Hans Zappe; Niels Quack <i>Auditorium Cassin (Niveau/Level 0)</i>			
Lasers and Nonlinear Optics				
Conference 14090: Semiconductor Lasers and Laser Dynamics XII , Chairs: Marc Sciamanna; Fan-Yi Lin; Jesper Mørk <i>Leicester/Salon 12 (Niveau/Level 1)</i>			Conference 14089: Specialty Optical Fibres 2026 , Chairs: Kyriacos Kalli; Pavel Peterka; Stephanos Yerolatsitis <i>Leicester/Salon 12 (Niveau/Level 1)</i>	
Conference 14091: Fiber Lasers and Glass Photonics: Materials through Applications V , Chairs: Stefano Taccheo; Maria Rita Cicconi; Matthias L. Jäger <i>Berlin/Salon 9 (Niveau/Level 0)</i>				
	Conference 14092: Nonlinear Optics and its Applications 2026 , Chairs: John M. Dudley; Anna C. Peacock; Birgit Stiller; Giovanna Tissoni <i>Churchill (Niveau/Level 1)</i>			
Conference 14093: Lasers and Photonics for Advanced Manufacturing II , Chairs: François Courvoisier; Sylvain Lecler; Wilhelm Pfleging <i>Curie A (Niveau/Level 1)</i>				

Sunday 12 April	Monday 13 April	Tuesday 14 April	Wednesday 15 April	Thursday 16 April
	Hot Topics I 8:45 - 11:00 Auditorium Erasme (Niveau/Level 0)	Hot Topics II 16:30 - 18:10 Auditorium Erasme (Niveau/Level 0)		Hot Topics III 9:00 - 10:35 Auditorium Erasme (Niveau/Level 0)
Biophotonics				
Conference 14094: Biomedical Spectroscopy, Microscopy, and Imaging IV , Chairs: Jürgen Popp; Csilla Gergely <i>Etoile A (Niveau/Level 1)</i>				
Conference 14095: Neurophotonics III , Chairs: Tomáš Čížmár; Tommaso Fellin <i>Adenauer (Niveau/Level 1)</i>				
Conference 14096: Biophotonics in Point-of-Care IV , Chairs: Michael T. Canva; Ambra Giannetti; Hatice Altug; Julien Moreau <i>Stuttgart/Salon 15 (Niveau/Level 1) Wed, Churchill (Niveau/Level 1) Thu</i>				
Conference 14097: Clinical Biophotonics IV , Chairs: Daniel S. Elson; Sylvain Gioux; Brian W. Pogue <i>Amsterdam/Salon 6 (Niveau/Level 0)</i>				
Conference 14098: Tissue Optics and Photonics IV , Chairs: Walter C. P. M. Blondel; Zeev Zalevsky; Valery V. Tuchin <i>Rome/Salon 5 (Niveau/Level 0)</i>				
Conference 14099: Data Science for Photonics and Biophotonics II , Chairs: Thomas Bocklitz <i>Stuttgart/Salon 15 (Niveau/Level 1)</i>				
Applications of Photonics Technology — Chair: Laurent Vivien, Ctr. de Nanosciences et de Nanotechnologies (France)				
Conference 14100: Integrated Photonics Platforms IV , Chairs: Peter O'Brien; Delphine Marris-Morini; Dries Van Thourhout <i>Boston/Salon 11 (Niveau/Level 1)</i>				
Conference 14101: Organic Electronics and Photonics: Fundamentals and Devices V , Chairs: Koen Vandewal; Wouter Maes; Sebastian Schellhammer <i>Adenauer (Niveau/Level 1)</i>				
Conference 14102: Photosensitive Materials and their Applications IV , Chairs: Robert R. McLeod; Inmaculada Pascual Villalobos; Yasuo Tomita <i>Stuttgart/Salon 15 (Niveau/Level 1) Tue, Etoile A (Niveau/Level 1) Wed</i>				
Conference 14103: Liquid Crystals Optics and Photonic Devices II , Chairs: Ibrahim Abdulhalim; María Del Mar Sánchez-López <i>Londres 1/Salon 8 (Niveau/Level 0)</i>				
Conference 14104: Machine Learning in Photonics II , Chairs: Francesco Ferranti; Mehdi Keshavarz Hedayati; Andrea Fratalocchi <i>Etoile A ((Niveau/Level 1)</i>				
Conference 14105: Photonics in Africa , Chairs: Zouheir Sekkat; Malik Maaza <i>Adenauer (Niveau/Level 1)</i>				

SPIE. DIGITAL LIBRARY

INCLUDED WITH REGISTRATION

Presentations on the Digital Library

The Photonics Europe and Optical Systems Design conference proceedings papers and presentations will be published in the SPIE Digital Library approximately six weeks after the meeting. All paid conference registrations include 50 downloads for ongoing access.

Sunday 12 April	Monday 13 April	Tuesday 14 April	Wednesday 15 April	Thursday 16 April
	Monday Plenary Session 13:30 - 15:15 Auditorium Erasme, Niveau/Level 0	Tuesday Plenary Session 9:00 - 10:35 Auditorium Erasme, Niveau/Level 0		
		Conference 14106: Optical Design and Engineering X , Chairs: James Babington; Ulrike Fuchs; Thierry Lépine <i>Madrid 2/Salon 4 (Niveau/Level 0)</i>		
	Conference 14107: Advances in Optical Thin Films IX , Chairs: Julien Lumeau; Markus K. Tilsch; Andreas Wienke <i>Varsovie/Salon 1 (Niveau/Level 0)</i>			
	Conference 14108: Optical Fabrication and Testing IX , Chairs: Eric Ruch; Reinhard Völkel <i>Madrid 1/Salon 3 (Niveau/Level 0)</i>			
	Conference 14109: Illumination Optics VIII , Chairs: Tina E. Kidger; Stuart David; Thorsten Schupp; Rengmao Wu <i>Luxembourg/Salon 2 (Niveau/Level 0)</i>		Conference 14110: Computational Optics 2026 , Chairs: Andreas Erdmann; Nikolai P. Schmitt; Daniel G. Smith <i>Madrid 1/Salon 3 (Niveau/Level 0)</i>	
	Conference 14111: Optical Instrument Science, Technology, and Applications IV , Chairs: Holger Münz; Breann N. Sitarski; Nandini Bhattacharya <i>Madrid 2/Salon 4 (Niveau/Level 0)</i>			

► 2028 | MARK YOUR CALENDAR

**SPIE. PHOTONICS
EUROPE**

**SPIE. OPTICAL
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2-6 April 2028 | Strasbourg, France

The premier European events for optics and photonics research and development, plus the latest advances in optical systems applications, materials, and processing

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APPLICATION TRACKS

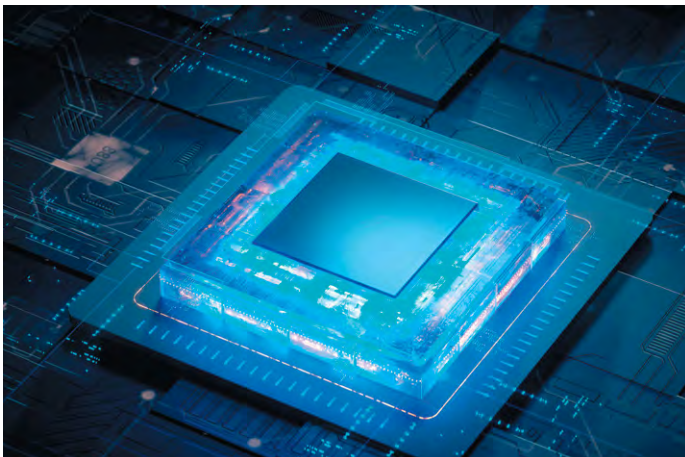
Application tracks enable attendees to group and explore presentations in the conference programs to more easily plan their event schedule around the topic of interest. Application track filters span across all conferences at an SPIE event. The ability to group presentations together across the entire event in this way helps participants more easily locate a presentation in their area of interest and has the reciprocal benefit of helping authors' presentations be more easily found.

Three application tracks to explore



Sustainability

Papers that highlight the use of optics and photonics for renewable energy, natural resource management, sustainable manufacturing, and greenhouse gas mitigation in support of the UN Sustainable Development Goals.



AI/ML

Papers that highlight the use of artificial intelligence, machine learning, and deep learning to create and implement intelligent systems across multiple sectors, technologies, and applications.



EU-funded research programmes

Papers presenting research supported by current EU-funded programmes, initiatives, and innovation projects



Explore the two free exhibitions

Palais de la Musique et des Congrès
Exhibition floor

Tuesday 14 April • 10.00–17.00
Wednesday 15 April • 10.00–16.00

These free exhibitions are a prime opportunity for researchers and engineers to connect with leading companies supplying optics and photonics technologies.

Photonics Europe exhibition—showcases the latest innovations in detection, imaging, sensing, lasers, and their supporting components and devices.

Optical Systems Design exhibition—an innovative exhibition on optical design, thin films, detectors, signal processing, and metrology from the wide field of optical system design which includes computational optics, illumination optics, optical fabrication, optical instrument sciences, and applications.

Additional opportunities on the exhibition floor

European Networks Village

Recognizing innovation is an essential way to boost excellence in research and to foster collaboration throughout the European Research Area.

Successful applicants from the European Framework Programmes are invited to showcase their research, innovative products, and services. They receive visibility for their research and free exhibition space.

The EFPs are part of the EU's funding instruments for research and innovation, supporting various sectors and initiatives across Europe. Drawing on decades of experience and regular collaboration with the European Commission, particularly through joint initiatives, successful applicants enhance the programmes' effectiveness in advancing R&I across Europe.

Stand Number	Lab. /company
EV1	OPTIPATH Project
EV2	COMPAS Project
EV3	PoLightFilters
EV4	Wavetailor
EV5	QuPIC
EV6	Bilasurf
EV7	SMIEQ Project
EV8	OPTIMAL Project





Product Demonstrations

Learn new possibilities at these half-hour demonstrations, which are free to all attendees.

Photonics Marketplace - Hall Rhin

TIME	Tuesday • 14 April	Wednesday • 15 April
10:20 - 10:50	Stefan Lovsky Acktar Ltd. (ACM Coatings GmbH) Ultra Black to Ultra white coatings for light control and thermal management. Ultra Black to Ultra White - High Performance Coatings for Straylight Suppression and Passive Thermal Management SUPPRESS STRAY LIGHT, ABSORB LASER POWER, CREATE HIGH EMISSIVITY	
13:00 - 13:30		Lieven Penninck PlanOpSim Metaoptics design using PlanOpSimSW PlanOpSim's founder and CEO, Lieven Penninck will demonstrate the PlanOpSimSW metaoptics design flow highlighting its latest features.
13:30 - 14:00		Victor Larsson Liquid Instruments FPGA Based Instrumentation Meet Moku: Moku is a reconfigurable test platform optimized for friction-free customization, from simple tests to complex multi-instrument setups, helping labs move from idea to implementation faster.

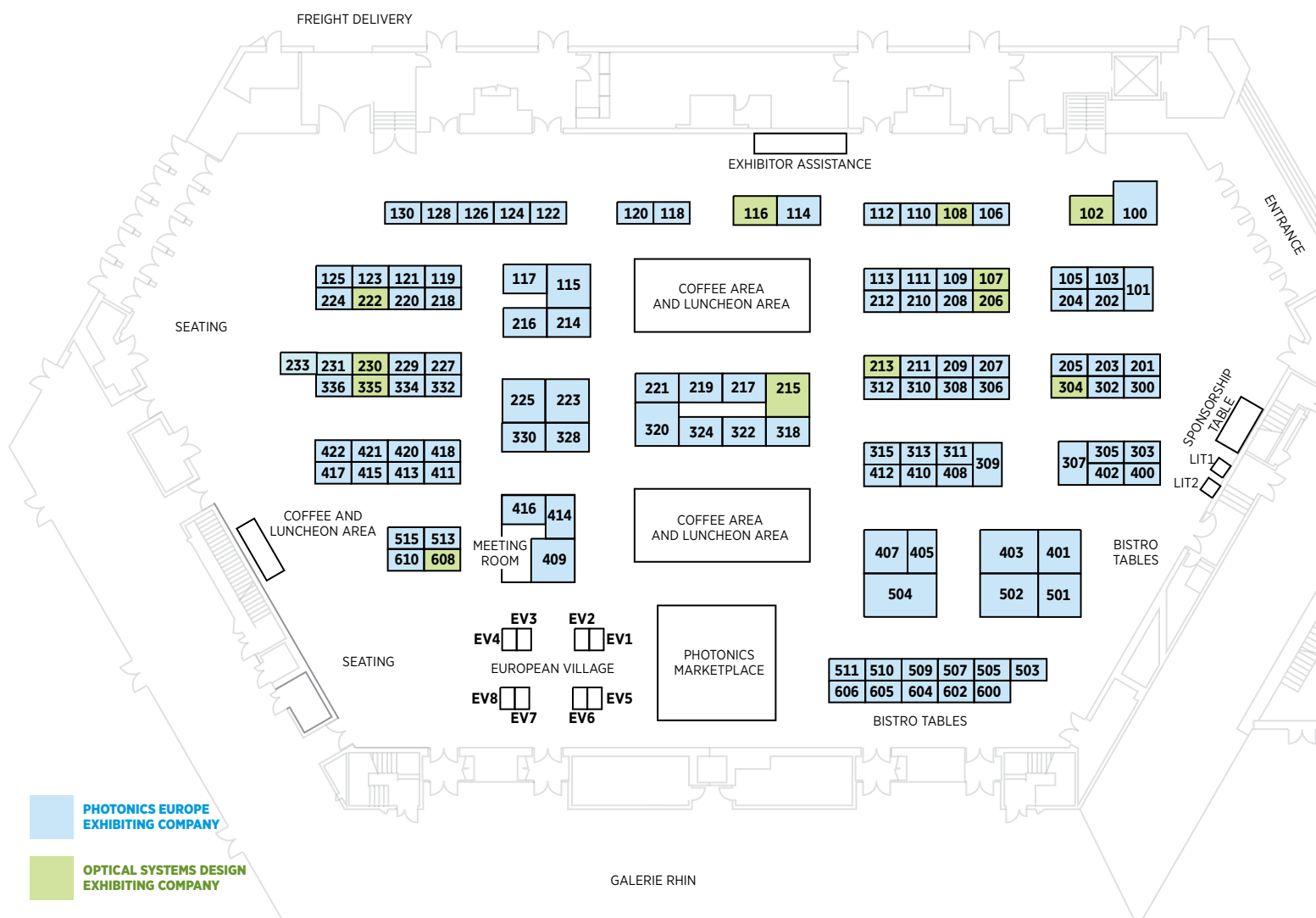


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SYSTEMS
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Exhibition Directory

Exhibitors are listed in alphabetical order with full contact information and booth location. Full company descriptions, product announcements, and other information are available on the SPIE App and on spie.org.



EXHIBITOR BOOTH LISTING

1EV OPTIPATH project	120 TOPTICA Photonics SE	217 Teledyne SP Devices	400 Photonics Bretagne
2EV SINTEF COMPASS	121 Femto Easy	218 EXAIL SAS	401 Vescent Technologies, Inc.
3EV PoLightFilters	122 HÜBNER Photonics	219 OPTOMAN	402 Noisy Labs GmbH
4EV WAVETAILOR	123 Piezo Motor Company, LLC	220 Bruker Optics GmbH & Co. KG	403 Solaris Optics S.A.
5EV QUPIC	124 OPTOPRIM	221 CADFEM Germany GmbH	405 ECREAM
6EV BILASURF	125 micro resist technology GmbH	222 Keysight Technologies, Inc.	407 Photonics France
7EV SMIEQ Project	126 Gestione SILO S.r.l.	223 Institut Photonique	408 Imagine Optic
8EV Joanneum Research - OPTIMAL project	128 Swabian Instruments GmbH	224 cronologic GmbH & Co. KG	409 Photon Design Ltd
1LIT Electro Optics	130 PlanOpSim NV	225 Univ. Strasbourg and Holo3	410 Finetech
2LIT Laser Focus World	201 Photonics Industries International, Inc.	227 ARLUMEN	411 MAIMAN ELECTRONICS SL
100 XRnanotech AG	202 Avenir Photonics	229 Optogear Oy	412 AHF analysentechnik AG
101 CeramOptec GmbH	203 SINOPTIX	230 Hybrid Integration	413 SAVIMEX
102 CSEM SA	204 Cycle GmbH	231 Chroma Technology	414 HOLOEYE Photonics AG
103 OptoSigma	205 AMPLITUDE	233 OPTIM Wafer Services	415 MONTFORT Laser GmbH & Co. KG
105 LIGHT CONVERSION	206 Cutting Edge Coatings GmbH	300 PI France SAS	416 HINDS INSTRUMENTS, INC
106 JEULIN	207 IMS CHIPS-Institut für Mikroelektronik Stuttgart	302 Ohara GmbH	417 Menhir Photonics
107 SI Stuttgart Instruments GmbH	208 NEW IMAGING TECHNOLOGIES	303 Active Technologies	418 SuperLight Photonics
108 Photon Engineering	209 Hamamatsu Photonics Deutschland GmbH	304 OTF Studio GmbH	420 Laser 2000 GmbH
109 Avantes	209 NKT Photonics A/S	304 Vacuum Innovations	421 Luceda Photonics
110 UltraFast Innovations GmbH	210 Vistec Electron Beam GmbH	305 Springer Nature Group	422 Northrop Grumman SYNOPTICS
111 VIAVI SOLUTIONS INC	211 Kenosistec SRL	306 Liquid Instruments	501 optics.org
112 ISP SYSTEM	212 PHASICS S.A.	307 Diamond SA	502 Opton Laser International
113 Nanoscribe GmbH & Co. KG	213 scia Systems GmbH	308 Agilent Technologies LDA UK Limited	503 GLOphotonics
114 Thorlabs S.A.S.	214 SAES Getters S.p.A.	309 Glassomer GmbH	504 ALPhANOV
116 Acktar Ltd. (ACM Coatings GmbH)	215 NorthLab Photonics AB	310 EKSPLA	505 Societa Italiana di Ottica e Fotonica - SIOF
115 ACAL BFi France	216 Arnold Gruppe	311 SYMÉTRIE	507 VM-TIM GmbH
115 Fluence Technology		312 Zurich Instruments	509 OXXIUS
117 Bühler Alzenau GmbH		313 SET Corp. S.A.	510 I-Photonics UAB
118 SOLCERA		315 AeroDIODE	511 Menlo Systems GmbH
119 Bota Systems AG		318 PicoQuant GmbH	513 Telops/Exosens
		322 Le Verre Fluoré	515 Heilbronn Trading Company GmbH
		324 HTDS – Hi Tech Detection Systems	600 AdlOptica Optical Systems GmbH
		326 Fiber Optic Center	602 Ocean Optics B.V.
		328 Photonic Cleaning Technologies	604 OptiLayer GmbH
		330 Photodigm, Inc.	605 IotaMetrix
		332 LASEROPTIK GmbH	606 LUMIBIRD
		334 Spectrum Info LLC	608 LASER COMPONENTS
		335 KiwiStar Optics	610 Dover Motion
		336 Universal Photonics	

HALL
SCHWEITZER

EXHIBITOR LISTING

ACAL BFi France

#115

1 Allée de la Chartreuse, EVRY, 91080 France
+33 1 6079 5900; fax +33 1 6079 8901
sales-fr@acalbfi.fr;
www.acalbfi.com/fr/technologies/photonique/

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Acktar Ltd. (ACM Coatings GmbH) #116

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OSD

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Active Technologies

#303

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AdOptica Optical Systems GmbH #600

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AHF analysentechnik AG

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ALPhANOV #504

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AMPLITUDE

#205

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Cite de la Photonique, 11 Avenue de Canteranne, Pessac,
33600 France
+33 6 47 41 97 50
info@amplitude-laser.com; www.amplitude-laser.com

OSD = SPIE Optical Systems Design Exhibitor

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ARLUMEN

#227

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29280 France
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contact@arlumen.fr; www.arlumen.fr

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Arnold Gruppe #216

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info@arnold-gruppe.de; www.arnold-gruppe.de



Avantes

#109

SPIE. CORPORATE MEMBER

Oude Apeldoornseweg 28, Apeldoorn, 7333 NS Netherlands
+31 313 670170
info@avantes.com; www.avantes.com

Avenir Photonics #202

SPIE. CORPORATE MEMBER

Franz-Mayer-Str 1, Regensburg, 93053 Germany
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info@avenirphotonics.com; www.avenirphotonics.com

BILASURF #6EV

Paseo de Manuel Lardizabal N° 15, Donostia San Sebastián,
20018 Spain
+34 943 212800
compras@ceit.es; www.ceit.es

SPONSOR

Bota Systems AG

#119

Hagenholzstrasse 85, Zurich 8050, Switzerland
+41 43 883 34 68
sales@botasys.com; www.botasys.com

Bruker Optics GmbH & Co. KG #220

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info.bopt.de@bruker.com; www.bruker.com

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Bühler Alzenau GmbH #117

Business Area Leybold Optics,
Siemensstr 88,
Alzenau, 63755 Germany
www.buhlergroup.com/leyboldoptics



SPONSOR

CADFEM Germany GmbH #221

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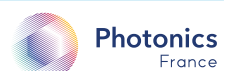
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Chairs: Mona Jarrahi; Sascha Preu; Dmitry Turchinovich

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Functional Materials: Advances and Applications

Chairs: Alistair Kean; Nikhil Bhalla; Riccardo Funari

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Spintronics and Nanomagnetism

Chairs: Jean-Eric Wegrowe; Henri Jaffrès

CONFERENCE 14082..... 93

3D Printed Optics and Additive Photonic Manufacturing V

Chairs: Alois M. Herkommer; Georg von Freymann; Manuel Flury

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Unconventional Optical Imaging V

Chairs: Irene Georgakoudi; Marc P. Georges; Nicolas Verrier

CONFERENCE 14084..... 110

Optics and Photonics for Advanced Dimensional Metrology IV

Chairs: Felipe Guzman; Pascal Picart; Thomas Kissinger

CONFERENCE 14085..... 116

Optics, Photonics and Digital Technologies for Imaging Applications IX

Chairs: Peter Schelkens; Tomasz Kozacki

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Optical Sensing and Detection IX

Chairs: Francis Berghmans; Ioanna Zergioti; Francesco Chiavaioli

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Real-time Processing of Image, Depth and Video Information 2026

Chairs: Gian Domenico Licciardo; Viktor J. Schneider;
Matthias F. Carlsohn

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Optical and Photonic Microsystems: Technology and Applications

Chairs: Hans Zappe; Niels Quack

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Specialty Optical Fibres 2026

Chairs: Kyriacos Kalli; Pavel Peterka; Stephanos Yerolatsitis

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Chairs: Marc Sciamanna; Fan-Yi Lin; Jesper Mørk

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Fiber Lasers and Glass Photonics: Materials through Applications V

Chairs: Stefano Taccheo; Maria Rita Cicconi; Matthias L. Jäger

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Nonlinear Optics and its Applications 2026

Chairs: John M. Dudley; Anna C. Peacock; Birgit Stiller;
Giovanna Tisconi

CONFERENCE 14093..... 187

Lasers and Photonics for Advanced Manufacturing II

Chairs: François Courvoisier; Sylvain Lecler; Wilhelm Pfleging

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Biomedical Spectroscopy, Microscopy, and Imaging IV

Chairs: Jürgen Popp; Csilla Gergely

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Neurophotonics III

Chairs: Tomáš Čižmár; Tommaso Fellin

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Biophotonics in Point-of-Care IV

Chairs: Michael T. Canva; Ambra Giannetti; Hatice Altug;
Julien Moreau

SPIE. OPTICAL SYSTEMS DESIGN

THE LATEST ADVANCES IN OPTICAL SYSTEMS APPLICATIONS, MATERIALS, AND PROCESSING

OPTICAL SYSTEMS DESIGN SYMPOSIUM CHAIRS



Marta C. de la Fuente
ASE Optics Europe (Spain)



Thierry Lépine
Institut d'Optique &
Hubert Curien Lab
(France)



Tina Kidger
Kidger Optics Associates
(United Kingdom)

OPTICAL SYSTEMS DESIGN

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Clinical Biophotonics IV

Chairs: Daniel S. Elson; Sylvain Gioux; Brian W. Pogue

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Tissue Optics and Photonics IV

Chairs: Walter C. P. M. Blondel; Zeev Zalevsky; Valery V. Tuchin

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Data Science for Photonics and Biophotonics II

Chairs: Thomas Bocklitz

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Integrated Photonics Platforms IV

Chairs: Peter O'Brien; Delphine Marris-Morini; Dries Van Thourhout

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Organic Electronics and Photonics: Fundamentals and Devices V

Chairs: Koen Vandewal; Wouter Maes; Sebastian Schellhammer

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Photosensitive Materials and their Applications IV

Chairs: Robert R. McLeod; Inmaculada Pascual Villalobos; Yasuo Tomita

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Liquid Crystals Optics and Photonic Devices II

Chairs: Ibrahim Abdulhalim; María Del Mar Sánchez-López

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Chairs: Francesco Ferranti; Mehdi Keshavarz Hedayati; Andrea Fratalocchi

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Photonics in Africa

Chairs: Zouheir Sekkat; Malik Maaza

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Co-located: PhoBioS COST Action Session - Biophotonic Surfaces and Light-Matter Interactions for Biomedical Sensing and Imaging

Chairs: Dror Fixler; Malgorzata Szczerska

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Optical Design and Engineering X

Chairs: James Babington; Ulrike Fuchs; Thierry Lépine

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Advances in Optical Thin Films IX

Chairs: Julien Lumeau; Markus K. Tilsch; Andreas Wienke

CONFERENCE 14108 304

Optical Fabrication and Testing IX

Chairs: Eric Ruch; Reinhard Völkel

CONFERENCE 14109 308

Illumination Optics VIII

Chairs: Tina E. Kidger; Stuart David; Thorsten Schupp; Reng-mao Wu

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Computational Optics 2026

Chairs: Andreas Erdmann; Nikolai P. Schmitt; Daniel G. Smith

CONFERENCE 14111 317

Optical Instrument Science, Technology, and Applications IV

Chairs: Holger Münz; Breann N. Sitarski; Nandini Bhattacharya

CONFERENCE 14075

Metamaterials XV

12 - 15 April 2026 | Etoile B (Niveau/Level 1)

Conference Chair(s): Kevin F. MacDonald, Univ. of Southampton (United Kingdom); Isabelle Staude, Friedrich-Schiller-Univ. Jena (Germany); Anatoly V. Zayats, King's College London (United Kingdom)

Program Committee: Angela Barreda, Carlos III Univ. of Madrid (Spain); Sergey I. Bozhevolnyi, Univ. of Southern Denmark (Denmark); Michele Celebrano, Politecnico di Milano (Italy); Andrea Di Falco, Univ. of St. Andrews (United Kingdom); Tal Ellenbogen, Tel Aviv Univ. (Israel); Patrice Genevet, Colorado School of Mines (United States); Baohua Jia, RMIT Univ. (Australia); Maria Kafesaki, Foundation for Research and Technology-Hellas (Greece); Guixin Li, Southern Univ. of Science and Technology (China); Stefan Linden, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); Natalia M. Litchinitser, Duke Univ. (United States); Alejandro Martínez, Univ. Politècnica de València (Spain); Martin W. McCall, Imperial College London (United Kingdom); Carsten Rockstuhl, Karlsruher Institut für Technologie (Germany); Mario Silveirinha, Univ. Técnica de Lisboa (Portugal); Philippe Tassin, Chalmers Univ. of Technology (Sweden); Jason G. Valentine, Vanderbilt Univ. (United States)

Sunday 12 April 2026

SESSION 1: METAMATERIALS FOR IMAGING

12 April 2026 • 13:00 - 15:00 | Etoile C (Niveau/Level 1)

Session Chair(s): Kevin F. MacDonald, Optoelectronics Research Ctr. (United Kingdom)

14075-77 • 13:00 - 13:30

Metasurface-enabled image compression (*Invited Paper*)

Author(s): Randy Stefan Tanuwijaya, Hong Kong Univ. of Science and Technology (China); Zaka Ullah, Univ. of St. Andrews (United Kingdom); Jensen Li, Univ. of Exeter (United Kingdom); Andrea Di Falco, Univ. of St. Andrews (United Kingdom)

14075-2 • 13:30 - 13:45

Seeing in thermal colour: wavelength-sensitive imaging in the LWIR

Author(s): James M. Daly, David R.S. Cumming, Univ. of Glasgow (United Kingdom)

14075-3 • 13:45 - 14:15

Optical metasurfaces as novel optical components for biological imaging. (*Invited Paper*)

Author(s): Maryna L. Meretska, Karlsruher Institut für Technologie (Germany)

14075-4 • 14:15 - 14:30

Broadband Programmable Virtual Lens for Infrared Imaging

Author(s): Ze Zheng, Nottingham Trent Univ. (United Kingdom); Olga Sergaeva, Davide Rocco, Univ. degli Studi di Brescia (Italy); Yuchen Zhang, Guoquan Zhang, Nankai Univ. (China); Lei Xu, Nottingham Trent Univ. (United Kingdom); Costantino De Angelis, Univ. degli Studi di Brescia (Italy); Mohsen Rahmani, Nottingham Trent Univ. (United Kingdom)

14075-5 • 14:30 - 15:00

Metasurfaces for future sensing and imaging technologies (*Invited Paper*)

Author(s): Mark L. Brongersma, Geballe Lab. for Advanced Materials (GLAM) (United States)

Coffee Break 15:00 - 15:30

SESSION 2: CONTROLLING EMISSION AND LIGHT-MATTER INTERACTIONS

12 April 2026 • 15:30 - 17:15 | Etoile C (Niveau/Level 1)

Session Chair(s): Mark L. Brongersma, Geballe Lab. for Advanced Materials (GLAM) (United States)

14075-6 • 15:30 - 16:00

Engineering fluorescence with plasmonic, dielectric and air metasurfaces (*Invited Paper*)

Author(s): Olivier J. F. Martin, EPFL (Switzerland)

14075-7 • 16:00 - 16:15

Plasmonic Metasurfaces for Versatile Control of Light and Quantum Emission

Author(s): **Fei Ding**, Univ. of Southern Denmark (Denmark), Eastern Institute of Technology, Ningbo (China)

14075-8 • 16:15 - 16:30

Plasmonically-assisted chiral emission from tunnel junctions

Author(s): **Yuan Yang Xie**, **Alexey V. Krasavin**, **Anatoly V. Zayats**, King's College London (United Kingdom)

14075-20 • 16:30 - 17:00

MEMS-tunable bilayer metasurfaces for dynamic and multifunctional wavefront control (*Invited Paper*)

Author(s): **Chao Meng**, Univ. of Southern Denmark (Denmark)

14075-10 • 17:00 - 17:15

Air-defined Mie voids for fluorescence emission control

Author(s): **Yuchao Fu**, Ecole Polytechnique Federale de Lausanne (Switzerland); **Olivier J. F. Martin**, EPFL (Switzerland)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:25

SESSION 3: QUANTUM, TOPOLOGICAL AND SPACE-TIME PHENOMENA

13 April 2026 • 11:25 - 12:40 | Etoile C (Niveau/Level 1)

Session Chair(s): **Anatoly V. Zayats**, King's College London (United Kingdom)

14075-11 • 11:25 - 11:55

Classical and quantum electrodynamics of synthetically rotating crystals (*Invited Paper*)

Author(s): **Iñigo Liberal**, **Amaia Vertiz**, **Javier Alfaro**, Univ. Pública de Navarra (Spain)

14075-12 • 11:55 - 12:10

Reconfigurable dual-wavelength quantum skyrmions via liquid-crystal topological defects

Author(s): **Mwezi Koni**, Univ. of the Witwatersrand Johannesburg (South Africa); **Fazilah Nothlawala**, Univ. of the Witwatersrand, Johannesburg (South Africa); **Vagharshak Hakobyan**, Univ. de Bordeaux (France); **Isaac Nape**, Univ. of the Witwatersrand, Johannesburg (South Africa); **Etienne Brasselet**, Univ. de Bordeaux (France); **Andrew Forbes**, Univ. of the Witwatersrand, Johannesburg (South Africa)

14075-13 • 12:10 - 12:25

Time varying metamaterials in the terahertz generated by multiple sub-cycle excitation pulses of graphene

Author(s): **William P. Wardley, Euan Hendry, Ian R. Hooper, Simon A. R. Horsley, Calvin M. Hooper**, Univ. of Exeter (United Kingdom)

14075-14 • 12:25 - 12:40

Space-time metamaterials for next-generation applications

Author(s): **Zeki Hayran, John B. Pendry**, Imperial College London (United Kingdom)

Lunch Break 12:40 - 13:40

SESSION 4: METASURFACES I

13 April 2026 • 13:40 - 15:40 | Etoile C (Niveau/Level 1)

Session Chair(s): **Maryna L. Meretska**, Karlsruher Institut für Technologie (Germany)

14075-15 • 13:40 - 14:10

Holistic design of large-NA Huygens metasurfaces (Invited Paper)

Author(s): **Peter R. Wiecha, Dalin Soun**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Antoine Azéma**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France), Ctr. d'Elaboration de Matériaux et d'Etudes Structurales (France); **Aurélien Cuche**, Ctr. d'Elaboration de Matériaux et d'Etudes Structurales, CNRS (France)

14075-16 • 14:10 - 14:25

Moth-Eye Enhanced Infrared Metalenses through Deep UV Lithography

Author(s): **Jordan Scott, Kai Sun, Xingzhao Yan**, Univ. of Southampton (United Kingdom); **James N. Monks**, Teledyne Qioptiq (United Kingdom); **Jun-Yu Ou, Otto L. Muskens**, Univ. of Southampton (United Kingdom)

14075-17 • 14:25 - 14:40

Enhancing magneto-optical effects in hybrid ferromagnetic metal-silver metasurfaces

Author(s): **Proficiency Munsaka, Rose Mary Jose, Aina Quintilla, Silvia Diewald, Qige Song, Maryna L. Meretska**, Karlsruher Institut für Technologie (Germany)

14075-19 • 14:40 - 15:10

Environmental anisotropy-induced quasi-bound states in the continuum in symmetric metasurfaces (Invited Paper)

Author(s): **Maximilian Beddoe, Dmitry Pidgayko**, Institute of Solid State Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Angela Barreda**, Institute of Solid State Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Univ. Carlos III de Madrid (Spain); **Muyi Yang**, Institute of Solid State Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Chengjun Zou**, Institute of Solid State Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Microelectronics (China); **Daniel Füllbel**, Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Thomas Pertsch**, Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany), Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Isabelle Staude**, Institute of Solid State Physics, Friedrich-Schiller-Univ. Jena (Germany), Institute of Applied Physics, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany)

14075-31 • 15:10 - 15:40

Tunable Active Metasurfaces for Imaging and Computation with Electro-optic and Nonlinear Elements (Invited Paper)

Author(s): **Harry A. Atwater**, Caltech (United States)

Coffee Break 15:40 - 16:05

SESSION 5: METASURFACES II

13 April 2026 • 16:05 - 17:50 | Etoile C (Niveau/Level 1)

Session Chair(s): **Esther Alarcon-Llado**, AMOLF (Netherlands)

14075-9 • 16:05 - 16:35

Bound States in the Continuum in Nanophotonic Metasurfaces for Next-Generation Biomedical Sensors and Advanced Light-Matter Interaction Control (Invited Paper)

Author(s): **Silvia Romano, Bruno Miranda, Ankit Singh, Sergio Balestrieri**, Istituto di Scienze Applicate e Sistemi Intelligenti "Eduardo Caianiello" (Italy); **Annalisa Lamberti**, Univ. degli Studi di Napoli Federico II (Italy); **Scott Duhey, Adam Schwartzberg**, The Molecular Foundry (United States); **Vito Mocella, Ivo Rendina, Gianluigi Zito**, Istituto di Scienze Applicate e Sistemi Intelligenti "Eduardo Caianiello" (Italy)

14075-21 • 16:35 - 16:50

Multipole analysis of resonant membrane-metasurfaces

Author(s): **Izzatjon Allayarov, Andrey B. Evlyukhin, Antonio Calà Lesina**, Leibniz Univ. Hannover (Germany)

14075-22 • 16:50 - 17:05

Simulations of Brownian thermal noise for arbitrarily shaped metasurfaces

Author(s): **Mika Gaedtke**, TU Braunschweig (Germany); **Liam Shelling Neto, Swarali Talele**, Technische Univ. Braunschweig (Germany); **Stefanie Kroker**, Technische Univ. Braunschweig (Germany), Physikalisch-technische Bundesanstalt (Germany)

14075-23 • 17:05 - 17:20

Multipolar near-field coupling and multi-resonances in bi-layer dielectric metasurfaces

Author(s): **Yankun Jiang, Izzatjon Allayarov, Antonio Calà Lesina**, Leibniz Univ. Hannover (Germany)

14075-24 • 17:20 - 17:50

OAM-multiplexed holography via cascaded metasurfaces without post sampling and position multiplexing *(Invited Paper)*

Author(s): **Xiao Jin**, Paderborn University (Germany); **Thomas Zentgraf**, Univ. Paderborn (Germany)

Tuesday 14 April 2026

SESSION 6: METADEVICES

14 April 2026 • 9:00 - 10:30 | Etoile C (Niveau/Level 1)

Session Chair(s): **Humeyra Caglayan**, Technische Univ. Eindhoven (Netherlands)

14075-25 • 9:00 - 9:30

Metasurfaces enabling new solar cell designs *(Invited Paper)*

Author(s): **Esther Alarcon-Llado**, AMOLF (Netherlands)

14075-26 • 9:30 - 9:45

Exploring metalenses as compact solar concentrators with improved wide-angle performance for integrated systems

Author(s): **Armin Hosseinghorbani**, Environment and Sustainability Institute, Univ. of Exeter (United Kingdom); **Jensen Li**, Univ. of Exeter (United Kingdom); **Katie Shanks**, Environment and Sustainability Institute, Univ. of Exeter (United Kingdom)

14075-27 • 9:45 - 10:15

Anapole dielectric and plasmonic meta-atoms for energy concentration in transparent metamaterials *(Invited Paper)*

Author(s): **Andrey B. Evlyukhin, Antonio Calà Lesina**, Leibniz Univ. Hannover (Germany)

14075-28 • 10:15 - 10:30

Invisibility and transparency of compound meta-particles

Author(s): **Alexey Basharin**, Univ. of Eastern Finland (Finland)

Coffee Break 10:30 - 11:00

SESSION 7: COMPUTING WITH METASURFACES

14 April 2026 • 11:00 - 12:45 | Etoile C (Niveau/Level 1)

Session Chair(s): **Andrey B. Evlyukhin**, Leibniz Univ. Hannover (Germany)

14075-29 • 11:00 - 11:30

Meta-Optic Interferometry and Analog Computing for Next-Generation Photonics *(Invited Paper)*

Author(s): **Humeyra Caglayan**, Technische Univ. Eindhoven (Netherlands)

14075-30 • 11:30 - 11:45

Discretized optical computing with metalens arrays: from discrete Fourier transform to Grover's search

Author(s): **Randy Stefan Tanuwijaya, Lap So, Tailin An**, Hong Kong Univ. of Science and Technology (Hong Kong, China); **Wai Chun Wong**, Univ. of Exeter (United Kingdom); **Jingdi Zhang, Wing Yim Tam**, Hong Kong Univ. of Science and Technology (Hong Kong, China); **Jensen Li**, Univ. of Exeter (United Kingdom)

14075-18 • 11:45 - 12:00

3D Nanoprinted Bi-Layer Achromatic Metalenses on Optical Fibers

Author(s): **Bennet Fischer, Tim Stechel, Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14075-32 • 12:00 - 12:15

Synaptic functions within plasmonic cavities

Author(s): **Martin Nicolussi, Anastasiia Zaleska, Henry Cossey, Alexey V. Krasavin**, King's College London (United Kingdom); **Abin Varghese**, King's College London (United Kingdom), Univ. of Cambridge (United Kingdom); **Bipin Rajendran, Anatoly V. Zayats**, King's College London (United Kingdom)

14075-33 • 12:15 - 12:45

Analogue Computing with Nonlinear Photonic Metasurfaces (*Invited Paper*)

Author(s): **Costantino De Angelis**, Univ. degli Studi di Brescia (Italy)

Lunch/Exhibition Break 12:45 - 14:15

SESSION 8: TIME-VARYING MEDIA AND TIME CRYSTALS

14 April 2026 • 14:15 - 16:00 | Etoile C (Niveau/Level 1)

Session Chair(s): **Costantino De Angelis**, Univ. degli Studi di Brescia (Italy)

14075-34 • 14:15 - 14:45

Kirchhoff's laws of thermal radiation for complex, nonreciprocal, and time-varying materials (*Invited Paper*)

Author(s): **Sander A. Mann**, Univ. of Amsterdam (Netherlands)

14075-35 • 14:45 - 15:00

Low-energy nano-opto-mechanical time crystal devices

Author(s): **Venugopal Raskatla**, **Kevin F. MacDonald**, **Nikolay I. Zheludev**, Univ. of Southampton (United Kingdom)

14075-36 • 15:00 - 15:15

Discontinuous Galerkin Time Domain framework coupled with advanced Bayesian optimization for realistic Near Infrared space-time modulated metasurfaces

Author(s): **Roman Gelly**, Centre Inria d'Université Côte d'Azur (France); **Stéphane Lanteri**, **Mahmoud Elsayy**, Ctr. Inria d'Univ. Côte d'Azur (France)

14075-37 • 15:15 - 15:30

Scattering from plasma cylinder of time-modulated permittivity

Author(s): **Jiaruo Yan**, **Ioannis Katsantonis**, Foundation for Research and Technology-Hellas (Greece); **Mohamed Mostafa**, **Viktar Asadchy**, Aalto Univ. (Finland); **Maria Kafesaki**, Foundation for Research and Technology-Hellas (Greece)

14075-38 • 15:30 - 15:45

Broadband dipole absorption in dispersive photonic time crystals

Author(s): **Thomas F. Allard**, Departamento de Física Teórica de la Materia Condensada, Universidad Autónoma de Madrid (Spain), Condensed Matter Physics Center (IFIMAC), Universidad Autónoma de Madrid (Spain); **Jaime E. Sustaeta-Osuna**, **Francisco J. García-Vidal**, **Paloma A. Huidobro**, Univ. Autónoma de Madrid (Spain)

14075-39 • 15:45 - 16:00

Drude model for time-varying dispersive and lossy media

Author(s): **Antonio Ganfornina-Andrades**, **Juan Enrique Vázquez-Lozano**, **Iñigo Liberal**, Univ. Pública de Navarra (Spain); **Simon A. R. Horsley**, Univ. of Exeter (United Kingdom)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14075-62 • 18:10 - 20:00

Numerical modeling of metamaterials using Bloch's theorem and the Finite Element Method

Author(s): **Anudeep Kusumanchi, Mira Mitra**, Indian Institute of Technology Kharagpur (India)

14075-63 • 18:10 - 20:00

Engineering correlated disorder for exotic light scattering diagrams

Author(s): **Denis Langevin**, Aix-Marseille Univ. (France), Univ. Clermont Auvergne (France); **Emmanuel Centeno**, Univ. Clermont Auvergne (France); **Pauline Bennet**, Aix-Marseille Univ. (France); **Rémi Carminati**, Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris (France); **Bodo Wilts**, Univ. Salzburg (Austria); **Patrick Bouchon**, ONERA (France); **Antoine Moreau**, Univ. Clermont Auvergne (France)

14075-64 • 18:10 - 20:00

Compact Metalens Doublet F-Theta System for Diffraction-Limited Wide-Field Scanning

Author(s): **Shubham Meena, Tapajyoti Das Gupta**, Indian Institute of Science, Bengaluru (India)

14075-66 • 18:10 - 20:00

Semi-periodic numerical modeling of the optical response of disordered plasmonic metasurfaces on dielectric substrates

Author(s): **Isabel Rojas-Martinez**, Universidad Nacional Autónoma de México (Mexico); **Alejandro Reyes-Coronado**, Univ. Nacional Autónoma de México (Mexico)

14075-67 • 18:10 - 20:00

Metasurface based polarization sensitive dammann vortex grating

Author(s): **Swapnil Chitriv, Arpit Gupta, Kapil K. Gangwar, Gufran S. Khan, P. Senthilkumaran**, Indian Institute of Technology Delhi (India)

14075-68 • 18:10 - 20:00

Blazed pillars metasurface design for optical wireless communications

Author(s): **Marta Padovani, Maria Guglielmina Pelizzo**, Univ. degli Studi di Padova (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Luca Schenato, Marco Santagiustina**, Univ. degli Studi di Padova (Italy)

14075-69 • 18:10 - 20:00

Infrared up-conversion via sum-frequency generation enhanced by lattice resonance in vertically stacked AlGaAs disk metasurfaces

Author(s): **Urmila Bag**, Indian Institute of Science, Bengaluru (India); **Mikko E. Kjellberg**, KTH Royal Institute of Technology (Sweden); **Rabindra Biswas**, Indian Institute of Science, Bengaluru (India); **Srinivasan Anand**, KTH Royal Institute of Technology (Sweden); **Varun Raghunathan**, Indian Institute of Science Bengaluru (India)

14075-70 • 18:10 - 20:00

Multipolar decomposition framework for the spatial distribution of radiation intensity in spherical resonators

Author(s): **Joao P. Silva Dias, Jhon J. Hernández-Sarria, Luciano L. Mendes**, INATEL (Brazil); **Jorge Ricardo Mejía-Salazar**, Instituto Nacional de Telecomunicações (Brazil)

14075-72 • 18:10 - 20:00

Mechanically tunable and high-efficiency metasurface filters: a computational study of TiO₂ and Selenium meta-atoms

Author(s): **Santanu Mandal, Tapajyoti Das Gupta**, Indian Institute of Science, Bengaluru (India)

14075-73 • 18:10 - 20:00

Large-scale, phase-only metalenses for high-efficiency super-resolution imaging

Author(s): **Santanu Mandal, Ramnishanth S., Tapajyoti Das Gupta**, Indian Institute of Science, Bengaluru (India)

14075-74 • 18:10 - 20:00

Intriguing manifestations of spin polarization-dependent orbital angular momentum Hall effect of light in spatially tailored symmetry broken non-vortex structures

Author(s): **Anwesha Panda**, Indian Institute of Science Education and Research Kolkata (India); **Shirsha Mukherjee**, National Institute of Technology, Agartala (India); **Dwijendra Mohan Tribedi, HareKrishna Bhunia, Sujit Rajak, Nirmalya Ghosh**, Indian Institute of Science Education and Research Kolkata (India)

14075-75 • 18:10 - 20:00

Quasi-bound states in continuum empowered all-dielectric metasurface on-chip spectral filter in VIS-NIR range

Author(s): **Ranjeet Kumar, Arthur Lipinski, Robert M. Bowman**, Queen's Univ. Belfast (United Kingdom); **Aneesh Vincent Veluthandath**, Univ. of Southampton (United Kingdom)

14075-76 • 18:10 - 20:00

High-aspect-ratio c-Si metasurfaces for ultra-fast pulse lasers

Author(s): **Klaudijus Midveris**, Kaunas University of Technology (Lithuania); **Erika Jonaityte, Gvidas Klyvis, Tomas Klinavicius, Andrius Zutautas, Mindaugas Juodenas**, Kaunas Univ. of Technology (Lithuania)

14075-78 • 18:10 - 20:00

Optofluidic sensors based on surface-enhanced Raman spectroscopy for sensitive detection of pesticides in the field

Author(s): **Elizaveta Vereshchagina, Simone Zonetti, Jesil Jose, Anand Summanwar, Karolina Milenko**, SINTEF Digital (Norway)

Wednesday 15 April 2026

SESSION 9: ACTIVE AND NONLINEAR METAMATERIALS

15 April 2026 • 8:30 - 10:15 | Etoile C (Niveau/Level 1)

Session Chair(s): **Femius Koenderink**, AMOLF (Netherlands)

14075-40 • 8:30 - 9:00

Nanoscale liquid crystal light modulation (*Invited Paper*)

Author(s): **Patrice Genevet**, Colorado School of Mines (United States); **Emil Marinov, Renato J. Martins**, Flatlight (France)

14075-41 • 9:00 - 9:15

Self-Assembled Nanocrystal Metasurfaces for High-Contrast Femtosecond Switching in the Mid-Infrared

Author(s): **Zarko Sakotic, Madeline Brown, Woo Je Chang, Lauralee E. Hurst, Noah Mansfield, Tanay Paul, Thomas M. Truskett**, The Univ. of Texas at Austin (United States); **Monica Allen, Jeffery Allen**, Air Force Research Lab. (United States); **Delia J. Milliron**, Univ. of Michigan (United States); **Daniel Wasserman**, The Univ. of Texas at Austin (United States)

14075-42 • 9:15 - 9:30

Broadband terahertz holography using nonlinear plasmonic metasurfaces

Author(s): **Zixian Hu, Guixin Li**, Southern Univ. of Science and Technology (China)

14075-43 • 9:30 - 10:00

New platforms for active and tunable metasurfaces (*Invited Paper*)

Author(s): **Uriel Levy**, The Hebrew Univ. of Jerusalem (Israel)

14075-44 • 10:00 - 10:15

Electrical modulation of excitonic strong coupling and electroluminescence in plasmonic nanocavities

Author(s): **Alexey V. Krasavin**, King's College London (United Kingdom); **Junsheng Zheng, Lufang Liu, Ruoxue Yang, Zhenxin Wang**, Zhejiang Univ. (China); **Anatoly V. Zayats**, King's College London (United Kingdom); **Limin Tong, Pan Wang**, Zhejiang Univ. (China)

Coffee Break 10:15 - 10:45

SESSION 10: CHIRAL, BIANISOTROPIC AND HYPERBOLIC METAMATERIALS

15 April 2026 • 10:45 - 12:15 | Etoile C (Niveau/Level 1)

Session Chair(s): **Uriel Levy**, The Hebrew Univ. of Jerusalem (Israel)

14075-56 • 10:45 - 11:15

Quasi-Bound States in the Continuum in bianisotropic optical metasurfaces (*Invited Paper*)

Author(s): **Ana Díaz-Rubio, Luis Máñez-Espina**, Univ. Politècnica de València (Spain); **Bahman Amrahi, Viktor Asadchy**, Aalto Univ. (Finland)

14075-57 • 11:15 - 11:30

Experimental demonstration of an optical magnetoelectric nonreciprocal metasurface

Author(s): **Shadi Safaei Jazi**, Aalto University (Finland); **Ihar Faniayeu, Rafael Cichelero**, Göteborgs Univ. (Sweden); **Nikolai Kuznetsov, Sebastiaan van Dijken**, Aalto Univ. (Finland); **Shanhui Fan**, Stanford Univ. (United States); **Alexandre Dmitriev**, Göteborgs Univ. (Sweden); **Viktor Asadchy**, Aalto Univ. (Finland)

14075-58 • 11:30 - 11:45

Inverse-designed superchiral cavity for enantioselective detection

Author(s): **Anastasia M. Romashkina**, Friedrich Schiller University Jena (Germany); **Omer Yesilurt**, **Owen Matthiessen**, **Vahagn Mkhitarian**, Purdue University (United States); **Min Jiang**, Leibniz Institute of Photonic Technology (Germany); **Evgeny Lyubin**, **Bayarjargal N. Tugchin**, **Isabelle Staude**, Friedrich Schiller University Jena (Germany); **Jer-Shing Huang**, Leibniz Institute of Photonic Technology (Germany); **Thomas Pertsch**, Friedrich Schiller University Jena (Germany); **Alexander V. Kildishev**, Purdue University (United States)

14075-59 • 11:45 - 12:00

Self-Assembled hyperbolic metasurfaces for spontaneous emission control

Author(s): **Angelo Angelini**, **Irdi Murataj**, **Eleonora Cara**, Istituto Nazionale di Ricerca Metrologica (Italy); **Mateo Rosero Realpe**, Politecnico di Torino (Italy); **Federico Ferrarese Lupi**, **Luca Boarino**, Istituto Nazionale di Ricerca Metrologica (Italy)

14075-60 • 12:00 - 12:15

Mid-Infrared Anisotropic Plasmonics with Geometrically Diluted Ultrathin Gold Films

Author(s): **Zarko Sakotic**, University of Texas at Austin (United States); **Noah E. Mansfield**, **Hee Gon Kim**, The Univ. of Texas at Austin (United States); **Monica Allen**, **Jeffery Allen**, Air Force Research Lab. (United States); **Daniel Wasserman**, The Univ. of Texas at Austin (United States)

Lunch/Exhibition Break 12:15 - 13:30

SESSION 11: METAMATERIALS FOR METROLOGY AND SENSING

15 April 2026 • 13:30 - 15:30 | Etoile C (Niveau/Level 1)

Session Chair(s): **Ana Díaz-Rubio**, Univ. Politècnica de València (Spain)

14075-51 • 13:30 - 14:00

Resonant metasurface scatterometry for sensing and metrology from a Fisher information perspective *(Invited Paper)*

Author(s): **Femius Koenderink**, AMOLF (Netherlands); **Nick Feldman**, Advanced Research Ctr. for Nanolithography (Netherlands), AMOLF (Netherlands); **Lyubov Amitonova**, Advanced Research Ctr. for Nanolithography (Netherlands)

14075-52 • 14:00 - 14:15

Experimental comparison of rectangular vs elliptical meta-atoms for polarimetry in the telecom waveband

Author(s): **JAMES M. DALY**, University of Glasgow (United Kingdom); **David R.S. Cumming**, Univ. of Glasgow (United Kingdom)

14075-53 • 14:15 - 14:45

Metasurfaces as an underpinning technology for Industry 4.0 applications *(Invited Paper)*

Author(s): **Andrew J. Henning**, **Daniel Townend**, **Pengqian Yang**, **James Williamson**, **Dawei Tang**, **Haydn Martin**, **Xiang Jiang**, Univ. of Huddersfield (United Kingdom)

14075-54 • 14:45 - 15:00

Combinatorial optical tweezers using grating couplers and metalenses

Author(s): **Artemios Karvounis**, Ansys part of Synopsys (Greece); **Tiziana Bertoncelli**, Ansys, part of Synopsys, Inc. (Germany); **Greg Baethge**, Ansys, part of Synopsys, Inc. (France)

14075-55 • 15:00 - 15:30

Plasmonic metasurface arrays as artificial "taste buds" for point-of-need liquid sensing in industrial settings *(Invited Paper)*

Author(s): **Alasdair W. Clark**, **Justin Sperling**, **Finlay Walton**, **William Peveler**, **Caroline Gauchotte-Lindsay**, **Baptiste Poursat**, **Daniel Osborne**, **Liam Wilson**, Univ. of Glasgow (United Kingdom)

Coffee Break 15:30 - 16:00

SESSION 12: METAMATERIALS FOR MANIPULATING COMPLEX BEAMS AND POLARIZATION

15 April 2026 • 16:00 - 17:45 | Etoile C (Niveau/Level 1)

Session Chair(s): **Isabelle Staude**, Friedrich-Schiller-Univ. Jena (Germany)

14075-45 • 16:00 - 16:30

Meta-Fibers: a platform combining metasurfaces and optical fibers through 3D nanoprining *(Invited Paper)*

Author(s): **Markus A. Schmidt**, **Tim Stechel**, **Bennet Fischer**, **Matthias Zeisberger**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14075-46 • 16:30 - 16:45

Combining Local-Nonlocal Metasurfaces for Broadband Angular Control

Author(s): **Shany Z. Cohen**, Bar-Ilan Univ (Israel); **Luna Sinistky**, Bar-Ilan Univ. (Israel); **Sukanta Nandi**, Indraprastha Institute of Information Technology (India); **Leeju Singh**, **Amos Sharoni**, **Tomer Lewi**, Bar-Ilan Univ. (Israel)

14075-47 • 16:45 - 17:00

Mechanically reconfigurable piezoelectric–plasmonic polymer metasurfaces for SERS and fluorescence sensing

Author(s): Eni Kume, Aeshah Farhan M. Alotaibi, Rongcheng Gan, Ghadeer Almohammadi, James H. Rice, Univ. College Dublin (Ireland)

14075-48 • 17:00 - 17:15

Reversal asymmetry of reciprocal metasurface enables ultra-compact varifocal reflective lens

Author(s): Christopher A. Dirdal, Jesil Jose, Firehun Tsige Dullo, Grégory Bouquet, Paul Thrane, Zeljko Skokic, SINTEF (Norway);

Johannes Skaar, Univ. of Oslo (Norway)

14075-49 • 17:15 - 17:30

UV-compatible reflective Mie void metasurfaces

Author(s): Serkan Arslan, Julian Schwab, Harald Giessen, Mario Hentschel, Univ. Stuttgart (Germany)

14075-50 • 17:30 - 17:45

All-optical ultrafast polarization switching with nonlinear plasmonic metasurfaces

Author(s): Heng Wang, Guixin Li, Southern Univ. of Science and Technology (China)

CONFERENCE 14076

Nanophotonics XI

12 - 16 April 2026 | Auditorium Schweitzer (Niveau/Level 0)

Conference Chair(s): David L. Andrews, Univ. of East Anglia (United Kingdom); Angus J. Bain, Univ. College London (United Kingdom); Antonio Ambrosio, Istituto Italiano di Tecnologia (Italy)

Program Committee: Sophie Brasselet, Institut Fresnel (France); Michele Celebrano, Politecnico di Milano (Italy); Raul de Oliveira Freitas, Lab. Nacional de Luz Sincrotron (Brazil); Itai Epstein, Tel Aviv Univ. (Israel); Robert Fickler, Tampere Univ. (Finland); Céline Fiorini-Debuisschert, Commissariat à l'Énergie Atomique (France); Kayn A. Forbes, Univ. of East Anglia (United Kingdom); Vincent Ginis, Vrije Univ. Brussel (Belgium); Christoph Lienau, Carl von Ossietzky Univ. Oldenburg (Germany); Raúl J. Martín-Palma, Univ. Autónoma de Madrid (Spain); Dorota A. Pawlak, ENSEMBLE3 sp. z o.o. (Poland); Jean-Luc Pelouard, Ctr. de Nanosciences et de Nanotechnologies (France); Monika Ritsch-Marte, Medizinische Univ. Innsbruck (Austria); Cesare Soci, Nanyang Technological Univ. (Singapore); Anatoly V. Zayats, King's College London (United Kingdom)

Sunday 12 April 2026

SESSION 1: STRUCTURED LIGHT AND CHIRALITY I

12 April 2026 • 13:40 - 14:50 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): David L. Andrews, Univ. of East Anglia (United Kingdom)

14076-1 • 13:40 - 14:10

Three-Dimensional Spin Skyrmions at Vortex Cores of Electromagnetic and Acoustic Waves (*Invited Paper*)

Author(s): Andrei Afanasev, The George Washington Univ. (United States)

14076-2 • 14:10 - 14:30

Tunable spatio-spectral and spatiotemporal topological beam shaping from liquid crystals

Author(s): Camila Castillo Pinto, Lab. Ondes et Matière d'Aquitaine, Univ. de Bordeaux (France); Sophie Vo, The Institute of Optics, Univ. of Rochester (United States); Etienne Brasselet, Lab. Ondes et Matière d'Aquitaine, Univ. de Bordeaux (France); Miguel Alonso, The Institute of Optics, Univ. of Rochester (United States), Institut Fresnel, Centrale Méditerranée, Aix-Marseille Univ. (France)

14076-3 • 14:30 - 14:50

Nonlinear-tensor-driven geometric phase in AlGaAs metasurface

Author(s): Giorgio Guercio, Andrea Gerini, Univ. Paris Cité (France), CNRS (France); Kristina Frizyuk, Costantino De Angelis, Univ. degli Studi di Brescia (Italy); Martina Morassi, Aristide Lemaître, Ctr. de Nanosciences et de Nanotechnologies (France); Luca Carletti, Univ. degli Studi di Brescia (Italy); Giuseppe Leo, Univ. Paris Cité (France), CNRS (France)

Coffee Break 14:50 - 15:20

SESSION 2: OPTOMECHANICS AND PLASMONICS

12 April 2026 • 15:20 - 17:30 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): Andrei Afanasev, The George Washington Univ. (United States)

14076-4 • 15:20 - 15:50

Metaoptics-based optomechanics (*Invited Paper*)

Author(s): Romain Quidant, ETH Zurich (Switzerland)

14076-5 • 15:50 - 16:10

Transverse Optomechanical Interaction Mediated by Mechanically Induced Symmetry Breaking: Hamiltonian Dynamics

Author(s): Lev I. Deych, Queens College (United States), Graduate Center of CUNY (United States); Satyam S. Jha, Queens College (United States), The Graduate Ctr., CUNY (United States)

14076-6 • 16:10 - 16:30

Improving Fisher information flow in picometric optical metrology

Author(s): **Thomas A. Grant, Cheng-Hung Chi, Kevin F. MacDonald, Nikolay I. Zheludev**, Univ. of Southampton (United Kingdom)

14076-7 • 16:30 - 16:50

Ultrathin and conformal ITO nanolayers for nonlinear photonics

Author(s): **Henry Cossey, Jingyi Wu**, King's College London (United Kingdom); **Anton Bykov**, Univ. of Cambridge (United Kingdom); **Mari Napari, Anatoly V. Zayats**, King's College London (United Kingdom)

14076-8 • 16:50 - 17:10

Optimizing Plasmonic Substrates through Advanced FDTD Simulation

Author(s): **Qing Liu**, Vrije Univ Brussel (Belgium); **Sara Abbasi, Heidi Ottevaere**, Vrije Univ. Brussel (Belgium)

14076-9 • 17:10 - 17:30

Transient molecular states revealed through in-situ SERS monitoring of plasmo-catalytic reactions

Author(s): **Dries Maurice, Diptiranjana Paital, Anastasiia Zaleska, Anatoly V. Zayats, David Richards**, King's College London (United Kingdom)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: NANO-BIOSENSING

13 April 2026 • 11:30 - 12:40 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Antonio Ambrosio**, Istituto Italiano di Tecnologia (Italy)

14076-10 • 11:30 - 12:00

Raman sequential readout through nanopores for RNA and protein sequencing (Invited Paper)

Author(s): **Francesco De Angelis**, Istituto Italiano di Tecnologia (Italy)

14076-11 • 12:00 - 12:20

Enhanced photocatalysis and biomolecular sensing with field-activated nanotube-nanoparticle templates

Author(s): **James H. Rice**, Univ. College Dublin (Ireland)

14076-12 • 12:20 - 12:40

Photoacoustic nanoscale biosensing and metrology using lab-fabricated polymer-based high-frequency transducers.

Author(s): **Neelkamal Das**, Indian Institute of Science Education and Research (India); **Aman Aman**, **Nagendra Singh**, **Shivam Rakhoulia**, **Samir Kumar Biswas**, Indian Institute of Science Education and Research Mohali (India)

Lunch Break 12:40 - 14:00

SESSION 4: METASURFACES

13 April 2026 • 14:00 - 15:10 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Antonio Ambrosio**, Istituto Italiano di Tecnologia (Italy)

14076-13 • 14:00 - 14:30

Active organic metasurfaces (*Invited Paper*)

Author(s): **Magnus P. Jonsson**, Linköping Univ. (Sweden)

14076-61 • 14:30 - 14:50

Face on oriented confinement and rotation of a hexagonal disk shaped upconverting particle induced by localised heating at a liquid-liquid interface

Author(s): **Snigdha Chakraborty**, **Rajalingam A.**, **Pallab Sinha Mahapatra**, **Basudev Roy**, Indian Institute of Technology Madras (India)

14076-117 • 14:50 - 15:10

TBA

Coffee Break 15:10 - 15:40

SESSION 5: FABRICATION

13 April 2026 • 15:40 - 17:30 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Magnus Jonsson**, Halmstad Univ. (Sweden)

14076-16 • 15:40 - 16:10

X-ray Optics fabrication: state of art and challenges for current and future applications (*Invited Paper*)

Author(s): **Lucia Romano**, Paul Scherrer Institut (Switzerland)

14076-17 • 16:10 - 16:30

Optical sieve for nanoplastic detection, sizing, and counting - Improved detection efficiency through principal component analysis

Author(s): **Dominik Ludescher**, **Bekim Hisenaj**, University of Stuttgart - 4th Physics Institute (Germany); **Lukas Wesemann**, University of Melbourne - ARC Center of Excellence for Transformative Meta-Optical Systems (TMOS) (Australia); **Julian Schwab**, **Julian Karst**, University of Stuttgart - 4th Physics Institute (Germany); **Shaban B. Sulejman**, University of Melbourne - ARC Center of Excellence for Transformative Meta-Optical Systems (TMOS) (Australia); **Monika Ubl**, University of Stuttgart - 4th Physics Institute (Germany); **Brad O. Clarke**, University of Melbourne - Australian Laboratory for Emerging Contaminants (Australia); **Ann Roberts**, University of Melbourne - ARC Center of Excellence for Transformative Meta-Optical Systems (TMOS) (Australia); **Harald Giessen**, **Mario Hentschel**, University of Stuttgart - 4th Physics Institute (Germany)

14076-18 • 16:30 - 16:50

UV-Nanoimprint Lithography for Nanostructured Surface Enhanced Raman Spectroscopy Substrates

Author(s): **Jesil Jose**, **Firehun T. Dullo**, **Anand Summanwar**, **Zeljko Skokic**, **Elizaveta Vereshchagina**, **Karolina Milenko B. Milenko-Kuszevska**, SINTEF (Norway)

14076-20 • 16:50 - 17:10

Development of functionalized gold nanoparticles with dual optical properties for biomedical imaging

Author(s): **Mahsa Nasehi**, Inselspital, Univ. Bern Hospital, Univ. Bern (Switzerland); **Oya Tagit**, Fachhochschule NordWestschweiz (Switzerland), Univ. Basel (Switzerland); **Lilian Witthauer**, Inselspital, Univ. Bern Hospital, Univ. Bern (Switzerland)

14076-113 • 17:10 - 17:30

Design, testing and applications of optical biomimetic (SiO₂)_x-(TiO₂)_y-(ZrO₂)_z nanocoatings

Author(s): **Myles P. Worsley**, **Paul A. Sermon**, Brunel Univ. London (United Kingdom)

Tuesday 14 April 2026

SESSION 6: OPTICAL RESONANCE AND COMPUTATIONAL NANOPHOTONICS

14 April 2026 • 8:30 - 10:20 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **David L. Andrews**, Univ. of East Anglia (United Kingdom)

14076-21 • 8:30 - 8:50

Design and modeling of far-field and near-field plasmonic switches based on phase change materials for optical switching in the visible and NIR spectral regimes

Author(s): **Yashna Sharma**, Delhi Technological University, Delhi (India); **Anuj Dhawan**, Indian Institute of Technology Delhi (India)

14076-22 • 8:50 - 9:10

Wavelength-Dependent Characteristics of Bessel Beams Produced by Physical and SLM-Based Axicons

Author(s): **Eduard S. Hakobyan**, A.B. Nalbandyan Institute of Chemical Physics of NAS RA (Armenia), Department of General Physics and Quantum Nanostructures, Russian-Armenian University (Armenia); **Arman H. Avetisyan**, **Paytsar Mantashyan**, A.B. Nalbandyan Institute of Chemical Physics of NAS RA (Armenia)

14076-23 • 9:10 - 9:30

Intraband optical absorption in cylindrical quantum dots driven by a non-resonant Bessel beam

Author(s): **Dmitrii Primenko**, Russian-Armenian Univ. (Armenia)

14076-24 • 9:30 - 9:50

Low-defect quantum dot lasers directly grown on silicon analyzed using scanning tunnelling spectroscopy

Author(s): **Konstantinos Papatryfonos**, Institut d'Electronique de Microélectronique et de Nanotechnologie, Univ. de Lille, CNRS (France); **Jean-Christophe Girard**, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France); **Mingchu Tang**, Univ. College London (United Kingdom); **Christophe David**, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France); **Alwyn J. Seeds**, Univ. College London (United Kingdom); **Guillemin Rodary**, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France); **Huiyun Liu**, **David R. Selviah**, Univ. College London (United Kingdom)

14076-25 • 9:50 - 10:20

Identifying intrinsic resonances of optical materials and cavities from their optical spectrum (*Invited Paper*)

Author(s): **Nicolas Bonod**, Institut Fresnel (France)

Coffee Break 10:20 - 10:50

SESSION 7: 2D MATERIALS AND DEVICES I

14 April 2026 • 10:50 - 12:40 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Olga Smirnova**, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany)

14076-26 • 10:50 - 11:20

Exciton-polaritons in van der Waals metasurfaces (*Invited Paper*)

Author(s): **Luca Sortino**, Ludwig-Maximilians-Univ. München (Germany)

14076-27 • 11:20 - 11:50

Broadband visible Purcell enhancement in Hyperbolic MoOCl₂ (*Invited Paper*)

Author(s): **Nicola Melchioni**, Istituto Italiano di Tecnologia (Italy); **Anastasiia Efimova**, Istituto Italiano di Tecnologia (Italy), Politecnico di Milano (Italy); **Andrea Mancini**, **Lin Nan**, **Antonio Ambrosio**, Istituto Italiano di Tecnologia (Italy)

14076-28 • 11:50 - 12:20

Linearly uncoupled resonators for ultrabroadband resonant frequency doubling on chip (*Invited Paper*)

Author(s): **Camille-Sophie Brès**, EPFL (Switzerland)

14076-29 • 12:20 - 12:40

Scalable polymer encapsulation of 2D TMDs for nanophotonic integration

Author(s): **Suprova Das**, Friedrich Schiller University Jena, Max Planck School of Photonics (Germany); **Md Tarik Hossain**, Friedrich Schiller university Jena (Germany); **Zlata Fedorova**, Friedrich Schiller University Jena (Germany); **Zifei Zhang**, Friedrich-Schiller-Univ. Jena (Germany); **Axel Pritschler**, **Andrey Turchanin**, Friedrich Schiller University Jena (Germany); **Isabelle Staude**, Friedrich Schiller University Jena, Max Planck School of Photonics (Germany)

Lunch/Exhibition Break 12:40 - 14:10

SESSION 8: METAMATERIALS AND PLASMONIC DEVICES

14 April 2026 • 14:10 - 16:00 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Anatoly V. Zayats**, King's College London (United Kingdom)

14076-30 • 14:10 - 14:30

Metasurface-controlled high-speed tunable external cavity lasers

Author(s): **Ileana-Cristina Benea-Chelmus**, **Zahra Basiri**, **Alessandro Tomasino**, **Gabriel Juelg**, EPFL (Switzerland)

14076-31 • 14:30 - 14:50

Multi-State Dynamically Switchable Optomechanical Frequency Combs

Author(s): **Xiangming Xu**, Information Support Force Engineering University (China); **Huatao Zhu, Shuwen Chen, Feiyu Li, Xin Zhang**, Information Support Force Engineering Univ. (China)

14076-32 • 14:50 - 15:10

From Nanophotonics to Device Physics: Plasmonic Design in Perovskite Optoelectronics.

Author(s): **Sol Carretero-Palacios**, Univ. Autónoma de Madrid (Spain); **Jaime Bueno, Luisina Forzani**, Instituto de Ciencia de Materiales de Madrid, CSIC (Spain); **Marta Zarzuela**, Univ. Autónoma de Madrid (Spain); **Leo Rosado**, Instituto de Ciencia de Materiales de Madrid, CSIC (Spain); **Alberto Jiménez-Solano**, Univ. de Córdoba (Spain); **Marta Quintanilla**, Univ. Autónoma de Madrid (Spain); **Miguel Anaya**, Univ. de Sevilla (Spain)

14076-33 • 15:10 - 15:30

Acoustoplasmonic Metasurface Design for Tunable Acoustic Wavefront Shaping with Polarized Light

Author(s): **Julia Holland, George M. Zipitis, Saaj Chattopadhyay, Claire Kim, Nicholas Boechler, Lisa Poulikakos**, Univ. of California, San Diego (United States)

14076-34 • 15:30 - 16:00

Fano Resonances and Plasmon-Exciton Coupling in Layered Structures *(Invited Paper)*

Author(s): **Zouheir Sekkat**, Moroccan Foundation for Advanced Science, Innovation and Research (Morocco), The Institute for Advanced Studies (Morocco)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 9: STRUCTURED LIGHT AND CHIRALITY II

15 April 2026 • 8:30 - 10:30 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Isaac M. Nape**, Univ. of the Witwatersrand, Johannesburg (South Africa)

14076-35 • 8:30 - 8:50

Advanced near-field optical microscopy for the discovery of Moiré spin superlattices and beyond

Author(s): **Peng Shi**, Shenzhen Univ. (China)

14076-36 • 8:50 - 9:20

Enantio-sensitive Molecular Compass as a Fundamental Mechanism of CISS *(Invited Paper)*

Author(s): **Olga Smirnova**, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany), Technische Univ. Berlin (Germany)

14076-37 • 9:20 - 9:40

First principles optical response of the electron gas

Author(s): **David Trejo Garcia, Juha Tiihonen, Tapio T. Rantala, Marco Ornigotti**, Tampere Univ. (Finland)

14076-38 • 9:40 - 10:00

InAs/GaAs QD bilayers for independent control of wavelength and density

Author(s): **Ronel Christian I. Roca, Itaru Kamiya**, Toyota Technological Institute (Japan)

14076-39 • 10:00 - 10:30

Visible-range hyperbolic photonics in a natural anisotropic crystal *(Invited Paper)*

Author(s): **Andrea Mancini, Nicola Melchioni, Giacomo Venturi, Lin Nan, Anastasiia Efimova, Stefano Chiodini, Antonio Ambrosio**, Ctr. for Nano Science & Technology, Istituto Italiano di Tecnologia (Italy)

Coffee Break 10:30 - 11:00

SESSION 10: STRUCTURED LIGHT AND CHIRALITY III

15 April 2026 • 11:00 - 12:30 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Antonio Ambrosio**, Istituto Italiano di Tecnologia (Italy)

14076-40 • 11:00 - 11:30

Paraxial spin-orbit interactions as a resource for spin-hall effects and information engines *(Invited Paper)*

Author(s): **Isaac M. Nape**, Univ. of the Witwatersrand, Johannesburg (South Africa)

14076-41 • 11:30 - 11:50

Robust optical topologies through real world channels

Author(s): **Cade Ribeiro Peters**, University of the Witwatersrand (South Africa); **Kelsey Everts**, Univ. of the Witwatersrand, Johannesburg (South Africa); **Vagharshak Hakobyan**, Univ. de Bordeaux (France), CAILabs (France); **Pedro Ornelas, Alice Drozdov, Tatjana Kleine**, Univ. of the Witwatersrand, Johannesburg (South Africa); **Etienne Brasselet**, Univ. de Bordeaux (France); **Mitchell Cox, Andrew Forbes**, Univ. of the Witwatersrand, Johannesburg (South Africa)

14076-42 • 11:50 - 12:10

Emergence of complex space-time singularities in ultrashort Laguerre-Gaussian beams with spatial chirp

Author(s): **Spencer W. Jolly**, Univ. Libre de Bruxelles (Belgium); **Miguel A. Porras**, Univ. Politécnica de Madrid (Spain)

14076-43 • 12:10 - 12:30

Topological reconfiguration of full Poincaré beams via spin-decoupled metasurfaces

Author(s): **Gianluca Ruffato, Andrea Vogliardi, Daniele Bonaldo, Vittorio Apolloni**, University of Padova (Italy), MetaPhoX S.r.l. (Italy); **Simone Dal Zilio**, Istituto Officina dei Materiali, Consiglio Nazionale delle Ricerche (Italy), MetaPhoX S.r.l. (Italy); **Filippo Romanato**, University of Padova (Italy), MetaPhoX S.r.l. (Italy)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 11: 2D MATERIALS AND DEVICES II

15 April 2026 • 14:00 - 15:10 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Andrea Mancini**, Istituto Italiano di Tecnologia (Italy)

14076-44 • 14:00 - 14:30

Ultrafast coherent polariton dynamics investigated by two-dimensional electronic spectroscopy *(Invited Paper)*

Author(s): **Daniel Timmer**, Carl von Ossietzky Univ. Oldenburg (Germany)

14076-45 • 14:30 - 14:50

Symmetry breaking of spectrally non-degenerate modes in an integrated microresonator

Author(s): **Arghadeep Pal, Alekhya Ghosh**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Luca Trinchão**, State University of Campinas (Brazil), Max Planck Institute for the Science of Light (Germany); **Haochen Yan**, Max-Planck-Institut für die Physik des Lichts (Germany); **Toby Bi**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Shuangyou Zhang**, Technical Univ. of Denmark (Denmark); **Nathalia Tomazio**, Univ. de São Paulo (Brazil); **Flore Kunst**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Lewis Hill**, Max-Planck-Institut für die Physik des Lichts (Germany); **Gustavo Wiederhecker**, Univ. of Campinas (Brazil); **Pascal Del'Haye**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14076-47 • 14:50 - 15:10

Single photon emitters in carbon-doped hexagonal Boron Nitride

Author(s): **Sofiya Karankova**, Center for Quantum Technology, Korea Institute of Science and Technology (Korea, Republic of), Division of Nanomaterials Science and Engineering, University of Science and Technology (Korea, Republic of); **Kenji Watanabe**, Research Center for Electronic and Optical Materials, National Institute for Materials Science (Japan); **Takashi Taniguchi**, Research Center for Materials Nanoarchitectonics, National Institute for Materials Science (Japan); **Yong-Won Song, Hyowon Moon**, Center for Quantum Technology, Korea Institute of Science and Technology (Korea, Republic of), Nanoscience and Technology, University of Science and Technology (Korea, Republic of)

Coffee Break 15:10 - 15:50**SESSION 12: NANOCAVITIES**

15 April 2026 • 15:50 - 17:20 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Nicola Melchioni**, Istituto Italiano di Tecnologia (Italy)

14076-48 • 15:50 - 16:20

Spectral Shaping of NV Center Emission Using Hybrid Plasmonic-Photonic Cavities (*Invited Paper*)*Author(s):* **Rajesh V. Nair**, IIT Ropar (India); **Nitesh Singh**, Indian Institute of Technology Ropar (India)

14076-49 • 16:20 - 16:40

nanometer-scale cavities for mid-infrared radiation via image phonon polariton resonators*Author(s):* **Michael Klein**, Tel Aviv University (Israel); **Yonathan Gershuni**, Alisa Perutski, Tel Aviv Univ. (Israel); **Jean-Paul Hugonin**, Univ. Paris-Saclay, CNRS (France); **Itai Epstein**, Tel Aviv Univ. (Israel)

14076-50 • 16:40 - 17:00

Geometry-induced enhancement and tunability of silver nanocube-SiC phonon-polariton cavities*Author(s):* **Alisa Perutski**, **Michael Klein**, Tel Aviv University (Israel); **Jean-Paul Hugonin**, Universite Paris-Saclay (France); **Itai Epstein**, Tel Aviv University (Israel)

14076-51 • 17:00 - 17:20

Origin of microsphere cavity surface roughness linked to capillary wave fluctuations*Author(s):* **Abhishek Sureshkumar**, **Georges Perin**, **Helene Ollivier**, **Yannick Dumeige**, Univ. de Rennes (France); **Julien Lapeyre**, **Rozenn Bernard**, Institut National des Sciences Appliquées de Rennes (France); **Kelig Terrien**, **Adil Haboucha**, **Bertrand Dudoux**, Photonics Bretagne (France); **Stéphane Trebaol**, Univ. de Rennes (France)**POSTERS-WEDNESDAY**

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrsPoster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14076-52 • 17:45 - 19:30

Cavity-enhanced organic single-photon emitters*Author(s):* **Margarita Anna Zommere**, Institute of Solid State Physics, Univ. of Latvia (Latvia); **Maja Colautti**, **Elena Fanella**, **Rocco Duquennoy**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy); **Sven Burger**, **Fridtjof Betz**, Zuse Institute Berlin (Germany); **Elisabetta Rosadoni**, **Andrea Ottomaniello**, **Virgilio Mattoli**, Istituto Italiano di Tecnologia (Italy); **Costanza Toninelli**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy)

14076-57 • 17:45 - 19:30

Importance of pure dephasing in the optical response of excitons in high-quality van der Waals heterostructures*Author(s):* **Anabel Atash Kahlon**, **Matan Meshulam**, **Tomer Eini**, Tel Aviv Univ. (Israel); **Thomas Poirier**, **James H. Edgar**, Kansas State Univ. (United States); **Seth A. Tongay**, Arizona State Univ. (United States); **Itai Epstein**, Tel Aviv Univ. (Israel)

14076-58 • 17:45 - 19:30

Rapid detection of ciprofloxacin in milk based on SPR molecular imprinting technology combined with AI*Author(s):* **Bing Zhang**, Zhejiang Univ. (China)

14076-60 • 17:45 - 19:30

Size-dependent spectroscopic investigation of folic acid and citrate-stabilized gold nanoparticles*Author(s):* **Jyoti G. Nagalik**, Karnatak University Dharwad (India), Karnatak University Dharwad (India); **Sanjeev R. Inamdar**, Karnatak Univ. Dharwad (India)

14076-62 • 17:45 - 19:30

Investigation on the photoluminescence quenching of NaBiF₄, Er³⁺, Yb³⁺ particles with two infrared wavelengths, 975nm and 1064nm*Author(s):* **Atanu Ghosh**, **Krishna Kumari Swain**, **Snigdha Chakraborty**, **Siddharth Dhomkar**, **Basudev Roy**, Indian Institute of Technology Madras (India)

14076-63 • 17:45 - 19:30

Roll-rotation of a hexagonal shaped upconverting microparticle in multiple hydro-thermophoretic traps

Author(s): **Mrutyunjaya Rath, Snigdha Chakraborty, Basudev Roy**, Indian Institute of Technology Madras (India)

14076-65 • 17:45 - 19:30

Finite element modeling of charge dynamics and optical responses in type-I CdSe/ZnS nanodisk heterostructures

Author(s): **Anna Melkonyan**, A.B. Nalbandyan Institute of Chemical Physics, 5/2 Paruyr Sevak St., Yerevan 0014, Armenia (Armenia), Department of General Physics and Quantum Nanostructures, Russian-Armenian University, 123 H. Emin, Yerevan 0051, Armenia (Armenia)

14076-66 • 17:45 - 19:30

Numerical modeling of near-field to far-field emission evolution of CdSe/ZnS core/crown nanodisk arrays

Author(s): **Grigor A. Mantashyan**, AB Nalbandyan Institute of Chemical Physics (Armenia)

14076-67 • 17:45 - 19:30

Self-focusing special beam generation in hyperbolic media

Author(s): **Yueqian Zhang, Haotian Wu, Chongwu Wang**, Nanyang Technological Univ. (Singapore); **Guanghui Yuan**, Univ. of Science and Technology of China (China); **Linyang Zou**, Nanyang Technological Univ. (Singapore); **Qian Wang**, A*STAR Agency for Science, Technology and Research (Singapore); **Qi Jie Wang**, Nanyang Technological Univ. (Singapore); **Yu Luo**, Nanjing Univ. of Aeronautics and Astronautics (China)

14076-68 • 17:45 - 19:30

Intraband Transitions and Absorption Spectra in CdSe Boomerang-shaped Quantum Dots

Author(s): **Ernest Vardanyan**, Russian-Armenian Univ. (Armenia)

14076-69 • 17:45 - 19:30

Theoretical Investigation of excitonic complexes and optical properties in spherical InP quantum dots

Author(s): **Sargis Gavalajyan**, Russian-Armenian Univ. (Armenia), Univ. of Patras (Greece)

14076-70 • 17:45 - 19:30

Hybrid photonic-plasmonic dual-cavity substrates for efficient SERS applications

Author(s): **Jagathpriya L M, Shourya Dutta-Gupta**, Indian Institute of Technology Hyderabad (India)

14076-71 • 17:45 - 19:30

Integration of FDTD Simulation and Experimental Realization of Metal-Insulator-Metal Honeycomb Array for Plasmon Enhanced Raman Sensing of Pesticide Residues

Author(s): **Sümeysra Vural Kaymaz**, Sabanci University (Turkey); **Hasan Kurt**, Imperial College London (United Kingdom); **Meral Yüce Kurt**, Sabanci Univ. (Turkey)

14076-72 • 17:45 - 19:30

Single-interferogram wide-field Bayesian analysis for geometrical characterization of nanophotonic elements

Author(s): **Damian Suski**, Warsaw University of Technology (Poland); **Maria Cywińska, Julianna Winnik, Michał Józwiak, Piotr Zdańkowski**, Warsaw Univ. of Technology (Poland); **Azeem Ahmad, Balpreet S. Ahluwalia**, UiT The Arctic Univ. of Norway (Norway); **Maciej Trusiak**, Warsaw Univ. of Technology (Poland)

14076-73 • 17:45 - 19:30

Ellipticity-resilient plasmonic meron lattices: Poincaré-sphere selection rule

Author(s): **Anand Hegde, Komal Gupta, Chenbin Huang**, National Tsing Hua Univ. (Taiwan)

14076-74 • 17:45 - 19:30

Metasurfaces for designing Cassegrain-type optical systems

Author(s): **Qichang Ma**, Southern University of Science and Technology (China); **Xing Wen, Xuan Liu, Guixin Li**, Southern Univ. of Science and Technology (China)

14076-75 • 17:45 - 19:30

Interband absorption in double GaAs/Ga_{1-x}Al_xAs quantum dots

Author(s): **Gyulnara Khachatryan**, A.B. Nalbandyan Institute of Chemical Physics (Armenia)

14076-76 • 17:45 - 19:30

Colloidal quantum dots BIC laser on a quartz substrate

Author(s): **Hyeonjeong Kang, Jaewon Jang**, Chungnam National Univ. (Korea, Republic of); **Duk-Yong Choi**, The Australian National Univ. (Australia); **Yeonsang Park**, Chungnam National Univ. (Korea, Republic of)

14076-77 • 17:45 - 19:30

Surface Plasmon Polariton Neural Network for Broadband Computing

Author(s): **Komal Gupta, Anand Hegde, Wei-Hsiang Shen, Meng-Lin Li, Chen-Bin Huang**, National Tsing Hua Univ. (Taiwan)

14076-78 • 17:45 - 19:30

P-type organic semiconductor – metal nanoparticle hybrid film for the enhancement of Raman and Fluorescence detection

Author(s): Rongcheng Gan, James H. Rice, Dominik Duleba, Robert Johnson, Univ. College Dublin (Ireland)

14076-79 • 17:45 - 19:30

Turbulence effects in optical vortex: experimental generation and analysis via holographic techniques

Author(s): George B. Reis, Univ. Federal do ABC (Brazil); Rafael A. Bonilla Suarez, Univ. Santiago de Cali (Colombia); Marcos R. R. Gesualdi, Univ. Federal do ABC (Brazil)

14076-80 • 17:45 - 19:30

Scalable reproduction of Plasmonic Quasicrystals via thermal Nanoimprint Lithography for label-free detection of Cotinine

Author(s): Deepak Kumar, Sibashish Chakraborty, Satish Kumar Dubey, Indian Institute of Technology Delhi (India)

14076-81 • 17:45 - 19:30

Multiscale structuring with MacEtch for silicon-based photonics

Author(s): Bryan Peter Jost Benz, PSI (Switzerland), University of Basel (Switzerland); Marco Stampanoni, Paul Scherrer Institut (Switzerland), ETH Zurich (Switzerland); Lucia Romano, Paul Scherrer Institut (Switzerland)

14076-82 • 17:45 - 19:30

Prism-coupled planar Fano resonance device as a compact tunable monochromator

Author(s): Arnab Das, Ben-Gurion Univ. of the Negev (Israel); Susana Isabel Pinheiro Cardoso de Freitas, Instituto Superior Técnico, Univ. de Lisboa (Portugal), INESC MN (Portugal); Ibrahim Abdulhalim, Ben-Gurion Univ. of the Negev (Israel), Ilse Katz Institute for Nanoscale Science & Technology, Ben-Gurion Univ. of the Negev (Israel)

14076-83 • 17:45 - 19:30

Easily-Bored aperiodic diffractive lenses

Author(s): Arlen B. Pérez-Hernández, Adrián Garmendía-Martínez, Juan Castro-Palacio, Universitat Politècnica de València (Spain); Walter Furlan, Universitat de València (Spain); Juan Monsoriu, Universitat Politècnica de València (Spain); Francisco Muñoz-Pérez, Universitat Politècnica de València (Spain), Universidad Politécnica de Tulancingo (Mexico)

14076-84 • 17:45 - 19:30

Polarization control and measurement of Smith Purcell radiation

Author(s): Feiyan Zhao, Zahava Barkay, Ady Arie, Tel Aviv Univ. (Israel)

14076-85 • 17:45 - 19:30

Design of a Large Depth of Focus Metalens by Controlling the Amplitude, Phase, and Polarization of Light.

Author(s): Ramnishanth S., Tapajyoti Das Gupta, Indian Institute of Science, Bengaluru (India)

14076-86 • 17:45 - 19:30

In-Plane Hyperbolic Phonon Polaritons in Far-Field

Author(s): Rohit Kumar, Indian Institute of Technology Bombay (India)

14076-87 • 17:45 - 19:30

Electronic structure and interband optical transitions in dumbbell quantum dots

Author(s): Narek Yengibaryan, Russian-Armenian Univ. (Armenia), Univ. of Patras (Greece)

14076-88 • 17:45 - 19:30

Analytic-numerical framework for intraband optical properties of lens-shaped quantum dots

Author(s): Davit Gevorgyan, Russian Armenian University (Armenia)

14076-89 • 17:45 - 19:30

Fabrication approach for all-diamond nano-cavity structures in submicron membranes

Author(s): Kilian Mark, Jan Fait, Christoph Becher, Univ. des Saarlandes (Germany)

14076-91 • 17:45 - 19:30

Efficient single-photon nonlinearity in a strongly coupled quantum dot–nanobeam cavity

Author(s): Abhijit Biswas, Neelesh Kumar Vij, Univ. of Maryland, College Park (United States); Allan S. Bracker, U.S. Naval Research Lab. (United States); Edo Waks, Univ. of Maryland, College Park (United States)

14076-92 • 17:45 - 19:30

Low-loss silicon nitride photonics: a process for unlocking high-performance nonlinear optics

Author(s): Maria Camila Diaz Sanchez, Center of Nanosciences and Nanotechnologies (France); Yijun Yang, Sebastian Alvarez Ortega, Etienne Herth, David Bouville, Daniele Melati, Carlos Alonso Ramos, Delphine Marris-Morini, Laurent Vivien, Eric Cassan, Ctr. de Nanosciences et de Nanotechnologies (France)

14076-93 • 17:45 - 19:30

Structured Light Beams via Holographic Techniques: experimental generation, characterization, and applications in optical instrumentation systems

Author(s): **Marcos R. R. Gesualdi**, Univ. Federal do ABC (Brazil); **Rafael A. Bonilla Suarez**, Univ. Santiago de Cali (Colombia); **Tarcio A. Vieira**, Univ. de São Paulo (Brazil); **George B. Reis**, **Indira S. Vargas Yepes**, Univ. Federal do ABC (Brazil)

14076-94 • 17:45 - 19:30

2D exciton coupling with nano plasmonic system

Author(s): **Xiaoyi Zhou**, **Carmen M. Ruiz**, **Pauline Bennet**, **Denis Langevin**, Aix Marseille Univ, CNRS, Université de Toulon, IM2NP, UMR 7334, F-13397 Marseille, France (France); **Beniamino Sciacca**, Aix Marseille Université, CNRS, CINAM UMR 7325, Marseille, France (France); **David Duché**, Aix Marseille Univ, CNRS, Université de Toulon, IM2NP, UMR 7334, F-13397 Marseille, France (France)

14076-95 • 17:45 - 19:30

Nanometer-precision tracking of adipocyte dynamics via single lipid droplet whispering-gallery optical resonances

Author(s): **Rok Podlipec**, **Ana Krišelj**, **Petra Matjan Štefin**, Jožef Stefan Institute (Slovenia); **Siegfried Usaar**, Helmholtz Zentrum München GmbH (Germany); **Matjaž Humar**, Jožef Stefan Institute (Slovenia), CENN Nanocenter (Slovenia), University of Ljubljana (Slovenia)

14076-96 • 17:45 - 19:30

Structural color for automotive signaling

Author(s): **Manèle Chouiter**, Valeo (France), Lab. de Physicochimie des Polymères et des Interfaces (LPPI), CY Cergy Paris Univ. (France); **Fengdi Li**, **Hafid El-Hidrisi**, **Eduardo Alvear**, Valeo Light (France); **Xavier Sallenave**, Laboratoire de Physico-chimie des Polymères et des Interfaces (LPPI), CY Cergy Paris Université (France)

14076-97 • 17:45 - 19:30

Continuous-Wave Lasing in Perovskite LEDs with an Integrated Distributed Feedback Resonator

Author(s): **Jingmin Wang**, Nanjing Tech Univ. (China)

14076-98 • 17:45 - 19:30

Vortex Beam Generation Using Metamaterials for Chiral Particle Trapping and Manipulation

Author(s): **Hania Altabbaa**, **Viet Giang Truong**, **Fathy Hassan**, Okinawa Institute of Science and Technology Graduate Univ. (Japan); **Yeon Ui Lee**, Chungnam National Univ. (Korea, Republic of); **Christine Luscombe**, **Sile Nic Chormaic**, Okinawa Institute of Science and Technology Graduate Univ. (Japan)

14076-99 • 17:45 - 19:30

Cavity optomechanics in MoS₂ micro-drum resonators

Author(s): **Julia García-Pérez**, **Daniel Granados**, **Ramón Bernardo-Gavito**, IMDEA Nanociencia (Spain)

14076-100 • 17:45 - 19:30

Impact of Sn composition on exciton binding energy in SiGeSn/GeSn multiquantum wells

Author(s): **Tim Hartmann**, **Alan Abdi**, **Dirk Schulz**, TU Dortmund University (Germany)

14076-101 • 17:45 - 19:30

Silicon Integrated Infrared Lasers using Colloidal Quantum Dots

Author(s): **Guy L. Whitworth**, **Jingyi Wu**, **Henry Cossey**, **Yoel Negrin**, **Mark Green**, **Anatoly V. Zayats**, King's College London (United Kingdom)

14076-102 • 17:45 - 19:30

Coupled SERS-quartz crystal microbalance with dissipation measurements for enhanced detection of DNA viscoelasticity and raman spectral features

Author(s): **Vlad Cucuiet**, Univ. Babes-Bolyai (Romania), Interdisciplinary Research Institute in Bio-Nano-Sciences, Nanobiophotonics (Romania); **Dana Maniu**, Univ. Babes-Bolyai (Romania); **Simion Astilean**, Univ. Babes-Bolyai (Romania), Institutul de Cercetări Interdisciplinare în Bio-Nano-Științe (Romania); **Marc Lamy de la Chapelle**, Institut des Molécules et Matériaux du Mans, Le Mans Univ. (France), Univ. Babes-Bolyai (Romania); **Monica Focsan**, Univ. Babes-Bolyai (Romania), Institutul de Cercetări Interdisciplinare în Bio-Nano-Științe (Romania)

14076-103 • 17:45 - 19:30

Metasurface-enabled polarization-selective vortex beams through Bloch Surface Waves diffraction

Author(s): **Zongyuan Tang**, Politecnico di Torino (Italy), Southern Univ. of Science and Technology (China); **Niccolò Marcucci**, Istituto di Fisica Applicata "Nello Carrara" (Italy); **YanJun Liu**, Southern Univ. of Science and Technology (China); **Matthieu Roussey**, **Tianlong Guo**, Univ. of Eastern Finland (Finland); **Emiliano Descrovi**, Politecnico di Torino (Italy)

14076-104 • 17:45 - 19:30

Characterization of high-power-excited CdSe/CdS quantum dots for spectroscopy and photonics

Author(s): **Fengzhi GU**, Laboratoire de Physique et d'Etude des Matériaux - ESPCI Paris PSL (France), Institut des Nanosciences de Paris - Sorbonne Université (France); **Damien Simonot**, Institut des Nanosciences de Paris - Sorbonne Université (France); **Amit Raj Dhawan**, Institut des Nanosciences de Paris - Sorbonne Université (France), Department of Physics, University of Oxford (United Kingdom); **Hugo Saint-Olive**, Institut des Nanosciences de Paris - Sorbonne Université (France); **Céline Roux-Byl**, Lab. de Physique et d'Etude des Matériaux (France); **Willy Daney de Marcillac**, Institut des Nanosciences de Paris - Sorbonne Université (France); **Thomas Pons**, Laboratoire de Physique et d'Etude des Matériaux - ESPCI Paris PSL (France); **Agnès Maître**, Institut des Nanosciences de Paris - Sorbonne Université (France)

14076-105 • 17:45 - 19:30

Bioinspired Approaches to Infrared Management and Thermal Protection

Author(s): **Amandine Marchand**, Univ. de Mons (Belgium); **Kevin Delmote**, **Olivier Deparis**, Univ. de Namur (Belgium); **Sébastien R. Mouchet**, Univ. de Mons (Belgium), Univ. of Exeter (United Kingdom), Univ. de Namur (Belgium)

14076-106 • 17:45 - 19:30

Designing H1, L2 and L3 photonic crystal cavities to reach Q-factors above 1e5 with controlled frequencies and far-field coupling

Author(s): **Wolfgang W. Langbein**, **Nadhia Monim**, **Amit Nilabh**, **Francesco Masia**, Cardiff Univ. (United Kingdom)

14076-107 • 17:45 - 19:30

Room-temperature exciton-polaritons in R6G/polymer Fabry-Pérot microcavities

Author(s): **Andrea Betti**, Univ. degli Studi di Firenze (Italy); **Eleonora Cara**, Istituto Nazionale di Ricerca Metrologica (Italy); **Giulia Serrano**, Univ. degli Studi di Firenze (Italy); **Natascia de Leo**, Istituto Nazionale di Ricerca Metrologica (Italy); **Alessia Valzelli**, **Paolo Bartolini**, Univ. degli Studi di Firenze (Italy); **Andrea Taschin**, Istituto Nazionale di Ottica (Italy); **Renato Torre**, Univ. degli Studi di Firenze (Italy); **Alice Boschetti**, Istituto Nazionale di Ricerca Metrologica (Italy)

14076-108 • 17:45 - 19:30

Beyond optical chirality density: tensor descriptors of electromagnetic chirality in anisotropic media

Author(s): **Iliia Smagin**, **Sergey Dyakov**, Skolkovo Institute of Science and Technology (Russian Federation)

14076-109 • 17:45 - 19:30

Arrested rotation of plasmonic optical matter driven by chiral light

Author(s): **Ashutosh Shukla**, IISER Pune (India); **Sneha Bobby**, **Rahul Chand**, **G. V. Pavan Kumar**, Indian Institute of Science Education and Research Pune (India)

14076-110 • 17:45 - 19:30

Transparent MXene-Electrode Self-Rectifying Memristors for Neuromorphic Photosensing

Author(s): **Muhammad Umair Khan**, Khalifa Univ. (United Arab Emirates)

14076-111 • 17:45 - 19:30

UV mirrors with enhanced optical phase shift control using combination of standard and structural coatings

Author(s): **Ignas Pikas**, State Research Institute Center for Physical Sciences and Technology, (Lithuania); **Simas Melninkas**, **Saulius Tumėnas**, **Lukas Ramalis**, **Aušra Selskienė**, **Lina Grinevičiūtė**, Ctr. for Physical Sciences and Technology (Lithuania)

14076-112 • 17:45 - 19:30

Effect of spatial coherence on Lloyd-plane interference and needle-beam formation

Author(s): **Sausan Abdulrazak**, **Vladislav Dudelev**, **Grigori Sokolovskii**, **Nickolay Deryagin**, Ioffe Institute (Russian Federation)

14076-114 • 17:45 - 19:30

Composition modulation-mediated band alignment engineering from type I to type III in 2D vdW heterostructures

Author(s): **Dingli Guo**, **Bei Zhao**, **Junpeng Lu**, **Zhenhua Ni**, Southeast Univ. (China)

14076-115 • 17:45 - 19:30

Ultraviolet irradiation on molybdenum disulfide nanostructures for improved surface-enhanced Raman spectroscopy

Author(s): **Samar Ghopry**, Jazan Univ. (Saudi Arabia); **Judy Z. Wu**, The Univ. of Kansas (United States)

14076-116 • 17:45 - 19:30

Laser-driven proton acceleration in nanoantenna-doped media: toward fusion-relevant proton energies

Author(s): **Zsukovszki Konstantin**, HUN-REN Wigner Research Ctr. for Physics (Haiti)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 13: STRUCTURED LIGHT AND CHIRALITY IV

16 April 2026 • 11:00 - 12:30 | Auditorium Schweitzer (Niveau/Level 0)

Session Chair(s): **Antonio Ambrosio**, Istituto Italiano di Tecnologia (Italy)

14076-53 • 11:00 - 11:30

Structured Beams and Focusing Delivery Schemes: a Comparative Analysis for Extreme UltraViolet Ultrafast Tabletop Ptychography (Invited Paper)

Author(s): **Giulia Fulvia Mancini**, Univ. degli Studi di Pavia (Italy)

14076-54 • 11:30 - 11:50

Holographic optical tweezers using structured light beams: experiments and trapping of microparticles

Author(s): **Rafael A. Bonilla Suarez**, Univ. Santiago de Cali (Colombia); **Antonio A. Ralha Neves**, **Marcos R. R. Gesualdi**, Univ. Federal do ABC (Brazil)

14076-55 • 11:50 - 12:10

Structural Colouration in Blow Flies

Author(s): **Élise Camus**, Univ. de Namur (Belgium), Ecole Normale Supérieure de Lyon (France), Univ. Claude Bernard Lyon 1 (France); **Ewan D. Finlayson**, **Pete Vukusic**, Univ. of Exeter (United Kingdom); **Olivier Deparis**, Univ. de Namur (Belgium); **Sébastien R. Mouchet**, Univ. de Mons (Belgium), Univ. de Namur (Belgium), Univ. of Exeter (United Kingdom)

14076-56 • 12:10 - 12:30

Integration of Optical Metamaterials and optical fiber technology

Author(s): **Maria Principe**, **Patrizio Vaiano**, **Gaia M. Berruti**, Univ. degli Studi del Sannio (Italy); **Alberto Micco**, CeRICT srl (Italy); **Marco Consales**, **Andrea Cusano**, Univ. degli Studi del Sannio (Italy)

CONFERENCE 14077

Advances in Ultrafast Condensed Phase Physics V

15 - 16 April 2026 | Dresde/Salon 13 (Niveau/Level 1)

Conference Chair(s): **Stefan Haacke**, Institut de physique et chimie des matériaux de Strasbourg (France); **Markus Ossiander**, Technische Univ. Graz (Austria)

Program Committee: **Jens Biegert**, ICFO - Institut de Ciències Fotòniques (Spain); **Giulio N. Cerullo**, Politecnico di Milano (Italy); **Joanna Czaplá-Masztafiak**, Institute of Nuclear Physics PAN (Poland); **Wolfgang W. Langbein**, Cardiff Univ. (United Kingdom); **Christoph Lienau**, Carl von Ossietzky Univ. Oldenburg (Germany); **Antonio Picón**, Instituto de Ciencia de Materiales de Madrid, CSIC (Spain); **Jelena Sjakste**, Ecole Polytechnique (France)

Wednesday 15 April 2026

SESSION 1: ULTRAFAST MAGNETISM

15 April 2026 • 8:30 - 10:20 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Stefan Haacke**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France)

14077-1 • 8:30 - 9:00

Dynamical frequency manipulation of coherent magnons (*Invited Paper*)

Author(s): **Davide Bossni**, Univ. Konstanz (Germany)

14077-2 • 9:00 - 9:20

Ultrafast Time-resolved Brillouin spectroscopy to reveal the secrets of ferroelectrics

Author(s): **Gwenaëlle Vaudel**, Institut des Molécules et Matériaux du Mans, CNRS (France); **Mads C. Weber**, Institut des Molécules et Matériaux du Mans (France); **Vincent Juvé**, Institut des Molécules et Matériaux du Mans, CNRS (France); **Marius Lejman**, **Ruizhe Gu**, **Pascal Ruello**, Institut des Molécules et Matériaux du Mans (France)

14077-3 • 9:20 - 9:40

Ultrafast High-Harmonic Spectroscopy of Photoinduced Dynamics and Long-Lived Coherences in ferroelectric BaTiO₃

Author(s): **Lauren B. Drescher**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany); **Simon Vendelbo Bylling Jensen**, Max Planck Institute for the Structure and Dynamics of Matter and Center for Free-Electron Laser Science, Luruper Chaussee 14922761 Hamburg, Germany (Germany); **Mark Mero**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany); **Janett Feickert**, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany); **Marc J. J. Vrakking**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany); **Davide Sangalli**, Istituto di Struttura della Materia - CNR (ISM-CNR) (Italy); **Angel Rubio**, Max Planck Institute for the Structure and Dynamics of Matter and Center for Free-Electron Laser Science, Luruper Chaussee 14922761 Hamburg, Germany (Germany); **Nicolas Tancogne-Dejean**, Max Planck Institute for the Structure and Dynamics of Matter and Center for Free-Electron Laser Science, Luruper Chaussee 14922761 Hamburg, Germany (Germany), Research Center Future Energy Materials Faculty of Physics and Astronomy, Ruhr University Bochum (Germany); **Peter Jürgens**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany)

14077-4 • 9:40 - 10:00

Strong correlations in rare-earth intermetallic compounds

Author(s): **Payel Shee**, **Tanaya Halder**, National Institute of Science Education and Research (India); **Chia-Jung Yang**, ETH Zurich (Switzerland); **Nainish Tickoo**, National Institute of Science Education and Research (India); **Shishir Kumar Pandey**, Birla Institute of Technology and Science, Pilani (United Arab Emirates); **Ashis Kumar Nandy**, **Anamitra Mukherjee**, National Institute of Science Education and Research (India); **Ruta Kulkarni**, **Arumugam Thamizhavel**, Tata Institute of Fundamental Research (India); **Manfred Fiebig**, ETH Zurich (Switzerland); **Shovon Pal**, National Institute of Science Education and Research (India)

14077-5 • 10:00 - 10:20

Evidence of relativistic field-derivative torque in nonlinear THz response of magnetization dynamics

Author(s): **Arpita Dutta**, National Institute of Science Education and Research (India); **Pratyay Mukherjee**, Indian Institute of Technology (Indian School of Mines), Dhanbad (India); **Swosti P. Sarangi**, National Institute of Science Education and Research (India); **Somasree Bhattacharjee**, Indian Institute of Technology (Indian School of Mines), Dhanbad (India); **Christian Tzschaschel**, **Debanshi Priyadarshi**, ETH Zurich (Switzerland); **Kouki Mikuni**, **Takuya Satoh**, Institute of Science Tokyo (Japan); **Ritwik Mondal**, Indian Institute of Technology (Indian School of Mines), Dhanbad (India); **Shovon Pal**, National Institute of Science Education and Research (India)

Coffee Break 10:20 - 10:50

SESSION 2: ELECTRON DYNAMICS

15 April 2026 • 10:50 - 12:40 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Jelena Sjakste**, École Polytechnique (France)

14077-6 • 10:50 - 11:20

Ultrafast hybrid exciton dynamics in lithium fluoride (*Invited Paper*)

Author(s): **Matteo Lucchini, Simone Bonetti**, Politecnico di Milano (Italy)

14077-7 • 11:20 - 11:40

Focusing extreme ultraviolet metagrating for attosecond spectroscopy

Author(s): **Anna Kulter**, Technische Univ. Graz (Austria); **Tiago Rego Crispim**, Univ. do Minho (Portugal); **Alexander Grosseck, David J. Grafinger**, Technische Univ. Graz (Austria); **Rodolfo Previdi**, Institute of Science and Technology Austria (Austria); **Harald Plank**, Technische Univ. Graz (Austria); **Joachim R. Krenn, Andreas Hohenau**, Karl-Franzens-Univ. Graz (Austria); **Martin Schultze**, Technische Univ. Graz (Austria); **Marcus Ossiander**, Technische Univ. Graz (Austria), Harvard Univ. (United States)

14077-8 • 11:40 - 12:00

Absorption saturation process and stimulated polariton-polariton scattering in mid-IR Multisubband Polaritonic System

Author(s): **Raffaele Riccio, Arpita Mukherjee, Stefano Pirotta, Isabelle Sagnes, Grégoire Beaudoin, Mathieu Jeannin, Adel Bousseksou, Raffaele Colombelli, Jean-Michel Manceau**, CNRS - Univ. Paris-Saclay (France)

14077-9 • 12:00 - 12:20

Nonlinear response of thin gold films to strong THz-electric fields

Author(s): **Holger Lange, Jonas Grumm**, Univ. Potsdam (Germany); **Rokas Jutas, Audrius Pugzlys**, Technische Univ. Wien (Austria); **Andreas Knorr**, Technische Univ. Berlin (Germany)

14077-10 • 12:20 - 12:40

Ultrafast Raman probe of the photoinduced superconducting to normal state transition in the cuprate Bi₂Sr₂CaCu₂O₈+ δ

Author(s): **Yann Gallais**, Univ. Paris Cité (France)

Lunch/Exhibition Break 12:40 - 13:50

SESSION 3: CONDENSED PHASE PHYSICS: MIXED TOPICS

15 April 2026 • 13:50 - 15:30 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Nicoletta Liguori**, ICFO - Institut de Ciències Fotòniques (Spain)

14077-11 • 13:50 - 14:20

Excitonic Phenomena in Momentum Space (*Invited Paper*)

Author(s): **Keshav M. Dani**, Okinawa Institute of Science and Technology Graduate Univ. (Japan)

14077-12 • 14:20 - 14:40

Direct subcycle momentum-resolved observation of Landau-Zener-Majorana transitions in lightwave-driven graphene

Author(s): **Giacomo Inzani**, Department of Physics and Regensburg Center for Ultrafast Nanoscopy (RUN), University of Regensburg (Germany); **Vincent Eggers, Manuel Meierhofer, Lasse Münster, Jakob Helml**, Regensburg Ctr. for Ultrafast Nanoscopy, Univ. Regensburg (Germany); **Robert Wallauer, Sarah Zajusch, Suguru Ito**, Philipps-Univ. Marburg (Germany); **Leon Machtl**, Regensburg Ctr. for Ultrafast Nanoscopy, Univ. Regensburg (Germany); **Hao Yin, Christian Kumpf, François C. Bocquet**, Peter Grünberg Institut, Forschungszentrum Jülich GmbH (Germany); **Changhua Bao**, Regensburg Ctr. for Ultrafast Nanoscopy, Univ. Regensburg (Germany); **Jens Güdde**, Philipps-Univ. Marburg (Germany); **Frank Stefan Tautz**, Peter Grünberg Institut, Forschungszentrum Jülich GmbH (Germany); **Rupert Huber**, Regensburg Ctr. for Ultrafast Nanoscopy, Univ. Regensburg (Germany); **Ulrich Höfer**, Regensburg Ctr. for Ultrafast Nanoscopy, Univ. Regensburg (Germany), Philipps-Univ. Marburg (Germany)

14077-13 • 14:40 - 15:00

Photoinduced structural dynamics in topological semimetal ZrTe₅

Author(s): **Elodie Igleis, Alexandr Alekhin, Niloufar Nilforoushan**, Lab. Matériaux et Phénomènes Quantiques (France); **Genda Gu, Qiang Li**, Stony Brook Univ. (United States); **Alain Sacuto, Yann Gallais, Sarah Houver**, Lab. Matériaux et Phénomènes Quantiques (France)

14077-14 • 15:00 - 15:30

Tracking many-body interactions in solids state systems by multidimensional spectroscopy (*Invited Paper*)

Author(s): **Daniele Brida**, Univ. du Luxembourg (Luxembourg)

Coffee Break 15:30 - 16:00

SESSION 4: MOLECULAR DYNAMICS I

15 April 2026 • 16:00 - 17:50 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Daniele Brida**, Univ. du Luxembourg (Luxembourg)

14077-15 • 16:00 - 16:30

Photosynthetic proteins in action! Towards a real-time investigation of how light-harvesting is regulated in photosynthetic organisms (Invited Paper)

Author(s): **Nicoletta Liguori**, ICFO - Institut de Ciències Fotòniques (Spain)

14077-16 • 16:30 - 16:50

Fast generation of charge-transfer states in Y6 and YSe dimers following photoexcitation

Author(s): **Isabel Creed**, Imperial College London (United Kingdom)

14077-17 • 16:50 - 17:10

Ultrafast dynamics of a long-lived emissive Fe(II) complex with azaullazine ligands

Author(s): **Simon Ali Rincon Celis**, Univ. de Strasbourg (France), Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France); **Nour Shalhoub**, Univ. de Lorraine (France), Lab. Lorrain de Chimie Moléculaire, CNRS (France); **Mariachiara Pastore**, Univ. de Lorraine (France), Lab. de Physique et Chimie Théoriques, CNRS (France); **Florian Molton**, **Carole Duboc**, Univ. Grenoble Alpes, CNRS (France); **Philippe Pierrat**, Univ. de Lorraine (France), Lab. Lorrain de Chimie Moléculaire, CNRS (France); **Philippe C. Gros**, Univ. Grenoble Alpes, CNRS (France); **Stefan Haacke**, Univ. de Strasbourg (France), Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France)

14077-18 • 17:10 - 17:30

Unravelling the pH-dependent photophysics of Archaerhodopsin-3 using ultrafast spectroscopy

Author(s): **Krystyna Herasymenko**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France); **Masae Konno**, **Keiichi Inoue**, The Institute for Solid State Physics (Japan), The Univ. of Tokyo (Japan); **Michel Sliwa**, Lab. d'Optique et Biosciences, CNRS (France), Institut National de la Santé et de la Recherche Médicale (France), École Polytechnique (France); **Stefan Haacke**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France)

14077-19 • 17:30 - 17:50

Ultrafast photo-physics of Fe(II) complexes: Evidence for long-lived triplet states with mixed MLCT/MC character

Author(s): **Ronan Viel**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France); **Ulises Carrillo Arcos**, **Salwa Simona Jamil**, Lab. Lorrain de Chimie Moléculaire (France); **Florian Molton**, **Carole Duboc**, Univ. Grenoble Alpes (France); **J. Luis Perez-Lustres**, **Kartsen Heyne**, Freie Univ. Berlin (Germany); **Stefan Haacke**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France); **Cristina Cebrian-Avila**, Univ. de Strasbourg (France); **Philippe C. Gros**, Univ. Grenoble Alpes (France)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14077-33 • 17:45 - 19:30

Investigating photonic response, structure, and harmonic generation in a lab grown TaAs Weyl semimetal crystal

Author(s): **Sardar A. Shah**, **Khalil A. Ziq**, **Ahmed M. El-Zohry**, **Abdulaziz Aljalal**, **Watheq Al-Basheer**, King Fahd Univ. of Petroleum & Minerals (Saudi Arabia)

14077-34 • 17:45 - 19:30

An ultrafast widely tunable mid-IR pump-probe setup for studying material dynamics on sub-ps scales.

Author(s): **Arpita Mukherjee**, **Raffaele Riccio**, **Stefano Pirotta**, **Mathieu Jeannin**, **Adel Bousseksou**, Ctr. de Nanosciences et de Nanotechnologies, Univ. Paris-Saclay, CNRS (France); **Andrea Simaz**, **Ganpath Kumar Veerabathran**, **Stephan Sprengel**, **Alexander Andrejew**, **Mikhail Belkin**, Walter Schottky Institut, Technische Univ. München (Germany); **Raffaele Colombelli**, **Jean-Michel Manceau**, Ctr. de Nanosciences et de Nanotechnologies, Univ. Paris-Saclay, CNRS (France)

14077-35 • 17:45 - 19:30

Size and cluster effects on the electronic relaxation dynamics in gold nanoparticles

Author(s): **Lucrezia Catanzaro**, Univ. degli Studi di Catania (Italy); **Tlek Tapani**, **Nils Henriksson**, **Nicolas Boulanger**, **Esdras J. Canto-Aguilar**, **Erik Zäll**, **Carla M. Brunner**, **Aitor De Andres**, Umeå Univ. (Sweden); **Vittorio Scardaci**, **Marcello Condorelli**, **Giuseppe Compagnini**, Univ. degli Studi di Catania (Italy); **Nicolò Maccaferri**, Umeå Univ. (Sweden)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 5: NOVEL TOOLS

16 April 2026 • 11:00 - 12:30 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Wolfgang W. Langbein**, Cardiff Univ. (United Kingdom)

14077-20 • 11:00 - 11:30

Theoretical Modeling of Ultrafast Phase Transitions from the Femtosecond to the Picosecond Scale (Invited Paper)

Author(s): **Matteo Calandra**, Univ. degli Studi di Trento (Italy)

14077-21 • 11:30 - 11:50

Theoretical description of the energy flow mechanisms in photoexcited semiconductors

Author(s): **Raja Sen**, **Nathalie vast**, **Jelena Sjakste**, Laboratoire des Solides Irradiés, CNRS, CEA, Ecole Polytechnique (France)

14077-22 • 11:50 - 12:10

Real-time probing of the Insulator to Metal Phase transitions.

Author(s): **Santanu Mandal**, **Praful Kumar**, **Hee-Yong Kim**, **Zekun Pi**, Univ. Rostock (Germany); **Jiyu Xu**, **Daqiang Chen**, Institute of Physics (China); **Daniel Kazenwadel**, **Peter Baum**, Univ. Konstanz (Germany); **Sheng Meng**, Institute of Physics (China); **Eleftherios Goulielmakis**, Univ. Rostock (Germany)

14077-23 • 12:10 - 12:30

Effect of the substitution groups on the excited-state dynamics of oxindole-based photoswitches revealed by ultrafast spectroscopies

Author(s): **Xingjie Fu**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France); **Daniel Doellerer**, Univ. of Groningen (Netherlands); **Matthew Mgbukwu**, Helmholtz-Zentrum Dresden-Rossendorf (Germany); **Roman Peshkov**, **Stefano Crespi**, Uppsala Univ. (Sweden); **Ben L. Feringa**, Univ. of Groningen (Netherlands); **Jérémie Léonard**, **Stefan Haacke**, Institut de Physique et de Chimie des Matériaux de Strasbourg (France)

Lunch Break 12:30 - 13:40

SESSION 6: MOLECULAR DYNAMICS II

16 April 2026 • 13:40 - 15:30 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Matteo Calandra Buonauro**, Univ. degli Studi di Trento (Italy)

14077-24 • 13:40 - 14:10

Ultrafast spectroscopy of molecular model systems (Invited Paper)

Author(s): **Lukas Bruder**, Univ. of Freiburg (Germany)

14077-25 • 14:10 - 14:30

Electron thermalization in TDDFT and Ehrenfest molecular dynamics

Author(s): **Tobias Zier**, University of California Merced (United States); **Uday Panta**, **David A. Strubbe**, Univ. of California, Merced (United States)

14077-26 • 14:30 - 14:50

Site effects in cryogenic matrices revealed by two-dimensional infrared spectroscopy (2D-IR)

Author(s): **Armel Jouan**, CNRS/IPCMS (France); **Wutharath Chin**, Institut des Sciences Moléculaires d'Orsay, CNRS (France), Univ. Paris-Saclay (France); **Jan Helbing**, Univ. Zürich (Switzerland); **Claudine Crépin-Gilbert**, Institut des Sciences Moléculaires d'Orsay, CNRS (France), Univ. Paris-Saclay (France)

14077-27 • 14:50 - 15:10

Tuning vibrational dynamics in molecular switches for enhanced efficiency

Author(s): **Thomas Meric**, Univ. de Strasbourg (France); **Olivier Crégut**, **Stefan Haacke**, **Jérémie Léonard**, Univ. de Strasbourg, CNRS (France)

14077-28 • 15:10 - 15:30

Real-time dual-comb spectroscopy self-correction on a radio-frequency system-on-chip

Author(s): **Marcus Ossiander**, **Alexander Eber**, **Christoph Gruber**, **Martin Schultze**, **Birgitta Bernhardt**, Technische Univ. Graz (Austria)

Coffee Break 15:30 - 16:00

SESSION 7: STRONG FIELD PROCESSES

16 April 2026 • 16:00 - 17:30 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Marcus Ossiander**, Technische Univ. Graz (Austria)

14077-29 • 16:00 - 16:30

Ultrafast soft X-ray absorption study of strong-field-induced dynamics in pyridine across gas and liquid. *(Invited Paper)*

Author(s): **Shayantani Ghosh**, University of Geneva (Switzerland); **Leonardo Redaelli**, **Emir Ardali**, **Valentina Utrio Lanfaloni**, **Tristan Kopp**, **Federico Vismarra**, ETH Zürich (Switzerland); **Tessa Basso**, Univ. de Genève (Switzerland); **Yi-Ping Chang**, European XFEL, Schenefel (Germany); **Zhong Yin**, International Center for Synchrotron Radiation Innovation Smart, Tohoku University, Miyagi, Sendai (Japan); **Tadas Balciunas**, ETH Zürich (Switzerland); **Jean-Pierre Wolf**, University of Geneva (Switzerland); **Hans Jakob Wörner**, ETH Zürich (Switzerland)

14077-30 • 16:30 - 16:50

Field Sampling Reveals Sub-Cycle Absorption in PHz Current Generation

Author(s): **Václav Hanus**, **Eszter Papp**, **Beatrix Fehér**, **Péter Sándor**, HUN-REN Wigner Research Ctr. for Physics (Hungary); **Zsuzsanna Pápa**, ELI-ALPS Research Institute (Hungary); **Péter Dombi**, HUN-REN Wigner Research Ctr. for Physics (Hungary), ELI-ALPS Research Institute (Hungary)

14077-31 • 16:50 - 17:10

Tracking Bandgap Dynamics in Solids with Extreme Ultraviolet High Harmonic Interferometry

Author(s): **Lisa Marie Koll**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany); **Simon Vendelbo Bylling Jensen**, Department of Physics and Astronomy, Ny Munkegade 120, Aarhus University, DK-8000, Denmark (Denmark), Max Planck Institute for the Structure and Dynamics of Matter (Germany); **Pieter J. van Essen**, **Brian de Keijzer**, **Emilia Olsson**, **Jon Cottom**, Advanced Research Center for Nanolithography (ARCNL), Science Park 106, 1098 XG Amsterdam, Netherlands (Netherlands); **Tobias Witting**, **Anton Husakou**, **Marc J. J. Vrakking**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany); **Lars Bojer Madsen**, Department of Physics and Astronomy, Ny Munkegade 120, Aarhus University, DK-8000, Denmark (Denmark); **Peter M. Kraus**, Advanced Research Center for Nanolithography (ARCNL), Science Park 106, 1098 XG Amsterdam, Netherlands (Netherlands); **Peter Jürgens**, MBI für Nichtlineare Optik Kurzzeitspektroskopie (Germany)

14077-32 • 17:10 - 17:30

Single photon High Harmonic Spectroscopy of strongly correlated materials

Author(s): **Julita Poborska**, ICFO - The Institute of Photonic Sciences (Spain); **Joseph Lamarre**, **Lenard Vamos**, **Igor Tyulnev**, ICFO - Institut de Ciències Fotòniques (Spain); **Jens Biegert**, ICFO - Institut de Ciències Fotòniques (Spain), ICREA - Institució Catalana de Recerca i Estudis Avançats (Spain)

CONFERENCE 14078

Quantum Technologies 2026

13 - 16 April 2026 | Bruxelles/Salon 10 (Niveau/Level 0)

Conference Chair(s): Florent Baboux, Lab. Matériaux et Phénomènes Quantiques (France); Virginia D'Auria, Institut de Physique de Nice (France); Tom Bienaimé, Univ. de Strasbourg (France)

Program Committee: Sara Ducci, Univ. Paris 7-Diderot (France); Thomas Gerrits, National Institute of Standards and Technology (United States); Robin Kaiser, Institut de Physique de Nice (France); Magdalena Stobinska, Univ. of Warsaw (Poland); Nicolas Treps, Lab. Kastler Brossel (France)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

SESSION 1: QUANTUM SENSING, IMAGING AND METROLOGY I

13 April 2026 • 14:00 - 15:30 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Tom Bienaimé**, Univ. de Strasbourg (France)

14078-1 • 14:00 - 14:30

Quantum Imaging for Astronomy (*Invited Paper*)

Author(s): **David Gozzard, Joshua J. Collier, John S. Wallis, Elrina Hartman**, The Univ. of Western Australia (Australia)

14078-2 • 14:30 - 14:50

Towards dark matter detection by quantum-enhanced spectroscopy

Author(s): **Florin Lucian Constantin**, Lab de Physique des Lasers Atomes et Molecules (France)

14078-3 • 14:50 - 15:10

LED-LC pumped Room Temperature Organic Solid-State Maser based quantum sensor

Author(s): **Priyanka S. Choubey**, Northumbria University (United Kingdom); **Max Attwood**, Imperial College London (United Kingdom); **Juna Sathian**, Northumbria Univ. (United Kingdom)

14078-4 • 15:10 - 15:30

Towards Sub-Diffraction Mapping of NV Center Positions via Electrostatic Raster Scanning

Author(s): **Kimy Jaimes**, Univ. of New Brunswick (Canada); **Joe A. Smith**, The Univ. of Sheffield (United Kingdom); **Zahra Khatami**, Univ. of New Brunswick (Canada)

Coffee Break 15:30 - 16:00

SESSION 2: QUANTUM COMMUNICATION

13 April 2026 • 16:00 - 17:30 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **David R. Gozzard**, The Australian National Univ. (Australia)

14078-36 • 16:00 - 16:30

On-chip single-photon spectroscopy using a tunable photonic crystal cavity *(Invited Paper)*

Author(s): **Harmen Smedes**, Technische Univ. Delft (Netherlands); **Fons van der Laan**, AMOLF (Netherlands); **Jin Chang**, Technische Univ. Delft (Netherlands); **Letizia Catalini**, AMOLF (Netherlands); **Xiong Yao**, Technische Univ. Delft (Netherlands); **Ewold Verhagen**, AMOLF (Netherlands); **Simon Groeblacher**, Technische Univ. Delft (Netherlands)

14078-6 • 16:30 - 16:50

Quantifying the effect of polarization drift on continuous-variable QKD security

Author(s): **Margarida Ribau Almeida**, Instituto de Telecomunicacoes (Portugal); **Íris Guilherme**, **Armando N. Pinto**, **Nuno A. Silva**, Instituto de Telecomunicações (Portugal)

14078-7 • 16:50 - 17:10

Comparison Between High-Dimensional Time-bin Encoded Measurement Device Independent and Prepare-and-Measure Quantum Key Distribution

Author(s): **Gokul Agasthilingam**, **Harinee Natarajan**, **Varun Raghunathan**, Indian Institute of Science, Bengaluru (India)

14078-8 • 17:10 - 17:30

Vacuum fluctuation quantum random number generator assessed by AIS 20/31-compliant health tests

Author(s): **Mehrzad Firoozi**, Fraunhofer IPMS (Germany); **Bhuvnesh Narayanan**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany); **evangelos Gkoumas**, TU Darmstadt (Germany); **Rene Kirrbach**, **Anandhakrishnan Srinivasan**, **Arya Venu**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany)

Tuesday 14 April 2026

SESSION 3: NOVEL QUANTUM PLATFORMS

14 April 2026 • 9:00 - 10:30 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Tom Bienaimé**, Univ. de Strasbourg (France)

14078-9 • 9:00 - 9:30

Hybrid integrated scalable circuits in silica with embedded quantum emitters *(Invited Paper)*

Author(s): **Christos Riziotis**, **Symeon Tsintzos**, **Konstantinos Tsimvraakis**, National Hellenic Research Foundation (Greece); **James C. Gates**, Optoelectronics Research Ctr. (United Kingdom); **Ali W. Elshaari**, KTH Royal Institute of Technology (Sweden); **Oleksandr Buchnev**, Optoelectronics Research Ctr. (United Kingdom); **Valery Zwiller**, KTH Royal Institute of Technology (Sweden); **Peter G. R. Smith**, Optoelectronics Research Ctr. (United Kingdom)

14078-10 • 9:30 - 9:50

Towards Rb PMC: loading, splicing and lifetime studies on different capillaries

Author(s): **Rosu Baby**, GPPMM Group, Xlim Research Institute, CNRS UMR 7252, University of Limoges (France); **Jim Ignacchiti**, **Sargis Jibilyan**, XLIM, Univ. de Limoges, CNRS (France); **Thomas Billotte**, GLPhotonics SAS (France); **Jenny Jouin**, **Philippe Thomas**, Institut de Recherche sur les Céramiques, Ctr. Européen de la Céramique, CNRS (France); **Frédéric Gérôme**, **Benoît Debord**, **Fetah Benabid**, XLIM, Univ. de Limoges, CNRS (France)

14078-11 • 9:50 - 10:10

Direct-laser-written polymer nanowire waveguides and metallic nano-rings for broadband single photon collection

Author(s): **Edgar Perez**, National Institute of Standards and Technology (United States); **Cori Haws**, Univ. of Southampton (United Kingdom); **Marcelo Davanco**, National Institute of Standards and Technology (United States); **Jin Dong Song**, Korea Institute of Science and Technology (Korea, Republic of); **Luca Sapienza**, University of Cambridge (United Kingdom); **Kartik Srinivasan**, National Institute of Standards and Technology (United States)

14078-12 • 10:10 - 10:30

Chiral liquid crystals – alternative to periodically poled SPDC sources

Author(s): **Aljaž Kavčič**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); **Nerea Sebastian**, Jožef Stefan Institute (Slovenia); **Matjaž Humar**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), Nanocenter (Slovenia)

Coffee Break 10:30 - 11:00

SESSION 4: QUANTUM SIMULATION AND COMPUTING I

14 April 2026 • 11:00 - 12:30 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Christos Riziotis**, National Hellenic Research Foundation (Greece)

14078-14 • 11:00 - 11:30

Round trip free distributed quantum computation via photonic graph-stitching (*Invited Paper*)

Author(s): **Dhyan Baruah**, Univ. of New Brunswick (Canada)

14078-15 • 11:30 - 11:50

Tunable Hong-Ou-Mandel interference via liquid-crystal metasurfaces

Author(s): **Maria Gorizia Ammendola**, **Italo Ignacio Machuca Flores**, **Sneha Dey**, **Francesco Di Colandrea**, Università degli Studi di Napoli Federico II (Italy); **Andrei Nomerotski**, Czech Technical University in Prague (Czech Republic); **Bereneice Sephton**, **Carlo Schiano**, **Corrado de Lisio**, **Vincenzo D'Ambrosio**, **Lorenzo Marrucci**, Università degli Studi di Napoli Federico II (Italy); **Patrick Cameron**, Scuola Superiore Meridionale (Italy); **Filippo Cardano**, Università degli Studi di Napoli Federico II (Italy)

14078-16 • 11:50 - 12:10

Programmable vectorial photonic circuit for quantum simulations

Author(s): **Francesco Di Colandrea**, **Maria Gorizia Ammendola**, **Filippo Cardano**, Università degli Studi di Napoli Federico II (Italy)

14078-17 • 12:10 - 12:30

Coherent-State Sampling for Simulating Vibronic Spectra

Author(s): **Iurii Konyshev**, **Oliver Page**, **Ravi Pradip**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Rinat T. Nasibullin**, Univ. of Helsinki (Finland); **Caghan Ünlüer**, **Simone Ferrari**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 5: QUANTUM COMPONENTS AND APPLICATIONS I

14 April 2026 • 14:00 - 15:50 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Florent Baboux**, Lab. Matériaux et Phénomènes Quantiques (France)

14078-18 • 14:00 - 14:30

High-fidelity entangled photon pairs from a quantum-dot-based single-photon source (*Invited Paper*)

Author(s): **Mark Hogg**, University of Basel (Switzerland); **Malwina Marczak**, **Timon Baltisberger**, Univ. Basel (Switzerland); **Nathan Arnold**, **Benjamin Nussbaum**, **Spencer Johnson**, Univ. of Illinois (United States); **Clotilde Pillot**, Univ. Basel (Switzerland); **Sascha Valentin**, **Arne Ludwig**, Ruhr-Univ. Bochum (Germany); **Paul Kwiat**, Univ. of Illinois (United States); **Richard Warburton**, Univ. Basel (Switzerland)

14078-19 • 14:30 - 14:50

Quantum Emitters in two-dimensional materials via ion implantation

Author(s): **Ikshvaku Shyam**, **Amrita Majumder**, **Kousik Bera**, **Janhavi Jayawant Khunte**, **Ekta Ekta**, Indian Institute of Technology Bombay (India); **Amol Sonawane**, **Akash Khair**, **Shailendra Dahiwal**, Savitribai Phule Pune Univ. (India); **Anshuman Kumar Srivastava**, Indian Institute of Technology Bombay (India)

14078-20 • 14:50 - 15:10

Characterization of a single photon counting module with high photon detection efficiency and low dark count rate

Author(s): **Florian Gerg**, **Niklas Höpfl**, Laser Components Germany GmbH (Germany); **Zheng Ju**, Laser Components Detector Group, Inc. (United States); **Sven Tischler**, Laser Components Germany GmbH (Germany); **Bodhy England**, **Richard Kim**, **Kyle Ward**, Laser Components Detector Group, Inc. (United States)

14078-21 • 15:10 - 15:30

Novel narrow laser modules for quantum technologies

Author(s): **Lucia Duca**, Istituto Nazionale di Ricerca Metrologica (Italy); **Pierre Brochard**, **Patrick O'Donoughue**, SILENTSYS SAS (France); **Emilien Beck**, IDIL Fibres Optiques (France); **Roberto Concas**, **Carlo Sias**, Istituto Nazionale di Ricerca Metrologica (Italy)

14078-22 • 15:30 - 15:50

Tailoring photonic correlations with structured light

Author(s): **Vincenzo D'Ambrosio**, Univ. degli Studi di Napoli Federico II (Italy)

Coffee Break 15:50 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14078-40 • 18:10 - 20:00

Noise induced active detector efficiency mismatch attack in QKD

Author(s): **Hashir Puthiyapurayil Kuniyil**, Hamad bin Khalifa Univ. (Qatar)

14078-41 • 18:10 - 20:00

Investigation of photon counting statistics in a coherent state using a SPAD-based photon number resolver

Author(s): **Utku Karaca**, **Ekin Kizilkan**, **Andrei Ardelean**, NovoViz SA (Switzerland)

14078-43 • 18:10 - 20:00

Measurement of orbital angular momentum entangled photons via stimulated emission tomography

Author(s): **Seonghu Jung**, **Do-Kyeong Ko**, Gwangju Institute of Science and Technology (Korea, Republic of)

14078-44 • 18:10 - 20:00

Secure and high-capacity data storage via Fresnel-domain multiplexed optical encryption using Bessel-Gaussian speckle pattern keys

Author(s): **Patnala Vanitha**, **Do-Kyeong Ko**, Gwangju Institute of Science and Technology (Korea, Republic of)

14078-45 • 18:10 - 20:00

Quantum synchronization of two-qubits in a coupled-cavity QED system

Author(s): **Jatin Ghildiyal**, **Shubhrangshu Dasgupta**, **Asoka Biswas**, Indian Institute of Technology Ropar (India)

14078-46 • 18:10 - 20:00

Compact 532.2nm and 555.8nm lasers for iodine and ytterbium atomic clocks: simple frequency locking scheme based on monolithic cavity and low-voltage electro-optical control

Author(s): **Julien Rouvillain**, **Christophe Bonnin**, **Evan Pauly**, **Antoine Congar**, **Nicolas Landru**, **Thierry Georges**, Oxixus R&D department, 4 rue Louis de Broglie, 22300 Lannion (France); **Georges Perin**, Univ Rennes, CNRS, Institut FOTON – UMR 6082, 6 Rue de Kerampont CS 80518, 22305 Lannion (France); **Sharon Elsa Sha**, Univ Rennes, CNRS, Institut FOTON – UMR 6082, 6 Rue de Kerampont CS 80518, 22305 Lannion (France); **Silentsys**, 10 rue Xavier Bichat, 72000 Le Mans (France); **Stéphane Trebaol**, Univ Rennes, CNRS, Institut FOTON – UMR 6082, 6 Rue de Kerampont CS 80518, 22305 Lannion (France); **Pierre Brochard**, **Romain Frénéhard**, Silentsys, 10 rue Xavier Bichat, 72000 Le Mans (France)

14078-47 • 18:10 - 20:00

Ultrafast Low-Noise Lasers Enabling Scalable and Robust Quantum Technologies

Author(s): **Andrea Pertoldi, Jonas Heidrich, Oguzhan Kara, Benjamin Rudin, Florian Emaury**, Menhir Photonics AG (Switzerland)

14078-48 • 18:10 - 20:00

Fiber-based tunable squeezed-light source for quantum-enhanced dual-comb interferometry

Author(s): **Rubén Gordillo-Hachuel**, Universidad Carlos III de Madrid (Spain); **Eduardo Castro Rodríguez, Ricardo Puebla Antunes, Cristina de Dios Fernández**, Univ. Carlos III de Madrid (Spain)

14078-49 • 18:10 - 20:00

Evaluation of two self-adaptive random bit extractors for a quantum random number generator

Author(s): **Andrea Bonzi, Nicola Massari, Luca Parmesan, Fabio Acerbi**, Fondazione Bruno Kessler (FBK) (Italy); **Aymane Bouzafour, Marc Renaudin**, Tiempo Secure (France); **Leonardo Gasparini**, Fondazione Bruno Kessler (FBK) (Italy)

14078-52 • 18:10 - 20:00

Engineering high-efficiency deterministic single-photon emitter arrays: a monolithic inverse-design approach

Author(s): **Amrita Majumder, Janhavi Jayawant Khunte, Hrushikesh Gawali, Ikshvaku Shyam, Anshuman Kumar Srivastava**, Indian Institute of Technology Bombay (India)

14078-53 • 18:10 - 20:00

Uncovering a family of solutions in nested Herriott cells for long optical delay line

Author(s): **Arya Chowdhury**, National University of Singapore (Singapore); **Pranay Tiwari**, National Univ. of Singapore (Singapore); **Anindya Banerji, Yu Guo, Alexander Ling**, Ctr. for Quantum Technologies, National Univ. of Singapore (Singapore)

14078-54 • 18:10 - 20:00

Optimizing toeplitz strong extractor for FPGA based quantum random number generators

Author(s): **Bhuvnesh Narayanan**, Fraunhofer Institute for Photonic Microsystems (Germany); **Mehrzad Firoozi, Sudarsan Pandian, Michael Faulwaßer**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany)

14078-55 • 18:10 - 20:00

Investigating the luminescence background of electrically pumped AlGaAs-based entangled photon sources

Author(s): **Vivienne Leidel, Thorsten Passow, Quankui Yang, Andreas Bächle, Katrin Frei, Henning Heußen, Robert Keil, Mario Prescher, Silvia Giudicatti, Marina Preschle, Marko Haertelt**, Fraunhofer-Institut für Angewandte Festkörperphysik IAF (Germany)

14078-56 • 18:10 - 20:00

Position-Tunable Hybrid Photonic-Plasmonic Cavity for High-Efficiency and Directional Quantum Emission

Author(s): **Anurag Vishal, Parul Singh, Jhuma Saha**, Indian Institute of Technology Gandhinagar (India)

14078-57 • 18:10 - 20:00

Quantum photonics using color centers in a diamond membrane coupled to a photonic structure

Author(s): **Surena Fatemi**, Univ. de Technologie Troyes (France)

14078-58 • 18:10 - 20:00

Integrating superconducting NbN thin films into nanowire single-photon detectors

Author(s): **Hyesoo Jin**, Korea Institute of Science and Technology, Seoul National University (Korea, Republic of); **Soyun Woo**, Korea Institute of Science and Technology (Korea, Republic of); **Howon Jang**, Seoul National Univ. (Korea, Republic of); **Donghee Park**, Korea Institute of Science and Technology (Korea, Republic of)

14078-59 • 18:10 - 20:00

Nondegenerate quantum source with pump rejection

Author(s): **Ekta Kumawat, Jasleen Lugani**, Indian Institute of Technology Delhi (India)

14078-60 • 18:10 - 20:00

Measurement of photon pair generation in a high-Q-fiber Fabry-Perot resonator with a pulsed pump signal

Author(s): **Nassim ZAKI**, LAAS-CNRS, Université de Toulouse, CNRS (France), CNES (France); **Benoît Chalopin**, Lab. Collisions, Agrégats, Réactivité (France); **Arnaud Fernandez**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Julien Lumeau, Antonin Moreau**, Aix-Marseille Univ. (France), Ecole Centrale de Marseille (France), Institut Fresnel, CNRS (France); **Olivier Llopis**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France)

14078-61 • 18:10 - 20:00

Reconstructing quantum structured light on a quantum computer

Author(s): **Mwezi Koni, Shawal Kassim, Paola Concha Obando, Neelan Gounden, Montaz Ali, Isaac Nape**, Univ of the Witwatersrand Johannesburg (South Africa)

14078-62 • 18:10 - 20:00

Cavity-enhanced SPDC: purifying muddy photons

Author(s): **Ormond Taylor**, University of York (United Kingdom); **Marco Lucamarini**, Univ. of York (United Kingdom)

14078-64 • 18:10 - 20:00

Experimental fiber-based BB84 QKD with LiNbO₃ modulators and coarse WDM for VPN encryption

Author(s): **Fatou Diao**, Multitel (Belgium); **Axel Mercier**, Multitel A.S.B.L. (Belgium); **Selim Chaabani**, Multitel A.S.B.L. (Belgium), Liège Univ. (Belgium); **Marina Zajnulina**, Multitel A.S.B.L. (Belgium); **Antonio Baylon**, Euro-Multitel SA (Belgium); **Yves Hernandez**, **Nicolas Point**, Multitel A.S.B.L. (Belgium)

14078-65 • 18:10 - 20:00

Optimizing coexistence of quantum continuous variable and classical signals in the C band

Author(s): **Tanya Sharma**, Télécom Paris, Institut Polytechnique de Paris (France); **Ambashri Purkayastha**, Télécom Paris (France), Nokia Bell Labs (France); **Matteo Schiavon**, **Juan Rafael Alvarez**, Télécom Paris (France); **Mounia Lourdiane**, Télécom SudParis (France); **Cédric Ware**, **Nicolas Fabre**, Télécom Paris (France)

14078-66 • 18:10 - 20:00

Accidental coincidences in camera-based high-dimensional entanglement certification

Author(s): **Raphaël Guitter**, **Baptiste Courme**, **Chloé Vernière**, Institut des nanosciences de Paris (France); **Peter Svihra**, **Andrei Nomerotski**, Czech Technical Univ. in Prague (Czech Republic); **Hugo Defienne**, Institut des nanosciences de Paris (France)

14078-67 • 18:10 - 20:00

High-purity OAM entangled states via source-engineered suppression of spatial-spectral correlations

Author(s): **Francisca Crislane V. de Brito**, Nicolaus Copernicus Univ. (Poland), Univ. of Canterbury (New Zealand); **Sylwia M. Kolenderska**, The Univ. of Auckland (New Zealand); **Piotr Leszek Kolenderski**, Nicolaus Copernicus Univ. (Poland)

14078-68 • 18:10 - 20:00

Nonlocal wavefront shaping using entangled photons

Author(s): **Yanis Trouyet**, Institut des nanosciences de Paris (France); **Patrick Cameron**, Univ. degli Studi di Napoli Federico II (Italy); **Pedro Ornelas**, **Isaac Nape**, **Andrew Forbes**, Univ. of the Witwatersrand, Johannesburg (South Africa); **Hugo Defienne**, Institut des nanosciences de Paris (France)

14078-69 • 18:10 - 20:00

Scalable laser and optical architectures for neutral atom quantum computing

Author(s): **Arvid Olof Lindberg**, **Rebecca El Koussaifi**, **Julie Armougom**, PASQAL (France)

Wednesday 15 April 2026

SESSION 6: QUANTUM COMPONENTS AND APPLICATIONS II

15 April 2026 • 13:30 - 15:20 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Florent Baboux**, Lab. Matériaux et Phénomènes Quantiques (France)

14078-23 • 13:30 - 14:00

Ultrabright quasi-phase-matched SPDC photon pair source in a lithium niobate photonic-crystal Fabry Perot micro-resonator (*Invited Paper*)

Author(s): **Mohamad Reza Nurrahman**, **Hyeon Hwang**, KAIST (Korea, Republic of); **Guhwan Kim**, **Hong-Seok Kim**, **Kiwon Moon**, **Jung-Jin Ju**, Electronics and Telecommunications Research Institute (Korea, Republic of); **Min-Kyo Seo**, KAIST (Korea, Republic of)

14078-24 • 14:00 - 14:20

Engineered atomic decay as a control parameter for photon statistics and entanglement in a lambda-type cavity-QED system

Author(s): **Katha Haldar**, Indiana University Indianapolis (United States)

14078-25 • 14:20 - 14:40

Integrated nonlinear light sources for quantum networks: a machine learning-enabled design

Author(s): **Italo Pio De Simeone**, Univ. Paris Cité (France); **Giorgio Maltese**, Microsoft Azure Fiber (United Kingdom); **Florent Baboux**, **Sara Ducci**, Univ. Paris Cité (France)

14078-26 • 14:40 - 15:00

Comprehensive characterization of single-photon emitters on an integrated platform

Author(s): **Katarina Zikic**, **Sergei Sobolev**, Universität Bern (Switzerland); **Alexandros Bampis**, **Nicolas Grandjean**, Ecole Polytechnique Fédérale de Lausanne (EPFL) (Switzerland); **André Stefanov**, Universität Bern (Switzerland)

14078-27 • 15:00 - 15:20

Nanophotonic structures for Purcell enhancement in the silicon bullseye consisting of G-Center

Author(s): **Rezoana Bente Arif**, **Arez Nosratpour**, **Zahra Khatami**, Univ. of New Brunswick (Canada)

Coffee Break 15:20 - 15:50

SESSION 7: QUANTUM SIMULATION AND COMPUTING II

15 April 2026 • 15:50 - 17:20 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Mohamad Reza Nurrahman**

14078-28 • 15:50 - 16:20

Spatial entanglement and topological protection in nonlinear waveguide arrays (*Invited Paper*)

Author(s): **Alessandro Zecchetto**, **Arnault Raymond**, Univ. Paris Cité (France); **Jean-René Coudeville**, **Martina Morassi**, **Aristide Lemaître**, Univ. Paris-Saclay (France); **Fabrice Raineri**, Univ. Côte d'Azur (France); **Maria I. Amanti**, **Sara Ducci**, **Florent Baboux**, Univ. Paris Cité (France)

14078-29 • 16:20 - 16:40

Experimental investigation of Rydberg-induced optical non-linearities in a cold atomic cloud

Author(s): **Amar Bellahsene**, **Shannon Whitlock**, **Tom Bienaimé**, Univ. de Strasbourg (France)

14078-30 • 16:40 - 17:00

Photonic Quantum Memristors on a silicon nitride chip

Author(s): **Xuan Chen**, **Alessio Baldazzi**, **Sebastiano Guaraldo**, **Lorenzo Pavesi**, **Stefano Azzini**, Univ. degli Studi di Trento (Italy); **Roy Konnoth Ancel**, **Christophe Couteau**, Univ. de Technologie Troyes (France)

14078-31 • 17:00 - 17:20

Non-destructive optical read-out and manipulation of circular Rydberg atoms

Author(s): **Abderrahmane Kassid**, Laboratoire Kastler Brossel (France); **Aurore Alice Young**, Lab. Kastler Brossel (France)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 8: QUANTUM SENSING, IMAGING AND METROLOGY II

16 April 2026 • 11:00 - 12:30 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Mariella Minder**, Cyprus Univ. of Technology (Cyprus)

14078-32 • 11:00 - 11:30

Independent quantum sensing capability assessment for NASA space science (*Invited Paper*)

Author(s): **Upendra N. Singh**, NASA Langley Research Ctr. (United States); **John Kitching**, National Institute of Standards and Technology (United States); **Prem Kumar**, Northwestern Univ. (United States); **Jessica Gaskin**, NASA Marshall Space Flight Ctr. (United States)

14078-33 • 11:30 - 11:50

Rotation rate measurement with a nuclear magnetic resonance gyroscope

Author(s): **Janine Riedrich-Moeller**, **Omar A. Nassar**, **Martina Huebner**, **Thomas Buck**, **Ulrike Scholz**, **Monika Blank**, **Tino Fuchs**, Robert Bosch GmbH (Germany)

14078-34 • 11:50 - 12:10

Towards site-resolved readout of ions using multimode fibre for scalable trapped ion quantum computing

Author(s): **Thomas Hinde, Emre Pasaogullari, Lorenzo Versini, Catherine E. J. Challoner, Tim F. Wohlers-Reichel, Arjun D. Rao, Mika A. Zalewski, Peter Drmota, Joseph F. Goodwin**, Univ. of Oxford (United Kingdom)

14078-35 • 12:10 - 12:30

The role of symmetry in generalized Hong-Ou-Mandel interference and quantum metrology

Author(s): **Eloi Descamps**, Lab. Matériaux et Phénomènes Quantiques (France); **Arne Keller**, Lab. Matériaux et Phénomènes Quantiques (France), Univ. Paris-Saclay (France); **Pérola Milman**, Lab. Matériaux et Phénomènes Quantiques (France)

Lunch Break 12:30 - 13:40

SESSION 9: QUANTUM COMPONENTS AND APPLICATIONS III

16 April 2026 • 13:40 - 15:10 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Upendra N. Singh**, NASA Langley Research Ctr. (United States)

14078-5 • 13:40 - 14:10

Experimental Seven-Node Mixed-Architecture Quantum Key Distribution Network in a Metropolitan Fibre Environment (*Invited Paper*)

Author(s): **Mariella Minder, Andreas Siakolas, Stephanos Yerolatsitis, Konstantinos Katzis, Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

14078-37 • 14:10 - 14:30

high efficiency cold atom based photonic quantum memory

Author(s): **Jean-Gabriel Pipelin, Hadriel Mamann, Thomas Nieddu**, Lab. Kastler Brossel (France); **Felix HOFFET**, ICFO - Institut de Ciències Fotòniques (France); **Matthieu Bozzio**, Univ. Wien (Austria); **Felix Garreau de Loubresse**, Lab. Kastler Brossel (France); **Iordanis Kerenidis**, Univ. Paris Cité (France); **Eleni Diamanti**, Lab. d'informatique de Paris 6 (France); **Alban Urvoy, Julien Laurat**, Lab. Kastler Brossel (France)

14078-38 • 14:30 - 14:50

Triggered telecom C-band source of polarization-entangled photon pairs with high coincidence rates, fidelities and single-photon purity

Author(s): **Raphael Joos**, Institut für Halbleiteroptik und Funktionelle Grenzflächen, Univ. Stuttgart (Germany); **Mohamed Helal**, Julius-Maximilians-Univ. Würzburg (Germany); **Michal Vyvlecka, Benjamin Breiholz, Ponraj Vijayan**, Institut für Halbleiteroptik und Funktionelle Grenzflächen, Univ. Stuttgart (Germany); **Johannes Michl**, Physikalisches Institut, Julius-Maximilians-Univ. Würzburg (Germany); **Michael Jetter**, Institut für Halbleiteroptik und Funktionelle Grenzflächen, Univ. Stuttgart (Germany); **Sven Höfling, Tobias Huber-Loyola, Giora Peniakov**, Physikalisches Institut, Julius-Maximilians-Univ. Würzburg (Germany); **Simone Luca Portalupi, Peter Michler**, Institut für Halbleiteroptik und Funktionelle Grenzflächen, Univ. Stuttgart (Germany)

14078-39 • 14:50 - 15:10

Toward atomically thin superconducting-nanowire single-photon detectors

Author(s): **Pietro Metuh**, Technical University of Denmark (Denmark); **Athanasios Paralakis, Paweł Wyborski, Niels Gregersen, Battulga Munkhbat**, Technical Univ. of Denmark (Denmark)

CONFERENCE 14079

Terahertz Photonics IV

12 - 14 April 2026 | Ramat Gan/Salon 14 (Niveau/Level 1)

Conference Chair(s): **Mona Jarrahi**, Univ. of California, Los Angeles (United States); **Sascha Preu**, Technische Univ. Darmstadt (Germany); **Dmitry Turchinovich**, Univ. Bielefeld (Germany)

Program Committee: **Jan C. Balzer**, Univ. of Duisburg-Essen (Germany); **Enrique Castro-Camus**, Centro de Investigaciones en Óptica, A.C. (Mexico); **Jean-François Lampin**, Institute of Electronics, Microelectronics and Nanotechnology (France); **Hiroaki Minamide**, RIKEN (Japan); **Taiichi Otsuji**, Tohoku Univ. (Japan); **Willie J. Padilla**, Duke Univ. (United States); **Romain Peretti**, **Emilien Peytavit**, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); **Marco Rahm**, Technische Univ. Kaiserslautern (Germany); **François Simoens**, CEA-LETI (France); **Andreas Stöhr**, Univ. Duisburg-Essen (Germany); **Zach Taylor**, Aalto Univ. (Finland); **Shang Hua Yang**, National Tsing Hua Univ. (Taiwan); **Nezih Tolga Yardimci**, Univ. of California, Los Angeles (United States)

Sunday 12 April 2026

SESSION 1: PASSIVE COMPONENTS

12 April 2026 • 13:00 - 14:30 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Sascha Preu**, Technische Univ. Darmstadt (Germany)

14079-1 • 13:00 - 13:25

Devices to guide and manipulate THz waves (*Invited Paper*)

Author(s): **Martin Koch**, Philipps-Univ. Marburg (Germany)

14079-2 • 13:25 - 13:50

Dielectric waveguide-based interconnects for ultrabroadband interfaces (*Invited Paper*)

Author(s): **Guillermo Carpintero**, Univ. Carlos III de Madrid (Spain); **Yuma Kawamoto**, LeapWave Technologies (Spain); **Sergio Rivera Lavado**, **Ashish Kumar**, Univ. Carlos III de Madrid (Spain); **Daniel Gallego Cabo**, **Alejandro Rivera-Lavado**, LeapWave Technologies (Spain)

14079-3 • 13:50 - 14:15

Nonlinear terahertz pulse generation and beam structuring with semiconductor metasurfaces (*Invited Paper*)

Author(s): **Oleg Mitrofanov**, Univ. College London (United Kingdom); **Hyunseung Jung**, The Ctr. for Integrated Nanotechnologies (United States), Sandia National Labs. (United States); **Lucy L. Hale**, ETH Zurich (Switzerland); **Sarah Norman**, Univ. College London (United Kingdom); **C T. Harris**, **Sadhvikas Addamane**, **Chloe F. Doiron**, **Prasad P. Iyer**, **Igal Brener**, The Ctr. for Integrated Nanotechnologies (United States), Sandia National Labs. (United States)

14079-4 • 14:15 - 14:30

Design and optimization of beam-shaping optical elements for mid-IR and THz free-space communication systems

Author(s): **Marta Kurowska**, Warsaw University of Technology (Poland); **Pawel Komorowski**, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland); **Stanislaw Stopinski**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Mateusz Kaluza**, Warsaw Univ. of Technology (Poland); **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), Lighthouse Sp. z o.o. (Poland); **Agnieszka Siemion**, Warsaw Univ. of Technology (Poland)

SESSION 2: THZ BIOPHYSICS

12 April 2026 • 14:30 - 15:15 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Aparajita Bandyopadhyay**, Indian Institute of Technology Delhi (India)

14079-6 • 14:30 - 14:45

Terahertz time-domain spectroscopy study of skin phantoms simulating healthy and pathological tissues for in reflection optical setup

Author(s): **Adrianna Nieradka**, **Mateusz Kaluza**, Warsaw Univ. of Technology (Poland); **Agnieszka Siemion**, Warsaw University of Technology (Poland)

14079-7 • 14:45 - 15:00

Bimodal skin phantoms for calibration of THz systems

Author(s): **Agrima Agarwal**, The Univ. of Warwick (United Kingdom); **Sonal Saxena**, Univ. of Exeter (United Kingdom); **Adam Metcalf**, Univ. of Leeds (United Kingdom); **Ifan Jones**, **Xiangyu Guo**, **Anubhav Dogra**, The Univ. of Warwick (United Kingdom); **Jonathan Woolfrey**, Univ. of Leeds (United Kingdom); **Nishtha Chopra**, **Rachel A. Hand**, **Emma Pickwell-MacPherson**, The Univ. of Warwick (United Kingdom)

14079-34 • 15:00 - 15:15

Image Processing Techniques for Terahertz Tomography Applications

Author(s): **Amartya Sengupta**, **Uzair Aalam**, **Animesh K. Srivastava**, Indian Institute of Technology Delhi (India); **Aparajita Bandyopadhyay**, Goethe-Univ. Frankfurt am Main (Germany)

Coffee Break 15:15 - 15:40

SESSION 3: SPECTROSCOPY

12 April 2026 • 15:40 - 17:55 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Martin Koch**, Philipps-Univ. Marburg (Germany)

14079-8 • 15:40 - 16:05

Cross-correlated THz spectroscopy unravels newer sensing methods in diverse application domains – from agrifood to mineral characterization to contraband detection *(Invited Paper)*

Author(s): **Aparajita Bandyopadhyay**, **Amartya Sengupta**, Indian Institute of Technology Delhi (India)

14079-9 • 16:05 - 16:30

Considerations regarding practical frequency-resolution requirements in terahertz frequency-domain spectroscopy *(Invited Paper)*

Author(s): **Kevin Kolpatzeck**, Univ. Duisburg-Essen (Germany)

14079-10 • 16:30 - 16:55

Ultrafast light-induced phase transitions sensed by time-resolved multi-THz spectroscopy *(Invited Paper)*

Author(s): **David Cooke**, McGill Univ. (Canada)

14079-11 • 16:55 - 17:10

Particle size distribution maps from terahertz spectroscopy

Author(s): **Miguel Ángel Báez-Chorro**, Universidad Politécnica de Valencia (Spain); **Borja Vidal**, Univ. Politècnica de València (Spain)

14079-12 • 17:10 - 17:25

Harmonic and anharmonic vibrational activity and charge dynamics in solid-state polymer electrolytes revealed by terahertz, infrared, and optical spectroscopy

Author(s): **Yuhao Meng**, University Bielefeld (Germany); **Jian-Fen Wang**, **Matthias Weiling**, Forschungszentrum Jülich GmbH (Germany); **Wentao Zhang**, Univ. Bielefeld (Germany); **Felix Pfeiffer**, Forschungszentrum Jülich GmbH (Germany); **Lukas Goett-Zink**, **Tilman Kottke**, Univ. Bielefeld (Germany); **Jijeesh Ravi Nair**, **Masoud Baghernejad**, Forschungszentrum Jülich GmbH (Germany); **Dmitry Turchinovich**, **Hassan A. Hafez**, Univ. Bielefeld (Germany)

14079-13 • 17:25 - 17:40

identification of temperature-induced phase transition in two-dimensional perovskites using terahertz spectroscopy

Author(s): **Yu-Jui Lai**, **Li-Tzu Wang**, **Tsung Sheng Kao**, **Hyeyoung Ahn**, National Yang Ming Chiao Tung Univ. (Taiwan)

14079-14 • 17:40 - 17:55

Echo-resolved terahertz spectroscopy for simultaneous determination of complex refractive index and thickness with high precision

Author(s): **Nicolas S. Beermann**, **Andreas Gebauer**, **Savio Fabretti**, **Wentao Zhang**, **Hassan A. Hafez Eid**, **Dmitry Turchinovich**, Univ. Bielefeld (Germany)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 4: SPINTRONICS

13 April 2026 • 11:30 - 12:35 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Giacomo Scalari**, ETH Zurich (Switzerland)

14079-15 • 11:30 - 11:55

Ultrabroadband spintronic terahertz emitters (Invited Paper)

Author(s): **Oliver Gueckstock**, Freie Univ. Berlin (Germany)

14079-16 • 11:55 - 12:20

Terahertz electronic and spin currents in wafer-scale 2D Van der Waals heterostructures and polymorphs (Invited Paper)

Author(s): **Sukhdeep S. Dhillon**, Lab. de Physique de l'Ecole Normale Supérieure (France)

14079-17 • 12:20 - 12:35

Tantalum-rhenium alloys in spintronic terahertz emitters

Author(s): **Suraj Joshi**, TU Darmstadt (Germany); **Reshma Rajeev Lekha**, **Fahd Rushd Faridi**, Technische Univ. Darmstadt (Germany); **Dmitry Turchinovich**, Univ. Bielefeld (Germany); **Sascha Preu**, **Markus Meinert**, Technische Univ. Darmstadt (Germany)

Lunch Break 12:35 - 13:40

SESSION 5: ON-CHIP-TERAHERTZ AND PICS

13 April 2026 • 13:40 - 15:35 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Dmitry Turchinovich**, Univ. Bielefeld (Germany)

14079-18 • 13:40 - 14:05

On-chip THz sources, from frequency combs to Peltier cooled quantum cascade lasers (Invited Paper)

Author(s): **Giacomo Scalari**, **Valerio Digiorgio**, ETH Zurich (Switzerland); **Urban Senica**, Harvard Univ. (United States); **Sebastian Gloor**, **Marco Raffa**, ETH Zurich (Switzerland); **Michael A. Schreiber**, **Christian Jirauschek**, Technische Univ. München (Germany); **Mattias Beck**, **Jérôme Faist**, ETH Zurich (Switzerland)

14079-19 • 14:05 - 14:30

Towards photonic integrated terahertz systems based on InP technology (*Invited Paper*)

Author(s): **Lauri Schwenson, Milan Deumer, Simon Nellen, Shahram Keyvaninia, Florian Walter, Lars Liebermeister, Martin Schell, Robert B. Kohlhaas**, Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI (Germany)

14079-20 • 14:30 - 14:55

Monolithic generation and detection of millimeter/terahertz waves on cavity-based photonic integrated circuits (*Invited Paper*)

Author(s): **Jiawen Liu**, EPFL (Switzerland); **Chengli Wang**, Shanghai Institute of Microsystem and Information Technology (China); **Tianyi Zhang, Yazan LAmper, EPFL (Switzerland); Xin Ou**, Shanghai Institute of Microsystem and Information Technology (China); **Cristina Benea-Chelmu**, EPFL (Switzerland)

14079-21 • 14:55 - 15:20

Nonlinear integrated photonics on thin film lithium niobate for terahertz technology (*Invited Paper*)

Author(s): **Shima Rajabali**, Technische Univ. Delft (Netherlands)

14079-22 • 15:20 - 15:35

Terahertz Generation and Detection through Interband Photomixing in Quantum Well Structures

Author(s): **Mona Jarrahi, Yifan Zhao, Shahed-E Zumrat**, UCLA Samueli School of Engineering (United States)

Coffee Break 15:35 - 16:00

SESSION 6: MATERIALS, METAMATERIALS, AND METASURFACES

13 April 2026 • 16:00 - 17:55 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Sukhdeep S. Dhillon**, Lab. de Physique de l'Ecole Normale Supérieure (France)

14079-23 • 16:00 - 16:25

Terahertz non-linear optics in van der Waals metamaterials (*Invited Paper*)

Author(s): **Miriam Serena Vitiello**, Istituto Nanoscienze (Italy)

14079-24 • 16:25 - 16:40

Fractal terahertz metasurface enabled free-space frequency-multiplexed logic operations

Author(s): **Mohammadhossein Momtazpour, Lei Xu**, Nottingham Trent Univ. (United Kingdom); **Dou Feng, Anjali Chaudhary**, Univ. of Birmingham (United Kingdom); **Dominic Craske, Costas Tsakonas, Cuifeng Ying, Demosthenes Koutsogeorgis**, Nottingham Trent Univ. (United Kingdom); **Miguel Navarro-Cía**, Univ. of Birmingham (United Kingdom); **Mohsen Rahmani**, Nottingham Trent Univ. (United Kingdom)

14079-25 • 16:40 - 16:55

Terahertz holographic encryption by reflective wavelength-multiplexed metasurface

Author(s): **Hao Su**, Beijing University of Technology (China); **Dayong Wang**, Beijing Univ. of Technology (China); **Yushi Zheng, John Healy**, Univ. College Dublin (Ireland); **Jie Zhao**, Beijing Univ. of Technology (China)

14079-26 • 16:55 - 17:10

Investigation of high-Q resonances in THz metasurface structures for sensing applications

Author(s): **Oznur Omrum Sahin**, Middle East Technical University (Turkey); **Baris Celik, Utku Temel, Mehmet Bugra Ozcan, Hakan Altan**, Middle East Technical Univ. (Turkey)

14079-27 • 17:10 - 17:25

Polarization dependent multifunctional split ring resonators in THz range

Author(s): **Bhavya Sanghavi**, Indian Institute of Technology Bombay (India); **Snehal Haldankar, Vibhavari Parkar, Shriganesh S. Prabhu**, Tata Institute of Fundamental Research (India); **Parinda Vasa**, Indian Institute of Technology Bombay (India)

14079-28 • 17:25 - 17:40

Ultrafast carrier dynamics in semiconductor InSb and in topological semimetal ZrTe5

Author(s): **Elodie Iglesias, Alexandr Alekhin**, Lab. Matériaux et Phénomènes Quantiques (France); **Qiang Li, Genda Gu**, Stony Brook Univ. (United States); **Alain Sacuto, Yann Gallais, Sarah Houver**, Lab. Matériaux et Phénomènes Quantiques (France)

14079-29 • 17:40 - 17:55

Surface plasmon hybridization in three-dimensional metallic wire terahertz metamaterials

Author(s): **Simon Rossel, Wentao Zhang, Hassan A. Hafez, Savio Fabretti, Dmitry Turchinovich**, Univ. Bielefeld (Germany)

Tuesday 14 April 2026

SESSION 7: IMAGING AND HOLOGRAPHY

14 April 2026 • 8:30 - 10:10 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Simon Rossel**, Univ. Bielefeld (Germany)

14079-30 • 8:30 - 8:55

Terahertz Hyperspectral Imaging Platforms Utilizing Plasmonic Nanoantenna Array Technology (*Invited Paper*)

Author(s): **Mona Jarrahi**, UCLA Samueli School of Engineering (United States)

14079-31 • 8:55 - 9:20

Solving ill-posed problems of inline terahertz holography: a unified physics-informed deep learning framework (*Invited Paper*)

Author(s): **Mingjun Xiang**, Goethe University Frankfurt am Main (Germany); **Jianwei Zhang**, University of Hamburg (Germany); **Kai Zhou**, School of Science and Engineering, The Chinese University of Hong Kong (Shenzhen) (China); **Hartmut G. Roskos**, Goethe University Frankfurt am Main (Germany)

14079-32 • 9:20 - 9:45

SAR imaging with terahertz time-domain spectroscopy for material classification (*Invited Paper*)

Author(s): **Tobias Kubiczek**, **Ekrem Emir Yildiz**, **Jan C. Balzer**, Univ. Duisburg-Essen (Germany)

14079-33 • 9:45 - 10:10

Micromechanical Bolometers arrays for Terahertz hyperspectral imaging (*Invited Paper*)

Author(s): **Alessandro Tredicucci**, Istituto Nanoscienze (Italy), Univ. di Pisa (Italy)

Coffee Break 10:10 - 10:40

SESSION 8: SOURCES AND DETECTORS

14 April 2026 • 10:40 - 12:50 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Mona Jarrahi**, UCLA Samueli School of Engineering (United States)

14079-35 • 10:40 - 11:05

Terahertz, topology, technology: optically-switchable terahertz sources based on topological materials (*Invited Paper*)

Author(s): **Jessica Louise Boland**, The Univ. of Manchester (United Kingdom)

14079-36 • 11:05 - 11:30

High repetition rate strong-field THz sources for LCLS-II (*Invited Paper*)

Author(s): **Matthias C. Hoffmann**, SLAC National Accelerator Lab. (United States)

14079-37 • 11:30 - 11:45

Nonlinearity of field-effect transistor detectors in the terahertz domain and beyond

Author(s): **Florian Bek**, TU Darmstadt (Germany); **Fahd R. Faridi**, Technische Univ. Darmstadt (Germany); **Rahul Yadav**, Technische Hochschule Mittelhessen (Germany), Technische Univ. Darmstadt (Germany); **John M. Klopff**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany); **Andreas Penirschke**, Technische Hochschule Mittelhessen (Germany); **Sascha Preu**, Technische Univ. Darmstadt (Germany)

14079-38 • 11:45 - 12:10

Enhanced terahertz spectral response of cavity-based photoconductive antennas and application to QCL coherent detection (*Invited Paper*)

Author(s): **Anna De Vetter**, Lab. de Physique de l'Ecole Normale Supérieure (France); **James Normansell**, Univ. of Leeds (United Kingdom); **José Palomo**, **Martin Micica**, Lab. de Physique de l'Ecole Normale Supérieure (France); **Li Chen**, Univ. of Leeds (United Kingdom); **Juliette Mangeney**, **Jerome Tignon**, Lab. de Physique de l'Ecole Normale Supérieure (France); **Lianhe Li**, **Alexander Davies**, **Edmund Linfield**, **Joshua Freeman**, Univ. of Leeds (United Kingdom); **Sukhdeep S. Dhillon**, Lab. de Physique de l'Ecole Normale Supérieure (France)

14079-39 • 12:10 - 12:25

Multi-color laser emission from optically cascaded intersubband transitions below 2 THz and above 3 THz

Author(s): **Alessandro Biffani**, **Valerio Digiorgio**, **Marco Raffa**, **Mattias Beck**, **Jerôme Faist**, **Giacomo Scalari**, ETH Zurich (Switzerland)

14079-40 • 12:25 - 12:50

Radio over fiber solutions for terahertz links in 6G networks (*Invited Paper*)

Author(s): **Bruno Cimoli**, **Amgalan Sodnomai**, **Metodi Belchovski**, **Simon Rommel**, **Idelfonso Tafur Monroy**, Eindhoven University of Technology (Netherlands)

Lunch/Exhibition Break 12:50 - 13:50

SESSION 9: ELECTRO-OPTIC SAMPLING

14 April 2026 • 13:50 - 16:05 | Ramat Gan/Salon 14 (Niveau/Level 1)
 Session Chair(s): **Jessica Louise Boland**, The Univ. of Manchester (United Kingdom)

14079-41 • 13:50 - 14:15

Time-Domain Quantum Electrodynamics (*Invited Paper*)
 Author(s): **Alfred Leitenstorfer**, Univ. Konstanz (Germany)

14079-42 • 14:15 - 14:40

Evolution of THz parametric generation and detection and their applications (*Invited Paper*)
 Author(s): **Kodo Kawase**, Nagoya Univ. (Japan); **Sota Mine**, Nagoya Univ. (Japan), RIKEN (Japan); **Kosuke Murate**, Nagoya Univ. (Japan)

14079-43 • 14:40 - 14:55

Multiparametric optimization of terahertz generation efficiency in periodically poled lithium niobate
 Author(s): **Carlo Vicario**, Paul Scherrer Institut (Switzerland); **Umit Demirbas**, Paul Scherrer Institut (Switzerland), Antalya Bilim Univ. (Turkey); **Alexandre Trisorio**, Paul Scherrer Institut (Switzerland)

14079-44 • 14:55 - 15:10

Efficient and tunable comb-like THz emission in PPLN
 Author(s): **Carlo Vicario**, Paul Scherrer Institut (Switzerland); **Umit Demirbas**, Paul Scherrer Institut (Switzerland), Antalya Bilim Univ. (Turkey); **Alexandre Trisorio**, Paul Scherrer Institut (Switzerland)

14079-45 • 15:10 - 15:25

THz optical properties of ZnTe under two-photon optical excitation at 800 nm wavelength
 Author(s): **Farell Keiser**, Univ. Bielefeld (Germany), Gymnasium Leopoldinum (Germany); **Wentao Zhang**, **Dominik Johannesmann**, **Yuhao Meng**, **Nicolas S. Beermann**, **Hassan A. Hafez**, **Savio Fabretti**, **Dmitry Turchinovich**, Univ. Bielefeld (Germany)

14079-46 • 15:25 - 15:40

Terahertz emission enhancement from a gallium phosphide metasurface
 Author(s): **Yuxuan Liu**, University of Cambridge (United Kingdom); **Stephanie O. Adeyemo**, **Philip Mackereth**, **Hannah J. Joyce**, Univ. of Cambridge (United Kingdom)

14079-5 • 15:40 - 16:05

High-sensitivity THz biosensing and perspectives towards near-field bioanalysis (*Invited Paper*)
 Author(s): **Anna Katharina Wigger**, **Merle Richter**, **Yannik Loth**, **Stephan Schaeffer**, Univ. Siegen (Germany); **Nicole Rachinger**, **Anja Katrin Bosserhoff**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Peter Haring Bolívar**, Univ. Siegen (Germany)

Coffee Break 16:05 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)
 Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)
 2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks
SPIE Directors' Award Presentation
Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)
 Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)
 Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14079-47 • 18:10 - 20:00

Establishing a comprehensive reference database of terahertz measurements on 81 wood species

Author(s): **Demian Botros, Felix Gorka, Pauline Höhbusch, Eike Pohlentz, Finja Fischer**, Philipps-Univ. Marburg (Germany); **Helena Schübler, Andreas Seul**, Andreas Seul Orgelbau (Germany); **Antonello Andreone**, Univ. degli Studi di Napoli Federico II (Italy); **Martin Koch**, Philipps-Univ. Marburg (Germany)

14079-48 • 18:10 - 20:00

Performance evaluation of tunable THz mesh filters produced by fs-laser ablation

Author(s): **Hakan Alaboz**, Hochschule Furtwangen Univ. (Germany); **Felix Gorka**, Philipps-Univ. Marburg (Germany); **Daniel Johannes Förster**, LightPulse Laser Precision (Germany), Hochschule für Angewandte Wissenschaften München (Germany); **Matthias Buser**, LightPulse Laser Precision (Germany); **Volker Bucher**, Hochschule Furtwangen Univ. (Germany); **Martin Koch**, Philipps-Univ. Marburg (Germany)

14079-49 • 18:10 - 20:00

Filterless Photonic Frequency-Tupling Architecture for High-Purity W-Band Signal Generation

Author(s): **Prashant Kumar, Paritosh Shukla**, Indian Institute of Technology (Indian School of Mines), Dhanbad (India); **Sanjeev Kumar Raghuwanshi**, Indian Institute of Technology (Indian School of Mines) Dhanbad (India)

14079-50 • 18:10 - 20:00

Constant-thickness optical structures for beam steering in terahertz systems

Author(s): **Adrianna Nieradka**, Warsaw University of Technology (Poland); **Paweł Komorowski**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Mateusz Kaluza, Agnieszka Siemion**, Warsaw Univ. of Technology (Poland)

14079-51 • 18:10 - 20:00

Detecting acoustic vibrations of nanoparticles with THz waves

Author(s): **barış çelik**, metu(Middle East Technical University) (Turkey); **Mehmet Buğra Özcan**, Middle East Technical Univ. (Turkey); **Öznur Ömrüm Şahin**, metu(Middle East Technical University) (Turkey); **Utku Temel, Hakan Altan**, Middle East Technical Univ. (Turkey)

CONFERENCE 14080

Functional Materials: Advances and Applications

15 - 16 April 2026 | Ramat Gan/Salon 14 (Niveau/Level 1)

Conference Chair(s): Alistair Kean, Univ. of the Highlands and Islands (United Kingdom); Nikhil Bhalla, Univ. of Ulster (United Kingdom); Riccardo Funari, Scuola Superiore Sant'Anna (Italy)

Program Committee: Ke Du, Univ. of California, Riverside (United States); Amir Farokh Payam, Univ. of Ulster (United Kingdom); Doojin Lee, Chonnam National Univ. (Korea, Republic of); Fayu Wan, Nanjing Univ. of Information Science & Technology (China); Chia-Ming Yang, Chang Gung Univ. (Taiwan); Zhugen Yang, Cranfield Univ. (United Kingdom)

Wednesday 15 April 2026

SESSION 1: METAMATERIALS AND FUNCTIONAL NANOPHOTONICS

15 April 2026 • 9:00 - 10:00 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): Riccardo Funari, Scuola Superiore Sant'Anna (Italy)

14080-1 • 9:00 - 9:20

Metamaterials for medical applications

Author(s): Tatjana Gric, Vilnius Gediminas Technical Univ. (Lithuania); Edik Rafailov, Aston Univ. (United Kingdom)

14080-2 • 9:20 - 9:40

Nanostructured sol-gel TiO₂ layers fabricated by nanoimprint lithography for enhanced light absorption in photocatalysis

Author(s): Agathe Cavanna, Université Jean Monnet Saint-Etienne, Laboratoire Hubert Curien (France), Institut des Nanotechnologies de Lyon (INL) (France); Nicolas Aimé, Arnaud Valour, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France); Eric Puzenat, Ircelyon (France); Emmanuel Drouard, Céline Chevalier, Institut des Nanotechnologies de Lyon (France); Nicolas Crespo-Monteiro, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France); Christian Seassal, Institut des Nanotechnologies de Lyon (France); Yves Jourlin, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France)

14080-3 • 9:40 - 10:00

Bio-Inspired Design and Optimization of Moth-Eye Antireflective Surfaces Using Lumerical Simulations

Author(s): Patrick Millar, Univ. of Glasgow (United Kingdom), Helia Photonics Ltd. (United Kingdom)

Coffee Break 10:00 - 10:30

SESSION 2: PEROVSKITES AND METAL HALIDES

15 April 2026 • 10:30 - 12:30 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): Riccardo Funari, Scuola Superiore Sant'Anna (Italy)

14080-4 • 10:30 - 10:50

2D hybrid perovskite ferroelectrics with switchable ferroelectricity and photoelectric robustness down to monolayer

Author(s): Yuzhong Hu, Norwegian Univ. of Science and Technology (Norway); Marin Alexe, The Univ. of Warwick (United Kingdom); Haidong Lu, Shehr Bano Masood, Alexei Gruverman, Univ. of Nebraska-Lincoln (United States); Clemens Goehler, Shangpu Liu, Ruprecht-Karls-Univ. Heidelberg (Germany)

14080-5 • 10:50 - 11:20

Metal halide perovskite heterostructures for optoelectronic and photovoltaic applications (Invited Paper)

Author(s): Jacky Even, Institut National des Sciences Appliquées de Rennes (France); Claudine Katan, Institut des Sciences Chimiques de Rennes (France); Mercouri Kanatzidis, Northwestern Univ. (United States); Aditya Mohite, Rice Univ. (United States)

14080-6 • 11:20 - 11:50

Landscape of Excited States in 0D Metal Halides (Invited Paper)

Author(s): Qiming Peng, Nanjing Tech Univ. (China)

14080-7 • 11:50 - 12:10

Carrier dynamics determines the optimization strategies of perovskite LEDs and PVs

Author(s): **Saixue Wang**, Nanjing Tech Univ. (China)

14080-13 • 12:10 - 12:30

An ultrasensitive biosensor based on graphene and perovskite heterostructures

Author(s): **Xianfeng Chen, Jiaxing Sun, Kartikey Chavan**, Nottingham Trent University (United Kingdom); **Lin Zhou, Jianlong Zhao**, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science (China)

Lunch/Exhibition Break 12:30 - 14:10

SESSION 3: DYNAMICS, IR, AND ELECTRICALLY ACTIVE MATERIALS

15 April 2026 • 14:10 - 15:10 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-8 • 14:10 - 14:30

Tuning phonon properties in isotopically enriched hexagonal boron nitride

Author(s): **Madeline Hennessey**, University of Technology Sydney (Australia), ARC Centre of Excellence in Optical Microcombs for Breakthrough Science (COMBS) (Australia); **Hadi Mahmodi**, Univ. of Technology Sydney (Australia), ARC Ctr. of Excellence in Optical Microcombs for Breakthrough Science (Australia); **Seth Eckels, Thomas Poirier, Eli Janzen**, Kansas State Univ. (United States); **Trong Toan Tran**, Univ. of Technology Sydney (Australia); **James H. Edgar**, Kansas State Univ. (United States); **Alexander Solntsev**, Univ. of Technology Sydney (Australia); **Irina Kabakova**, Univ. of Technology Sydney (Australia), ARC Ctr. of Excellence in Optical Microcombs for Breakthrough Science (Australia); **Ramon Cuscó**, GEO3BCN, Consejo Superior de Investigaciones Científicas (Spain)

14080-9 • 14:30 - 14:50

Optical Investigation of Electrically Active Extended Defects in High-Purity 4H-SiC Substrates.

Author(s): **Hsiu-Ming Hsu, Irwan Saleh Kurniawan, Ruth Jeane Soebroto, Hsiu-Ying Huang, Wen-Chung Li, Chi-Tsu Yuan, Russel Cruz Sevilla**, Chung Yuan Christian Univ. (Taiwan)

14080-11 • 14:50 - 15:10

Impregnation of Single-Atom Iron from Metallosurfactants onto MOF-Derived Porous N-Doped Carbon for Efficient Wastewater Treatment via Peroxymonosulfate Activation

Author(s): **Preeti Garg, Ganga Ram Chaudhary**, Panjab Univ. (India)

Coffee Break 15:10 - 15:40

SESSION 4: FIBER/RI SENSING AND BIOSENSING DEVICES

15 April 2026 • 15:40 - 16:30 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-12 • 15:40 - 16:10

Reflection-mode fiber optic biosensor integrating FBG and short period-LPG for real-time detection of fPSA (Invited Paper)

Author(s): **Riccardo Funari, Rana Muhammad Armaghan Ayaz, Francesca Samà**, Scuola Superiore Sant'Anna (Italy); **Vanessa Susini, Maria Franzini**, Univ. di Pisa (Italy); **Claudio J. Oton, Fabrizio C. F. Di Pasquale**, Scuola Superiore Sant'Anna (Italy)

14080-14 • 16:10 - 16:30

temperature-compensated refractive index sensing using a cascaded FBG/Short Period - LPG fiber configuration

Author(s): **Romeo Lettini, Riccardo Funari**, Scuola Superiore Sant'Anna (Italy), Consiglio Nazionale delle Ricerche (Italy); **Rana Muhammad Armaghan Ayaz, Claudio J. Oton, Fabrizio C. F. Di Pasquale**, Scuola Superiore Sant'Anna (Italy); **Francesca Bontempi**, Centro Nazionale delle Ricerche (Italy)

SESSION 5: SURFACES, MORPHOLOGY AND HYBRID PLATFORMS

15 April 2026 • 16:30 - 17:30 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-15 • 16:30 - 16:50

The role of morphology and surface hydrophilicity of silver nanoparticles in plasmonic humidity sensing

Author(s): **Lucrezia Catanzaro, Marcello Condorelli, Vittorio Scardaci**, Univ. degli Studi di Catania (Italy); **Enza Fazio, Carmelo Corsaro**, Univ. degli Studi di Messina (Italy); **Luisa D'Urso, Giuseppe Compagnini**, Univ. degli Studi di Catania (Italy)

14080-16 • 16:50 - 17:10

Mechanically reconfigurable hybrid interferometers from copper coordination polymer single crystals

Author(s): **Ankur Khapre**, University of Hyderabad (India); **Melchi Chosenyah, Rajadurai Chandrasekar**, Univ. of Hyderabad (India)

14080-17 • 17:10 - 17:30

Biocompatible metal-organic frameworks for light-driven chemosensing and thermometry

Author(s): **Valentin A. Milichko**, New Uzbekistan Univ. (Uzbekistan); **Maria Timofeeva, Yuliya Kenzhebayeva**, ITMO Univ. (Russian Federation)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14080-25 • 17:45 - 19:30

Delignified and densified wood as a bio-based functional material for passive radiative cooling

Author(s): **Ernesto Pini**, Istituto Nazionale di Ricerca Metrologica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Vincenzo Spinoso**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Ruggero Rossi**, Univ. degli Studi di Firenze (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Jérémy Werlé**, Istituto Nazionale di Ricerca Metrologica (Italy); **Diederik Sybolt Wiersma**, Istituto Nazionale di Ricerca Metrologica (Italy), Univ. degli Studi di Firenze (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Lorenzo Pattelli**, Istituto Nazionale di Ricerca Metrologica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy)

14080-26 • 17:45 - 19:30

Construction of ZnO/V₂O₅ heterostructured photoelectrodes with a staggered band alignment for improved photoelectrochemical performance

Author(s): **Cheng-Ming Chang**, National Yang Ming Chiao Tung Univ. (Taiwan); **Sheng-Hsiung Yang**, National Yang Ming Chiao Tung Univ (Taiwan)

14080-27 • 17:45 - 19:30

Real-time optical sensing technique using a nanophotonic cavity based on microellipsometry

Author(s): **Jaehyun Lee**, Length and Dimensional Metrology Group, Physical Metrology Department, Korea Research Institute of Standards and Science (Korea, Republic of); **Dong-Geun Yang, Jihoo Kim**, Korea Research Institute of Standards and Science (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Soonwook Hong**, Chonnam National Univ. (Korea, Republic of); **Dae Hee Kim**, Korea Research Institute of Standards and Science (Korea, Republic of); **Young-Jin Kim**, KAIST (Korea, Republic of); **Young-Sik Ghim**, Korea Research Institute of Standards and Science (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of)

14080-29 • 17:45 - 19:30

Laser cleaning of contaminated silica optical components for high power laser facilities

Author(s): **Emilie Lourdel, Laurent Lamaignère**, CEA (France); **Jean-Yves Natoli**, Institut Fresnel (France); **Jean-François Gleyze, Nadja Roquin, Martin Cormier**, CEA (France)

14080-30 • 17:45 - 19:30

Synthesis of plasmonic and photocatalytic active 3D nanostructures by MS-ALD

Author(s): **Mario Ziegler, Valentin Ripka**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Anke Drewitz**, Gesellschaft zur Förderung von Medizin-, Bio- und Umwelttechnologien e.V. (Germany); **Marco Diegel, Jan Dellith**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Martin Kühnel**, Gesellschaft zur Förderung von Medizin-, Bio- und Umwelttechnologien e.V. (Germany); **Uwe Hübner**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14080-31 • 17:45 - 19:30

Exploring the optical sensing enhancement with annealed piezoelectric peptide microrods

Author(s): **Rongcheng Gan, James H. Rice**, Univ. College Dublin (Ireland)

14080-32 • 17:45 - 19:30

Solution process high-brightness white light colloidal quantum dots light-emitting diodes

Author(s): **Min-Han LU**, Graduate Program of College of Photonics, National Yang Ming Chiao Tung University (Taiwan); **Yi-Zuo Chen, Yi-Hsiang Chen**, National Yang Ming Chiao Tung Univ. (Taiwan); **Ray-Kuang Chiang, Cih-Jung Chen**, Taiwan Nanocrystals Corp. Ltd. (Taiwan); **Hsin-Chieh Yu**, National Yang Ming Chiao Tung Univ. (Taiwan)

14080-33 • 17:45 - 19:30

Ultra-flat silver films for photonic applications.

Author(s): **Pavel Bulkin, Dmitri Daineka**, Lab. de Physique des Interfaces et des Couches Minces, École Polytechnique, Institut Polytechnique de Paris, CNRS (France); **Talgat Shugabaev**, Saint Petersburg State Univ. (Russian Federation), St. Petersburg Academic Univ. (Russian Federation); **Ivan Melnichenko**, HSE Univ. (Russian Federation); **George E. Cirlin, Vladislav O. Gridchin**, Saint Petersburg State Univ. (Russian Federation), St. Petersburg Academic Univ. (Russian Federation)

14080-35 • 17:45 - 19:30

Performance Analysis of Ag- α -Fe₂O₃ Hybrid Grating Assisted Tunable D-shaped Fiber Plasmonic Sensor

Author(s): **Kirti Shukla, Rashmi Achla Minz**, National Institute of Technology, Rourkela (India); **Amit Kumar Goyal**, Manipal Institute of Technology (India)

14080-36 • 17:45 - 19:30

Investigating the photoluminescence and electrochemical properties of 0D/2D GQDs/MXene heterostructure

Author(s): **Hsiu-Ying Huang, Ruth Jeane Soebroto, Chin-Hsuan Lin, Chi-Tsu Yuan**, Chung Yuan Christian Univ. (Taiwan)

14080-37 • 17:45 - 19:30

Hydrothermal synthesis of multifunctional seaweed-derived biomass carbon for energy storage

Author(s): **Renisha Esther S, Jerlin G., M. Ashok**, National Institute of Technology, Tiruchirappalli (India)

14080-38 • 17:45 - 19:30

Enhanced electrochromic properties of tungsten oxide modified with graphene quantum dots

Author(s): **Ruth Jeane Soebroto, Chin-Hsuan Lin, Hsiu-Ying Huang, Chi-Tsu Yuan**, Chung Yuan Christian Univ. (Taiwan)

14080-39 • 17:45 - 19:30

Modeling of fibrous insulation with coated cylindrical microfibers

Author(s): **Payam Mashinchi Abbasi, Kursat Sendur**, Sabanci Univ. (Turkey)

14080-40 • 17:45 - 19:30

Effects of rapid thermal annealing on Mid IR propagation improvement based on Ge-Sb-Se waveguides for photonic sensor

Author(s): **Radwan Chahal**, Institut des Sciences Chimiques de Rennes, Univ. de Rennes 1 (France); **Mélanie Joubaud**, Univ. de Rennes 1 (France); **Tomáš Halenkovič, Jan Gutwirth**, Univ. of Pardubice (Czech Republic); **Abdelali Hammouti**, Fonctions Optiques pour les Technologies de l'information, Univ. de Rennes (France); **Stanislav Šlang**, Univ. of Pardubice (Czech Republic); **Francis Gouttefangeas**, ScanMAT, CNRS (France), Univ. de Rennes (France); **Joël Charrier**, Fonctions Optiques pour les Technologies de l'information, Univ. de Rennes (France); **Petr Němec**, Univ. of Pardubice (Czech Republic); **Virginie Nazabal**, Université de Rennes, Institut des Sciences Chimiques de Rennes (France)

14080-41 • 17:45 - 19:30

Ultrathin flexible glass with Au nanoparticles for SERS substrates enhanced by bending treatments

Author(s): **Chin Yi Kuan**, Chang Gung University (Taiwan); **Yu-Jie Lin, Chih-Jen Yu**, Chang Gung Univ. (Taiwan); **Chia-Ming Yang**, Chang Gung Univ. (Taiwan), Chang Gung Memorial Hospital at Linkou (Taiwan)

14080-42 • 17:45 - 19:30

Sun-Like Visible White Light Source with Enhanced Color Quality and Safety

Author(s): **Dheeraj Kumar, Ravendra K. Varshney, Dalip S. Mehta**, Indian Institute of Technology Delhi (India)

14080-44 • 17:45 - 19:30

The synthesis and characterisation of hydrophobic sol-gel thin films for the detection of PFOA in water.

Author(s): **Jodie Bermingham**, Dublin City Univ. (Ireland)

14080-45 • 17:45 - 19:30

Multi-angle optical characterization of reflective and transmissive scattering using the Agilent Cary 7000 UMS

Author(s): **Marcus Schulz**, Agilent Technologies Deutschland GmbH (Germany)

14080-46 • 17:45 - 19:30

LIBT-Fabricated Metallic Patterns for Guided Cell Spheroid Growth

Author(s): **Andrei G. Buzuykin, Maxim Morozov, Polina Belik, Nikita Afanasiev**, ITMO Univ. (Russian Federation)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 6: RAMAN/SERS FOR CHEMICAL- AND BIO-DETECTION

16 April 2026 • 11:00 - 12:20 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-18 • 11:00 - 11:20

Metal-Free Peptide Semiconductor-Enhanced Raman Scattering

Author(s): **James H. Rice**, Univ. College Dublin (Ireland)

14080-19 • 11:20 - 11:40

Detection of Nanoplastics Using SERS with Silver Nanoflowers

Author(s): **Jiunn-Woei Liaw**, Chang Gung Univ. (Taiwan)

14080-20 • 11:40 - 12:00

Large-area SERS sensor chips fabricated on flexible platforms for highly sensitive and specific detection of pesticides and explosives

Author(s): **Merbin John**, **Umang Chaturvedi**, **Kamal Kumar**, **Vaibhav Chaturvedi**, **Swapnil Shekhar**, **Mohd Asif**, **Anuj Dhawan**, Indian Institute of Technology Delhi (India)

14080-21 • 12:00 - 12:20

Porous Silicon as a Platform for SERS and Solar Water Desalination

Author(s): **Aideen Shlebe**, Ben-Gurion Univ. of the Negev (Israel)

SESSION 7: PLASMONICS AND HYBRID FUNCTIONAL FILMS

16 April 2026 • 12:20 - 12:40 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-22 • 12:20 - 12:40

In-situ Growth of Plasmonic Nanoparticles for Optical Transmission Filters

Author(s): **Oliver Burton**, **Hannah Joyce**, Univ. of Cambridge (United Kingdom)

SESSION 8: GREEN AND BIO-BASED MATERIALS

16 April 2026 • 12:40 - 13:00 | Ramat Gan/Salon 14 (Niveau/Level 1)

Session Chair(s): **Riccardo Funari**, Scuola Superiore Sant'Anna (Italy)

14080-24 • 12:40 - 13:00

Green Synthesis of Ultra-Small Anatase TiO₂ Nanoparticles Using Pinus patula Extract for High-Performance Photocatalysis

Author(s): **Gurdit Singh**, **Sanjeev Kumar**, Chandigarh Univ. (India); **Gurmeet Singh Lotey**, Indiana Univ.-Purdue Univ. Indianapolis (United States)

CONFERENCE 14081

Spintronics and Nanomagnetism

12 - 16 April 2026 | Londres 2/Salon 7 (Niveau/Level 0)

Conference Chair(s): Jean-Eric Wegrowe, École Polytechnique (France); Henri Jaffrès, Lab. Albert Fert (France)

Program Committee: Flavio Abreu Araujo, Univ. Catholique de Louvain (Belgium); Matthieu Bailleul, Institut de Physique et de Chimie des Matériaux de Strasbourg (France); Mairbek Chshiev, CEA-LETI (France); Joseph S. Friedman, The Univ. of Texas at Dallas (United States); Jiwan Kim, Kunsan National Univ. (Korea, Republic of); Andrei Kirilyuk, Radboud Univ. Nijmegen (Netherlands); Dominik Kriegner, Institute of Physics of the CAS, v.v.i. (Czech Republic); Daniel Lacour, Institut Jean Lamour (France); Richard Schlitz, Univ. Konstanz (Germany); Aurélie Solignac, CEA-DRF (France); Vasily V. Temnov, École Polytechnique (France); Laura Thevenard, Institut des nanosciences de Paris (France); Paolo Vavassori, CIC nanoGUNE (Spain)

Sunday 12 April 2026

SESSION 1: SPINTRONIC DEVICES I

12 April 2026 • 13:45 - 15:00 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): William Legrand, ETH Zurich (Switzerland)

14081-2 • 13:45 - 14:10

Racetrack memory devices based on freestanding membranes (*Invited Paper*)

Author(s): Ke Gu, Yicheng Guan, Prajwal Rigvedi, Max-Planck-Institut für Mikrostrukturphysik (Germany); Binoy K. Hazra, Max-Planck-Institut für Mikrostrukturphysik (Germany), Indian Institute of Technology Guwahati (India); Hakan Deniz, Zihan Yin, Stuart Parkin, Max-Planck-Institut für Mikrostrukturphysik (Germany)

14081-3 • 14:10 - 14:35

MEMS-Magnonics Integration: Enabling Tunable RF Components (*Invited Paper*)

Author(s): Federico Maspero, Maria Cocconcelli, Antonio Angotti, Andrea Cattoni, Riccardo Bertacco, Politecnico di Milano (Italy)

14081-4 • 14:35 - 15:00

IMAP: in-MRAM associative processor with reliable bit-serial massively-parallel arithmetic operations (*Invited Paper*)

Author(s): Esteban Garzón, University of Calabria (Italy); Cristhopher Mosquera, Marco Lanuzza, Univ. della Calabria (Italy)

Coffee Break 15:00 - 15:30

SESSION 2: SPINTRONIC DEVICES II

12 April 2026 • 15:30 - 18:00 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): Johanna Fischer, Spintec (France)

14081-5 • 15:30 - 15:55

Wigner-function tomography of parametrically excited magnon dynamics (*Invited Paper*)

Author(s): Tomosato Hioki, The Univ. of Tokyo (Japan)

14081-6 • 15:55 - 16:20

Controlling Magnons and Their Transport by Electronic Spin Injection (*Invited Paper*)

Author(s): Richard Schlitz, Univ. Konstanz (Germany)

14081-66 • 16:20 - 16:45

Development of an ultrasensitive skyrmion-based magnetic field sensor (*Invited Paper*)

Author(s): Lucia Malucelli, Spintec (France); Mariana Caseiro, CEA-Paris-Saclay (France); Eyub Yildiz, Javier Rial, Stéphane Auffret, Spintec (France); Nicolas Mollard, CEA (France); Isabelle Joumard, Jérôme Faure-Vincent, Spintec (France); Claire Baraduc, CEA-Grenoble (France); Aurélie Solignac, Claude Fermon, Myriam Pannetier-Lecoq, CEA-DRF (France); Hélène Béa, CEA-LETI-DOPT (France); Johanna Fischer, Spintec (France)

14081-8 • 16:45 - 17:10

Substituted iron garnet thin films for low temperatures and quantum magnonics *(Invited Paper)*

Author(s): **William Legrand**, Institut NÉEL, Univ. Grenoble Alpes, CNRS (France)

14081-9 • 17:10 - 17:35

All-magnonic non-linear frequency conversion processes *(Invited Paper)*

Author(s): **Rouven Dreyer, Alexandra Schrader, Chris Körner, Georg Woltersdorf**, Martin-Luther-Univ. Halle-Wittenberg (Germany)

14081-10 • 17:35 - 18:00

Magnon-phonon coupling in magnetic materials *(Invited Paper)*

Author(s): **MOHAMED BOUTGHATIN**, IEMN (France); **Noura Ezzahni**, IEMN (France), Physics of Matter and Radiation Laboratory, Department of Physics, Faculty of Sciences, Mohammed I (Morocco); **abdelkrim talbi, othmane marbough**, IEMN (France); **Yannick Dusch**, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); **Nicolas Tiercelin**, IEMN (France); **El Houssaine El Boudouti**, Physics of Matter and Radiation Laboratory, Department of Physics, Faculty of Sciences, Mohammed I University (Morocco); **Olivier Olivier Bou Matar**, IEMN (France)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair
and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G) innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:20

SESSION 3: ADVANCED MAGNETIC SENSORS I

13 April 2026 • 11:20 - 13:00 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Richard Schlitz**, Univ. Konstanz (Germany)

14081-11 • 11:20 - 11:45

Ultracompact magnetic flowmeter in biochip applications *(Invited Paper)*

Author(s): **Susana Cardoso**, INESC MN (Portugal), Instituto Superior Tecnico, ULisboa (Portugal)

14081-12 • 11:45 - 12:10

Magneto-resistive detection of spin-waves *(Invited Paper)*

Author(s): **Quentin Rossi, Daniel Stoeffler**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France); **Grégoire de Loubens, Hugo Merbouche**, SPEC, CEA-Paris-Saclay (France); **Hicham Majjad, Yves Henry, Igor Ngouagnia**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France); **Aurélien Solignac**, SPEC, CEA-Paris-Saclay (France); **Matthieu Bailleul**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France)

14081-13 • 12:10 - 12:35

AMR sensors and laser-micromachined permanent micromagnets for microscale device applications *(Invited Paper)*

Author(s): **Stefano Lumetti**, **Perla Malagò**, Silicon Austria Labs GmbH (Austria); **Povilas Smaliukas**, **Luiz Enger**, **Jochen Bardong**, **Matteo Montagnese**, Silicon Austria Labs. GmbH (Austria)

14081-7 • 12:35 - 13:00

Phonon-assisted generation of propagating quantum magnonic states *(Invited Paper)*

Author(s): **Carlos Gonzalez Ballester**, **Marco Brühlmann**, Technische Univ. Wien (Austria); **Jorge Puebla**, Kyoto Univ. (Japan); **Yunyoung Hwang**, RIKEN (Japan)

Lunch Break 13:00 - 14:00

SESSION 4: ADVANCED MAGNETIC SENSORS II

13 April 2026 • 14:00 - 15:15 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Stefano Lumetti**, Silicon Austria Labs. GmbH (Austria)

14081-14 • 14:00 - 14:25

Advances towards the optimization of La₂/3Sr₁/3MnO₃-based low-noise anisotropic magnetoresistive sensors *(Invited Paper)*

Author(s): **Tagi Tagiyev**, Univ. de Caen Normandie (France), GREYC UMR 6072 CNRS (France), ENSICAEN (France); **Javier Rial**, Univ. Grenoble Alpes (France), Spintec, CNRS (France); **Luiz Enger**, Silicon Austria Labs GmbH (Austria); **Thomas Brun**, Université Grenoble Alpes, CNRS, CEA, SPINTEC, Grenoble 38054, France (France), LPC2E, Université d'Orléans, CNRS, Orléans, (France) (France); **Raul Solis Leon**, Univ. de Caen Normandie (France), GREYC UMR6072 CNRS (France), ENSICAEN (France); **Philippe Sabon**, Université Grenoble Alpes, CNRS, CEA, SPINTEC, Grenoble 38054, France (France); **Hélène Béa**, Université Grenoble Alpes, CNRS, CEA, SPINTEC, Grenoble 38054, France (France), Institut Universitaire de France (IUF) (France); **Michel Hehn**, Université de Lorraine, CNRS, IJL, F-54000 Nancy, France (France); **Aurélié Solignac**, SPEC, CEA, CNRS, Université Paris-Saclay, CEA Saclay, 91191 Gif sur Yvette Cedex France (France); **Paolo Perna**, IMDEA Nanoscience, C/ Faraday 9, Campus de Cantoblanco, Madrid 28049, Spain (Spain); **Victor Pierron**, **Bruno Guillet**, **Stéphane Flament**, Univ. de Caen Normandie (France), GREYC UMR6072 CNRS (France), ENSICAEN (France); **Laurence Mechin**, Université Caen Normandie (France), GREYC UMR6072 CNRS (France), ENSICAEN (France)

14081-15 • 14:25 - 14:50

Magnetoresistive sensor for distributed tactile sensor applications *(Invited Paper)*

Author(s): **Susana Cardoso**, INESC MN (Portugal)

14081-16 • 14:50 - 15:15

Carbon doping effects on MgO tunneling barriers and their influence on magnetic tunnel junction noise *(Invited Paper)*

Author(s): **Mariana Caseiro**, **Rohit Pachat**, **Aurélié Solignac**, **Claude Fermon**, SPEC, CEA-Paris-Saclay (France); **Martin Bowen**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France); **Michel Hehn**, **Daniel Lacour**, Institut Jean Lamour (France); **Myriam Pannetier-Lecoeur**, SPEC, CEA-Paris-Saclay (France)

Coffee Break 15:15 - 15:45

SESSION 5: SPIN NEUROMORPHIC

13 April 2026 • 15:45 - 17:50 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Susana Isabel Cardoso**, INESC MN (Portugal)

14081-17 • 15:45 - 16:10

The spintronic crossbar: from binary to n-ary *(Invited Paper)*

Author(s): **Lior Klein**, Bar-Ilan Univ. (Israel)

14081-18 • 16:10 - 16:35

Multi-weight molecular spintronic synapses for reinforcement learning *(Invited Paper)*

Author(s): **Alberto Riminucci**, CNR-ISMN (Italy); **Caterina Baldassini**, Istituto per lo Studio dei Materiali Nanostrutturati (Italy), Univ. degli Studi di Bologna (Italy); **Riccardo Licata**, Istituto per lo Studio dei Materiali Nanostrutturati (Italy); **Saleh Rezaei**, Istituto per lo Studio dei Materiali Nanostrutturati (Italy), Univ. degli Studi di Bologna (Italy); **Samuele Sanna**, Univ. degli Studi di Bologna (Italy); **Rajib Rakshit**, **Manju Singh**, **Patrizio Graziosi**, **Raimondo Cecchini**, **Luca Gnoli**, **Ilaria Bergenti**, **Valentin A. Dediu**, Istituto per lo Studio dei Materiali Nanostrutturati (Italy)

14081-19 • 16:35 - 17:00

Scalable Algorithms for Neuromorphic In-Memory Computing with N-ary Spintronic Crossbar Arrays *(Invited Paper)*

Author(s): **Anatole Moureaux**, **Anthony Lopes Temporao**, **Lindimar Borges de Avila**, **Flavio Abreu Araujo**, Univ. Catholique de Louvain (Belgium)

14081-20 • 17:00 - 17:25

Spintronic architectures for unconventional and neuromorphic computing *(Invited Paper)*

Author(s): **Davi Rodrigues**, Politecnico di Bari (Italy); **Thomas B. Winkler**, Radboud University (Netherlands); **Yuean Zhou**, Johannes Gutenberg-Universität Mainz (Germany); **Catarina Pereira**, **Alex Jenkins**, International Iberian Nanotechnology Laboratory (INL) (Portugal); **David Breitbach**, RPTU Kaiserslautern-Landau (Germany); **Mario Carpentieri**, Politecnico di Bari (Italy); **Mathias Klau**, Johannes Gutenberg-Universität Mainz (Germany); **Johan Mentink**, Radboud University (Netherlands); **Ricardo Ferreira**, International Iberian Nanotechnology Laboratory (INL) (Portugal); **Alexandre A. Hamadeh**, Université Paris-Saclay (France); **Philipp Pirro**, RPTU Kaiserslautern-Landau (Germany); **Giovanni Finocchio**, University of Messina (Italy)

14081-21 • 17:25 - 17:50

Neuromorphic weighted sum operation using magnetic skyrmions *(Invited Paper)*

Author(s): **Tristan da Câmara Santa Clara Gomes**, INESC TEC (Portugal); **Yanis Sassi**, **Dedalo Sanz-Hernandez**, **Sachin Krishnia**, **Sophie Collin**, **Marie-Blandine Martin**, **Pierre Seneor**, **Vincent Cros**, **Julie Grollier**, **Nicolas Reyren**, Lab. Albert Fert, Univ. Paris-Saclay, Thales, CNRS (France)

Tuesday 14 April 2026

SESSION 6: ULTRAFAST MAGNETISM

14 April 2026 • 8:35 - 10:15 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Markus Münzenberg**, Ernst Moritz Arndt Univ. Greifswald (Germany)

14081-22 • 8:35 - 9:00

Ultrafast opto-spintronics enabled by optical epsilon-near-zero regime *(Invited Paper)*

Author(s): **Andrei Kirilyuk**, Radboud Univ. Nijmegen (Netherlands)

14081-23 • 9:00 - 9:25

Femtosecond laser-produced cavities for resonant acousto-magneto-plasmonics *(Invited Paper)*

Author(s): **Vasily V. Temnov**, **Pavel Varlamov**, **Akira Barros**, **Aditya Swaminathan**, Lab. des Solides Irradiés, École Polytechnique (France); **Jan Marx**, **Andreas Ostendorf**, Ruhr-Univ. Bochum (Germany); **Anna Semisalova**, Univ. Duisburg-Essen (Germany); **Denys Makarov**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany); **Paolo Vavassori**, CIC nanoGUNE, Basque Research & Technology Alliance (Spain); **Yannis Laplace**, **Michele Raynaud**, Lab. des Solides Irradiés, École Polytechnique (France)

14081-24 • 9:25 - 9:50

Ultrafast electron dynamics in altermagnets *(Invited Paper)*

Author(s): **Hans Christian Schneider**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14081-25 • 9:50 - 10:15

Ultrafast electron-magnon interactions in a spin-polarized electron gas *(Invited Paper)*

Author(s): **Benjamin Bakri**, **Giovanni Manfredi**, **Paul-Antoine Hervieux**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France)

Coffee Break 10:15 - 10:45

SESSION 7: TOPOLOGICAL MATERIALS

14 April 2026 • 10:45 - 12:25 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Gunther Springholz**, Johannes Kepler Univ. Linz (Austria)

14081-26 • 10:45 - 11:10

Spin and orbital current conversion using topological insulator Bi_{1-x}Sb_x alloy. *(Invited Paper)*

Author(s): **Mudit Jain**, Ctr. National de la Recherche Scientifique (France)

14081-27 • 11:10 - 11:35

Hybridization of topological surface states in ultrathin devices *(Invited Paper)*

Author(s): **Alexander Brinkman**, Univ. Twente (Netherlands)

14081-28 • 11:35 - 12:00

Thermodynamic theory of local orbital magnetization *(Invited Paper)*

Author(s): **Sariah Al Saati**, **Karyn Le Hur**, Ctr. de Physique Théorique, École Polytechnique (France); **Frédéric Piéchon**, Lab. de Physique des Solides, Univ. Paris-Saclay (France)

14081-29 • 12:00 - 12:25

Programmable optical tweezer for magnetic skyrmions *(Invited Paper)*

Author(s): **Jaeyu Kim**, Korea Advanced Institute of Science and Technology (Korea, Republic of); **Seungmo Yang**, Korea Research Institute of Standards and Science (Korea, Republic of); **Dongha Kim**, Korea Univ. (Korea, Republic of); **Kyoung-Woong Moon**, **Changsoo Kim**, **Chanyong Hwang**, Korea Research Institute of Standards and Science (Korea, Republic of); **Min-Kyo Seo**, KAIST (Korea, Republic of)

Lunch/Exhibition Break 12:25 - 13:50

SESSION 8: SPIN-INJECTION AND SPIN-ORBIT TORQUE

14 April 2026 • 13:50 - 15:30 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Jean-Eric Wegrowe**, École Polytechnique (France)

14081-30 • 13:50 - 14:15

A programmable Ising machine using Vortex spin-torque nano-oscillator *(Invited Paper)*

Author(s): **Abderrazak Hakam**, **Chloé Chopin**, **Leandro Martins**, **Erwan Aubouin**, SPINTEC, Univ. Grenoble Alpes, CEA, CNRS, GINP (France); **Simon de Wergifosse**, Institute of Condensed Matter and Nanosciences, Université catholique de Louvain (Belgium); **Clément De Barbarin**, **Nicolas Mollard**, **Eyub Yildiz**, SPINTEC, Univ. Grenoble Alpes, CEA, CNRS, GINP (France); **Louis Hutin**, **Franck Badets**, Université Grenoble Alpes, CEA, LETI (France); **Luana Benetti**, **Alex Jenkins**, **Ricardo Ferreira**, International Iberian Nanotechnology Laboratory (Portugal); **Liliana Buda-Prejbeanu**, SPINTEC, Univ. Grenoble Alpes, CEA, CNRS, GINP (France); **Flavio Abreu Araujo**, Institute of Condensed Matter and Nanosciences, Université catholique de Louvain (Belgium); **Philippe Talatchian**, **Ursula Ebels**, SPINTEC, Univ. Grenoble Alpes, CEA, CNRS, GINP (France)

14081-31 • 14:15 - 14:40

Current-induced modification of the magnon density using the spin orbit torque at heavy metal/ferromagnet Interfaces *(Invited Paper)*

Author(s): **Paul Noël**, Institut de Physique et de Chimie des Matériaux de Strasbourg, CNRS (France), ETH Zurich (Switzerland)

14081-32 • 14:40 - 15:05

Orbital angular momentum in solids: generation, transport and magnetoresistive effects *(Invited Paper)*

Author(s): **Sachin Krishnia**, **Christin Schmitt**, **Omar Ledesma**, **Durgesh Kumar**, **Ao Do**, Johannes Gutenberg Univ. Mainz (Germany); **Eiji Saitoh**, The Univ. of Tokyo (Japan); **Olena Gomonay**, **Gerhard Jakob**, **Yuriy Mokrousov**, Johannes Gutenberg Univ. Mainz (Germany); **Mathias Klauui**, Johannes Gutenberg Univ. Mainz (Germany), Norwegian Univ. of Science and Technology (Norway)

14081-34 • 15:05 - 15:30

Thickness-dependent terahertz emission of Pt-Al spintronic terahertz emitters *(Invited Paper)*

Author(s): **Reshma Rajeev Lekha**, Technische Univ. Darmstadt (Germany); **Suraj Joshi**, TU Darmstadt (Germany); **Fahd Rushd Faridi**, Technische Univ. Darmstadt (Germany); **Dmitry Turchinovich**, Univ. Bielefeld (Germany); **Sascha Preu**, **Markus Meinert**, Technische Univ. Darmstadt (Germany)

SESSION 9: ANTIFERROMAGNETS

14 April 2026 • 15:30 - 15:55 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Paul Noël**, ETH Zurich (Switzerland)

14081-35 • 15:30 - 15:55

Dislocation-network templating of pentacene self-assembly on ultrathin CoO/Ag(001) *(Invited Paper)*

Author(s): **Alberto Brambilla**, **Alessio Giampietri**, **Michele Capra**, **Andrea Picone**, Politecnico di Milano (Italy)

Coffee Break 15:55 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 10: THZ SPINTRONICS

15 April 2026 • 8:45 - 10:25 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Vasily V. Temnov**, École Polytechnique (France)

14081-36 • 8:45 - 9:10

Correlating proximity induced magnetization in ferromagnetic/Pt multilayers with their efficiency to emit THz radiation (Invited Paper)

Author(s): **Evangelos Th. Papaioannou**, Aristotle Univ. of Thessaloniki (Greece), National Institute of Materials Physics (NIMP) (Romania);

Unnar Arnalds, **Kristina Ignatova**, Univ. of Iceland (Iceland); **Vassilios Kapaklis**, Uppsala Univ. (Sweden); **Garik Torosyan**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany); **Ovidiu Crisan**, **Claudiu Locovei**, National Institute of Materials Physics (Romania); **René Beigang**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14081-37 • 9:10 - 9:35

Terahertz spin-orbitronics (Invited Paper)

Author(s): **Oliver Gueckstock**, Freie Univ. Berlin (Germany)

14081-38 • 9:35 - 10:00

Phonon-magnetism in Iron oxides (Invited Paper)

Author(s): **Oleksandr Y. Kovalenko**, **Rostislav Mikhaylovskiy**, Lancaster Univ. (United Kingdom)

14081-39 • 10:00 - 10:25

Spintronic terahertz emitters: applications in complete time-domain spectroscopic ellipsometry (THz-cTDSE) and strategies for output power enhancement (Invited Paper)

Author(s): **Jakub Toběrný**, VŠB-Technical Univ. of Ostrava (Czech Republic), Lab. Albert Fert, CNRS (France), Univ. Paris-Saclay (France); **Henri Jaffrès**, Lab. Albert Fert, CNRS (France), Univ. Paris-Saclay (France); **Pierre Koleják**, **Jiaming Liu**, **Robin Silber**, VSB-Technical University of Ostrava (Czech Republic); **Kamil Postava**, VŠB-Technical Univ. of Ostrava (Czech Republic)

Coffee Break 10:25 - 10:55

SESSION 11: THZ SPINTRONICS IN 2D MATERIALS

15 April 2026 • 10:55 - 11:45 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Oliver Gueckstock**, Fritz-Haber-Institut der Max-Planck-Gesellschaft (Germany)

14081-42 • 10:55 - 11:20

Tailoring interfacial Spin-Charge Conversion in 2D TMD Heterobilayers (Invited Paper)

Author(s): **Rahul Sharma**, Spintec (France); **Soumya Mukherjee**, Lab. de Physique de l'Ecole Normale Supérieure (France); **Fatima Ibrahim**, **Gaétan Verdier**, Spintec (France); **Martin Micica**, Lab. de Physique de l'Ecole Normale Supérieure (France); **Vincent Polewczyk**, **Libor Vojáček**, **Alain Marty**, **Isabelle Gomes de Moraes**, Spintec (France); **Anupam Jana**, **Jun Fuji**, **Ivana Vobornik**, Istituto Officina dei Materiali (Italy); **Federico Mazzola**, Univ. degli Studi di Padova (Italy); **Jing Li**, CEA-LETI (France); **Adrien Michon**, Univ. Côte d'Azur (France); **Mairbek Chshiev**, Spintec (France); **Sukhdeep Dhillon**, Lab. de Physique de l'Ecole Normale Supérieure (France); **Matthieu Jamet**, Spintec (France)

14081-60 • 11:20 - 11:45

Integrated solid-state masers enabling coherent microwave amplification, free-space transmission, and quantum sensing at room temperature (Invited Paper)

Author(s): **Juna Sathian**, **Sophia Long**, **Weronika Korgul**, **Priyanka S. Choubey**, Northumbria Univ. (United Kingdom); **Max Attwood**, Imperial College London (United Kingdom); **Hamdi Torun**, Northumbria Univ. (United Kingdom)

Lunch/Exhibition Break 11:45 - 13:20

SESSION 12: ALTERMAGNETS

15 April 2026 • 13:20 - 15:00 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Evangelos Th. Papaioannou**, Aristotle Univ. of Thessaloniki (Greece)

14081-43 • 13:20 - 13:45

Altermagnets for ultrafast spintronics *(Invited Paper)*

Author(s): **Markus Münzenberg**, Ernst Moritz Arndt Univ. Greifswald (Germany)

14081-44 • 13:45 - 14:10

Joule power injected from a spin-Hall bar into a load circuit *(Invited Paper)*

Author(s): **Sariah - Al Saati, Vlad Carasel**, Ecole Polytechnique (France); **Daniel Lacour, Michel Hehn**, University of Lorraine, CNRS, IJL, F-54000 Nancy, France (France); **Jean-Eric Wegrowe**, Ecole Polytechnique (France)

14081-45 • 14:10 - 14:35

Altermagnetic MnTe *(Invited Paper)*

Author(s): **Gunther Springholz, Mahdi Hajloui, Tetiana Zakusylo, Takuya Takashiro**, Johannes Kepler Univ. Linz (Austria); **Juraj Krempasky, Martin Heinrich, Matthias Muntwiler**, Paul Scherrer Institut (Switzerland)

14081-47 • 14:35 - 15:00

Neel vector dependent magneto-optical Kerr effect of altermagnetic RuO₂ *(Invited Paper)*

Author(s): **Sonny H. Rhim, Guihyun Han**, Univ. of Ulsan (Korea, Republic of); **Minkyu Park**, Univ. of Ulsan (Kiribati, Republic of)

Coffee Break 15:00 - 15:30

SESSION 13: MAGNETOACOUSTIC I

15 April 2026 • 15:30 - 17:35 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Kei Yamamoto**, Japan Atomic Energy Agency (Japan)

14081-49 • 15:30 - 15:55

Acoustic parametric pumping of spin waves in yttrium-iron-garnet films *(Invited Paper)*

Author(s): **Albrecht Jander**, Oregon State University (United States); **Pallavi Dhagat, Carson Rivard**, Oregon State Univ. (United States); **Bennett Pohlmann**, Oregon State University (United States)

14081-50 • 15:55 - 16:20

Nontrivial dynamics of acoustically driven spin centers in silicon carbide *(Invited Paper)*

Author(s): **Alberto Hernández-Mínguez**, Paul-Drude-Institut für Festkörperelektronik (Germany); **Alexander V. Poshakinskiy**, ICFO - Institut de Ciències Fotòniques (Spain); **Michael Hollenbach**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany); **Paulo V. Santos**, Paul-Drude-Institut für Festkörperelektronik (Germany); **Georgiy V. Astakhov**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany)

14081-51 • 16:20 - 16:45

A magnetoelastic-piezoelectric layered approach for advanced magnetic surface acoustic wave (MSAW) sensors *(Invited Paper)*

Author(s): **Laurine Meistersheim, Michael Seyfried, Cécile FLOER, Sami Hage-Ali, Yang Yang, Sébastien Petit-Watlot, Daniel Lacour, Michel Hehn, Omar Elmazria**, Université de Lorraine (France)

14081-52 • 16:45 - 17:10

Surface acoustic wave induced nonreciprocal spin wave resonance *(Invited Paper)*

Author(s): **You Ba**, RIKEN Ctr. for Emergent Matter Science (Japan), CIC nanoGUNE (Spain)

14081-53 • 17:10 - 17:35

Acoustically-driven manipulation of magnetic textures in epitaxial ferromagnetic thin-films. *(Invited Paper)*

Author(s): **João Gomes**, Paul-Drude-Institut für Festkörperelektronik, Leibniz-Institut im Forschungsverbund Berlin e.V. (Germany); **Jens Herfort, Alberto Hernández-Mínguez**, Paul-Drude-Institut für Festkörperelektronik (Germany)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14081-59 • 17:45 - 19:30

Excitation and Generation of the Photonic Spin Hall Effect Using Photonic Bandgap Devices

Author(s): **Amit Kumar Goyal**, Manipal Institute of Technology (India); **Amit Rathi**, Manipal Univ. Jaipur (India); **Ajay Kumar, Jasmine Saini**, Jaypee Institute of Information Technology (India)

14081-67 • 17:45 - 19:30

Magnetization and coherent phonon dynamics in magnetic multilayers

Author(s): **Tiago Fernandes, Franklin M. Matinaga, Maximiliano D. Martins**, CDTN/CNEN, campus UFMG (Brazil); **LEANDRO HF ANDRADE**, Cdtm (Brazil)

14081-68 • 17:45 - 19:30

Revisiting Ultrafast Spin Dynamics: The Role of Quasi-Static Strain

Author(s): **Jiwan Kim, Yooleemi Shin**, Kunsan National Univ. (Korea, Republic of); **Duck-Ho Kim**, KIST (Korea, Republic of)

14081-69 • 17:45 - 19:30

On the energy dissipation in the Landau-Lifshitz-Gilbert equation

Author(s): **Kutay Kulbak, Mohamed Iyad Boualem, Charlie Massé, Mariana Delalibera de Toledo**, École Polytechnique (France); **Vasily V. Temnov**, LSI (France)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 14: MAGNETOACOUSTIC II

16 April 2026 • 11:00 - 12:40 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Vasily V. Temnov**, École Polytechnique (France)

14081-54 • 11:00 - 11:25

Spin current generation by acousto-electric evanescent wave (*Invited Paper*)

Author(s): **Takuya Kawada**, The Univ. of Tokyo (Japan); **Kei Yamamoto**, Japan Atomic Energy Agency (Japan); **Hiroshi Kohno**, Nagoya Univ. (Japan); **Masamitsu Hayashi**, The Univ. of Tokyo (Japan)

14081-55 • 11:25 - 11:50

Nonreciprocal Transmission of Surface Acoustic Waves Enabled by Magnetoacoustic Coupling (*Invited Paper*)

Author(s): **Matthias Küß, Stephan Glamsch, Andreas Hörner, Manfred Albrecht**, Univ. Augsburg (Germany)

14081-56 • 11:50 - 12:15

Accessing the orbital degree of freedom through chiral phonons in ferromagnetic/light-metal bilayers (*Invited Paper*)

Author(s): **Marc Rovirola**, Univ. de Barcelona (Spain), Institut de Nanociència i Nanotecnologia, Univ. de Barcelona (Spain); **Julia Odena**, Univ. de Barcelona (Spain); **Joan Manel Hernández**, Univ. de Barcelona (Spain), Institut de Nanociència i Nanotecnologia, Univ. de Barcelona (Spain); **Quim Badosa**, **Anna Castellví**, Univ. de Barcelona (Spain); **Saul Velez**, Univ. Autónoma de Madrid (Spain); **Blai Casals**, Univ. de Barcelona (Spain), Institut de Nanociència i Nanotecnologia, Univ. de Barcelona (Spain); **Alberto Hernández-Minguez**, Paul-Drude-Institut für Festkörperelektronik (Germany); **Ferran Macià**, Univ. de Barcelona (Spain), Institut de Nanociència i Nanotecnologia, Univ. de Barcelona (Spain)

14081-57 • 12:15 - 12:40

Sensing magnonic superpositions via a bosonic mode as probe (*Invited Paper*)

Author(s): **Bashab Dey**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

Lunch Break 12:40 - 13:50

SESSION 15: OPTICAL PUMPING AND PHOTONIC SPIN HALL

16 April 2026 • 13:50 - 14:40 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Matthias Küß**, Univ. Augsburg (Germany)

14081-58 • 13:50 - 14:15

Sensing light helicity with the Spin-Photo Diode (*Invited Paper*)

Author(s): **Viatcheslav Safarov**, VisaFiz (France); **Guojun Lan**, Institut Polytechnique de Paris (France); **Pambiang-Abel Dainone**, Institut Jean Lamour (France); **Henri Jaffrès**, Lab. Albert Fert, Univ. Paris-Saclay, Thales, CNRS (France); **Yuan Lu**, Institut Jean Lamour (France); **Jean-Marie George**, Lab. Albert Fert, Univ. Paris-Saclay, Thales, CNRS (France); **Henri-Jean Drouhin**, Institut Polytechnique de Paris (France)

14081-61 • 14:15 - 14:40

Spin Transport in Metal Halide Perovskites tracked with Ultrafast Phase-Resolved Microscopy (*Invited Paper*)

Author(s): **Julia Anthea Gessner**, Philipp Kollenz, Nasrin Solhtalab, Ruprecht-Karls-Univ. Heidelberg (Germany); **Martin Hörmann**, Politecnico di Milano (Italy); **Federico Visentin**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Shangpu Liu**, Ruprecht-Karls-Univ. Heidelberg (Germany), Walter Schottky Institut (Germany), Technische Univ. München (Germany); **Giulio Cerullo**, Politecnico di Milano (Italy); **Franco Valduga de Almeida Camargo**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Felix Deschler**, Ruprecht-Karls-Univ. Heidelberg (Germany)

SESSION 16: MAGNETO-OPTICS

16 April 2026 • 14:40 - 16:45 | Londres 2/Salon 7 (Niveau/Level 0)

Session Chair(s): **Henri-Jean M. Drouhin**, Lab. des Solides Irradiés (France)

14081-62 • 14:40 - 15:05

Magnetic Metamaterials for Functional X-ray Scattering (*Invited Paper*)

Author(s): **Christina Vantaraki**, Uppsala Univ. (Sweden); **Oier Bikondoa**, The Univ. of Warwick (United Kingdom); **Matias Grassi**, Brindaban Ojha, Uppsala Univ. (Sweden); **Alkaios Stamatelatos**, The Univ. of Warwick (United Kingdom); **Natalia Kwiatek-Maroszek**, ALBA Synchrotron (Spain); **Miguel Angle Nino Orti**, Instituto de Química Física Blas Cabrera (Spain); **Michael Foerster**, ALBA Synchrotron (Spain); **Thomas Saerbeck**, Institut Laue-Langevin (France); **Daniel Primetzhofer**, Max Wolff, Uppsala Univ. (Sweden); **Nicholas Jaouen**, Synchrotron SOLEIL (France); **Thomas Hase**, The Univ. of Warwick (United Kingdom); **Vassilios Kapaklis**, Uppsala Univ (Sweden)

Coffee Break • 15:05 - 15:30

14081-63 • 15:30 - 15:55

Kagome magnets as a platform for unconventional magnetism (*Invited Paper*)

Author(s): **Yona Soh**, Paul Scherrer Institut (Switzerland)

14081-64 • 15:55 - 16:20

On-Chip Microcoil Architectures for Generating High Magnetic Fields for Magneto-Optic Devices (*Invited Paper*)

Author(s): **Qige Song**, Institute of Nanotechnology, Karlsruhe Institute of Technology (Germany); **Proficiency Munsaka**, Maryna L. Meretska, Karlsruher Institut für Technologie (Germany)

14081-65 • 16:20 - 16:45

Spin injection and ultrafast dynamics in VCSELs (*Invited Paper*)

Author(s): **Markus Lindemann**, Ruhr-Univ. Bochum (Germany); **Nils C. Gerhardt**, Univ. Paderborn (Germany); **Igor Žutić**, Univ. at Buffalo (United States); **Martin R. Hofmann**, Ruhr-Univ. Bochum (Germany)

CONFERENCE 14082

3D Printed Optics and Additive Photonic Manufacturing V

12 - 15 April 2026 | Dresde/Salon 13 (Niveau/Level 1) Sun-Tues, Bruxelles/Salon 10 (Niveau/Level 0) Wed

Conference Chair(s): **Alois M. Herkommer**, Univ. Stuttgart (Germany); **Georg von Freymann**, Technische Univ. Kaiserslautern (Germany); **Manuel Flury**, ICube Lab., INSA Strasbourg (France)

Program Committee: **Klaus Bade**, Karlsruher Institut für Technologie (Germany); **Muriel Carin**, Univ. de Bretagne-Sud (France); **Thierry Engel**, IREPA LASER (France); **Harald Giessen**, Univ. Stuttgart (Germany); **Kevin J. Heggarty**, IMT Atlantique (France); **Andreas Heinrich**, Hochschule Aalen - Technik und Wirtschaft (Germany); **Hans Peter Herzig**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Christian Koos**, Karlsruher Institut für Technologie (Germany); **David Pietroy**, Univ. Jean Monnet Saint-Etienne (France); **Michael Thiel**, Nanoscribe GmbH (Germany); **Michael Totzeck**, Carl Zeiss SMT GmbH (Germany); **Reinhard Voelkel**, SUSS MicroOptics SA (Switzerland)

Sunday 12 April 2026

SESSION 1: APPLICATIONS I

12 April 2026 • 15:30 - 17:40 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Alois M. Herkommer**, Institut für Technische Optik (Germany)

14082-1 • 15:30 - 16:00

Simultaneous Generation of Multiple Orbital Angular Momentum Beams Using Metafibers with On-Fiber 3D Nanoprinted Holograms *(Invited Paper)*

Author(s): **Rahaf Ismail**, **Shahrazad Hosseinabadi**, **Mohammadhossein Khosravi**, **Torsten Wieduwilt**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany), Otto Schott Institute of Materials Research, Friedrich-Schiller-Univ. Jena (Germany)

14082-2 • 16:00 - 16:20

Hybrid metalens-wavefront shaping approach for advanced light control in multimode optical fibers

Author(s): **Linda Piscopo**, Istituto Italiano di Tecnologia (Italy), Università del Salento (Italy); **Stella Aslanoglou**, **Cinzia Montinaro**, **Barbara Spagnolo**, **Andrea Sattin**, **Tommaso Fellin**, Istituto Italiano di Tecnologia (Italy); **Massimo De Vittorio**, Istituto Italiano di Tecnologia (Italy), Univ. del Salento (Italy), Technical Univ. of Denmark (Denmark); **Ferruccio Pisanello**, Istituto Italiano di Tecnologia (Italy)

14082-3 • 16:20 - 16:40

Progress in STED-inspired subdiffractional lithography of epoxides

Author(s): **Anastasiia Mikhailenko**, **Sourav Islam**, **Georgii Gvindzhilia**, Johannes Kepler Univ. Linz (Austria); **Max Schmallegger**, **Georg Gescheidt**, Technische Univ. Graz (Austria); **Thomas Klar**, Johannes Kepler Univ. Linz (Austria)

14082-4 • 16:40 - 17:00

Design and fabrication of a 3D-printed micro-optical fringe projection system

Author(s): **Ömer Atmaca**, **Steffen Puscher**, **Anton Zimmermann**, **Andrea Toulouse**, Institut für Technische Optik (Germany); **Simon Thiele**, Printoptix GmbH (Germany); **Valese Aslani**, Univ. Stuttgart (Germany); **Alois M. Herkommer**, Institut für Technische Optik (Germany)

14082-5 • 17:00 - 17:20

Additive full-wafer manufacturing platform for all-inorganic metaoptics and AR waveguides using direct nanoimprint lithography

Author(s): **Dae-Eon Jung**, Univ. of Massachusetts Amherst (United States); **Vince Einck**, Myrias Optics, Inc. (United States); **James J. Watkins**, Univ. of Massachusetts Amherst (United States)

14082-62 • 17:20 - 17:40

Learning to explain: translating dermatological XAI insights to industrial photonics

Author(s): **Lennart Jütte**, Laser Zentrum Hannover e.V. (Germany); **Nick Schwarz**, **Tammo Ripken**, **Hendrik Sandmann**, Laser Zentrum Hannover e.V. (Germany)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 2: 3D PRINTING I

13 April 2026 • 11:30 - 12:40 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Georg von Freymann**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14082-11 • 11:30 - 12:00

3D printed microoptics: Combining extreme accuracy and large sizes with novel functionalities (Invited Paper)

Author(s): **Harald Giessen**, Univ. Stuttgart (Germany)

14082-12 • 12:00 - 12:20

3D printing of luminescent microstructures for multiplexed sensing

Author(s): **Valese Aslani**, Institut für Technische Optik, Univ. Stuttgart (Germany), SCoPE Forschungszentrum (Germany); **Shaghayegh Baghapour**, School of Physics, Chemistry and Earth Sciences, Adelaide Univ. (Australia), Laser Physics and Photonic Devices Laboratories, Adelaide Univ. (Australia); **Stephen C. Warren-Smith**, Future Industries Institute, Adelaide Univ. (Australia), Laser Physics and Photonic Devices Laboratories, Adelaide Univ. (Australia); **Wenqi Zhang**, School of Physics, Chemistry and Earth Sciences, Adelaide Univ. (Australia), Laser Physics and Photonic Devices Laboratories, Adelaide Univ. (Australia); **Esmat Ebadati**, Future Industries Institute, Adelaide Univ. (Australia), Laser Physics and Photonic Devices Laboratories, Adelaide Univ. (Australia); **Sally E. Plush**, School of Pharmacy and Biomedical Science, College of Health, Adelaide University (Australia); **Shahraam Afshar V.**, School of Physics, Chemistry and Earth Sciences, Adelaide Univ. (Australia), Laser Physics and Photonic Devices Laboratories, Adelaide Univ. (Australia); **Alois M. Herkommer**, **Andrea Toulouse**, Institut für Technische Optik, Univ. Stuttgart (Germany), SCoPE Forschungszentrum (Germany)

14082-13 • 12:20 - 12:40

Design and fabrication of 3D-printed micropillar outcoupling structures for waveguide-based optical cochlear implants

Author(s): **Roya Nazempour**, University Medical Center Göttingen (Germany); **Michael Ribeiro Stührenberg**, **Katharina Kunze**, **Ananda Rejikumar Bindu**, **Tobias Moser**, **Christian Gossler**, Universitätsmedizin Göttingen (Germany)

Lunch Break 12:40 - 13:30

SESSION 3: 3D PRINTING II

13 April 2026 • 13:50 - 15:20 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Andrea Toulouse**, Institut für Technische Optik (Germany)

14082-14 • 13:50 - 14:20

Fiber-interfaced 3D-printed hollow-core light cages for on-chip gas sensing (*Invited Paper*)

Author(s): **Xue Qi**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Otto Schott Institute of Materials Research, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany)

14082-15 • 14:20 - 14:40

Endoscopic objective lenses for biomedical diagnostic applications enabled by 2-Photon Polymerization (2PP) based additive manufacturing

Author(s): **Tomasz S. Tkaczyk**, Rice Univ. (United States)

14082-16 • 14:40 - 15:00

Design of a 5D direct laser writing system for fabrication of stimuli-responsive materials with adjustable actuation properties

Author(s): **Leonardo Rossi**, Consiglio Nazionale delle Ricerche (Italy); **Frank M. Den Hoed**, **Virgilio Mattoli**, Istituto Italiano di Tecnologia (Italy); **Gabriele Bolognini**, Consiglio Nazionale delle Ricerche (Italy)

14082-17 • 15:00 - 15:20

Ultrahigh-Aspect-Ratio Nanoprinted Hollow-Core Waveguides: A Novel Platform for Fiber-Integrated Optofluidic Applications

Author(s): **Diana Pereira**, Institute of Nanostructures, Nanomodelling and Nanofabrication, Univ. de Aveiro (Portugal), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Torsten Wieduwilt**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Marta S. Ferreira**, Institute of Nanostructures, Nanomodelling and Nanofabrication, Univ. de Aveiro (Portugal); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

Coffee Break 15:20 - 15:50

SESSION 4: APPLICATIONS II

13 April 2026 • 15:50 - 17:40 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Georg von Freymann**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14082-6 • 15:50 - 16:20

Towards endoscopic biofabrication: Fiber-based two photon lithography (*Invited Paper*)

Author(s): **Andrea Toulouse**, **Marco Wende**, **Theresa Kühn**, **Anton Hellstern**, Univ. Stuttgart (Germany); **Claudia Imiolczyk**, The Univ. of Adelaide (Australia), Univ. Stuttgart (Germany); **Pavel Ruchka**, Univ. Stuttgart (Germany), Printoptix GmbH (Germany); **Kai Hirzel**, **Alois M. Herkommer**, **Harald Giessen**, **Michael Heymann**, Univ. Stuttgart (Germany)

14082-7 • 16:20 - 16:40

Extreme geometry-induced optical chirality in vertically nanoprinted hollow-core light cages

Author(s): **Wenqin Huang**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Johannes Bürger**, Nano-Institute Munich, Ludwig-Maximilians-Univ. München (Germany); **Jun Sun**, **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14082-8 • 16:40 - 17:00

Optimizing phase modulators within fabrication constraints of resin 3D printing

Author(s): **Lukas Dippon**, **Johannes Meyer**, **Christian Kludt**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany)

14082-9 • 17:00 - 17:20

Holographic Metafiber for large-angle light collection with 3D nanoprinted structures

Author(s): **Jun Sun**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe School of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe School of Photonics, Friedrich-Schiller-Univ. Jena (Germany), Otto Schott Institute of Materials Research, Friedrich-Schiller-Univ. Jena (Germany)

14082-10 • 17:20 - 17:40

Interferometric wavefront characterization of 3D printed microlens singlets and doublets

Author(s): **Yanqiu Zhao**, **Chris-Peter Winkler**, **Leander Siegle**, Univ. Stuttgart (Germany); **Simon Thiele**, Printoptix GmbH (Germany)

Tuesday 14 April 2026

SESSION 5: TWO-PHOTON LITHOGRAPHY I

14 April 2026 • 9:00 - 10:20 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Georg von Freymann**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14082-19 • 9:00 - 9:20

Compact 3D-printed dark-field condenser for high-resolution optical microscopy

Author(s): **Robert Horvat**, **Leander Siegle**, **Luca Schmid**, 4. Physikalisches Institut, Univ. Stuttgart (Germany), Stuttgart Research Ctr. of Photonic Engineering, Univ. Stuttgart (Germany); **Pavel Ruchka**, Printoptix GmbH (Germany); **Philipp Flad**, **Monika Ubl**, 4. Physikalisches Institut, Univ. Stuttgart (Germany), Stuttgart Research Ctr. of Photonic Engineering, Univ. Stuttgart (Germany); **Michael Schmid**, Printoptix GmbH (Germany); **Lukas Wesemann**, The Univ. of Melbourne (Australia), ARC Ctr. of Excellence for Transformative Meta-Optical Systems, The Univ. of Melbourne (Australia); **Harald Giessen**, 4. Physikalisches Institut, Univ. Stuttgart (Germany), Stuttgart Research Ctr. of Photonic Engineering, Univ. Stuttgart (Germany)

14082-20 • 9:20 - 9:40

High-Fidelity Transfer of 3D-Printed Freeform Micro-Optics into Scalable Polymer Replication

Author(s): **Leander Siegle**, 4. Physikalisches Institut, Univ. Stuttgart (Germany); **Stefan P. Wagner**, Institut für Mikrointegration, Univ. Stuttgart (Germany), Hahn-Schickard-Gesellschaft Institut für Mikroaufbautechnik (Germany); **Stephan Haeusler**, Hahn-Schickard-Gesellschaft Institut für Mikroaufbautechnik (Germany); **Mario Hentschel**, 4. Physikalisches Institut, Univ. Stuttgart (Germany); **Thomas Günther**, Institut für Mikrointegration, Univ. Stuttgart (Germany); **André Zimmermann**, Institut für Mikrointegration, Univ. Stuttgart (Germany), Hahn-Schickard-Gesellschaft Institut für Mikroaufbautechnik (Germany); **Harald Giessen**, 4. Physikalisches Institut, Univ. Stuttgart (Germany)

14082-21 • 9:40 - 10:00

Self-aligned plug-and-play photonic integrated circuit packaging with sub-dB loss

Author(s): **Erik Jung**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Helge Gehring**, Univ. Münster (Germany); **Frank Brücknerhoff-Plückelmann**, **Linus Krämer**, **Clara Vazquez-Martel**, **Eva Blasco**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14082-22 • 10:00 - 10:20

Low-loss 3D microstructured optical waveguides fabricated by two-photon polymerization

Author(s): **Koen Vanmol**, **Tigran Baghdasaryan**, **Jürgen Van Erps**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium)

Coffee Break 10:20 - 10:50

SESSION 6: TWO-PHOTON LITHOGRAPHY II

14 April 2026 • 10:50 - 12:40 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Alois M. Herkommer**, Institut für Technische Optik (Germany)

14082-23 • 10:50 - 11:20

Simultaneous dual-plane multi-write-spot two-photon polymerization using a single diffractive optical element (Invited Paper)

Author(s): **Thomas Le Deun**, **Joël Rovera**, **Kevin Heggarty**, IMT Atlantique Bretagne-Pays de la Loire (France)

14082-24 • 11:20 - 11:40

Diffractive optical elements fabricated by monolithic mode-locked diode laser-based two-photon polymerization

Author(s): **Felix Behlau**, **Nils Surkamp**, **Benedikt Hofmeister**, Ruhr-Univ. Bochum (Germany), PicoShape (Germany); **Jan Marx**, Ruhr-Univ. Bochum (Germany); **Shulin Wohlfeil**, **Andrea Knigge**, Ferdinand-Braun-Institut gGmbH (Germany); **Martin Hofmann**, **Cemal Esen**, **Andreas Ostendorf**, Ruhr-Univ. Bochum (Germany)

14082-25 • 11:40 - 12:00

Two-photon polymerized nanostructures as high-sensitivity homogeneous and reproducible SERS substrates

Author(s): **Gilles Bernaerd**, **Mehdi Feizpour**, Vrije Univ. Brussel (Belgium); **Heidi Ottevaere**, **Tatevik Chalyan**, Vrije Univ Brussel (Belgium)

14082-26 • 12:00 - 12:20

On-fiber diffractive beam splitter for multi-core fiber interfacing fabricated by two-photon polymerization

Author(s): **Koen Vanmol**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium); **Athanasios Kyriazis**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium), imec, Univ. Gent (Belgium); **Simone Sorgato**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium); **Salah Guessoum**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium), imec, Univ. Gent (Belgium); **Martin Virte**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium); **Geert Van Steenberge**, Univ. Gent (Belgium), imec (Belgium); **Jürgen Van Erps**, Vrije Univ. Brussel (Belgium), Flanders Make, VUB B-PHOTONICS (Belgium)

14082-27 • 12:20 - 12:40

One-step fabrication of silicon nitride / polymer hybrid-waveguides and broadband out-of-plane coupling elements

Author(s): **Orlando Torres Perales, Uli Lemmer, Nils W. Rosemann**, Lichttechnisches Institut, Karlsruher Institut für Technologie (Germany)

Lunch/Exhibition Break 12:40 - 13:50

SESSION 7: ADDITIVE MANUFACTURING

14 April 2026 • 13:50 - 16:00 | Dresde/Salon 13 (Niveau/Level 1)

Session Chair(s): **Alois M. Herkommer**, Institut für Technische Optik (Germany)

14082-28 • 13:50 - 14:20

An innovative dynamic hybrid meta-material structure 3D printed for an ultra-light, highly precise and self-correcting Live Mirror
(Invited Paper)

Author(s): **Gil Moretto**, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); **Kritsadi Thetpraphi**, Walailak Univ. (France); **Mariano Laguna-Moreno**, Leibniz-Institut für Neue Materialien gGmbH (Germany); **Vincent Bruyère**, SIMTEC (France); **Peter König**, Leibniz-Institut für Neue Materialien gGmbH (Germany); **Johannes Hörber**, Kronos Mechatronics GmbH (Germany); **Peter Rogin, Peter W. de Oliveira**, Leibniz-Institut für Neue Materialien gGmbH (Germany); **Maud Langlois**, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); **Vincenzo Cotronero**, INAF - Osservatorio Astronomico di Brera (France); **Varun H. Shah**, INAF - Osservatorio Astronomico di Brera (Italy); **Alejandro M. Paola, José A. Dieste**, Aitiip Centro Tecnológico (Spain); **Francesca Rebasti**, Ctr. de Recherche Astrophysique de Lyon, CNRS (France)

14082-29 • 14:20 - 14:40

Additive Manufactured Fused Silica Micro Lens Array for Photoacoustic Applications

Author(s): **Sijia Liu, Zewei Lu, Christoph Klahn, Nicole Ruiter**, Karlsruher Institut für Technologie (Germany)

14082-30 • 14:40 - 15:00

Etch-free fabrication of strip-loaded thin-film lithium niobate integrated photonic components

Author(s): **Alexandra Rittmeier, Elisavet chatzyzirli**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD, Leibniz University Hannover (Germany); **Sophie-Marie Böse**, Laser Zentrum Hannover e.V. (Germany); **Anna Karoline Rüßeler**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD, Leibniz University Hannover (Germany); **Muhammed A. Sewidan**, Institute of Photonics, Leibniz Univ. Hannover (Germany); **Dietmar Kracht**, Laser Zentrum Hannover e.V. (Germany), Institute of Photonics, Leibniz University Hannover (Germany), Cluster of Excellence PhoenixD, Leibniz University Hannover (Germany); **Michael Kues**, Institute of Photonics, Leibniz University Hannover (Germany), Cluster of Excellence PhoenixD, Leibniz University Hannover (Germany); **Moritz Hinkelmann**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD, Leibniz University Hannover (Germany)

14082-31 • 15:00 - 15:20

Additive manufacturing of fiber-tip microlenses and layered microstructures using UV-curable photopolymer

Author(s): **Saiikat Chandra Das**, Laser Zentrum Hannover e.V. (Germany); **Anna Karoline Rüßeler**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD (Germany); **Stefan Kaierle, Dietmar Kracht**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD (Germany), Leibniz Univ. Hannover (Germany); **Moritz Hinkelmann**, Laser Zentrum Hannover e.V. (Germany), Cluster of Excellence PhoenixD (Germany)

14082-32 • 15:20 - 15:40

First steps towards machine learning for prediction and pre-correction in direct laser writing

Author(s): **Sven Enns**, RPTU University Kaiserslautern-Landau (Germany), Leibniz Universität Hannover (Germany); **Julian Hering-Stratemeier**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany), Opti-Cal GmbH (Germany); **Georg von Freymann**, Leibniz Universität Hannover (Germany), Opti-Cal GmbH (Germany), Fraunhofer-Institut für Techno- und Wirtschaftsmathematik ITWM (Germany)

14082-33 • 15:40 - 16:00

Additive manufacturing of intricate glass vapour cells for next-generation quantum technologies

Author(s): **Feiran Wang, Ryan McMullen, Nathan Cooper, Mark Fromhold, Lucia Hackermueller, Richard Hague, Lyudmila Turyanska**, The Univ. of Nottingham (United Kingdom)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14082-44 • 18:10 - 20:00

3D printing of micron-scale tapered optical fibers made from bio-based organic materials: multiple physical and optical characterizations, towards a new form of integrated photonic

Author(s): **Mohamad Ghandour**, **Corentin Sudja**, **Anjaly SureshKumar**, Institut d'Electronique et des Technologies du numéRique (IETR) (France); **Sylvain Pernon**, Institut d'Electronique et des Technologies du numéRique (IETR) (France), Project Lab (France); **Nathalie Coulon**, Institut d'Electronique et des Technologies du numéRique (IETR) (France); **Jean-Benoit Le Cam**, **Soilihi Moindjie**, **Franck Artzner**, Institut de Physique de Rennes (France); **Alain Moréac**, Institut de Physique de Rennes (France), ScanMat (France); **Christophe Levallois**, **Goulc'hen Loas**, Fonction Optique pour les Technologies de l'informatiON - INSA Rennes (France); **Julien Vaillant**, Project Lab (France); **Huriye Akdaş-Kiliç**, Institut des Sciences Chimiques de Rennes (France), Yıldız Technical University, Faculty of arts & science (Turkey); **Jordan Gastebois**, Institut d'Electronique et des Technologies du numéRique (IETR) (France); **Hervé Cormerais**, Institut d'Electronique et des Technologies du numéRique (France); **Bruno Bêche**, Institut d'Electronique et des Technologies du numéRique (IETR) (France)

14082-45 • 18:10 - 20:00

Nonlinear optical characterization and two-photon polymerization performance of titanocene for high-resolution 3D microfabrication

Author(s): **Natthanan Olanchantarothai**, Mahidol University (Thailand); **Nattanon Chaidet**, Chiang Mai Univ. (Thailand); **Chawatak Piriyanbanhan**, **Tanant Waritanant**, Mahidol Univ. (Thailand)

14082-47 • 18:10 - 20:00

Optofluidic integration for endoscopic multimaterial 3D-bioprinting

Author(s): **Theresa Kühn**, **Johannes Lippok**, Univ. Stuttgart (Germany); **Marco Wende**, Institut für Technische Optik (Germany); **Claudia Imiolczyk**, The Univ. of Adelaide (Australia), Institut für Technische Optik (Germany); **Anton Hellstern**, **Pavel Ruchka**, **Harald Giessen**, Univ. Stuttgart (Germany); **Alois M. Herkommer**, **Andrea Toulouse**, Institut für Technische Optik (Germany); **Michael Heymann**, Univ. Stuttgart (Germany), Stuttgart Research Ctr. Systems Biology (Germany)

14082-48 • 18:10 - 20:00

Two-photon polymerization of diffractive elements for core-selective coupling in multicore fibers

Author(s): **Mateusz Kaluza**, Warsaw University of Technology (Poland); **Konrad Pogorzaletc**, **Karol Kakarenko**, **Jan Bolek**, **Piotr Lesiak**, Warsaw Univ. of Technology (Poland)

14082-49 • 18:10 - 20:00

3D nanoprinted birefringent metasurfaces for polarization optics

Author(s): **Tim Stechel**, Leibniz IPHT (Germany); **Bennet Fischer**, **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14082-50 • 18:10 - 20:00

On-chip free-standing multimillimeter long 3D optical interconnects with molecular photoswitch memory functionality.

Author(s): **Artur Andrishak**, International Iberian Nanotechnology Laboratory (Portugal); **Abbey M. Philip**, Nano-Science Center & Department of Chemistry, University of Copenhagen (Denmark); **Mariia Lamers, Magnus T. Borgström**, NanoLund, Lund University (Sweden); **Bo W. Laursen**, Nano-Science Center & Department of Chemistry, University of Copenhagen (Denmark); **Jana B. Nieder**, International Iberian Nanotechnology Laboratory (Portugal)

14082-51 • 18:10 - 20:00

3D photonic circuits for linear operations using incoherent light

Author(s): **Jacob Puhalo-Smith, Daniel Brunner, Anas Skalli, Adria Grabulosa**, FEMTO-ST (France)

14082-52 • 18:10 - 20:00

Multi-task, large-scale integrated optical vision processor using ultrafast parallel nanofabrication

Author(s): **Wenqi Ouyang**, The Chinese Univ. of Hong Kong (Hong Kong, China)

14082-53 • 18:10 - 20:00

Development of a Flexible and Biodegradable Paper-Based Humidity Sensor for Sustainable Electronics

Author(s): **Vidya K. M., Amit Kumar Goyal, Adarsh Nigam**, Manipal Institute of Technology (India)

14082-55 • 18:10 - 20:00

Single-shot volumetric additive manufacturing via computer generated holograms

Author(s): **Junhee Lee**, University Heidelberg (Germany); **Lovish Gulati, Alexander Song**, Max-Planck-Institut für medizinische Forschung (Germany); **Kai Melde**, University Heidelberg (Germany); **Peer Fisher**, Max-Planck-Institut für medizinische Forschung (Germany)

14082-56 • 18:10 - 20:00

Additively Manufactured Diffractive Optical Elements for Super-Resolution Microscopy in Complex Biological Media

Author(s): **Marc Tondusson, Laurent Cognet**, Lab. Photonique, Numérique et Nanosciences (France)

14082-58 • 18:10 - 20:00

Inkjet Printed Switchable Optical Filter

Author(s): **Weimu Xu, Ulrich Lemmer**, Karlsruher Institut für Technologie (Germany)

14082-59 • 18:10 - 20:00

Polymer-supported 3D waveguides for robust photonic wirebonding

Author(s): **Eric Biedert, Erik Jung, Philipp Schmidt, Jan Brandes, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14082-60 • 18:10 - 20:00

Laser-Induced Functionalization of Glass Matrices for Sensing Applications

Author(s): **Polina Belik, Maksim Morozov, Nikita Afanasiev**, ITMO Univ. (Russian Federation)

14082-61 • 18:10 - 20:00

Additive manufacturing of doped high-resolution glass optical components for quantum sensing devices

Author(s): **Ryan McMullen, Feiran Wang, Lyudmila Turyanska, Ricky D. Wildman**, The Univ. of Nottingham (United Kingdom)

Wednesday 15 April 2026

SESSION 8: VOLUMETRIC PRINTING I

15 April 2026 • 8:30 - 10:20 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Arnaud Spangenberg**, Institut de Sciences des Matériaux de Mulhouse (France)

14082-34 • 8:30 - 9:00

Exploring new etendue configurations for next-generation blurred tomography and the volumetric fabrication of micro-optical components (*Invited Paper*)

Author(s): **Daniel Webber, Antony Orth, Yujie Zhang, Michel Picard, David Liu, Katie Sampson, Chantal Paquet, Jonathan Boisvert**, National Research Council Canada (Canada)

14082-35 • 9:00 - 9:20

High performance coupled opto-chemical simulation of gradient-index light transport in vat photopolymerization

Author(s): **Marwan Aarab**, Technische Universiteit Eindhoven (Netherlands); **Marc GD Geers, Joris JC Remmers**, Technische Univ. Eindhoven (Netherlands)

14082-36 • 9:20 - 9:40

Overprinting with Tomographic Volumetric Additive Manufacturing using Dr. TVAM

Author(s): **Felix Wechsler, Riccardo Rizzo**, EPFL (Switzerland); **Viola Sgarminato**, Politecnico di Torino (Italy); **Christophe Moser**, EPFL (Switzerland)

14082-37 • 9:40 - 10:00

Exploring the combination of 3D printed refractive elements with holographic optical elements for improved hybrid systems

Author(s): **Rory Val Staines, Kevin P. Murphy, John Walsh, Suzanne Martin**, Technological Univ. Dublin (Ireland)

14082-38 • 10:00 - 10:20

Additive Manufacturing of Transparent Glass from Liquid Silica Resin

Author(s): **Quentin Bauerlin**, Institut de Sciences des Matériaux de Mulhouse, CNRS (France); **Shauvik Pahari**, NeptunLab (Germany); **Joana Wernain**, **Cuong-Minh-Quoc Le**, **Keynaz Kamranikia**, Institut de Sciences des Matériaux de Mulhouse, CNRS (France); **Frederik Kotz-Helmer**, **Bastian Rapp**, NeptunLab (Germany); **Arnaud Spangenberg**, Institut de Sciences des Matériaux de Mulhouse, CNRS (France)

Coffee Break 10:20 - 10:50

SESSION 9: VOLUMETRIC PRINTING II

15 April 2026 • 10:50 - 12:40 | Bruxelles/Salon 10 (Niveau/Level 0)

Session Chair(s): **Arnaud Spangenberg**, Institut de Sciences des Matériaux de Mulhouse (France)

14082-39 • 10:50 - 11:20

Towards Additive Optics Prototyping and Manufacturing with Xolography (*Invited Paper*)

Author(s): **Martin Herder**, xolo GmbH (Germany)

14082-40 • 11:20 - 11:40

Recent Advances in 3D Printing and Injection Molding of Glass

Author(s): **Patrick Risch**, Glassomer GmbH (Germany); **Frederik Kotz-Helmer**, Univ. of Freiburg (Germany)

14082-41 • 11:40 - 12:00

Hybrid two-photon polymerization and single-photon Tomographic Volumetric Additive Manufacturing

Author(s): **Buse Unlu**, **Felix Wechsler**, **Ye Pu**, **Christophe Moser**, EPFL (Switzerland)

14082-42 • 12:00 - 12:20

Fluorescence profilometry for accurate volumetric additive manufacturing overprinting

Author(s): **Antony Orth**, **Nicolas Milliken**, **Yujie Zhang**, **Jeffrey Chin**, **Katherine Houlahan**, **Kathleen Sampson**, **Daniel Webber**, **Frank Billy Djupkep Dizeu**, **Jonathan Boisvert**, **Chantal Paquet**, National Research Council Canada (Canada)

14082-43 • 12:20 - 12:40

Volumetric printing of carbon-based architectures

Author(s): **Jérémy Druon**, **Quentin Bauerlin**, **Camélia Matei Ghimbeu**, **Arnaud Spangenberg**, Institut de Science des Matériaux de Mulhouse, Univ. de Haute Alsace (France)

CONFERENCE 14083

Unconventional Optical Imaging V

13 - 16 April 2026 | Curie B (Niveau/Level 1)

Conference Chair(s): Irene Georgakoudi, Thayer School of Engineering at Dartmouth (United States); Marc P. Georges, Liège Univ. (Belgium); Nicolas Verrier, IRIMAS-Univ. de Haute-Alsace (France)

Program Committee: Tatiana Alieva, Univ. Complutense de Madrid (Spain); Pierre H. Chavel, Institut d'Optique Graduate School (France); Jürgen W. Czarske, TU Dresden (Germany); Julien Fade, Institut Fresnel, CNRS (France); Corinne Fournier, Univ. Jean Monnet Saint-Etienne (France); Sylvain Gioux, Univ. de Strasbourg (France); Keisuke Goda, The Univ. of Tokyo (Japan); Olivier Haeberlé, Univ. de Haute Alsace (France); Elizabeth M.C. Hillman, Columbia Univ. (United States); Giancarlo Pedrini, Institut für Technische Optik (Germany); Neus Sabater, Technicolor (France); Anne Sentenac, Institut Fresnel (France); Guohai Situ, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); Enrique Tajahuerce, Univ. Jaume I (Spain); Pauline Trouvé-Peloux, ONERA (France); Wilfried Uhring, ICube-SERTIT (France); Laura Waller, Univ. of California, Berkeley (United States); Chao Zuo, Nanjing Univ. of Science and Technology (China)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 1: SMALL-SCALE IMAGING I

13 April 2026 • 11:30 - 12:40 | Curie B (Niveau/Level 1)

Session Chair(s): **Irene Georgakoudi**, Thayer School of Engineering at Dartmouth (United States)

14083-1 • 11:30 - 12:10

Chemical bond imaging: decoding the chemistry of life using molecular fingerprints (Keynote Presentation)

Author(s): **Ji-Xin Cheng**, Boston Univ. (United States)

14083-2 • 12:10 - 12:40

Multimodal nanoscopy for visualizing cellular metabolic dynamics in aging & diseases (Invited Paper)

Author(s): **Lingyan Shi**, Univ. of California, San Diego (United States)

Lunch Break 12:40 - 13:50

SESSION 2: SMALL-SCALE IMAGING II

13 April 2026 • 13:50 - 15:10 | Curie B (Niveau/Level 1)

Session Chair(s): **Jürgen W. Czarske**, TU Dresden (Germany); **Lingyan Shi**, Univ. of California, San Diego (United States)

14083-3 • 13:50 - 14:10

Antibunching super-resolution single-pixel structured-illumination microscopy

Author(s): **Olivier Bernard**, **Danielle E. Desa**, Morgridge Institute for Research (United States); **Olivier Pinaud**, **Maxine Varughese**, Colorado State Univ. (United States); **Randy A. Bartels**, Morgridge Institute for Research (United States)

14083-4 • 14:10 - 14:30

Lensless computational imaging by ultra-thin endoscopy using tapered multicore fiber and deep learning

Author(s): **Tom Glosemeyer**, TU Dresden (Germany); **Kinga Zolnacz**, Wroclaw Univ. of Science and Technology (Poland); **Robert Kuschmierz**, **Juergen W. Czarske**, TU Dresden (Germany)

14083-5 • 14:30 - 14:50

SHG-Brillouin microscopy to probe microscopic biomechanical properties of connective tissues.

Author(s): **Stéphane Bancelin**, CNRS (France)

14083-6 • 14:50 - 15:10

Towards two-photon endomicroscopy for detecting ovarian cancer peritoneal metastases

Author(s): **Irene Georgakoudi**, **Einstein Gnanatheepam**, **Matthew Lindley**, Thayer School of Engineering at Dartmouth (United States); **Dimitre G. Ouzounov**, **Chris Xu**, Cornell Univ. (United States)

Coffee Break 15:10 - 15:40

SESSION 3: HOLOGRAPHY-PHASE MEASUREMENT I

13 April 2026 • 15:40 - 18:10 | Curie B (Niveau/Level 1)

Session Chair(s): **Olivier Haeberlé**, Univ. de Haute Alsace (France)

14083-7 • 15:40 - 16:10

Doppler holography of the retina for hemodynamics, vascular mechanics, and rheology (Invited Paper)

Author(s): **Michael Atlan**, Institut Langevin (France)

14083-8 • 16:10 - 16:30

Super-Resolution Digital Holography: Phase-Based Reconstruction Beyond the Abbe Limit

Author(s): **Peter J. Bryanston-Cross**, Univ of Warwick (United Kingdom)

14083-9 • 16:30 - 16:50

Comparison of physics-informed and GAN-based deep learning for digital in-line holographic reconstruction of pollen samples

Author(s): **Mirpeyman Seyyedmohammadizaj**, University of Ljubljana (Slovenia); **Blaž Cugmas**, Univ. of Latvia (Latvia); **Eva Štruc**, Vetamplify SIA (Latvia); **Miran Bürmen**, Univ. of Ljubljana (Slovenia)

14083-10 • 16:50 - 17:10

Physics-driven learning through deep digital holographic microscopy

Author(s): **Rémi Kieber**, **Maxime Jacquot**, **Raphaël Couturier**, **Stephane Cuenat**, Univ. Marie et Louis Pasteur (France)

14083-12 • 17:10 - 17:30

Enhancing Digital Lensless Holographic Microscopy through Logarithmic Dynamic Range

Author(s): **Maria Josef Lopera Acosta**, Vrije Universiteit Brussel (Belgium); **René Restrepo**, Univ. EAFIT (Colombia); **Yunfeng Nie**, **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium); **Carlos Trujillo**, Univ. EAFIT (Colombia)

14083-13 • 17:30 - 17:50

Computational phase imaging for label-free 3D microscopy : noninterferometric phase retrieval and intensity diffraction tomography

Author(s): **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

14083-52 • 17:50 - 18:10

Single-Layer Talbot Optical Neural Network with On-Sensor Activation

Author(s): **Armin Grasnack**, IU International University of Applied Sciences (Germany)

Tuesday 14 April 2026

SESSION 4: HOLOGRAPHY-PHASE MEASUREMENT II

14 April 2026 • 8:30 - 10:30 | Curie B (Niveau/Level 1)

Session Chair(s): **Marc P. Georges**, Ctr. Spatial de Liège (Belgium)

14083-14 • 8:30 - 9:10

Multiphoton holographic manipulation of neuronal circuits (Keynote Presentation)

Author(s): **Valentina Emiliani**, Vision Institut, CNRS, Sorbonne University (France)

14083-15 • 9:10 - 9:30

Single-Shot Hyperspectral Wavefront Imaging

Author(s): **Baptiste Blochet**, Univ. Paris Cité (France); **Nathalie Lebas**, Lab. pour l'Utilisation des Lasers Intenses, CNRS (France); **Pascal Berto**, Institut Fresnel (France); **Dimitrios Papadopoulos**, Lab. pour l'Utilisation des Lasers Intenses, CNRS (France); **Marc Guillon**, Univ. Paris Cité (France)

14083-16 • 9:30 - 9:50

Incoherent Shearing Interferometry with Optimization-Based Phase Recovery for Robust Quantitative Phase Imaging

Author(s): **Piotr Zdańkowski**, **Julianna Winnik**, **Maciej Trusiak**, **Damian Suski**, Warsaw Univ. of Technology (Poland)

14083-17 • 9:50 - 10:10

Programmable Dual-Sensor Based Robust Adaptive Optics System

Author(s): **Biswajit Pathak**, **Anitta Jomy**, Indian Institute of Space Science and Technology (India)

14083-30 • 10:10 - 10:30

Quantum imaging with wavefront shaping

Author(s): **Stefan Krause**, TU Dresden (Germany); **Jonas Vasikonis**, **Markus Gräfe**, Technische Univ. Darmstadt (Germany); **Lars Büttner**, **Jürgen W. Czarske**, TU Dresden (Germany)

Coffee Break 10:30 - 11:00

SESSION 5: TOMOGRAPHY

14 April 2026 • 11:00 - 12:50 | Curie B (Niveau/Level 1)

Session Chair(s): **Nicolas Verrier**, Univ. de Haute Alsace (France)

14083-18 • 11:00 - 11:30

Ultrashort photonic lanterns for imaging and sensing (*Invited Paper*)

Author(s): **Caroline Boudoux**, Polytechnique Montréal (Canada)

14083-19 • 11:30 - 11:50

Mirror-assisted tomographic diffractive microscopy for isotropic super-resolution

Author(s): **Don Jean François Ulrich Agre**, **Patrick Chaumet**, **Anne Sentenac**, **Hugues Giovannini**, **Kamal Belkebir**, **Guillaume Maire**, Institut Fresnel (France)

14083-20 • 11:50 - 12:10

Ultrasound light waveguiding to aid fluorescence imaging through multiply scattering media

Author(s): **Maxim N. Cherkashin**, **Volodymyr Rohovets**, **Carsten Brenner**, **Georg Schmitz**, **Martin R. Hofmann**, Ruhr-Univ. Bochum (Germany)

14083-21 • 12:10 - 12:30

Tomographic diffractive microscopy using a dual-view setup

Author(s): **Carlos Alberto Chacón Ávila**, **Nicolas Verrier**, **Matthieu Debailleul**, **Bruno Colicchio**, **Olivier Haeberlé**, Univ. de Haute Alsace (France)

14083-22 • 12:30 - 12:50

Defocusing microscopy: towards real-time tomographic imaging

Author(s): **José Maria Caquito**, Universidade Federal de Minas Gerais (Brazil); **João Renato Vaz Pires**, **Ubirajara Agero Batista**, **Livia Siman Gomes**, Univ. Federal de Minas Gerais (Brazil)

Lunch/Exhibition Break 12:50 - 13:50

SESSION 6: COMPRESSED SENSING

14 April 2026 • 13:50 - 16:00 | Curie B (Niveau/Level 1)

Session Chair(s): **Marc P. Georges**, Ctr. Spatial de Liège (Belgium)

14083-23 • 13:50 - 14:20

Freeform spectral imaging using Hadamard-based matrices (*Invited Paper*)

Author(s): **Nicolas Ducros**, CREATIS (France)

14083-24 • 14:20 - 14:40

Computational fast FLIM for imaging of biological dynamic processes

Author(s): **Federico Simoni**, **Shivaprasad Varakkoth**, **Gennaro Fratta**, **Piergiorgio Daniele**, **Ivan Labanca**, **Giulia Acconcia**, **Ivan Rech**, Politecnico di Milano (Italy); **Andrea Farina**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Cosimo D'Andrea**, Politecnico di Milano (Italy), Ctr. for Nano Science and Technology, Istituto Italiano di Tecnologia (Italy)

14083-25 • 14:40 - 15:00

Resolution enhancement terahertz imaging under random spatial sampling

Author(s): **Zhangyue Wei**, Technische Univ. Eindhoven (Netherlands); **John Healy**, Univ. College Dublin (Ireland); **Idelfonso Tafur Monroy**, Technische Univ. Eindhoven (Netherlands); **Min Wan**, Eindhoven University Technology (Netherlands), University College Dublin (Ireland)

14083-26 • 15:00 - 15:20

Compressive sensing with a flexible fiber probe

Author(s): **Jakub Kraciuk**, ARCNL (Netherlands); **Aleksandra Ivanina**, Advanced Research Ctr. for Nanolithography (Netherlands); **Lyubov V. Amitonova**, Advanced Research Ctr. for Nanolithography (Netherlands), Vrije Univ. Amsterdam (Netherlands)

14083-27 • 15:20 - 15:40

Raman imaging of live cells at high speed and sensitivity via compressive Raman approach

Author(s): **Zannatul Ferdous**, Ctr. National de la Recherche Scientifique (France); **Clémence Gentner**, **Hilton Barbosa de Aguiar**, CNRS (France)

14083-28 • 15:40 - 16:00

Sensor-less adaptive optics in single-pixel microscopy supported by multi-actuator adaptive lens.

Author(s): **Heberley Tobón Maya**, Univ Jaume I (Spain); **Samuel Zapata-Valencia**, Univ. Jaume I (Spain); **Lindsey Willstatter**, **Stefano Bonora**, Consiglio Nazionale delle Ricerche (Italy); **Enrique Tajahuerce Romera**, **Jesús Lancis**, Univ. Jaume I (Spain)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14083-55 • 18:10 - 20:00

Visually invisible thermal emitters with controllable mid-IR emissivity for adaptive IR camouflage

Author(s): **Hyebi Kim, Young-Uk Jeon**, Korea Institute of Science and Technology (Korea, Republic of); **Soo Jin Kim**, Korea Univ. (Korea, Republic of); **Jongbum Kim**, Korea Institute of Science and Technology (Korea, Republic of)

14083-56 • 18:10 - 20:00

Holographic modal wavefront sensing with novel quality metric parameter

Author(s): **Anitta Jomy, Aryan Chand, Dinesh N. Naik, Biswajit Pathak**, Indian Institute of Space Science and Technology (India)

14083-57 • 18:10 - 20:00

Revealing fiber orientations on biological tissue surfaces with backscattered light imaging

Author(s): **Loes Ettema**, Technische Univ. Delft (Netherlands); **Hamed Abbasi**, Technische Univ. Delft (Netherlands), Erasmus MC (Netherlands); **Miriam Menzel**, Technische Univ. Delft (Netherlands)

14083-58 • 18:10 - 20:00

High-Speed Spatially-Resolved Stokes Polarimetry of Structured Light

Author(s): **Zahra Eslami, Iuliia Zaleskaia, Hossein Fathi, Regina Gumenyuk**, Tampere Univ. (Finland)

14083-59 • 18:10 - 20:00

Large-size integral imaging display with depth image-based plenoptic rendering

Author(s): **Brenno Ferreira**, Université Libre de Bruxelles (Belgium); **Sarah Dury, Gauthier Lafruit**, Univ. Libre de Bruxelles (Belgium); **Mehrdad Teratani**, Nagoya Univ. (Japan); **Daniele Bonatto**, Univ. Libre de Bruxelles (Belgium)

14083-60 • 18:10 - 20:00

Modelling and quantitative validation of the memory-effect kernel for imaging through scattering media

Author(s): **Sarah Tavassoli Koupaei, Philip Birch, Leila Yousefi**, Univ. of Sussex (United Kingdom)

14083-61 • 18:10 - 20:00

Lens-free lab-on-chip fluorescence microscopy using angle-stable polariton filters

Author(s): **Anja Lindenau, Andreas Mischock**, Univ. zu Köln (Germany); **Malte C. Gather**, Univ. zu Köln (Germany), Univ. of St Andrews (United Kingdom)

14083-62 • 18:10 - 20:00

Quadri-wave Interferometric Wavefront Sensing Using Programmable Multiplexed Grating Pattern

Author(s): **Jubin Jacob, Biswajit Pathak**, Indian Institute of Space Science and Technology (India)

14083-63 • 18:10 - 20:00

Route to replace halogen lamps with supercontinuum lasers in push-broom hyperspectral imaging

Author(s): **Dung-Han Yeh**, NKT Photonics A/S (Denmark); **Victor Cardoso**, Department of Food Science, University of Copenhagen (Denmark); **Angelo Manetta**, NKT Photonics A/S (Denmark); **Giulia Gorla**, Department of Analytical Chemistry, Faculty of Science and Technology, University of Basque Country (Spain); **Frederik Nielsen**, NKT Photonics A/S (Denmark); **José Amigo**, Department of Analytical Chemistry, Faculty of Science and Technology, University of Basque Country (Spain); **Patrick Montague**, NKT Photonics A/S (Denmark)

14083-64 • 18:10 - 20:00

Radiometric properties of a supercontinuum light source for hyperspectral imaging

Author(s): **Angelo Manetta, Dung-Han Yeh**, NKT Photonics A/S (Denmark); **Giulia Gorla**, Univ. del País Vasco (Spain); **Victor Cardoso**, Univ. of Copenhagen (Denmark); **Frederik Nielsen**, NKT Photonics A/S (Denmark); **José Amigo**, Univ. del País Vasco (Spain), IKERBASQUE, Basque Foundation for Science (Spain); **Patrick Montague**, NKT Photonics A/S (Denmark)

14083-65 • 18:10 - 20:00

Towards optical biomarkers of preterm birth: deep learning segmentation of cervical tissue using Mueller matrix polarimetry

Author(s): **Inass Kamal, Junha Park, Jean-Charles Vanel**, LPICM, CNRS, École Polytechnique, Institut Polytechnique de Paris (France); **Dominique Luton, Elodie Debras, Aude Gandji**, Department of Gynecology and Obstetrics, CHU de Bicêtre, AP-HP, Le Kremlin-Bicêtre (France); **Erwan Le Pennec**, CMAP, CNRS, École polytechnique, Institut Polytechnique de Paris (France); **Angelo Pierangelo**, LPICM, CNRS, École Polytechnique, Institut Polytechnique de Paris (France)

14083-66 • 18:10 - 20:00

Implementation of a statistical-based compressive sensing method in Hadamard-based single-pixel microscopy

Author(s): **Samuel Ignacio Zapata-Valencia**, Univ Jaume I (Spain); **Heberley Tobón-Maya**, Univ. Jaume I (Spain); **Marcos Obando, Felix Lucka**, Ctr. Wiskunde & Informatica (Netherlands); **Enrique Tajahuerce Romera, Jesus Lancis**, Univ. Jaume I (Spain)

14083-67 • 18:10 - 20:00

Direct observation of single scattering in the spatial frequency domain reflectance at high spatial frequencies

Author(s): **Christian Blum, Zachary D. Jones, Alwin Kienle, Peter Naglic**, Institut für Lasertechnologien in der Medizin und Meßtechnik an der Univ. Ulm (Germany)

14083-68 • 18:10 - 20:00

Characterization of optical sectioning in reflection microscopy with patterned illumination – guidelines to choose a method and its implementation.

Author(s): **Cathie Ventalon**, Ecole Normale Supérieure (France); **Delphine Débarre**, Univ. Grenoble Alpes (France)

14083-69 • 18:10 - 20:00

Structured random models for phase imaging using optical diffusers

Author(s): **Zhiyuan Hu, Fakhriyya Mammadova**, EPFL (Switzerland); **Julian Tachella**, Lab. de Physique de l'ens de Lyon (France); **Michael Unser, Jonathan Dong**, EPFL (Switzerland)

14083-70 • 18:10 - 20:00

Single-shot common-path grating-based holographic microscopy

Author(s): **Aleksandra Piekarska, Mikołaj Rogalski, Maciej Trusiak, Piotr Zdańkowski**, Politechnika Warszawska (Poland)

14083-71 • 18:10 - 20:00

High-speed non-line-of-sight imaging via pre-distorted FMCW LiDAR

Author(s): **Shan Qian**, Tsinghua University (China); **Xingyu Jia, Weiwei Yang, Junzhe Qiang, Guanhao Wu**, Tsinghua Univ. (China)

14083-72 • 18:10 - 20:00

Coherence polarization frustration: a property with potential physical implications in imaging ?

Author(s): **Philippe Réfrégier, Frédéric Galland, Julien Fade**, Institut Fresnel (France)

14083-74 • 18:10 - 20:00

Hybrid computational phase retrieval combining angular spectrum and transport of intensity equation

Author(s): **Shubham Tiwari, Dalip Singh Mehta**, Indian Institute of Technology Delhi (India)

14083-75 • 18:10 - 20:00

Development of a PZT-based experimental bench for potential detection of the piezoaxionic effect in axion dark matter research

Author(s): **Mahmoud Addouche, Patrice Salzenstein**, CNRS FEMTO-ST (France)

14083-76 • 18:10 - 20:00

Machine-learning-based detection of invasion in lymph nodes using digital holographic microscopy

Author(s): **Violeta Calin**, Excellence Ctr. of Research in Biophysics and Cellular Biotechnology (Romania), Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania); **Mona Mihailescu**, Fundamental Sciences Applied in Engineering Research Center, Univ Politehnica of Bucharest (Romania), Optoelectronica 2001 SA (Romania); **Nicolae Tarba**, Univ. Politehnica din Bucuresti (Romania); **Adrian Vasile Dumitru**, Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania), Bucharest Univ. Emergency Hospital (Romania); **Andrei Marian Niculae**, Institutul National de Cercetare-Dezvoltare "Victor Babes" (Romania), Central Univ. Emergency Military Hospital (Romania); **Oana Cristina Voinea**, Excellence Ctr. of Research in Biophysics and Cellular Biotechnology (Romania), Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania); **Ana Lucia Asmarandei**, Institutul Clinic Fundeni (Romania), Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania); **Ioan Tivig, Mihaela Georgeta Moisesu**, Excellence Ctr. of Research in Biophysics and Cellular Biotechnology (Romania), Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania)

14083-77 • 18:10 - 20:00

Phase imaging with correlation of intensity fluctuations

Author(s): **Prateek Agrawal**, IIT BHU, Varanasi (India); **Rakesh K. Singh**, Indian Institute of Technology (BHU), Varanasi (India)

14083-78 • 18:10 - 20:00

Three-dimensional field of view characterization in a remote focusing microscopy system

Author(s): **Dinesh Saini, Manish Kumar**, Indian Institute of Technology Delhi (India)

Wednesday 15 April 2026

SESSION 7: COMPUTATIONAL IMAGING

15 April 2026 • 8:40 - 10:30 | Curie B (Niveau/Level 1)

Session Chair(s): **Irene Georgakoudi**, Thayer School of Engineering at Dartmouth (United States)

14083-29 • 8:40 - 9:10

Seeing cells in the dark: fusing photon-sparse with light-sheet imaging (*Invited Paper*)

Author(s): **Andreas E. Vasdekis**, Univ. of Idaho (United States)

14083-31 • 9:10 - 9:30

Real-time multi-dimensional tissue imaging, oxygenation and fluorescence lifetime mapping via an integrated computational imaging approach

Author(s): **Shivaprasad Varakkoth**, Politecnico di Milano (Italy); **Serban C. Tudosie**, Univ. College London (United Kingdom); **Gabriel S. Shein**, Univ. de Strasbourg (France); **Federico Simoni**, Politecnico di Milano (Italy); **Simon Arridge**, Univ. College London (United Kingdom); **Michele Diana**, Univ. de Strasbourg (France); **Andrea Farina**, Consiglio Nazionale delle Ricerche (Italy); **Cosimo D'Andrea**, Politecnico di Milano (Italy)

14083-32 • 9:30 - 9:50

Iterative reconstruction algorithms for limited-angle ultrasound-modulated optical tomography (UOT) using structured planar waves

Author(s): **Lucas Duclos**, BioMaps, Université Paris-Saclay, CEA, CNRS, Inserm (France); **Anne Louchet-Chauvet**, **François Ramaz**, Institut Langevin, ESPCI Paris, Université PSL, CNRS (France); **Claude Comtat**, **Kaiyuan Xu**, BioMaps, Université Paris-Saclay, CEA, CNRS, Inserm (France)

14083-33 • 9:50 - 10:10

Video-rate widefield polarized light microscopy by spectral coding of the polarization without spectral measurements and Fourier analysis

Author(s): **Hugo Lavie**, **Sylvain Rivet**, **Matthieu Dubreuil**, **Mikhail Indenbom**, **Yann Le Grand**, Lab. d'OPTique et de MAGnetisme, Univ. de Bretagne Occidentale (France)

14083-11 • 10:10 - 10:30

Benchmark of deep denoising methods and a reinforcement learning approach for digital inline holograms

Author(s): **Bora Duman**, Eindhoven University of Technology (Netherlands); **Gökhan Bora Esmer**, Yildiz Technical University (Turkey)

Coffee Break 10:30 - 11:00

SESSION 8: SCATTERING

15 April 2026 • 11:00 - 12:30 | Curie B (Niveau/Level 1)

Session Chair(s): **Andreas E. Vasdekis**, Univ. of Idaho (United States)

14083-34 • 11:00 - 11:30

Transparent mice: refractive index modulation with absorbing molecules for in vivo optical transparency (*Invited Paper*)

Author(s): **Guosong Hong**, Stanford Univ. (United States)

14083-35 • 11:30 - 11:50

Controllable microrobotic guidestars for digital optical phase conjugation under single optical access

Author(s): **John Böhm**, TU Dresden (Germany); **David Castellanos-Robles**, CIC nanoGUNE (Spain); **Jürgen W. Czarske**, TU Dresden (Germany); **Mariana Medina-Sánchez**, CIC nanoGUNE (Spain); **Nektarios Koukourakis**, TU Dresden (Germany)

14083-36 • 11:50 - 12:10

Adaptive-optical correction for imaging through strongly curved phase boundaries

Author(s): **William Naundorf**, **Clemens Bilsing**, TU Dresden (Germany); **Gregory Lecrivain**, **Rhandrey Maestri**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany); **Jürgen W. Czarske**, **Lars Büttner**, TU Dresden (Germany)

14083-37 • 12:10 - 12:30

Speckle-illumination coherent microscopy

Author(s): **Ulysse Najar**, **Jory Hagen**, **Pepijn Klooster**, **Sarvesh Thakur**, **Dierck Hillmann**, Vrije Univ. Amsterdam (Netherlands)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 9: CO-DESIGN AND PSF ENGINEERING

15 April 2026 • 14:00 - 15:20 | Curie B (Niveau/Level 1)

Session Chair(s): **Nicolas Ducros**, CREATIS (France)

14083-38 • 14:00 - 14:20

Impact of the processing choice on the aperture trade-off during end-to-end design of an optical system with binary phase mask and digital processing

Author(s): **Alice Fontbonne**, **Pauline Trouvé-Peloux**, **Marius Dufraisie**, **Frédéric Champagnat**, ONERA (France)

14083-39 • 14:20 - 14:40

Revisiting PSF models: unifying framework and high-performance implementation

Author(s): **Yan Liu**, **Vasiliki Stergiopoulou**, **Jonathan Chuah**, **Eric Bezzam**, EPFL (Switzerland); **Gert-Jan Both**, Howard Hughes Medical Institute (United States); **Michael Unser**, **Daniel Sage**, **Jonathan Dong**, EPFL (Switzerland)

14083-40 • 14:40 - 15:00

Aberration-aware modeling in the co-design framework of a phase mask for depth-of-field extension in single-molecule localization microscopy

Author(s): **Wen Ruan**, Laboratoire Charles Fabry (France); **Marie-Anne Burcklen**, Lab. Charles Fabry (France); **Quentin Gresil**, **Laurent Cognet**, Lab. Photonique, Numérique et Nanosciences (France); **Caroline Kulcsár**, **François Goudail**, Lab. Charles Fabry (France)

14083-41 • 15:00 - 15:20

Quantifying optical masking: linking depolarization metrics and bulk diffusion coefficients via multi-scale mueller polarimetry

Author(s): **Alexandre They**, LPICM, UMR 7647 CNRS, Ecole Polytechnique, Institut Polytechnique de Paris (France), LVMH Recherche (France); **Laurent Brunel**, Photonix Technology S.L. (Spain); **Inass Kamal**, LPICM, UMR 7647 CNRS, Ecole Polytechnique, Institut Polytechnique de Paris (France); **Nicolas Benoot**, **Valérie Alard**, LVMH Recherche (France); **Martin Foldyna**, **Angelo Pierangelo**, LPICM, UMR 7647 CNRS, Ecole Polytechnique, Institut Polytechnique de Paris (France)

Coffee Break 15:20 - 15:50

SESSION 10: INFORMATION PROCESS AND MODELLING

15 April 2026 • 15:50 - 17:40 | Curie B (Niveau/Level 1)

Session Chair(s): **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

14083-43 • 15:50 - 16:20

Super-Resolution Quantum Imaging by Adaptive Multiparameter Fisher Information Maximization for Scalable Sub-Rayleigh Source Localization (Invited Paper)

Author(s): **Hyunsoo Choi**, **Haejun Chung**, Hanyang University (Korea, Republic of); **Zubin Jacob**, Purdue University (United States); **Hyoungh Won Baac**, Sungkyunkwan University, Korea (Korea, Republic of)

14083-44 • 16:20 - 16:40

From imaging to information extraction: A data-cube framework for advanced microscopy

Author(s): **Rajeev Ranjan**, Utsunomiya Univ. (Japan)

14083-45 • 16:40 - 17:00

Multimodal Severity Prediction Framework: Fusion of Medical Images and EHR Data for Diabetic Retinopathy Clinical Decision Support

Author(s): **Jitindra Fartiyal**, **Pedro Freire**, Aston University (United Kingdom); **Arif Ahmed Sekh**, University of Tromsø (Norway); **Michele Compare**, Datix Group (Italy); **Sergei G. Sokolovski**, Aston University (United Kingdom)

14083-46 • 17:00 - 17:20

Dense particle tracking using localization microscopy and neural networks for investigating transient shear flow phenomena

Author(s): **Yiqun Zhang**, **Clemens Bilsing**, **Bin Yang**, **Hannes Köhler**, **Lars Büttner**, **Jürgen W. Czarske**, TU Dresden (Germany)

14083-47 • 17:20 - 17:40

Deep-Learning-Based Three-Dimensional Localization Microscopy with Engineered Point Spread Functions for Cardiac Wavefront Tracking

Author(s): **Ying Zhang**, National Lab. on Adaptive Optics (China), TU Dresden (Germany), Univ. of Chinese Academy of Sciences (China); **Robert Wendland**, **Felix Schmieder**, **Lars Büttner**, **Jürgen W. Czarske**, TU Dresden (Germany)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 11: COMPUTATIONAL IMAGING AND DEEP LEARNING

16 April 2026 • 11:00 - 12:20 | Curie B (Niveau/Level 1)

Session Chair(s): **Nicolas Verrier**, Univ. de Haute Alsace (France)

14083-48 • 11:00 - 11:20

Deep learning-enabled multiphoton holographic stimulation and light-field microscopy

Author(s): **En-Jia Chiang**, National Yang Ming Chiao Tung Univ. (Taiwan); **Liang-Wei Chen**, Univ. of Wisconsin-Madison (United States);

Feng-Chun Hsu, National Yang Ming Chiao Tung Univ. (Taiwan); **Chun-Yu Lin**, National United Univ. (Taiwan); **Shean-Jen Chen**, National Yang Ming Chiao Tung University (Taiwan)

14083-49 • 11:20 - 11:40

End-to-end learning of signal-to-noise ratio for Wiener filter-based image deconvolution

Author(s): **Johannes Meyer**, Fraunhofer-IOSB (Germany); **Lukas Dippon**, **Christian Kludt**, **Chia-Wei Chen**, **Matthias Hartrumpf**, **Thomas**

Längle, Fraunhofer-Institut für Optonik, Systemtechnik und Bildauswertung IOSB (Germany)

14083-50 • 11:40 - 12:00

The screw-like mechanism of muscle contraction suggested by 3D SHG imaging and computational reconstruction

Author(s): **Alexis Parenté**, Univ. de Limoges (France); **Frédéric Claux**, XLIM (France); **Cécile Bétry**, Lab. TIMC (France), CHU Grenoble (France);

Alexis Desmoulière, Univ. de Limoges (France); **Mathilde Duchesne**, Ctr. Hospitalier Univ. de Limoges (France); **Laetitia Magnol**, **Véronique**

Blanquet, Univ. de Limoges (France); **Claire Lefort**, XLIM, CNRS (France)

14083-51 • 12:00 - 12:20

Quantitative Dynamic Monitoring of Zebrafish using High-throughput Optical Coherence Tomography and Deep Learning Technique

Author(s): **Chaerin Hwang**, UNIST (Korea, Republic of); **Geoseong Na**, **Sangjin Lee**, **Hwa Soo Ko**, Ulsan National Institute of Science and

Technology (Korea, Republic of); **Yoonsung Lee**, Kyung Hee Univ. Hospital (Korea, Republic of); **Woonggyu Jung**, Ulsan National Institute of Science and Technology (Korea, Republic of)

CONFERENCE 14084

Optics and Photonics for Advanced Dimensional Metrology IV

15 - 16 April 2026 | Amsterdam/Salon 6 (Niveau/Level 0)

Conference Chair(s): **Felipe Guzman**, Wyant College of Optical Sciences, Univ. of Arizona (United States); **Pascal Picart**, LAUM CNRS, Le Mans Univ. (France); **Thomas Kissinger**, Technische Univ. Ilmenau (Germany)

Program Committee: **Roger Artigas Pursals**, Sensofar-Tech, S.L. (Spain); **Jürgen W. Czarske**, Technische Univ. Dresden (Germany); **Fengzhou Fang**, Tianjin Univ. (China); **Pietro Ferraro**, Istituto Nazionale di Ottica (Italy); **Ines Fortmeier**, Physikalisch-Technische Bundesanstalt (Germany); **Yoshio Hayasaki**, Utsunomiya Univ. (Japan); **Helia Hooshmand-Ziafi**, The Univ. of Nottingham (United Kingdom); **Michał Józwik**, Warsaw Univ. of Technology (Poland); **Dae Wook Kim**, College of Optical Sciences, The Univ. of Arizona (United States); **Eberhard Manske**, Technische Univ. Ilmenau (Germany); **Paul C. Montgomery**, Univ. de Strasbourg (France); **Yukitoshi Otani**, Utsunomiya Univ. (Japan); **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium); **Anne-Sophie Poulin-Girard**, Univ. Laval (Canada); **Christof Pruss**, Univ. Stuttgart (Germany); **Katharina Schmidt**, TU Dresden (Germany); **Mikael Sjödaahl**, Lulea Univ. of Technology (Sweden); **Rong Su**, The Univ. of Nottingham (United Kingdom); **Carlos A. Trujillo**, Univ. EAFIT (Colombia)

Wednesday 15 April 2026

SESSION 1: QUANTITATIVE IMAGING FOR 3D METROLOGY

15 April 2026 • 8:30 - 10:30 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Pascal Picart**, Lab. d'Acoustique de l'Univ. du Mans (France)

14084-2 • 8:30 - 9:00

Light Field Imaging for the characterization of droplets or bubbles in two-phase flows (*Invited Paper*)

Author(s): **Marc Brunel**, **Pierre Schleuniger**, **Adrian Marszalek**, **Ramana Kukkarasi**, **Jean-Bernard Blaisot**, Univ. de Rouen Normandie (France), Complexe de Recherche Interprofessionnel en Aérothermochimie (France)

14084-3 • 9:00 - 9:20

High-speed structured light 3D imaging empowered by deep learning

Author(s): **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

14084-4 • 9:20 - 9:40

Expanding Measurement Volumes in 6-DoF Speckle Tracking Sensors

Author(s): **Niklas Borchers**, Carl Zeiss AG (Germany), Institute of Applied Optics (ITO), University of Stuttgart (Germany); **Ulrich Vogl**, **Carsten Glasenapp**, Carl Zeiss AG (Germany); **Tobias Haist**, **Stephan Reichelt**, Institut für Technische Optik, Univ. Stuttgart (Germany)

14084-5 • 9:40 - 10:00

3D surface measurement via Scheimpflug telecentric vision and multi-line structured light

Author(s): **Liqi Zhang**, **Yan Hu**, **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

14084-1 • 10:00 - 10:30

Multi-Modal Computational 3D Imaging on Specular and Glossy Surfaces (*Invited Paper*)

Author(s): **Florian Willomitzer**, Wyant College of Optical Sciences (United States)

Coffee Break 10:30 - 11:00

SESSION 2: AI AND MACHINE LEARNING FOR OPTICAL METROLOGY AND ULTRA-HIGH PERFORMANCE SYSTEMS

15 April 2026 • 11:00 - 12:40 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Jürgen W. Czarske**, TU Dresden (Germany)

14084-6 • 11:00 - 11:30

Physics-enhanced deep learning for computational imaging: theory, algorithms, and applications *(Invited Paper)*

Author(s): **Fei Wang**, Shanghai Institute of Optics and Fine Mechanics (China)

14084-7 • 11:30 - 12:00

AI-driven characterization of textile materials via deep learning classifiers based on vision transformers *(Invited Paper)*

Author(s): **Vito Renò, Angelo Cardellicchio, Giuseppe Farano, Tiziana D'Orazio**, Sistemi e Tecnologie Industriali Intelligenti per il Manifatturiero Avanzato (Italy)

14084-8 • 12:00 - 12:20

Fringe-print-through and noise error removal in phase-shifting method for high accuracy surface measurement using deep learning.

Author(s): **Manh Nguyen The, Young-Sik Ghim, Hyug-Gyo Rhee**, Korea Research Institute of Standards and Science (Korea, Republic of)

14084-9 • 12:20 - 12:40

Digital-twin-driven physics-informed deep learning for robust temporal phase unwrapping

Author(s): **Shijie Feng**, Nanjing Univ. of Science and Technology (China)

Lunch/Exhibition Break 12:40 - 13:50

SESSION 3: DEVELOPMENT AND USE OF ADVANCED OPTICS FOR METROLOGY PURPOSES

15 April 2026 • 13:50 - 15:30 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Pascal Picart**, Lab. d'Acoustique de l'Univ. du Mans (France)

14084-10 • 13:50 - 14:10

Shack-Hartmann wavefront sensing with metalens array

Author(s): **Xin Wen, Guixin Li**, Southern Univ. of Science and Technology (China)

14084-11 • 14:10 - 14:30

Ultra-compact metalens-based interferometer for manufacturing metrology

Author(s): **Dawei Tang**, Univ of Huddersfield (United Kingdom); **James Williamson, Daniel Townend, Andrew Henning, Haydn Martin, Xiangqian Jiang**, Univ. of Huddersfield (United Kingdom)

14084-12 • 14:30 - 14:50

Inline quality control of nanometer-thick oxide coatings on polymer substrates using quantum cascade laser spectroscopy

Author(s): **Friederike Münch**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Benedikt Hauer, Lukas Bolz**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); **Yuri Victorovich Flores, Marko Haertelt, Jan-Philip Kniesel**, Fraunhofer-Institut für Angewandte Festkörperphysik IAF (Germany); **Ingo Breunig**, Department of Microsystems Engineering IMTEK, University of Freiburg (Germany); **Daniel Carl**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany), Department of Sustainable Systems Engineering INATECH, University of Freiburg (Germany)

14084-14 • 15:10 - 15:30

Real-time surface shape retrieval and broadband refractometry using scalar diffraction from azopolymer surface relief gratings

Author(s): **Marcella Salvatore, Francesco Reda, I Komang Januariyasa, Salvatore Formato, Fabio Borbone, Stefano Luigi Oscurato**, Univ. degli Studi di Napoli Federico II (Italy)

Coffee Break 15:30 - 16:00

SESSION 4: METHODS FOR OPTICAL MICRO- AND NANOMETROLOGY

15 April 2026 • 16:00 - 17:40 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Thomas Kissinger**, Technische Univ. Ilmenau (Germany)

14084-15 • 16:00 - 16:20

Indirect geometry measurement method based on confocal microscopy and gas-phase fluorescence

Author(s): **Giacomo Rizzi**, University of Bremen (Germany); **Andreas Tausendfreund, Andreas Fischer**, Univ. of Bremen (Germany)

14084-16 • 16:20 - 16:40

Using angle-resolved cathodoluminescence for 3D reconstruction of nanoscale geometries

Author(s): **Sam Borman, Daphne Dekker, Evelijn Akerboom, Albert Polman**, AMOLF (Netherlands)

14084-17 • 16:40 - 17:00

Quantitative morphometric analysis of individual gold nanoparticles with sub-nanometer 3D precision using polarisation-resolved wide-field optical extinction microscopy

Author(s): **Wolfgang W. Langbein, Lukas Payne**, Cardiff Univ. (United Kingdom); **Furqan Alabdullah**, Cardiff Univ. (United Kingdom), Al-Furat Al-Awsat Technical Univ. (Iraq); **Paola Borri**, Cardiff Univ. (United Kingdom)

14084-18 • 17:00 - 17:20

Confocal photon-reassignment microscopy for non-destructive 3D metrology of micro-printed structures

Author(s): **Jérémy Calonego, Alberto Aguilar**, IotaMetrix (France); **Duc-Minh Ta**, IotaMetrix (France), XLIM (France); **Pierre Bon**, XLIM (France), IotaMetrix (France)

14084-19 • 17:20 - 17:40

Resolving structures below the diffraction limit using microsphere-assisted and immersion coherence scanning interferometry

Author(s): **Lucie Hüser**, University of Kassel (Germany); **Andre Stelter, Peter Lehmann**, Univ. Kassel (Germany)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14084-13 • 17:45 - 19:30

New precise alignment method using optical back focal plane imaging for a multi-axis quasi-Abbe-error-free measuring platform

Author(s): **Yi-Yuan Lu**, National Taiwan Univ. (Taiwan); **Liang-Chia Chen**, National Taiwan Univ (Taiwan)

14084-35 • 17:45 - 19:30

Simultaneous Characterization of the Full Elastic Constants and Thickness in Sub-micron Membranes using Ultrafast Optoacoustics

Author(s): **Shuchang Zhang, Yi He, Jie Huang**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Yehai Li**, Sun Yat-Sen Univ. (China); **Zhongqing Su**, The Hong Kong Polytechnic Univ. (Hong Kong, China)

14084-36 • 17:45 - 19:30

Digital holography with a linear imager

Author(s): **Yuma Sato, Satoshi Hasegawa, Yoshio Hayasaki**, Utsunomiya Univ. Ctr. for Optical Research & Education (Japan)

14084-37 • 17:45 - 19:30

Development of a Large-Aperture Flat Mirror Technology Using an Array of Small Mirrors

Author(s): **Ho-Soon Yang, Sangwon Park**, Korea Research Institute of Standards and Science (Korea, Republic of)

14084-38 • 17:45 - 19:30

GHz-surface wave ultrasound tomography for nanoscale characterization of subsurface features empowered by ultrafast optoacoustics

Author(s): **Jie Huang, Yi He, Guojie Luo, Shuchang Zhang, Zhongqing Su**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Lin Ye**, Southern Univ. of Science and Technology (China)

14084-39 • 17:45 - 19:30

A 3D optical metrology technique for optically active threading dislocations in n+ 4H-SiC using confocal PL and backscattering imaging

Author(s): **Irwan Saleh Kurniawan**, Chung Yuan Christian University (Taiwan); **Russel Cruz Sevilla, Hsiu-Ming Hsu, Tzu Chien Yang, Chi Tsu Yuan**, Chung Yuan Christian Univ. (Taiwan)

14084-40 • 17:45 - 19:30

Optical method for the determination of surface roughness in on-chip waveguides

Author(s): **Lin Chin-Hsuan, Ruth Jeane Soebroto, Huang Hsiu-Ying, Yuan Chi-Tsu**, Chung Yuan Christian Univ. (Taiwan)

14084-41 • 17:45 - 19:30

Optimization-based Algorithm for Single-Frame Interferometric Nanometrology of Semiconductor Structures

Author(s): **Damian Suski**, Warsaw University of Technology (Poland); **Maria Cywińska, Julianna Winnik, Michał Józwiak, Piotr Zdańkowski**, Warsaw Univ. of Technology (Poland); **Azeem Ahmad, Balpreet S. Ahluwalia**, UiT The Arctic Univ. of Norway (Norway); **Maciej Trusiak**, Warsaw Univ. of Technology (Poland)

14084-42 • 17:45 - 19:30

Operational limits of DeepQuadrature: AI-driven fringe analysis for optical and biological metrology

Author(s): **Wiktór Forjasz**, Warsaw Univ. of Technology (Poland)

14084-43 • 17:45 - 19:30

High-speed real-time optical metrology for large-area 3D surface characterization in continuous production

Author(s): **Karsten Schmiedel**, Fraunhofer IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Leander Kläber**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Tobias Baselt**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), FTZ Zwickau: Forschungs- und Transferzentrum e.V. (Germany); **Peter Hartmann**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany), FTZ Zwickau: Forschungs- und Transferzentrum e.V. (Germany)

14084-44 • 17:45 - 19:30

Surface profilometry using a fibre-based synthetic aperture interferometer

Author(s): **Kayden Parish**, **Jeremy Coupland**, **Pablo Ruiz**, Loughborough University (United Kingdom); **Priyanka Ghosh**, **Sundar Marimuthu**, **Tom Hovell**, Manufacturing Technology Centre (United Kingdom)

14084-45 • 17:45 - 19:30

Metallized 45° Cleaved Optical Fiber Probe with Effective Cylindrical Lensing for Wafer-Level Testing of In-Plane Photonic MEMS Devices

Author(s): **Ahmed Shebl**, **Mohamed Elsaedy**, **Mohamed Refaat**, **Mohamed Sayed Ismail**, **Moez Elmasry**, **Yasseen Nada**, **Momen Anwar**, **Tarek Zeinah**, **Mostafa Medhat**, **Bassem Mortada**, Si-Ware Systems (Egypt); **Yasser M. Sabry**, Si-Ware Systems (Egypt), Ain-Shams Univ. (Egypt); **Bassam Saadany**, Si-Ware Systems (Egypt); **Diaa Khalil**, Ain Shams Univ. (Egypt), Si-Ware Systems (Egypt)

14084-46 • 17:45 - 19:30

Field of view effects on local slope measurements in confocal laser scanning microscopy for surface metrology

Author(s): **Sai Gao**, Physikalisch-Technische Bundesanstalt (Germany)

14084-47 • 17:45 - 19:30

Local spectroscopy and topographic analysis of thin films using white light interferometry

Author(s): **Muneeb Ali**, **Farid Mahfoud**, ICube (France); **Olivier Felix**, Institut Charles Sadron (France); **Sébastien Marbach**, ICube (France); **Pierre Barroy**, Univ. de Picardie Jules Verne (France); **Christophe Cordier**, **Gérard Philippe**, ICube (France); **Midavaine Thierry**, Société Astronomique de France (France); **Paul C. Montgomery**, **Manuel Flury**, ICube (France)

14084-48 • 17:45 - 19:30

From lab to landscape: Distribution of ultrastable, traceable optical frequencies for length metrology applications at the Technical University Ilmenau

Author(s): **Ulrike Blumröder**, **Oliver Birli**, **Suren Vasilyan**, Technische Univ. Ilmenau (Germany); **Denis Dontsov**, SIOS Messtechnik GmbH (Germany); **Thomas Kissinger**, **Thomas Fröhlich**, **Eberhard Manske**, Technische Univ. Ilmenau (Germany)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 5: FREQUENCY-COMB APPROACHES FOR DISTANCE METROLOGY

16 April 2026 • 11:00 - 12:40 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Thomas Kissinger**, Technische Univ. Ilmenau (Germany)

14084-21 • 11:00 - 11:30

Frequency-comb-based distance measurement : methodologies, systems and applications (*Invited Paper*)

Author(s): **Guanhao Wu, Liheng Shi**, Tsinghua Univ. (China)

14084-22 • 11:30 - 12:00

Extended Range Frequency Scanning Interferometry with a Fabry-Pérot Delay Line for high rate measurements (*Invited Paper*)

Author(s): **Pablo D. Ruiz**, Loughborough University (United Kingdom); **Conor E. Nolan, Charles R. Coggrave, Jonathan M. Huntley**, Loughborough Univ. (United Kingdom); **Andrew Gribble, Costantino Corbari**, Renishaw plc (United Kingdom)

14084-23 • 12:00 - 12:20

Electro-optic comb as synthetic wavelength generator for multi-wavelength digital holography

Author(s): **Leonard Voßgrag**, Albert-Ludwigs-University Freiburg (Germany); **Annelie Schiller**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); **Tobias Seyler, Jens Kießling**, Fraunhofer Institute for Measurement Techniques IPM (Germany); **Daniel Carl**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany), Albert-Ludwigs-University Freiburg (Germany); **Ingo Breunig**, Albert-Ludwigs-University Freiburg (Germany), Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany)

14084-24 • 12:20 - 12:40

Low-Noise 10 GHz Mode-Locked Frequency Comb with Complete Stabilization for Precision Spectral Calibration

Author(s): **Andrea Pertoldi**, Menhir Photonics AG (Switzerland); **Niccolò Barberio**, Politecnico di Milano (Italy); **Francesco Canella**, Consiglio Nazionale delle Ricerche (Italy); **Benjamin Rudin, Florian Emaury**, Menhir Photonics AG (Switzerland); **Francesco Benatti, Dario Giannotti**, Politecnico di Milano (Italy); **Francesco Leone**, Univ. degli Studi di Catania (Italy), INAF - Osservatorio Astrofisico di Catania (Italy); **Paolo Laporta**, Politecnico di Milano (Italy), Consiglio Nazionale delle Ricerche (Italy); **Gianluca Galzerano**, Consiglio Nazionale delle Ricerche (Italy), Politecnico di Milano (Italy)

Lunch Break 12:40 - 13:40

SESSION 6: DIGITAL HOLOGRAPHY AND COHERENT METROLOGY

16 April 2026 • 13:40 - 15:40 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Yukitoshi Otani**, Utsunomiya Univ. (Japan)

14084-25 • 13:40 - 14:00

Polarization Holography: Recent Advancements, Challenges, and Future Trends

Author(s): **Manoj Kumar**, Amity Univ. (India), Kobe Univ. (Japan)

14084-26 • 14:00 - 14:20

Towards absolute measurements using multiwavelength digital holography

Author(s): **Tobias Störk**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Leonard Voßgrag**, University of Freiburg (Germany); **Markus Fratz, Tobias Seyler, Alexander Bertz**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Daniel Carl**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), University of Freiburg (Germany); **Ingo Breunig**, University of Freiburg (Germany)

14084-27 • 14:20 - 14:40

Compensation of field-dependent lateral chromatic aberrations in multiwavelength digital holography

Author(s): **Marc Johannes Aslan, Markus Fratz, Tobias Seyler, Alexander Bertz**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany); **Daniel Carl**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany), Univ. of Freiburg (Germany); **Ingo Breunig**, Univ. of Freiburg (Germany)

14084-28 • 14:40 - 15:00

Electro-optic single-sideband modulation as a versatile platform for dynamic and fundamental studies in multi-wavelength holography

Author(s): **Ingo Breunig**, Albert-Ludwigs-University Freiburg (Germany); **Leonard Voßgrag**, Univ. of Freiburg (Germany)

14084-29 • 15:00 - 15:20

Investigation of fast and slow dynamics of concrete materials by digital 3-color holographic interferometry

Author(s): **Alexandre Klein, Silvio Montrésor, Mourad Bentahar, Pascal Picart**, Lab. d'Acoustique de l'Univ. du Mans, CNRS (France)

14084-30 • 15:20 - 15:40

Minimally Invasive Residual Stress Evaluation in LSP-Treated Components Using Shearography

Author(s): **Tainara Pedrosa de Lima, Mauro Eduardo Benedet, Armando Albertazzi**, Univ. Federal de Santa Catarina (Brazil); **Jan Šmaus, Jan Kaufman**, Institute of Physics of the CAS, v.v.i. (Czech Republic)

Coffee Break 15:40 - 16:00

SESSION 7: CURRENT CHALLENGES IN ADVANCED OPTICAL INSTRUMENTATION

16 April 2026 • 16:00 - 17:50 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Felipe Guzman**, Wyant College of Optical Sciences (United States)

14084-31 • 16:00 - 16:30

Full-Stokes imaging for industrial inspection *(Invited Paper)*

Author(s): **Yukitoshi Otani, Manning Sun, Jessica Onaka, Nathan Hagen**, Utsunomiya Univ. (Japan)

14084-32 • 16:30 - 17:00

Photonic systems for astronomical wavefront sensing and superresolution imaging. *(Invited Paper)*

Author(s): **Jeffrey R. Kuhn**, Institute for Astronomy (United States)

14084-33 • 17:00 - 17:30

Alignment and Performance Verification of the Second K-DRIFT G1 Off-Axis Freeform Telescope *(Invited Paper)*

Author(s): **Yunjong Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of), University of Science and Technology (Korea, Republic of); **Dohoon Kim**, Green Optics Co., Ltd. (Korea, Republic of); **Seonwoo Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Seunghyuk Chang**, Ctr. for Integrated Smart Sensors (Korea, Republic of); **Il Jihun Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Il Kweon Moon**, Korea Research Institute of Standards and Science (Korea, Republic of); **Hyuksun Kwon**, ADSOLUTION CO., Ltd. (Korea, Republic of); **Woowon Byun**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Yeonsik Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of), Kyungpook National Univ. (Korea, Republic of); **Yongseok Lee**, Korea Astronomy and Space Science Institute (Korea, Republic of), School of Space Research, Kyung Hee Univ. (Korea, Republic of); **Sangmin Lee, Jaewon Yoo**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Kyohoon Ahn**, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Jae-Woo Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Gayoung Lee**, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Daewook Kim**, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Steward Observatory (United States), Large Binocular Telescope Observatory (United States); **Jongwan Ko**, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of)

14084-34 • 17:30 - 17:50

Strengthening optical and photonic dimensional metrology through robust uncertainty evaluation and international intercomparisons

Author(s): **Patrice Salzenstein**, CNRS FEMTO-ST (France); **Thomas Y. Wu**, National Metrology Centre (NMC), Agency for Science, Technology and Research (A*STAR) (Singapore); **David Bassir**, Smart Structural Health Monitoring and Control Laboratory, DGUT-CNAM, Dongguan University of Technology (China); **Dinghua Yang**, China Three Gorges Corporation (China)

CONFERENCE 14085

Optics, Photonics and Digital Technologies for Imaging Applications IX

14 - 16 April 2026 | Luxembourg/Salon 2 (Niveau/Level 0)

Conference Chair(s): **Peter Schelkens**, Vrije Univ. Brussel (Belgium); **Tomasz Kozacki**, Warsaw Univ. of Technology (Poland)

Program Committee: **Pierre-Alexandre J. Blanche**, Wyant College of Optical Sciences (United States); **David Blinder**, Vrije Univ. Brussel (Belgium); **Adrian Bradu**, Univ. of Kent (United Kingdom); **Gloria Bueno**, Univ. de Castilla-La Mancha (Spain); **Liangcai Cao**, Tsinghua Univ. (China); **Praneeth K. Chakravarthula**, Princeton Univ. (United States); **Maksymilian Chlipala**, Warsaw Univ. of Technology (Poland); **Daping Chu**, Univ. of Cambridge (United Kingdom); **Gabriel Cristóbal**, Consejo Superior de Investigaciones Científicas (Spain); **Jürgen W. Czarske**, TU Dresden (Germany); **Touradj Ebrahimi**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Boris Escalante-Ramírez**, Univ. Nacional Autónoma de México (Mexico); **John J. Healy**, Univ. College Dublin (Ireland); **Thomas J. Naughton**, National Univ. of Ireland, Maynooth (Ireland); **Yunfeng Nie**, Vrije Univ. Brussel (Belgium); **Takashi Nishitsuji**, Toho Univ. (Japan); **Jae-Hyeung Park**, Inha Univ. (Korea, Republic of); **Stuart W. Perry**, Canon Information Systems Research (Australia); **Tomoyoshi Shimobaba**, Chiba Univ. (Japan); **Athanassios N. Skodras**, Univ. of Patras (Greece)

Tuesday 14 April 2026

SESSION 1: AUGMENTED AND VIRTUAL REALITY

14 April 2026 • 9:00 - 10:20 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **David Blinder**, Vrije Univ. Brussel (Belgium)

14085-1 • 9:00 - 9:20

Volumetric caustics engineering

Author(s): **Alon Bahabad**, **Keren Zhalenchuck**, Tel Aviv Univ. (Israel)

14085-2 • 9:20 - 9:40

Multifunctional metasurfaces for polarisation control and beam shaping in AR/VR light engines

Author(s): **Ashar Noor**, Institut Fresnel (France), imec (Belgium); **Farhan Ali**, KU Leuven (Belgium), imec (Belgium); **Florian Maudet**, imec (Belgium); **Oksana V. Shramkova**, Univ. de Strasbourg (France), imec (Belgium)

14085-3 • 9:40 - 10:00

Metagrating design for compact AR waveguide-based architectures

Author(s):

14085-4 • 10:00 - 10:20

Robust grating coupler design for near-eye displays: kernel-based tolerancing applied to slanted and meta gratings

Author(s): **Arda Eren**, ASELSAN AS (Turkey); **Nazmi Yilmaz**, ASELSAN A.S. (Turkey); **Ibrahim T. Ozdur**, TOBB Economics and Technology University (Turkey); **Kubilay Sezgin**, ASELSAN A.S. (Turkey)

Coffee Break 10:20 - 10:50

SESSION 2: HOLOGRAPHIC DISPLAYS

14 April 2026 • 10:50 - 12:30 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Peter Schelkens**, Vrije Univ. Brussel (Belgium)

14085-5 • 10:50 - 11:10

Off-axis 3D holographic display with multi-depth viewing via beam splitters

Author(s): **Roubing Meng**, Univ of Cambridge (United Kingdom); **Zhongling Huang**, **Antoni Wojcik**, Univ. of Cambridge (United Kingdom); **Tim Wilkinson**, Univ of Cambridge (United Kingdom)

14085-6 • 11:10 - 11:30

Single frame near-eye holographic display with RGB image and on-axis illumination

Author(s): **Artur Szawerdak, Dominik Drąg, Maksymilian Chlipala, Tomasz Kozacki**, Warsaw Univ. of Technology (Poland)

14085-7 • 11:30 - 11:50

Wide-angle holographic near-eye display with DOE lens

Author(s): **Maksymilian Chlipala, Dawid Ciesielski, Artur Szawerdak**, Warsaw Univ. of Technology (Poland); **Michał Golas**, CEZAMAT PW Sp. z o.o. (Poland); **Krysian Pavlov, Maciej Filipiak, Tomasz Kozacki**, Warsaw Univ. of Technology (Poland)

14085-8 • 11:50 - 12:10

Resolution enhancement in holographic lithography through photoresist response modeling

Author(s): **Antoni J. Wojcik**, Univ of Cambridge (United Kingdom); **Dilawer Singh, Ayan Rakshit, Hannah J. Joyce, Timothy D. Wilkinson**, Univ. of Cambridge (United Kingdom)

14085-9 • 12:10 - 12:30

Incoherent holographic display system using the generalized Van Cittert-Zernike Schell propagator

Author(s): **Manuel Montoya**, Vrije Universiteit Brussel (Belgium); **David Blinder, Yunfeng Nie**, Vrije Univ. Brussel (Belgium)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 3: COMPUTATIONAL MICROSCOPY AND TOMOGRAPHY

14 April 2026 • 14:00 - 16:00 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Maciej Trusiak**, Warsaw Univ. of Technology (Poland)

14085-10 • 14:00 - 14:20

A comparison between use of metasurface and conventional refractive axicons in OCT systems

Author(s): **Daniel J. Townend**, University of Huddersfield (United Kingdom); **Andrew J. Henning, Haydn Martin, Xiangqian Jiang**, Univ. of Huddersfield (United Kingdom)

14085-11 • 14:20 - 14:40

Beyond Fourier Transform Imaging: Subsurface imaging of Agate with Complex Leader-Follower Full-Field OCT

Author(s): **Irene Rodríguez Lamoso, Sascha Preu**, Technische Univ. Darmstadt (Germany); **Alejandro Martínez Jiménez**, Universidad de Castilla-La Mancha (Spain); **Adrian Podoleanu**, University of Kent (United Kingdom)

14085-12 • 14:40 - 15:00

Optical scanning tomography elastography: experimental validation of a novel elastography method

Author(s): **Elijah Van Houten**, ICube, CNRS (France), Univ. de Strasbourg (France); **Samuel Kurtz**, Univ. Grenoble Alpes (France); **Pascal Doumalin, Jean-Christophe Dupré**, Institut P², CNRS (France), Univ. de Poitiers (France); **Christophe Goze-Bac, Maïda Cardoso**, BioNanolmaging Foundry, CNRS (France), Univ. de Montpellier (France); **Bertrand Wattrisse**, Univ. de Montpellier (France)

14085-13 • 15:00 - 15:20

Diffusion-Weighted Photoacoustic Microscopy

Author(s): **Toghrul Alakbarzade, Mehmet Burçin Ünlü**, Ozyegin Univ. (Turkey)

14085-14 • 15:20 - 15:40

Polarization-multiplexed full-range optical coherence tomography for artifact-free imaging of multilayer display components

Author(s): **Tanbin Shao, Min Xia, Kecheng Yang**, Huazhong Univ. of Science and Technology (China); **Wenping Guo**, Huazhong Univ of Science and Technology (China)

14085-15 • 15:40 - 16:00

Phase Tomography using Axial Structured Illumination

Author(s): **Nishant Goyal, Kedar Khare**, Indian Institute of Technology Delhi (India)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 4: HOLOGRAPHIC SIGNAL PROCESSING

15 April 2026 • 8:50 - 10:20 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Tomasz Kozacki**, Warsaw Univ. of Technology (Poland)

14085-16 • 8:50 - 9:20

Mipmap-inspired phase space decomposition for efficient Fresnel diffraction (Invited Paper)

Author(s): **David Blinder**, Vrije Univ. Brussel (Belgium), imec (Belgium)

14085-17 • 9:20 - 9:40

Non-rigid motion estimation for CGH using the chirped cross ambiguity function

Author(s): **Bilal Moussa Fares**, **Peter Schelkens**, **David Blinder**, Vrije Universiteit Brussel (Belgium)

14085-18 • 9:40 - 10:00

Millibit-per-pixel compression of digital holograms

Author(s): **Raees K.M. Kizhakkumkara Muhamad**, VUB (Belgium), imec (Belgium); **Colas Schretter**, **Peter Schelkens**, **David Blinder**, Vrije Univ. Brussel (Belgium), imec (Belgium)

14085-19 • 10:00 - 10:20

Comparison of Spectrum-based Image Quality Assessment Metrics

Author(s): **Berkay Yilmaz**, Marmara Üniv (Turkey); **Gökhan Bora Esmer**, Yıldız Technical Univ. (Turkey)

Coffee Break 10:20 - 10:50

SESSION 5: COMPUTATIONAL HOLOGRAPHIC MICROSCOPY

15 April 2026 • 10:50 - 12:00 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Tomasz Kozacki**, Warsaw Univ. of Technology (Poland)

14085-20 • 10:50 - 11:20

Broadband lensless holographic microscopy for bioimaging from deep UV to near IR using a regular camera (Invited Paper)

Author(s): **Maciej Trusiak**, Warsaw Univ. of Technology (Poland)

14085-22 • 11:20 - 11:40

Real-time optogenetic control of excitation wavefronts in human cardiomyocytes using label-free and sparse sensing

Author(s): **Robert Wendland**, **Felix Schmieder**, TU Dresden (Germany); **Muhammad Atif Sikandar**, **Wolfram-Hubertus Zimmermann**, **Olaf Bergmann**, Universitätsmedizin Göttingen (Germany); **Lars Büttner**, **Jürgen Walter Czarke**, TU Dresden (Germany)

14085-24 • 11:40 - 12:00

High-fidelity label-free 3D microscopy via Fourier ptychographic diffraction tomography with adaptive support constraint

Author(s): **Shun Zhou**, **Kaiyu Du**, **Chao Zuo**, Nanjing Univ of Science and Technology (China)

Lunch/Exhibition Break 12:00 - 13:30

SESSION 6: COMPUTER VISION APPLICATIONS

15 April 2026 • 13:30 - 15:30 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **John J. Healy**, Univ. College Dublin (Ireland)

14085-25 • 13:30 - 13:50

Optimization and upscaling of microlens arrays for advanced photon detectors

Author(s): **Frédéric Zanella**, **Luka Ciric**, **Mohamed Asbahi**, **Noémie Morales**, **Christian Schneider**, **Guillaume Basset**, Ctr. Suisse d'Electronique et de Microtechnique SA (Switzerland)

14085-26 • 13:50 - 14:10

Stress-testing medical vision models with images edited by controllable inversion algorithms

Author(s): **Michel Pezzat**, Center of Advanced Computation Studies (Mexico), Laboratory of Advance Image Processing (Mexico), National Autonomous University of Mexico (Mexico); **Jimena Olveres Montiel**, **Boris Escalante-Ramírez**, Univ. Nacional Autónoma de México (Mexico); **Carlos Minutti**, Ctr. de Investigación e Innovación en Tecnologías de la Información y Comunicación (Mexico), Univ. Nacional Autónoma de México (Mexico); **Rodrigo Ramoz Dias**, Univ. Nacional Autónoma de México (Mexico)

14085-27 • 14:10 - 14:30

Deep Learning for robust optical overlay metrology in semiconductor device manufacturing

Author(s): **Maximilian Lipp**, **Lars de Wolf**, **Arie den Boef**, Advanced Research Ctr. for Nanolithography (Netherlands); **Patrick Forré**, Univ. of Amsterdam (Netherlands); **Lyuba V. Amitonova**, Advanced Research Ctr. for Nanolithography (Netherlands)

14085-28 • 14:30 - 14:50

Raytracing-generated images from surface metrology data for AI training on defect recognition

Author(s): **Simone Sorgato**, **Julie Verdood**, **Jürgen Van Erps**, Vrije Universiteit Brussel (Belgium), FlandersMake@VUB (Belgium)

14085-29 • 14:50 - 15:10

Development and evaluation of particle analysis system for the process water of the petrochemical industry using hyperspectral imaging, white-light imaging, and fluorescence imaging

Author(s): **Thomas Arnold**, Silicon Austria Labs GmbH (Austria); **Martin Datler**, **Johannes Schnöller**, OMV Aktiengesellschaft (Austria); **Martin De Biasio**, Silicon Austria Labs. GmbH (Austria); **Bernhard Lendl**, **Felix Frank**, **Dominik Kau-Wacht**, TU Wien, Institute of Chemical Technologies and Analytics (Austria); **Tibor Bereczki**, Silicon Austria Labs GmbH (Austria)

14085-66 • 15:10 - 15:30

Measurement of deep micro-holes on PCB using a spectral-domain coherent interferometry system

Author(s): **Hongyu Shen**, **Min Xia**, **WenPing Guo**, **Kecheng Yang**, **Zhiheng Shao**, **Zhe Chen**, Huazhong Univ of Science and Technology (China)

Coffee Break 15:30 - 16:00

SESSION 7: MACHINE LEARNING AND IMAGE PROCESSING I

15 April 2026 • 16:00 - 17:20 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Boris Escalante-Ramírez**, Univ. Nacional Autónoma de México (Mexico)

14085-30 • 16:00 - 16:20

Local Regression Mixture Models for Compact and Adaptive Plenoptic Representation

Author(s): **Rodolphe Valicon De Soete**, Vrije Universiteit Brussel (Belgium); **Colas Schretter**, **Nikos Deligiannis**, Vrije Univ. Brussel (Belgium)

14085-31 • 16:20 - 16:40

ViTCapsNets: Hybrid vision transformers and capsule networks architecture for automated building damage assessment using multi-temporal satellite imagery

Author(s): **Victor Hernández-Díaz**, Posgrado en Ciencia e Ingeniería de la Computación, Universidad Nacional Autónoma de México (Mexico); **Jimena Olveres Montiel**, Facultad de Ingeniería, Universidad Nacional Autónoma de México, (Mexico); **Boris Escalante-Ramírez**, Facultad de Ingeniería, Universidad Nacional Autónoma de México (Mexico)

14085-33 • 16:40 - 17:00

Applications and recent advances of polynomial neural networks in medical imaging

Author(s): **José Carlos Moreno Tagle**, Universidad Nacional Autónoma de México (UNAM) (Mexico); **Jimena Olveres Montiel**, **Boris Escalante-Ramírez**, Univ. Nacional Autónoma de México (Mexico)

14085-34 • 17:00 - 17:20

Model-guided online calibration for multi-actuator active optical systems with strong nonlinearities and inter-actuator coupling

Author(s): **Shahab Haidarian**, **Ulrike Wallrabe**, Univ. of Freiburg (Germany)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14085-44 • 17:45 - 19:30

Applications of Raman Spectroscopy for Electronic based Systems

Author(s): **Martin De Biasio**, Silicon Austria Labs GmbH (Austria); **Marc Straetgen**, Infineon Technologies Austria AG (Austria); **Dmytro Solonenko**, **Ivan I. Shishkin**, **Andreas Tortschanoff**, **Thomas Arnold**, Silicon Austria Labs. GmbH (Austria)

14085-45 • 17:45 - 19:30

Advanced RGB laser illumination system for endoscopy

Author(s): **Janis Spigulis**, Univ of Latvia (Latvia); **Edgars Kviesis-Kipge**, **Uldis Rubins**, Univ. of Latvia (Latvia)

14085-46 • 17:45 - 19:30

Detection of Hot Objects in Recycling Streams for Enhanced Safety Using Low-Cost IR Cameras

Author(s): **Martin De Biasio**, Silicon Austria Labs GmbH (Austria); **Dirk Balthasar**, **Michael Mayer**, TOMRA Sorting GmbH (Germany); **Thomas Arnold**, Silicon Austria Labs. GmbH (Austria)

14085-49 • 17:45 - 19:30

Development and evaluation of a new line illumination for hyperspectral imaging systems for industrial applications

Author(s): **Thomas Arnold**, Silicon Austria Labs GmbH (Austria); **Martin De Biasio**, Silicon Austria Labs. GmbH (Austria); **Dirk Balthasar**, TOMRA Sorting GmbH (Germany); **Tibor Bereczki**, Silicon Austria Labs GmbH (Austria)

14085-50 • 17:45 - 19:30

Ray tracing for holographic waveguides: image quality prediction in see-through systems

Author(s): **Juan Carlos Bravo Francés**, **Joan Josep Sirvent-Verdú**, **Jorge Francés**, **Cristian Neipp**, **Andrés Márquez Ruiz**, **Sergi Gallego**, **Augusto Beléndez**, Univ. de Alicante (Spain)

14085-51 • 17:45 - 19:30

Design and characterization of diffractive lenses based on the aperiodic Paperfolding sequence

Author(s): **Arlen B. Pérez-Hernández**, Universitat Politècnica de València (Spain); **Adrián Garmendía-Martínez**, **Francisco M. Muñoz-Pérez**, **Vicente Ferrando**, **Juan C. Castro Palacio**, Universidad Politècnica de Valencia (Spain); **Walter D. Furlan**, Universidad de Valencia (Spain); **Juan A. Monsoriu**, Universidad Politècnica de Valencia (Spain)

14085-52 • 17:45 - 19:30

A lightweight SVM-based framework for breast thermography using statistical descriptors

Author(s): **Laura Benita Alvarado Cruz**, **Pedro Fernández de Córdoba**, Univ. Politècnica de València (Spain); **Arlen B. Pérez-Hernández**, Universitat Politècnica de València (Spain); **Juan C. Castro-Palacio**, **Juan A. Monsoriu-Serra**, Univ. Politècnica de València (Spain); **Francisco M. Muñoz Pérez**, Univ. Politècnica de València (Spain), Univ. Politècnica de Tulancingo (Mexico)

14085-53 • 17:45 - 19:30

Tunable spherical aberration in modified kinoform lenses

Author(s): **Adrián Garmendía-Martínez**, **Arlen B. Pérez-Hernández**, **Francisco M. Muñoz-Pérez**, **Vicente Ferrando**, Universitat Politècnica de València (Spain); **Walter D. Furlan**, Universitat de València (Spain); **Juan A. Monsoriu**, Universitat Politècnica de València (Spain)

14085-54 • 17:45 - 19:30

PlenSimu: a simple web-based simulator and interactive optimizer for the concept design of plenoptic systems

Author(s): **Tommi J. Rintala**, Vaasa Univ. of Applied Sciences (Finland); **Jarmo T. Alander**, Art of CAD Ltd. (Finland)

14085-56 • 17:45 - 19:30

Eye-in-Hand RGB-D Volumetric Metrology for Large-Scale Objects Using Multi-View 3D Scanning.

Author(s): **Jinseong Son**, **Seunghun Oh**, **Jaehong Shim**, **Kihyun Kim**, **Hyo-young Kim**, Tech Univ. of Korea (Korea, Republic of)

14085-57 • 17:45 - 19:30

Scalable AI-driven inspection for inline nuisance filtering and whole wafer pattern classification

Author(s): **HuaChiang Chi**, Onto Innovation (Taiwan)

14085-58 • 17:45 - 19:30

Digital holographic profilometry with symmetric structured illumination

Author(s): **Tomasz Kozacki, Moncy Sajeev Idicula, Dawid Ciesielski, Michał Józwik**, Warsaw Univ. of Technology (Poland); **Kai Wen, Peng Gao**, Xidian Univ. (China)

14085-60 • 17:45 - 19:30

MR and PET/SPECT brain image fusion based on the fractional Hermite transform and sparse representation

Author(s): **Lorena P. Vargas-Quintero, Leiner Barba Jimenez, Leticia Acosta**, Univ. Popular del Cesar (Colombia)

14085-62 • 17:45 - 19:30

A block-affine registration and cloud-controlled stitching method for airborne hyperspectral cameras

Author(s): **zihan yang**, Wuhan University (China); **Yansong Duan**, Wuhan Univ. (China)

14085-63 • 17:45 - 19:30

An AOTF Spectral Bandwidth Control Method Based on Joint Multi-Frequency Driving and Delayed Integration

Author(s): **Liang Yaoxing, Huijie Zhao, Qi Guo, Xiaoyu Wang, Ran Li**, Beihang Univ. (China)

14085-64 • 17:45 - 19:30

Implementation of Sobel processing based on FPGA

Author(s): **Zhanchao Wang, Min Huang, Lulu Qian, Wenhao Zhao**, Aerospace Information Research Institute, CAS (China)

14085-65 • 17:45 - 19:30

Motion detection through scattering media using power analysis of correlation-difference-based reconstructed speckle Images

Author(s): **Sarah Tavassoli Koupaei, Philip Birch, Leila Yousefi**, Univ. of Sussex (United Kingdom)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 8: MACHINE LEARNING AND IMAGE PROCESSING II

16 April 2026 • 11:00 - 12:50 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Peter Schelkens**, Vrije Univ. Brussel (Belgium)

14085-35 • 11:00 - 11:30

Unsupervised video denoising for structured noise via Fourier masking (*Invited Paper*)

Author(s): **Haosen Liu**, The University of Hong Kong (Hong Kong, China); **Edmund Y. Lam**, The Univ. of Hong Kong (Hong Kong, China)

14085-36 • 11:30 - 11:50

Vector optimization for gridding kernels: a Pareto-based framework for NUFFT accuracy control

Author(s): **Federico Achini**, Università degli Studi di Milano (Italy); **Paola Causin**, Univ. degli Studi di Milano (Italy); **Sara Vanini**, Centervue S.p.A., Revenio Group Oyj (Italy); **Ke Chen**, Univ. of Strathclyde (United Kingdom); **Simone Scacchi**, Univ. degli Studi di Milano (Italy)

14085-37 • 11:50 - 12:10

synaptic plasticity based on photo-activated materials for mobile neuromorphic computing

Author(s): **Paulo S. André**, Instituto de Telecomunicações (Portugal)

14085-38 • 12:10 - 12:30

Content-adaptive face anti-spoofing for secure vision-based authentication

Author(s): **Shujaat Khan**, KFUPM (Saudi Arabia), SDAIA–KFUPM Joint Research Center for Artificial Intelligence (Saudi Arabia)

14085-39 • 12:30 - 12:50

Feature-based brain ischemic stroke detection in the fractional Hermite transform domain

Author(s): **Leiner Barba Jimenez**, **Lorena P. Vargas-Quintero**, **Yaileth Morales Daza**, Univ. Popular del Cesar (Colombia)

Lunch Break 12:50 - 14:00

SESSION 9: COMPUTATIONAL IMAGING

16 April 2026 • 14:00 - 15:30 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Boris Escalante-Ramírez**, Univ. Nacional Autónoma de México (Mexico)

14085-40 • 14:00 - 14:30

Pattern Extraction from 3D+t Imaging of Human Sperm Flagellar Beating (*Invited Paper*)

Author(s): **Haydee O. Hernandez**, Universidad Autónoma del Estado de Morelos (Mexico); **Gabriel Corkidi**, **Boris Escalante-Ramírez**, **Jimena Olveres Montiel**, Universidad Nacional Autónoma de México (Mexico)

14085-41 • 14:30 - 14:50

Tailoring object-specific light fields for the inspection of transparent materials

Author(s): **Christian Kludt**, **Johannes Meyer**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Jürgen Beyerer**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany)

14085-42 • 14:50 - 15:10

Optical SWIR imaging spectroscopy of atmospheric methane (CH₄) from space with TROPOMI/Sentinel-5P: Spatiotemporal trends and climatic drivers

Author(s): **Md Masudur Rahman**, King Fahd Univ. of Petroleum & Minerals (Saudi Arabia); **Arfan Arshad**, National Ctr. for Atmospheric Research (United States); **Sankaran Rajendran**, Qatar Univ. (Qatar); **Mahfuzur Rahman**, **Roman Shults**, King Fahd Univ. of Petroleum & Minerals (Saudi Arabia)

14085-43 • 15:10 - 15:30

From RGB to hyperspectral: a deep learning pipeline approach for accessible biomedical sample analysis

Author(s): **Marco Tulio Amorim Frazao**, Universidade do Estado do Amazonas (Brazil); **Denise Maria Zezell**, Center for Lasers and Applications, Nuclear and Energy Research Institute, IPEN—CNEN (Brazil); **Moisés Oliveira dos Santos**, Universidade do Estado do Amazonas (Brazil)

CONFERENCE 14086

Optical Sensing and Detection IX

12 - 16 April 2026 | Schuman (Niveau/Level 1)

Conference Chair(s): Francis Berghmans, Vrije Univ. Brussel (Belgium); Ioanna Zergioti, National Technical Univ. of Athens (Greece); Francesco Chiavaioli, Istituto di Fisica Applicata "Nello Carrara" (Italy)

Program Committee: Roger M. Groves, Technische Univ. Delft (Netherlands); Jane Hodgkinson, Cranfield Univ. (United Kingdom); Jiri Homola, Institute of Photonics and Electronics of the ASCR, v.v.i. (Czech Republic); Maria Konstantaki, Foundation for Research and Technology-Hellas (Greece); Anna G. Mignani, Istituto di Fisica Applicata Nello Carrara (Italy); Sinead O'Keefe, Univ. of Limerick (Ireland); Kate Sugden, Aston Univ. (United Kingdom); Alessandro Tredicucci, NEST (Italy); Wacław Urbanczyk, Wrocław Univ. of Technology (Poland); Jan Van Roosbroeck, FBGS International NV (Belgium); Libo Yuan, Harbin Engineering Univ. (China)

Sunday 12 April 2026

SESSION 1: OPTICAL FIBER-BASED SENSORS I

12 April 2026 • 15:30 - 17:40 | Schuman (Niveau/Level 1)

Session Chair(s): Francesco Chiavaioli, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-1 • 15:30 - 16:00

Dual-resonance D-shaped optical fiber sensors for simultaneous multi-analyte detection (*Invited Paper*)

Author(s): Ignacio Del Villar, Univ. Pública de Navarra (Spain); Desiree Santano, Abian B. Socorro, Univ. Pública de Navarra (Spain); Ambra Giannetti, Francesco Chiavaioli, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-2 • 16:00 - 16:20

Fiber-tip photothermal gas sensing based on a 3D nano-printed hollow-core light cage

Author(s): Pengcheng Zhao, Leibniz Institute of Photonic Technology (Germany); Wenqin Huang, Markus Schmidt, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14086-3 • 16:20 - 16:40

Multichannel photonic interrogators for fiber-optic sensing and vital signs monitoring

Author(s): Aleksandra Bieniek-Kaczorek, Warsaw Univ. of Technology (Poland); Stanisław Stopiński, Krzysztof Anders, Warsaw Univ. of Technology (Poland), LightHouse Sp. z o.o. (Poland), VIGO Photonics S.A. (Poland); Anna Jusza, Warsaw Univ. of Technology (Poland), LightHouse Sp. z o.o. (Poland); Ryszard Piramidowicz, Warsaw Univ. of Technology (Poland), LightHouse Sp. z o.o. (Poland), VIGO Photonics S.A. (Poland)

14086-4 • 16:40 - 17:00

Multiplexed TFBG Array for Quasi-Distributed RI Sensing Using Derivative Spectrum Analysis

Author(s): Jieqing Zheng, University of Mons (Belgium); Xuehao Hu, Karima Chah, Christophe Caucheteur, Univ. de Mons (Belgium)

14086-5 • 17:00 - 17:20

Etched Fiber Bragg Gratings: A Promising Platform for Environmental and Biological Analyte Sensing

Author(s): Debojyoti Mondal, Pandit Deendayal Energy University (India); Sundarrajan Asokan, Indian Institute of Science, Bengaluru (India)

14086-6 • 17:20 - 17:40

Hollow-core fiber Raman gas sensing with signal enhancement via lens-assisted active reflection coupling

Author(s): Yukun Wan, Min Xia, Xudong Li, Zijian Ni, Huazhong Univ. of Science and Technology (China); Wei Li, Huazhong University of Science and Technology (China)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 2: INTEGRATED, LAB-ON-CHIP AND RESONANCE-BASED SENSORS I

13 April 2026 • 11:30 - 12:40 | Schuman (Niveau/Level 1)

Session Chair(s): **Francesco Chiavaioli**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-7 • 11:30 - 12:00

Transfer learning for chip-independent biosensing with optical microresonators (Invited Paper)

Author(s): **Anton V. Saetchnikov**, Ruhr-University Bochum (Germany); **Andreas Ostendorf**, Ruhr-Univ. Bochum (Germany)

14086-8 • 12:00 - 12:20

Ultrasensitive optical quantification of biomarkers in liquid biopsies through evanescent-wave detection

Author(s): **Caterina Dallari**, **Caterina Credi**, Istituto Nazionale di Ottica (Italy); **Francesco S. Pavone**, Univ. degli Studi di Firenze (Italy)

14086-9 • 12:20 - 12:40

Effect of sensing location on the sensing functionality of coated microresonators for exosome detection

Author(s): **Maira Martins Garcia**, **Brahim Bessif**, **Daniel Erni**, **Mandana Jalali**, General and Theoretical Electrical Engineering (ATE), University of Duisburg-Essen (UDE), and Center for Nanointegration Duisburg-Essen (CENIDE), D-47048 Duisburg, Germany (Germany)

Lunch Break 12:40 - 13:50

SESSION 3: OPTICAL FIBER-BASED SENSORS II

13 April 2026 • 13:50 - 15:20 | Schuman (Niveau/Level 1)

Session Chair(s): **Francesco Chiavaioli**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-11 • 13:50 - 14:20

Building-Block Validation of Photonic Structural Health Monitoring for Aerospace Composites Using Embedded and Surface-Mounted FBG Sensors *(Invited Paper)*

Author(s): **Sidney Goossens**, Vrije Univ Brussel (Belgium); **Miguel Jiménez**, Element Materials Technology Seville SL (Spain); **Evangelos Karachalios**, Hellenic Aerospace Industry S.A. (Greece); **Diego Saenz-Castillo**, Fundación para la Investigación, Desarrollo y Aplicación de Materiales Compuestos (Spain); **Zahra Sharif Khodaei**, Imperial College London (United Kingdom)

14086-12 • 14:20 - 14:40

3D-Printed packaged FBG strain sensor for wind turbine structural health monitoring: field validation and EMD-based analysis

Author(s): **Marie Derison**, University of Mons (Belgium); **Ali Yagiz Ugurveren**, Izmir Institute of Technology (Turkey); **Karima Chah**, Univ. de Mons (Belgium); **Kivilcim Yüksel**, Izmir Institute of Technology (Turkey); **Sayahnya Roy**, **Marc Fourmentin**, **Patrick Augustin**, Univ. du Littoral Côte d'Opale (France); **François Vallée**, **Christophe Caucheteur**, Univ. de Mons (Belgium)

14086-13 • 14:40 - 15:00

Investigation of FBG sensor length effects on fault detection and damage location in rotating systems

Author(s): **Damilare Samuel Ojo**, Vrije Universiteit Brussel (Belgium), BP&M, FlandersMake@VUB, Brussels (Belgium); **Panagiotis Mantas**, **Alexandre Mauricio**, **Konstantinos Gryllias**, KU Leuven (Belgium), B-Phot (Belgium); **Francis Berghmans**, **Sidney Goossens**, Vrije Univ. Brussel (Belgium), B-Phot (Belgium)

14086-14 • 15:00 - 15:20

Femtosecond-Laser-Inscribed FBG Array in Polymer Coated Single-Mode Fibre for Shape Sensing Applications

Author(s): **Saba N. Khan**, **Pablo Roldán-Varona**, **Robert R. Thomson**, **William N. MacPherson**, Heriot-Watt Univ. (United Kingdom)

Coffee Break 15:20 - 15:50

SESSION 4: OPTICAL FIBER-BASED SENSORS III

13 April 2026 • 15:50 - 17:50 | Schuman (Niveau/Level 1)

Session Chair(s): **Sidney Goossens**, Vrije Univ. Brussel (Belgium)

14086-15 • 15:50 - 16:10

Shape sensing with optimized accuracy in single channel BOTDA

Author(s): **Francesco Falcetelli**, Consiglio Nazionale delle Ricerche (Italy), University of Bologna (Italy); **Leonardo Rossi**, Consiglio Nazionale delle Ricerche (Italy); **Piero Lovato**, **Filippo Bastianini**, Socotec Monitoring Italy S.R.L (Italy); **Raffella Di Sante**, University of Bologna (Italy); **Gabriele Bolognini**, Consiglio Nazionale delle Ricerche (Italy)

14086-16 • 16:10 - 16:30

Monitoring fabrication process of three-dimensional-printed composite coupons and residual strain measurements using distributed fiber sensing

Author(s): **Sergei Mikhailov**, **Ahmad Shawki Charkieh**, **Sidney Goossens**, **Lincy Pyl**, **Francis Berghmans**, Vrije Universiteit Brussel (Belgium)

14086-17 • 16:30 - 16:50

Event Detection and Localization Using a Multiple-Input-Multiple-Output Distributed Fiber Sensor with Birefringence and Phase Estimation

Author(s): **Diane Prato**, **Mehran Mokthari Sheramin**, **Renaud Gabet**, **Élie Awwad**, Télécom Paris (France)

14086-18 • 16:50 - 17:10

Characterization of Germanium Fibers and Their Applications as Solar Irradiance Sensors

Author(s): **Jing Zhang**, A*STAR (Singapore), National Metrology Centre, A*STAR (Singapore); **Xiangcheng Zhou**, **Zachary Zhe Xi Liew**, **Shixing Yuan**, Nanyang Technological Univ. (Singapore); **Zhixun Wang**, Nanyang Technological Univ. (Singapore), The Hong Kong Polytechnic Univ. (China); **Lei Wei**, Nanyang Technological Univ. (Singapore)

14086-19 • 17:10 - 17:30

An active optical fiber-ring gyroscope based on cascaded stimulated-Brillouin scattering

Author(s): **Rashmi Rekha Sahoo**, **Marialuisa Capezzuto**, **Davide D'Ambrosio**, **Pietro Malara**, **Saverio Avino**, **Gianluca Gagliardi**, Istituto Nazionale di Ottica (Italy)

14086-20 • 17:30 - 17:50

Fully Distributed In-Situ Thermal Characterization of PEM Fuel Cells Using Chirped Fiber Bragg Gratings

Author(s): **Yue Feng**, **Haodong Wu**, Harbin Univ. of Science and Technology (China); **Tongtong Xie**, **Shouju Liu**, **Tianxiang Luan**, **Chao Wang**, Univ. of Kent (United Kingdom)

Tuesday 14 April 2026

SESSION 5: OPTICAL FIBER-BASED SENSORS IV

14 April 2026 • 8:30 - 10:20 | Schuman (Niveau/Level 1)

Session Chair(s): **Francesco Chiavaioli**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-21 • 8:30 - 9:00

An optical fiber Bragg grating sensor for tracing Perfluorooctanoic acid in water (*Invited Paper*)

Author(s): **Stavros Pissadakis**, **Vasilios Sarakatsianos**, **Theodore Manouras**, Foundation for Research and Technology-Hellas (Greece); **Maria Vamvakaki**, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); **Vasileia Melissinaki**, Foundation for Research and Technology-Hellas (Greece); **Gabriella Motta**, Alite S.r.l. (Italy); **Guido Perrone**, Politecnico di Torino (Italy), Alite S.r.l. (Italy)

14086-22 • 9:00 - 9:20

Development of lossy mode resonance-based fiber-optic biosensing platform for the detection of cancer-related biomarkers

Author(s): **Claudia Borri**, Istituto di Fisica Applicata "Nello Carrara" (Italy); **Giorgia Montalbano**, **Ilaria Corvaglia**, Politecnico di Torino (Italy); **Rukmani Singh**, **Ambra Giannetti**, **Barbara Adinolfi**, Istituto di Fisica Applicata "Nello Carrara" (Italy); **Alberto Rovera**, **Maria Giorgia Spasari**, Politecnico di Torino (Italy); **Pablo Zubiate**, Univ. Pública de Navarra (Spain); **Ignacio Del Villar**, **Ignacio R. Matias**, Instituto de Smart Cities, Univ. Pública de Navarra (Spain); **Davide Luca Janner**, Politecnico di Torino (Italy); **Shadab Dabagh**, **Francesco Baldini**, Istituto di Fisica Applicata "Nello Carrara" (Italy); **Chiara Vitale-Brovarone**, **Sonia Lucia Fiorilli**, Politecnico di Torino (Italy); **Francesco Chiavaioli**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-23 • 9:20 - 9:40

Multi-point Optical Fiber Speckle Sensing with Event-Based Sensors for High-Bandwidth Applications

Author(s): **Joana Teixeira**, **Tomás Lopes**, INESC TEC (Portugal), Faculty of Sciences of the University of Porto (Portugal); **Tiago D. Ferreira**, **Catarina S. Monteiro**, INESC TEC (Portugal); **Pedro A.S. Jorge**, INESC TEC (Portugal), Faculty of Sciences of the University of Porto (Portugal); **Nuno A. Silva**, INESC TEC (Portugal)

14086-24 • 9:40 - 10:00

Practical aspects of gas sensing inside antiresonant hollow-core fibers

Author(s): **Piotr Perehiniec**, Wrocław Univ. of Science and Technology (Poland); **Ryszard Buczynski**, Univ. of Warsaw (Poland); **Michał Nikodem**, Wrocław Univ. of Science and Technology (Poland)

14086-25 • 10:00 - 10:20

Advancing sustainable crude oil transportation through optical fiber asphaltene precipitation monitoring

Author(s): **Nikos Klonos**, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); **Vasilis Sarakatsianos**, Foundation for Research and Technology-Hellas (Greece); **Eleftheria Antoniou**, **Eleni Chamilaki**, **Nikos Pasadakis**, Technical Univ. of Crete (Greece); **Stavros Pissadakis**, **Maria Konstantaki**, Foundation for Research and Technology-Hellas (Greece)

Coffee Break 10:20 - 10:50

SESSION 6: INTEGRATED, LAB-ON-CHIP AND RESONANCE-BASED SENSORS II

14 April 2026 • 10:50 - 13:00 | Schuman (Niveau/Level 1)

Session Chair(s): **Stavros Pissadakis**, Foundation for Research and Technology-Hellas (Greece)

14086-26 • 10:50 - 11:20

Silicon photonic sensors for induction welding joints in aerospace composite manufacturing (*Invited Paper*)

Author(s): **Giannis Pouloupoulos**, **Georgios Syriopoulos**, **Thenia Prousalidi**, National Technical Univ. of Athens (Greece); **Harindra Kumar Kannoja**, **Jeroen Missinne**, Ctr. for Microsystems Technology, imec (Belgium); **Charalampos Zervos**, National Technical Univ. of Athens (Greece); **Geert Van Steenberge**, Ctr. for Microsystems Technology, imec (Belgium); **Dimitrios Apostolopoulos**, **Hercules Avramopoulos**, **Constantinos Haliotis**, National Technical Univ. of Athens (Greece)

14086-27 • 11:20 - 11:40

Monitoring of Polycyclic Aromatic Hydrocarbons (PAHs) in runoff waters using a 3D printed microfluidic-based fluorescence sensor system

Author(s): **Caoilte O'Rourke O'Cuirrin**, **Fiona Regan**, **Mercedes Vazquez**, DCU Water Institute (Ireland)

14086-28 • 11:40 - 12:00

an intrinsically accurate optomechanical accelerometer for inertial navigation

Author(s): **Ronald Pagano**, **Sean Bressler**, **Benjamin Reschovsky**, **Yiliang Bao**, **Jason Gorman**, **Thomas LeBrun**, National Institute of Standards and Technology (United States)

14086-29 • 12:00 - 12:20

A broadband mid-infrared detector based on photonic integrated circuits and trampoline mechanical resonators

Author(s): **Guillermo Arregui Bravo**, **Amirali Arabmoheghi**, **Alessio Zicoschi**, **Xinru Ji**, **Shivaprasad Umesh Hulyal**, EPFL (Switzerland); **Scott Kenning**, Purdue Univ. (United States); **Yi Xia**, EPFL (Switzerland); **Sunil Bhawe**, Purdue Univ. (United States); **Tobias Jan Kippenberg**, EPFL (Switzerland)

14086-30 • 12:20 - 12:40

High spatiotemporal scintillation imaging dosimetry for conventional and ultra-high dose-rate proton therapy beams

Author(s): **Arash Darafsheh**, Washington Univ. School of Medicine in St. Louis (United States); **S. Murty Goddu**, Washington Univ. in St. Louis (United States)

14086-77 • 12:40 - 13:00

Silicon photonics phase-shifted Bragg-grating filter for temperature sensing applications

Author(s): **Lucivaldo B. Aguiar**, **Moises A. Oliveira**, Univ. Federal de Campina Grande (Brazil); **Murilo A. Romero**, Univ de Sao Paulo (Brazil); **Adolfo F. Herbster**, Univ. Federal de Campina Grande (Brazil)

Lunch/Exhibition Break 13:00 - 14:00

SESSION 7: VOLATILE ORGANIC COMPOUND AND GAS SENSING I

14 April 2026 • 14:00 - 16:10 | Schuman (Niveau/Level 1)

Session Chair(s): **Stavros Pissadakis**, Foundation for Research and Technology-Hellas (Greece)

14086-31 • 14:00 - 14:30

Electro-Optic Dual-Comb Spectroscopy System for Methane Detection in the Mid-Infrared Region (*Invited Paper*)

Author(s): **Bernat Frangi Mahiques**, Univ. Carlos III de Madrid (Spain); **Laura Monroy**, **Mariano Rubio**, **Mario Sánchez**, **Pedro Martín Mateos**, Universidad Carlos III de Madrid (Spain)

14086-32 • 14:30 - 14:50

Methane Concentration, Pressure, and Temperature using MA-WMS and Machine Learning algorithms

Author(s): **Lorenzo Santini**, **Luis Carlos C. Coelho**, **Claudio Florida**, INESC TEC (Portugal)

14086-33 • 14:50 - 15:10

WMS-2f gas detection using a picosecond OPO: a proof-of-concept for future multi-gas and remote sensing applications

Author(s): **Florent Défossez**, Multitel (Belgium); **Jean-Bernard Lecourt**, **Antonio Baylon**, **Alexandre Gognau**, **Yves Hernandez**, Multitel A.S.B.L. (Belgium)

14086-34 • 15:10 - 15:30

DFB laser diode-based inline real-time detection of hydrogen cyanide as a trace gas

Author(s): **Clemens Richter**, Westsächsische Hochschule Zwickau (Germany); **David Geßner**, Westsächsische Hochschule Zwickau (Germany), Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Tobias Baselt**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Forschungs- und Transferzentrum e.V., Westsächsische Hochschule Zwickau (Germany); **Peter Hartmann**, Westsächsische Hochschule Zwickau (Germany), Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany)

14086-39 • 15:30 - 15:50

Field validation of quartz-enhanced photoacoustic sensors for trace gas monitoring in urban and volcanic environments

Author(s): **Andrea Zifarelli**, Università degli Studi di Bari Aldo Moro (Italy); **Mariagrazia Olivieri**, Politecnico di Bari (Italy); **Arianna Elefante**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Luigi Lombardi**, PolySenSe Innovations s.r.l (Italy); **Angelo Sampaolo**, **Vincenzo Spagnolo**, Politecnico di Bari (Italy); **Pietro Patimisco**, Univ. degli Studi di Bari Aldo Moro (Italy)

14086-36 • 15:50 - 16:10

Echo-pulse differential absorption spectroscopy for large-scale multi-channel methane monitoring

Author(s): **Lorenzo Santini**, **Luis Carlos C. Coelho**, **Claudio Florida**, INESC TEC (Portugal)

Coffee Break 16:10 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 8: VOLATILE ORGANIC COMPOUND AND GAS SENSING II

15 April 2026 • 8:50 - 10:20 | Schuman (Niveau/Level 1)

Session Chair(s): **Ioanna Zergioti**, National Technical Univ. of Athens (Greece)

14086-37 • 8:50 - 9:20

Combining sub-Doppler resolution and ppb-level detection sensitivity with a cantilever-enhanced photoacoustic spectroscopy

(Invited Paper)

Author(s): **Jacopo Pelini**, **Simone Borri**, Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Stefano Dello Russo**, **Mario Siciliani de Cumis**, Agenzia Spaziale Italiana (Italy); **Chenghong Zhang**, **Iacopo Galli**, **Pablo Cancio Pastor**, **Paolo De Natale**, Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Maria Concetta Canino**, **Alberto Roncaglia**, Istituto per lo Studio dei Materiali Nanostrutturati, Consiglio Nazionale delle Ricerche (Italy); **Wei Ren**, **Zhen Wang**, The Chinese Univ. of Hong Kong (China); **Naota Akikusa**, Hamamatsu Photonics K.K. (Japan)

14086-38 • 9:20 - 9:40

Integration of gas chromatography and quartz-enhanced photoacoustic spectroscopy analytical domains: enhancing sensitivity and selectivity in natural gas analysis

Author(s): **Lavinia Anna Mongelli**, Politecnico di Bari (Italy); **Arianna Elefante**, Istituto di Fotonica e Nanotecnologie, Consiglio Nazionale delle Ricerche (Italy); **Giansergio Menduni**, **Marilena Giglio**, Politecnico di Bari (Italy); **Andrea Zifarelli**, **Pietro Patimisco**, Univ. degli Studi di Bari Aldo Moro (Italy); **Angelo Sampaolo**, **Vincenzo Spagnolo**, Politecnico di Bari (Italy); **Liam O'Faolain**, Ctr. for Advanced Photonics and Process Analysis, Munster Technological Univ. (Ireland); **Damien Fernandez**, **Jimmy Zanotto**, SRA Instruments SAS (France)

14086-40 • 9:40 - 10:00

OPO-based Mid-IR photoacoustic sensing of molecular hydrogen at 10-ppm level

Author(s): **Jacopo Pelini**, Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Marta Tonini**, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Stefano Dello Russo**, Agenzia Spaziale Italiana (Italy); **Chenghong Zhang**, Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Paolo De Natale**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Maria Concetta Canino**, **Alberto Roncaglia**, Istituto per lo Studio dei Materiali Nanostrutturati, Consiglio Nazionale delle Ricerche (Italy); **Guglielmo Vesco**, **Davide Gatti**, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Mario Siciliani de Cumis**, Agenzia Spaziale Italiana (Italy); **Marco Marangoni**, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Simone Borri**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy)

14086-41 • 10:00 - 10:20

Cesium Lead Bromide Hybrid Materials for Photoluminescence-Based Environmental Detection

Author(s): **Argyro Klini**, Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (Greece); **Ilias Zervakis**, Univ. of Patras (Greece); **Evangelia Vasilaki**, Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (Greece); **Stefania Milanese**, Univ. del Salento (Italy); **Maria Vamvakaki**, Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (Greece); **Maria Luisa De Giorgi**, Univ. del Salento (Italy)

Coffee Break 10:20 - 10:50

SESSION 9: SPECTROSCOPY I

15 April 2026 • 10:50 - 12:20 | Schuman (Niveau/Level 1)

Session Chair(s): **Ioanna Zergioti**, National Technical Univ. of Athens (Greece)

14086-42 • 10:50 - 11:20

Fluorescence spectroscopy for multi-mycotoxin detection (*Invited Paper*)

Author(s): **Francesca Venturini**, Zürcher Hochschule für Angewandte Wissenschaften (Switzerland); **Umberto Michelucci**, Lucerne Univ. of Applied Sciences and Arts (Switzerland); **Indy Magnus**, **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14086-43 • 11:20 - 11:40

In situ Raman spectroscopy for monitoring metabolite changes in infected tomato plants

Author(s): **Camilla Baratto**, INO-CNR (Italy); **Lorenzo Pandolfi**, Istituto Nazionale di Ottica (Italy); **Niccolò Miotti**, Istituto per la Protezione Sostenibile delle Piante (Italy); **Guido Faglia**, Univ. degli Studi di Brescia (Italy); **Carlo Pennacchio**, Dept. of Industrial and Information Engineering, University of Pavia (Italy); **Marina Ciuffo**, **Martino Schillaci**, Istituto per la Protezione Sostenibile delle Piante (Italy); **Emanuela Gobbi**, Univ. degli Studi di Brescia (Italy); **Massimo Turina**, **Sabrina Palmano**, Istituto per la Protezione Sostenibile delle Piante (Italy)

14086-44 • 11:40 - 12:00

Predicting Deoxynivalenol contamination in cereals using optical spectroscopy and regression analysis

Author(s): **Indy Magnus**, Vrije Univ Brussel (Belgium), Flanders Make@VUB - BP&M (Belgium); **Wannes Luts De Martelaere**, Vrije Univ. Brussel (Belgium); **Francesca Venturini**, Zürcher Hochschule für Angewandte Wissenschaften (Switzerland), TOELT GmbH (Switzerland); **Umberto Michelucci**, TOELT GmbH (Switzerland), Lucerne Univ. of Applied Sciences and Arts (Switzerland); **Lien Smeesters**, Vrije Univ. Brussel (Belgium), Flanders Make@VUB - BP&M (Belgium)

14086-45 • 12:00 - 12:20

Optical sensing system based on visible reflectance spectroscopy for classification of strawberry leaves

Author(s): **Diana Paulina P. Moreno Miranda**, Univ. de Guanajuato (Mexico); **Oleksiy D. Shulika**, Univ. de Guanajuato (Mexico)

Lunch/Exhibition Break 12:20 - 13:30

SESSION 10: SPECTROSCOPY II

15 April 2026 • 13:30 - 15:20 | Schuman (Niveau/Level 1)

Session Chair(s): **Argyro Klini**, Foundation for Research and Technology-Hellas (Greece)

14086-46 • 13:30 - 14:00

Background-Suppressed Label-Free SERS Biosensing in Complex Matrices with AI-Driven Spectral Decomposition (*Invited Paper*)

Author(s): **Yufang Liu**, **YanJun Yang**, **Haoran Lu**, **Jiaheng Cui**, **Jackelyn Murray**, **Ralph A. Tripp**, **Xianyan Chen**, **Wenxuan Zhong**, **Ping Ma**, **Yiping Zhao**, The Univ. of Georgia (United States)

14086-47 • 14:00 - 14:20

Digital SERS event counting and spectrum learning for quantitative, label-free protein sensing

Author(s): **Eni Kume**, **James H. Rice**, Univ. College Dublin (Ireland)

14086-48 • 14:20 - 14:40

Compact mid-infrared tunable interband cascade laser-based spectrometers with thin-film waveguides for protein sensing

Author(s): **Mehmet Can Erdem**, **Pranish Karki**, **Bijay Kafle**, **Michael Angelo Amith Fenelon**, **Boris Zimmermann**, Norwegian University of Life Sciences (NMBU) (Norway); **Polina Fomina**, **Antoni Femenias**, Ulm University (Germany); **Uladzislau Blazhko**, Norwegian University of Life Sciences (NMBU) (Norway); **Julian Scheuermann**, nanoplus Advanced Photonics Gerbrunn GmbH (Germany); **Maren Anna Brandsrud**, Norwegian University of Life Sciences (NMBU) (Norway); **Robert Weih**, **Johannes Koeth**, nanoplus Advanced Photonics Gerbrunn GmbH (Germany); **Boris Mizaikoff**, Ulm University (Germany); **Achim Kohler**, Norwegian University of Life Sciences (NMBU) (Norway)

14086-49 • 14:40 - 15:00

Sensing ultralight dark matter with molecular spectroscopy in an optical network

Author(s): **Florin Lucian Constantin**, Lab de Physique des Lasers Atomes et Molecules (France)

14086-50 • 15:00 - 15:20

Compensating for spectral distortion in a static modulated Fourier transform Spectrometer using a phase correction-based averaging approach

Author(s): **Ju Yong Cho**, Hanseo Univ (Korea, Republic of); **Won-Kweon Jang**, Hanseo Univ. (Korea, Republic of)

Coffee Break 15:20 - 15:50

SESSION 11: SPECTROSCOPY III

15 April 2026 • 15:50 - 17:40 | Schuman (Niveau/Level 1)

Session Chair(s): **Argyro Klini**, Foundation for Research and Technology-Hellas (Greece)

14086-51 • 15:50 - 16:20

Optical detection of eutrophic contaminants in water (*Invited Paper*)

Author(s): **Anna Jusza**, Warsaw Univ. of Technology (Poland), LightHouse Sp. z o.o. (Poland); **Jerzy Kalwas**, VIGO Photonics S.A. (Poland); **Aleksandra Bieniek-Kaczorek**, **Paweł Bortnowski**, **Łukasz Kozłowski**, **Adrian Ślipek**, **Michalina Zielińska**, Warsaw Univ. of Technology (Poland); **Filip Labaj**, VIGO Photonics S.A. (Poland); **Krzysztof Anders**, Warsaw Univ. of Technology (Poland), Lighthouse Sp. z o.o. (Poland), VIGO Photonics S.A. (Poland); **Stanisław Stopiński**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), Lighthouse Sp. z o.o. (Poland); **Edyta Kiedrzyńska**, European Regional Ctr. for Ecohydrology (Poland); **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland), Lighthouse Sp. z o.o. (Poland), VIGO Photonics S.A. (Poland)

14086-52 • 16:20 - 16:40

Fast detection of clostridia contamination in milk by Raman spectroscopy

Author(s): **Luca Poletto**, **Daniele Barbiero**, **Lorenzo Cocola**, **Massimo Fedel**, **Fabio Melison**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Paola De Dea**, **Cristian Andrichetto**, Veneto Agricoltura (Italy); **Andrea Chiarello**, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

14086-53 • 16:40 - 17:00

Quantitative Online Lithium Monitoring in Liquids Using Laser-Induced Breakdown Spectroscopy

Author(s): **Evangelia Kardamaki**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), University of Freiburg (Germany); **Carl Basler**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Daniel Carl**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), Univ. of Freiburg (Germany); **Ingo Breunig**, Univ. of Freiburg (Germany)

14086-54 • 17:00 - 17:20

Towards implementing optical computation in transmission filters for spectral imaging

Author(s): **Oliver Burton**, Univ of Cambridge (United Kingdom); **Tim Wilkinson**, **Hannah Joyce**, Univ. of Cambridge (United Kingdom)

14086-55 • 17:20 - 17:40

Hyperspectral Imaging in the MWIR and LWIR Ranges for Enhanced Identification of Complex E-Waste Objects in Recycling Applications

Author(s): **Andréa de Lima Ribeiro**, Helmholtz-Zentrum Dresden-Rossendorf eV (Germany); **Margret Fuchs**, **Sandra Lorenz**, **Filipa Simões**, **Richard Gloaguen**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14086-69 • 17:45 - 19:30

Enhanced sensitivity in linear regime of long period fiber gratings with deposition of two layer thin films

Author(s): **Lázaro González Salgueiro**, Univ. Pública de Navarra (Spain); **Ignacio Del Villar**, Univ Publica de Navarra (Spain); **Jesus M. Corres**, **Ignacio R. Matias**, Univ. Pública de Navarra (Spain)

14086-70 • 17:45 - 19:30

Real-time optical tracking of ITO thin films via lossy mode resonances

Author(s): **Ignacio Del Villar**, Univ Publica de Navarra (Spain); **Naisa Sena**, **Ismel Dominguez**, **Ignacio Matias**, Univ. Pública de Navarra (Spain); **Vitezslav Stranak**, **Alexej Horak**, **Pavel Čurda**, Univ. of South Bohemia in Ceske Budejovice (Czech Republic); **Mateusz Smietana**, Warsaw Univ. of Technology (Poland)

14086-71 • 17:45 - 19:30

Development of an auto-detecting method based on HSV color space and YOLO model for ship hull paint deterioration and corrosion

Author(s): **Chien-Cheng Lee**, National Taiwan Ocean Univ. (Taiwan); **Shu-Sheng Lee**, National Taiwan Ocean Univ (Taiwan)

14086-72 • 17:45 - 19:30

A compact broadband static Fourier transform spectrometer

Author(s): **Ali Hussain**, STFC Rutherford Appleton Lab. (United Kingdom)

14086-73 • 17:45 - 19:30

Non-Dispersive Raman Spectroscopy for Hydrogen Detection

Author(s): **Fabio Melison, Lorenzo Cocola, Luca Poletto**, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

14086-75 • 17:45 - 19:30

Quasi-distributed FBG-based strain characterization of a rotating inner Race in deep-groove ball bearings

Author(s): **Damilare Samuel Ojo**, Vrije Universiteit Brussel (Belgium), BP&M, FlandersMake@VUB, Brussels (Belgium); **Fernando de la Hucha Arce, Abhinit Hirde, Ted Ooijevaar**, Flanders Make (Belgium); **Francis Berghmans, Sidney Goossens**, Vrije Univ. Brussel (Belgium), B-Phot (Belgium)

14086-76 • 17:45 - 19:30

Highly sensitive, optical fiber taper temperature sensor based on plasma technique

Author(s): **Luis Fernando Granados-Zambrano, Jeroen Korterik, Herman Offerhaus**, Univ Twente (Netherlands); **Steven AA van den Berg**, The Hague University of Applied Sciences (Netherlands); **Daniel Jauregui-Vazquez, Enrique De La Cruz**, Ctr. de Investigación Científica y de Educación Superior de Ensenada B.C. (Mexico); **Jose Alfredo A. Alvarez-Chavez**, The Hague University of Applied Sciences (Netherlands)

14086-78 • 17:45 - 19:30

Phi-OTDR-based distributed acoustic sensing for structural health monitoring of wind turbines

Author(s): **Yosri Haddad, Yves Hernandez**, Multitel Innovation Center (Belgium); **Karima CHAH**, University of Mons (Belgium); **Jean-Bernard Lecourt**, Multitel Innovation Center (Belgium)

14086-79 • 17:45 - 19:30

Progress towards ultrahigh-count-rate superconducting nanowire single photon detectors

Author(s): **Kilian Welz, Ravi Pradip, Yagmur Yüzak, Cagla Mahanoglu, Oliver Page, Linus Krämer, Simone Ferrari, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14086-80 • 17:45 - 19:30

Sidelobe reduction for ghost image suppression in silicon photonic OPA-based FMCW LiDAR

Author(s): **Takahiro Higuchi, Kazuya Miura, Masashige Sato, Koichi Oyama, Hiroyuki Wado**, MIRISE Technologies Corp. (Japan)

14086-81 • 17:45 - 19:30

Optical sensing of seawater temperature and salinity using structured light

Author(s): **Zhaozhong Chen, Martin Lavery**, Univ. of Glasgow (United Kingdom)

14086-82 • 17:45 - 19:30

A design framework for laser-based structured illumination systems for object detection

Author(s): **Wendy Meulebroeck**, Vrije Universiteit Brussel (Belgium); **Daniela Dobrovodska, Manuel Tuba**, G² Industrial Engineering GmbH (Austria); **Hugo Thienpont**, Vrije Univ. Brussel (Belgium); **Albert Krammer**, G² Industrial Engineering GmbH (Austria)

14086-83 • 17:45 - 19:30

Scalable, high-fidelity photon-number resolution in a 20-channel, waveguide-integrated, spatially multiplexed SNSPD array

Author(s): **Oliver P. Page, Kilian Welz, Ravi Pradip, Wolfram Pernice, Simone Ferrari**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14086-84 • 17:45 - 19:30

Disordered biosensing-aimed plasmonic metasurfaces: from analytical modeling to experimental realization

Author(s): **Jonathan Alexis Urrutia-Anguiano**, Facultad de Ciencias, Universidad Nacional Autónoma de México (Mexico); **Yesai A. Garza-Valencia**, Univ. Nacional Autónoma de México (Mexico); **Juan P. Cuanalo-Fernández**, Univ. de Technologie Troyes (France); **Svetlana Mansurova, Rubén Ramos-García**, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); **Alejandro Reyes-Coronado**, Univ. Nacional Autónoma de México (Mexico)

14086-85 • 17:45 - 19:30

Investigation of a dual-channel optical fiber plasmonic sensor for simultaneous detection of heavy metals

Author(s): **Vikas ., Paola Saccomandi**, Politecnico di Milano (Italy)

14086-86 • 17:45 - 19:30

Fiber optic sensing system using light-diffusing fiber as broadband light source

Author(s): **Ramona M. Galatus, Andrei Clotan, Nicolae Bondric, Tiberiu Marita**, Univ Tehnica din Cluj Napoca (Romania)

14086-87 • 17:45 - 19:30

Event detection and localization in aerial optical fiber cable using distributed strain sensing

Author(s): **Taichi Murakami**, NTT East Inc (Japan); **Shuhei Eguchi, Ryota Sumiya, Hiromu Hashimoto**, NTT East Inc. (Japan)

14086-88 • 17:45 - 19:30

Integration of superconducting nanowire single photon detectors into 2d SiN photonic crystal cavities for enhanced performance at 930nm

Author(s): **Yagmur Yüzak, Kilian Welz, Cagla Mahanoglu, Simone Ferrari, Wolfram Pernice**, Ruprecht Karls University Heidelberg (Germany)

14086-89 • 17:45 - 19:30

Improving detection performance with noise measurements from avalanche photodiode-based optical receiver

Author(s): **David C. Jepsen, Ric Romero, Thor Martinsen**, Naval Postgraduate School (United States)

14086-90 • 17:45 - 19:30

An aerosol retrieval algorithm regarding the aerosol polarization of both coarse and fine mode

Author(s): **Weiyuan Yao, Zhaoyan Liu, Shi Qiu**, Aerospace Information Research Institute, CAS (China)

14086-91 • 17:45 - 19:30

Noncontact simultaneous optical power measurement of multifiber arrays using near-infrared imaging

Author(s): **Ryo Murata**, NTT EAST, Inc. (Japan); **Tomokazu Oda, Takayuki Hosome, Masami Miyazaki, Hiromu Hashimoto**, NTT East Inc. (Japan)

14086-92 • 17:45 - 19:30

a linear variable bandpass filter integrated 256×1 InGaAs array for a short-wave infrared linear spectrometer

Author(s): **Minkyong Kim, Jungwon Jungwon**, Sejong Univ. (Korea, Republic of), IR Spectra Co., Ltd. (Korea, Republic of); **Thu Trang Bui**, Univ. of Science and Technology (Korea, Republic of), Korea Research Institute of Standards and Science (Korea, Republic of); **Dongwan Kim**, Korea Research Institute of Standards and Science (Korea, Republic of); **Byong Sun Chun**, Korea Research Institute of Standards and Science (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); **Changsug Lee**, IR Spectra Co., Ltd. (Korea, Republic of); **Deok Kee Kim**, Sejong Univ. (Korea, Republic of); **Jong Su Kim**, Yeungnam Univ. (Korea, Republic of); **Hyeon June Kim**, Seoul National Univ. of Science and Technology (Korea, Republic of); **Sang Jun Lee**, Korea Research Institute of Standards and Science (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of)

14086-93 • 17:45 - 19:30

Comprehensive performance assessment of a broadly tunable mid-infrared interband cascade laser

Author(s): **Pranish Karki, Bijay Kafle, Mehmet Can Erdem, Michael Angelo Amith Fenelon**, Norwegian University of Life Sciences (Norway); **Julian Scheuermann, Robert Weih, Johannes Koeth**, nanoplus Nanosystems and Technologies GmbH (Germany); **Boris Mizaikoff**, Institute of Analytical and Bioanalytical Chemistry, Ulm University (UULM) (Germany); **Maren Anna Brandsrud, Boris Zimmermann, Achim Kohler**, Norwegian University of Life Sciences (Norway)

14086-94 • 17:45 - 19:30

Optimization of NbN thin film deposition for waveguide integrated superconducting nanowire single photon detectors

Author(s): **Cagla Mahanoglu, Kilian Welz, Yagmur Yüzak, Simone Ferrari**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Simone Ferrari, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14086-95 • 17:45 - 19:30

A novel method for mitigating polarization fading with reduced post-processing in a DAS employing Stokes parameters

Author(s): **Almaz Assire Demise, Abdusomad Nur, Yonas Seifu**, Scuola Superiore Sant'Anna (Italy)

14086-96 • 17:45 - 19:30

Effects of speckle size and temporal evolution in a common-path out-of-plane ESPI system with a pixelated polarization camera

Author(s): **Elena Stoykova**, Institute of Optical Materials and Technologies (Bulgaria), National Ctr. of Excellence for Mechatronics and Clean Technologies (Bulgaria); **Violeta Dimitrova Madjarova**, Institute of Optical Materials and Technologies - Bulgarian Academy of Sciences (Bulgaria), National Centre of Excellence "Mechatronics and Clean Technologies", Kliment Ohridski Blvd., Block 8, 1700, Sofia, Bulgaria (Bulgaria); **Nataliya Berberova-Buhova**, Institute of Optical Materials and Technologies (Bulgaria), National Ctr. of Excellence for Mechatronics and Clean Technologies (Bulgaria); **Keehoong Hong**, Electronics and Telecommunications Research Institute (Korea, Republic of)

14086-97 • 17:45 - 19:30

Photonic electric-field sensing with an LNOI ring resonator

Author(s): **Bottyan Batkai, Xinyu Ma, Rasmus Bankwitz, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Oscar Demeulenaere**, Max Planck Institute for Medical Research (Germany); **Athanasios Athanassiadis**, European Molecular Biology Laboratory (EMBL) (Germany)

14086-98 • 17:45 - 19:30

All-optical fiber speckle sensing of perturbations using genetic algorithms

Author(s): **Tomás Jose Moreira Lopes, Joana Teixeira, Tiago D. Ferreira, Catarina S. Monteiro, Pedro Alberto S. da Silva Jorge, Nuno A. Silva**, INESC TEC (Portugal)

14086-99 • 17:45 - 19:30

Asynchronous event-based spectroscopy for microsecond-scale spectral reconstruction

Author(s): **Joana Teixeira**, INESC TEC (Portugal), Faculty of Sciences of the University of Porto (Portugal); **Tomás Lopes**, **Pedro A.S. Jorge**, **Nuno A. Silva**, INESC TEC (Portugal), Univ. do Porto (Portugal)

14086-100 • 17:45 - 19:30

High-Resolution Fiber-Optic Sensing Based on Self-Mode-Locked Optoelectronic Oscillator

Author(s): **Tongtong Xie**, **Shouju Liu**, **Tianxiang Luan**, **Yue Feng**, Univ. of Kent (United Kingdom); **Hao Zhang**, Nankai University (China); **Chao Wang**, Univ. of Kent (United Kingdom)

14086-101 • 17:45 - 19:30

16-Channel InGaAs spectral sensor with integrated multiband mosaic Fabry–Perot filter array for SWIR detection

Author(s): **Yoon Jungwon**, Sejong Univ. (Korea, Republic of), IR Spectra Co., Ltd. (Korea, Republic of); **Minkyong Kim**, Sejong Univ. (Korea, Republic of); **Dayoung Kim**, **Dongwan Kim**, **Byong Sun Chun**, **Thuy Thi Nguyen**, Korea Research Institute of Standards and Science (Korea, Republic of); **Dong Hee Kim**, Korea Spectral Products (Korea, Republic of); **Changsug Lee**, IR Spectra Co., Ltd. (Korea, Republic of), Korea Spectral Products (Korea, Republic of); **Deok-Kee Kim**, Sejong Univ. (Korea, Republic of); **Sang Jun Lee**, Korea Research Institute of Standards and Science (Korea, Republic of)

14086-103 • 17:45 - 19:30

High-pressure H₂O detection with a compact GaAs-based single-mode VCSEL sensor

Author(s): **Bartosz Kamiński**, Airopic (Poland), Wrocław University of Science and Technology (Poland); **Nikolay Ledentsov**, **Oleg Yu Makarov**, Ilya Titkov, Epigap OSA Photonics GmbH (Germany); **Grzegorz Sęk**, Wrocław University of Science and Technology (Poland); **Paweł Kluczynski**, Airopic (Poland)

14086-104 • 17:45 - 19:30

Self-written waveguide Fabry-Perot sensor for temperature and humidity detection: a curing study

Author(s): **João P. Santos**, University of Aveiro (Portugal), CMST Ghent University (Belgium); **Micael Nascimento**, Univ. de Aveiro (Portugal); **Jeroen Missinne**, Ctr. for Microsystems Technology, Univ. Gent (Belgium); **Marta Ferreira**, Univ. de Aveiro (Portugal)

14086-105 • 17:45 - 19:30

Fiber optic sensors for real-time shape measurement of a catheter

Author(s): **Steven van den Berg**, **Jaïr Jongsma**, **Naomi van der Kolk**, The Hague Univ. of Applied Sciences (Netherlands); **Marinus van der Hoek**, VanderHoekPhotonics (Netherlands); **Hemanth Ramanna**, Haga Hospital (Netherlands); **Chantal van Tour**, The Hague Univ. of Applied Sciences (Netherlands)

14086-106 • 17:45 - 19:30

Compact mid-infrared laser spectrometer based on ATR-flow cell for on-line measurement of protein hydrolysates

Author(s): **Bijay Kafle**, **Pranish Karki**, **Mehmet Can Erdem**, **Michael Angelo Amith Fenelon**, **Boris Zimmermann**, Norwegian University of Life Sciences (Norway); **Julian Scheuermann**, **Robert Weih**, nanoplus Nanosystems and Technologies GmbH (Germany); **Johannes Koeth**, nanoplus Nanosystems and Technologies GmbH (Germany), nanoplus Nanosystems and Technologies GmbH (Germany); **Achim Kohler**, Norwegian University of Life Sciences (Norway)

14086-107 • 17:45 - 19:30

Comparison of vortex beams propagation characteristics in turbulence

Author(s): **Yushi Zheng**, Univ College Dublin (Ireland); **Lin Wang**, **Lu Rong**, Beijing University of Technology (China); **John Healy**, University College Dublin (Ireland)

14086-108 • 17:45 - 19:30

Super-spectral-resolution Raman spectroscopy using an angle-tuned Fabry-Pérot etalon: application to natural and lab grown diamond characterization

Author(s): **Yishai Amiel**, Bar-Ilan Univ (Israel); **Yaakov Tischler**, Bar-Ilan Univ. (Israel); **Hadass Tischler**, Jerusalem College of Technology (Israel); **Romi Nedvedski**, Bar-Ilan Univ. (Israel)

14086-109 • 17:45 - 19:30

Compact holmium-doped fiber laser system for photoacoustic hydrogen detection

Author(s): **Meron Demissie Tesfa**, **Uttam Samanta**, **Saara Kainu**, **Juha Toivonen**, **Regina Gumenyuk**, Tampere Univ. (Finland)

14086-110 • 17:45 - 19:30

Dual-comb coherent lidar generated using a bidirectional frequency shifting loop for simultaneous range and velocity measurements

Author(s): **Tituan ALLAIN**, **Hugues Guillet de Chatellus**, **Goulc'hen Loas**, **Anthony Carré**, **Steve Bouhier**, **Marc Brunel**, Institut FOTON - Université de Rennes/CNRS (France)

14086-111 • 17:45 - 19:30

Black Phosphorus-Based Optical Sensor for High-Resolution Detection of Pb²⁺ Using Surface Plasmon Resonance

Author(s): **Jyothsna Vaadaala**, Koneru Lakshmaiah Education Foundation (India)

14086-112 • 17:45 - 19:30

Quantum cascade detectors for 8 μm spectral range

Author(s): **Vladislav V. Dudelev, Alexey Andreev, Dmitriy Chistyakov**, Ioffe Institute (Russian Federation); **Vaventin Podoprighora, Alexey Nikitin**, Ioffe Institute (Russian Federation), Saint Petersburg Electrotechnical Univ. "LETI" (Russian Federation); **Dmitriy Mikhailov, Evgeniia Cherotchenko, Ivan Vruble, Valentin Mylnikov, Sergey Losev, Nikolay Deryagin, Sausan Abdulrazak, Andrey Babichev, Andrey Lutetskiy, Sergey Slipchenko, Nikita Pikhtin**, Ioffe Institute (Russian Federation); **Andrey G. Gladyshev**, Connector Optics LLC (Russian Federation); **Konstantin Podgaetskiy, Andrey Andreev, Irina Yarotskaya, Maxim Ladugin, Alexander Marmalyuk**, POLYUS Research Institute of M. F. Stelmakh JSC (Russian Federation); **Innokenty Novikov**, Connector Optics LLC (Russian Federation), ITMO Univ. (Russian Federation); **Elena Kognovitskaya**, Ioffe Institute (Russian Federation), All-Russian Scientific Research Institute of Metrology named after D. I. Mendeleev (Russian Federation); **Vladimir Kuchinskii**, Ioffe Institute (Russian Federation); **Leonid Karachinsky**, Connector Optics LLC (Russian Federation), ITMO Univ. (Russian Federation); **Anton Egorov**, Connector Optics LLC (Russian Federation); **Grigori Sokolovskii**, Ioffe Institute (Russian Federation)

14086-113 • 17:45 - 19:30

The development of an SI-traceable calibration sphere for low-temperature phosphor thermometry

Author(s): **Thomas Hutchinson**, The University of Sheffield (United Kingdom)

14086-114 • 17:45 - 19:30

Raman spectroscopy for identification and quantification of nutrients in complex mammalian cell culture media

Author(s): **Maria Karnachoriti, Marianneza Chatzipetrou**, National Technical Univ of Athens (Greece); **Wouter Beenker**, Scinus Cell Expansion BV (Netherlands); **Ioanna Zergioti**, National Technical Univ of Athens (Greece)

14086-115 • 17:45 - 19:30

Integrated photonic biosensor for real-time detection of gram-positive and gram-negative bacteria in bioreactor environments

Author(s): **Eleni Damianidou**, PhosPrint P. C. . Lefkippos Technology Park, NCSR Demokritos, Patriarchou Grigoriou 5' & Neapoleos 27, 15341, Agia Paraskevi (Greece); **Dimitrios Gounaridis, Maria Karnachoriti, Marianneza Chatzipetrou**, National Technical Univ of Athens (Greece); **Maria Dimadi**, PhosPrint P.C. (Greece); **Atland Bokski, Erik Schreuder, Ronald Dekker**, LioniX International B.V., Hengelosestraat 500, 7521 AN Enschede, The Netherlands (Netherlands); **Apostolos Klinakis**, PhosPrint P. C. . Lefkippos Technology Park, NCSR Demokritos, Patriarchou Grigoriou 5' & Neapoleos 27, 15341, Agia Paraskevi (Greece); **Ioanna Zergioti**, National Technical Univ of Athens (Greece)

14086-116 • 17:45 - 19:30

A phase shifting interferometer as a compact optical profilometer for 3D mapping of photonic integrated circuits

Author(s): **Savvas Sarigiannidis**, National Technical University of Athens (Greece); **Yannis Papadopoulos**, National Technical Univ. of Athens (Greece); **Dimitrios Papazoglou**, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); **Ioanna Zergioti**, National Technical Univ. of Athens (Greece); **Nektaria Konstantina Protopappa**, National Technical University of Athens (Greece)

14086-117 • 17:45 - 19:30

Development of a compact and highly-sensitivity compact surface plasmon resonance (SPR) sensor using a deep metal grating

Author(s): **Valentin Devin, Hugo Bruhier, Pascal Giraud, Frederic Celle**, Université Jean Monnet (France); **Arnaud Meyer**, Univ. Jean Monnet Saint-Etienne (France); **Nicolas Aimé**, Université Jean Monnet (France); **Irvin Girault**, Univ. Jean Monnet Saint-Etienne (France); **Isabelle Verrier, Maxime Royon, Yves Jourlin**, Université Jean Monnet (France)

14086-118 • 17:45 - 19:30

Probing external environment with nanoparticle-doped optical fiber based on interaction between evanescent field and surrounding medium

Author(s): **Apolline Legrand**, Université Côte d'Azur, CNRS, INPHYNI (France); **Wilfried Blanc**, Univ. Côte d'Azur (France); **Minh Châu Phan Huy**, Safran (France)

14086-119 • 17:45 - 19:30

Overcoming The Black Plastics Sorting Barrier with a Portable Non-Destructive Specular-Reflection MEMS-FTIR Spectrometer

Author(s): **Ahmed Abdelkhalik**, Faculty of Engineering, Ain-Shams University, 1 Elsarayat St., 11535 Abbaseya, Cairo (Egypt), Si-Ware Systems, 3 Khalid Ibn Al-Waleed St., 11361 Heliopolis, Cairo (Egypt); **Ali Khater, Samir Abozyd, Mohamed Elsaedy, Shady R. Labib, Ahmed S. Kishka, Mohamed H. Al Haron**, Si-Ware Systems (Egypt); **Mazen Erfan**, Ain Shams Univ. (Egypt), Si-Ware Systems (France); **Ahmed A. Elsayed**, Ain Shams Univ. (Egypt), Si-Ware Systems (Egypt); **Momen Anwar, Bassem Mortada**, Si-Ware Systems (Egypt); **Yasser M. Sabry**, Ain Shams Univ. (Egypt), Si-Ware Systems (Egypt)

14086-120 • 17:45 - 19:30

Impact of SNR and Fiber Asymmetry on the Accuracy of Distributed Shape Sensing

Author(s): **Leonardo Rossi**, Consiglio Nazionale delle Ricerche (Italy); **Francesco Falcetelli**, Consiglio Nazionale delle Ricerche (Italy), Univ. degli Studi di Bologna (Italy); **Raffaella Di Sante**, Univ. degli Studi di Bologna (Italy); **Gabriele Bolognini**, Consiglio Nazionale delle Ricerche (Italy)

14086-121 • 17:45 - 19:30

Photonic system for monitoring nitrite and nitrate content in water

Author(s): **Paweł Bortnowski**, Warsaw Univ of Technology (Poland); **Anna Jusza**, Warsaw Univ of Technology (Poland), LightHouse (Poland); **Michał Kozubal**, Warsaw Univ of Technology (Poland); **Filip Łabaj**, Warsaw Univ of Technology (Poland), Vigo Photonics (Poland); **Jerzy Kalwas**, Vigo Photonics (Poland); **Krzysztof Anders**, Warsaw Univ of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Edyta Kiedrzyńska**, European Regional Centre for Ecohydrology of the Polish Academy of Sciences (Poland); **Ryszard Piramidowicz**, Warsaw Univ of Technology (Poland), LightHouse (Poland), Vigo Photonics (Poland)

14086-122 • 17:45 - 19:30

Super-resolution spectroscopy with random Raman fiber laser

Author(s): **Danil V. Nadein**, **Dmitry Kudashkin**, **Ilya D. Vatnik**, **Oleg Gorbunov**, **Dmitry Churkin**, Novosibirsk State Univ (Russian Federation)

14086-123 • 17:45 - 19:30

Visible Light Communication for Adaptive AGV Fleet Coordination

Author(s): **Paula A. Louro**, Instituto Superior de Engenharia de Lisboa (Portugal), CTS-UNINOVA-LASI (Portugal); **Gonçalo Galvão**, Instituto Superior de Engenharia de Lisboa (Portugal); **Manuela Vieira**, **Manuel Augusto Vieira**, Instituto Superior de Engenharia de Lisboa (Portugal), CTS-UNINOVA-LASI (Portugal)

14086-124 • 17:45 - 19:30

Review of Fiber Bragg Grating (FBG) Sensor Network

Author(s): **Sugumar Venkatesan**, Ramakrishna Mission Vivekananda Educational and Research Institute (India)

14086-125 • 17:45 - 19:30

A simple pressure measurement of monitoring FBG sensors in a sensor network

Author(s):

14086-126 • 17:45 - 19:30

Raman spectroscopy and chemometrics: a sweet solution to carob molasses fraud

Author(s): **Fatima Dokmak**, Lebanese Univ. (Lebanon); **Anna Grazia Mignani**, **Andrea Azelio Mencaglia**, **Leonardo Ciaccheri**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14086-127 • 17:45 - 19:30

Design and development of a high-performance electro-optical receiver for laser ranging and spectroscopy

Author(s): **Khaled Gasmí**, King Fahd University of Petroleum & Minerals (Saudi Arabia)

14086-128 • 17:45 - 19:30

High-resolution tunable lithium niobate resonant grating filter array for optical spectroscopy

Author(s): **Kumar Kinjalk**, LAAS-CNRS, Toulouse, France (France); **Olivier Gauthier-Lafaye**, **Stéphane Calvez**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Anne-Laure Fehrembach**, **Antonin Moreau**, Aix-Marseille Univ. (France), Ecole Centrale de Marseille (France), Institut Fresnel, CNRS (France); **Julien Lumeau**, Aix-Marseille Univ. (France), Ecole Centrale de Marseille (France), Institut Fresnel, CNRS (France); **Antoine Monmayrant**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France)

14086-129 • 17:45 - 19:30

Passive SWIR imaging of flame front dynamics and thermodynamic parameters identification in a constant-volume chamber using the 1.38 μ m H₂O band

Author(s): **Bruno Serio**, LEME Laboratory, Paris Nanterre University (France); **Isabelle Ranc**, Univ. Paris Nanterre (France); **Etienne Studer**, CEA (France), Univ. Paris-Saclay (France)

14086-130 • 17:45 - 19:30

Comparative analysis of machine learning algorithms for FBG-based damage detection in glass fiber composites

Author(s): **Ali Y. Uğurveren**, Univ. de Mons (Belgium); **Enes A. Nohutcuoglu**, **Tarik Tekoglu**, **Kivildim Yuksel**, Izmir Institute of Technology (Turkey); **Alexander Gros**, **Karima Chah**, **Christophe Caucheteur**, Univ. de Mons (Belgium)

14086-131 • 17:45 - 19:30

Compact Disc used as the SERS substrate

Author(s): **Shelja Sharma**, **Marshall Dhayal**, Indian Institute of Technology Delhi (India)

14086-133 • 17:45 - 19:30

Self-injection-locked DFB lasers with fiber ring cavities for distributed fiber sensing

Author(s): **Ivan Panyaev**, Ulyanovsk State University (Russian Federation); **Artem Turov**, Institute of Continuous Media Mechanics (Russian Federation); **Pavel Itrín**, **Daniil Kachalkin**, **Maxim Pribylov**, **Aleksei Abanin**, **Aleksei Tregubov**, **Dmitry Korobko**, Ulyanovsk State University (Russian Federation); **Cesar López-Mercado**, Scientific Research and Advanced Studies Center of Ensenada (CICESE), Ensenada 22860, BC, Mexico; (Mexico); **Dmitrii Stoliarov**, Aston University (United Kingdom); **Andrei A. Fotiadi**, Univ of Mons (Belgium), Ulyanovsk State University (Russian Federation)

14086-134 • 17:45 - 19:30

High-sensitivity point-type temperature sensor based on fluorescence intensity ratio via down-conversion in Er³⁺-doped tellurite optical fiber

Author(s): **Tonglei Cheng**, University of Southampton (United Kingdom)

14086-135 • 17:45 - 19:30

CRDS nonlinearity overcoming for high-accuracy optical metrology

Author(s): **Marcin Gibas**, Central Office of Measures (Poland); Nicolaus Copernicus Univ. (Poland); **Agata Cygan, Rajesh Chell, Roman Ciurylo, Katarzyna Bielska, Szymon Wójtewicz**, Nicolaus Copernicus Univ. (Poland); **Vittorio D'Agostino**, Univ. degli Studi della Campania Luigi Vanvitelli (Italy); **Piotr Wcisło, Daniel Lisak**, Nicolaus Copernicus Univ. (Poland)

14086-136 • 17:45 - 19:30

Acoustic detection with coupled-mode microring lasers

Author(s): **Babita Bisht, Pietro Malara**, Istituto Nazionale di Ottica (Italy)

14086-137 • 17:45 - 19:30

Method for simultaneous measurements of hydrostatic pressure and temperature in a single optical fiber line using Rayleigh scattering-based distributed fiber measurements and a K-type side-hole optical fiber

Author(s): **Agnieszka Bednarek**, Wroclaw Univ. of Science and Technology (Poland)

14086-138 • 17:45 - 19:30

Optical sensors for water quality measurement

Author(s): **Adam Johan Bergren**, National Research Council Canada Quantum and Nanotechnologies Research Centre (Canada); **Andrew J. Tanentzap, Wenzhao Liang**, Trent University (Canada); **Angela Beltaos**, Athabasca Univ. (Canada), National Research Council Canada Quantum and Nanotechnologies Research Centre (Canada); **Darren Homeniuk, Michael Bergen**, National Research Council Canada Quantum and Nanotechnologies Research Centre (Canada)

14086-139 • 17:45 - 19:30

Leaky coupled waveguide-plasmon modes for enhanced light-matter interaction

Author(s): **Said Mahajna**, ORT Braude College (Israel)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 12: REMOTE SENSING, DRONE AND LIDAR APPROACHES

16 April 2026 • 11:00 - 12:00 | Schuman (Niveau/Level 1)

Session Chair(s): **Maria Konstantaki**, Foundation for Research and Technology-Hellas (Greece)

14086-56 • 11:00 - 11:20

3D imaging FMCW flash LIDAR: wide field-of-view optical solutions

Author(s): **Anis Daami, Laurent Frey, Florence Rigal, Vincent Moulin**, CEA-LETI (France)

14086-57 • 11:20 - 11:40

An Unmanned Aerial Vehicle (UAV)-based photonic method for the humane elimination of Colorado potato beetles

Author(s): **Wendy Meulebroeck**, Vrije Universiteit Brussel (Belgium); **Hugo Thienpont**, Vrije Univ. Brussel (Belgium); **Nick Reyntjens**, Creative Projects (Bulgaria)

14086-58 • 11:40 - 12:00

Coherent Doppler velocimeter for detection of underwater remote moving targets and scattering particles

Author(s): **Tituan Allain**, **Goulc'hén Loas**, **Anthony Carré**, **Hugues Guillet de Chatellus**, **Marc Brunel**, Fonctions Optiques pour les Technologies de l'information, Univ. de Rennes 1, CNRS (France)

Lunch Break 12:00 - 13:00

SESSION 13: DETECTOR TECHNOLOGIES

16 April 2026 • 13:20 - 16:30 | Schuman (Niveau/Level 1)

Session Chair(s): **Maria Konstantaki**, Foundation for Research and Technology-Hellas (Greece)

14086-61 • 13:20 - 13:40

Graphene adjustable-barriers phototransistor with tunable ultra-high responsivity

Author(s): **Carsten Strobel**, TU-Dresden - Chair of Nanoelectronics (Germany); **André Heinzig**, **Thomas Mikolajick**, TU Dresden (Germany); **Sören Röhlecke**, **Olaß Steinke**, FAP GmbH (Germany)

14086-62 • 13:40 - 14:00

Fast and Efficient Sub-Band Gap Photodetection in Al:ZnO/Si Heterojunction via Interfacial Defect States for Enhanced Photoexcited Hole Transport

Author(s): **Geunpil Kim**, Korea Institute of Science and Technology (Korea, Republic of), Korea Univ. (Korea, Republic of); **Byung Chul Lee**, **Jongbum Kim**, Korea Institute of Science and Technology (Korea, Republic of)

14086-63 • 14:00 - 14:20

Near-infrared anti-reflection coating film operated over a wide range of incident angles

Author(s): **Tae Min Woo**, **Chang Won Lee**, Chungnam National University (Korea, Republic of); **Sung Ho Lee**, **Yun Jong Kim**, **Byeong Jun Park**, **Jae Sok Oh**, Korea Astronomy and Space Science Institute (KASI) (Korea, Republic of); **Yeonsang Park**, Chungnam National Univ. (Korea, Republic of)

14086-64 • 14:20 - 14:40

Reconfigurable unipolar quantum photodetector

Author(s): **Andrea Piazza**, ONERA (France), Lab. de Physique de l'Ecole Normale Supérieure (France); **Angela Vasanelli**, LPENS (France); **Isabelle Ribet**, **Gregory Vincent**, ONERA (France); **Konstantinos Pantzas**, **Gregoire beaudoin**, **Isabelle Sagnes**, Université Paris-Saclay, CNRS, Centre de Nanosciences et de Nanotechnologies, (France); **Carlo Sirtori**, LPENS (France)

14086-65 • 14:40 - 15:00

Highly efficient single-photon detectors on a 3D femtosecond-laser-written photonic platform

Author(s): **Matthias Häußler**, Pixel Photonics GmbH (Germany); **Simone Cuccurullo**, **Valerio Galli**, **Marco Gardina**, **Francesco Ceccarelli**, **Roberto Osellame**, Ephos (Italy); **Mehdi Pazhooh**, **Nooshin Bandari**, **Martin A. Wolff**, **Robin Terhaar**, **Wladick Hartmann**, Pixel Photonics GmbH (Germany)

Coffee Break • 15:00 - 15:30

14086-66 • 15:30 - 15:50

Linear-Mode Photon Counting Performance and Intrinsic Dark Current in HgCdTe APDs for Quantum Optical Applications

Author(s): **Arthur Charrier**, **Timothée Guerra**, **Nicolas Baier**, **Julie Abergel**, **Antoine Coquiard**, **Amaury Mavel**, **Cedric Rostaing**, **Sébastien Renet**, **Frederic Berger**, **Aurélien Vandeneynde**, **Sandy Brunet-Manquat**, **Jean-Alain Nicolas**, **Jean-Luc Moro**, Univ. Grenoble Alpes, CEA, LETI, F38000 Grenoble (France); **Jean-Marc Merolla**, Université Marie et Louis Pasteur, CNRS, institut FEMTO-ST (UMR 6174), F-25000 Besançon (France); **Johan Rothman**, Univ. Grenoble Alpes, CEA, LETI, F38000 Grenoble (France)

14086-67 • 15:50 - 16:10

on-chip MIR sensing with high specific detectivity and high speed

Author(s): **XURAN ZHANG**, NTU EEE (Singapore); **Chuyuan Liu**, **Qi Jie Wang**, Nanyang Technological Univ. (Singapore)

14086-68 • 16:10 - 16:30

Assessment of Passivation Conditions on Arsenic Ion Implanted LWIR HgCdTe Gated Photodiodes

Author(s): **Hazal Kinaci**, **Beril Ugur**, **Berna Barutcu Ercan**, **Baturalp Kaya**, Aselsan A.S. (Turkey); **Mustafa Berke Yelten**, Istanbul Technical University (Turkey); **Neslihan Demirel**, **Burak Asıcı**, Aselsan A.S. (Turkey)

CONFERENCE 14087

Real-time Processing of Image, Depth and Video Information 2026

15 - 16 April 2026 | Stuttgart/Salon 15 (Niveau/Level 1)

Conference Chair(s): **Gian Domenico Licciardo**, Univ. degli Studi di Salerno (Italy); **Viktor J. Schneider**, Leibniz Univ. Hannover (Germany)

Conference Co-Chair(s): **Matthias F. Carlsohn**, Computer Vision and Bildkommunikation, Nexatech GmbH (Germany)

Program Committee: **Julian Rasmus Bankwitz**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Miguel Bordallo Lopez**, Univ. of Oulu (Finland); **Guillermo Botella**, Univ. Complutense de Madrid (Spain); **Maryam Dehbashizadeh Chehregghan**, Technische Univ. Eindhoven (Netherlands); **Abdelhafid El Ouardi**, Univ. Paris-Saclay (France); **Sepehr Elahi**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Andrea Fasolino**, Univ. degli Studi di Salerno (Italy); **Chiou-Shann Fuh**, National Taiwan Univ. (Taiwan); **Dominique Ginjac**, Univ. de Bourgogne (France); **Sergio R. Goma**, Qualcomm Inc. (United States); **M. Hassaballah**, South Valley Univ. (Egypt); **Gwanggil Jeon**, Incheon National Univ. (Korea, Republic of); **Äantas Kesten**, Technische Univ. Berlin (Germany); **Koorosh Khodabandehloo**, Univ. of Southern Queensland (Australia); **Tomasz Kryjak**, AGH Univ. of Krakow (Poland); **Antonio Sanz Montemayor**, Univ. Rey Juan Carlos (Spain); **Gunnar Niebuhr**, Nexatech GmbH (Germany); **Amos Omondi**, SUNY Korea (Korea, Republic of); **Danilo Pau**, STMicroelectronics SRL (Italy); **Luis Salgado**, Univ. Politécnica de Madrid (Spain); **Sergio Saponara**, Univ. di Pisa (Italy); **Leonel Sousa**, Instituto Superior Técnico (Portugal)

INFORMATION

Best Paper Award

SPIE Photonics Europe 2026 conference on Real-time Processing of Image, Depth and Video Information will offer a Best Paper Award. Eligibility is extended to all speakers who are present to deliver their research work in person at the conference. Papers will be judged based on clarity of presentation, scientific merit, and potential innovative impact. The Best Paper Award will include a cash reward and an award certificate.

Wednesday 15 April 2026

SESSION 1: AUTOMATED VISUAL INSPECTION AND MONITORING SYSTEMS

15 April 2026 • 16:00 - 17:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Gian Domenico Licciardo**, Univ. degli Studi di Salerno (Italy)

14087-1 • 16:00 - 16:20

Deep learning-based welding quality inspection from video streams using YOLOv11

Author(s): **Abdussalam Elhanashi**, Univ di Pisa (Italy); **Siham Essahraoui**, Univ. Mohammed Premier (Morocco); **Qinghe Zheng**, Shandong Management Univ. (China); **Sergio Saponara**, Univ di Pisa (Italy)

14087-2 • 16:20 - 16:40

Real-Time Image classifications of Lemons in Food Industries

Author(s): **Paolo Sommella**, Univ. degli Studi di Salerno (Italy); **Daniele Buonocore**, Hippocratica Imaging srl (Italy); **Giuseppe Ciavolino**, **Matteo Ferro**, Smart Instruments SRL Start-Up Innovativa (Italy)

14087-3 • 16:40 - 17:00

A YOLOv12-ByteTrack framework for automated fish species labeling in coral reef environments

Author(s): **Guo-Fong Hong**, **Chi-Jui Tsai**, National Yang Ming Chiao Tung Univ. (Taiwan); **Yu-Chi Chang**, National Museum of Marine Biology and Aquarium (Taiwan); **Kwang-Tsao Shao**, Academia Sinica (Taiwan); **Tung-Yung Fan**, National Museum of Marine Biology and Aquarium (Taiwan); **Shean-Jen Chen**, National Yang Ming Chiao Tung University (Taiwan)

14087-4 • 17:00 - 17:20

Optical flow and synthetic depth augmentation for face presentation attack detection

Author(s): **Muhammad Shahid Jabbar**, **Shujaat Khan**, King Fahd University of Petroleum and Minerals (KFUPM) (Saudi Arabia)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

CONFERENCE CO-SPONSOR

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Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14087-17 • 17:45 - 19:30

Automatic generation of annotated IR image datasets using embedded real-time vision

Author(s): **Bruno Serio**, LEME Laboratory, Paris Nanterre University (France); **Isabelle Ranc**, **Amanda Martinez Gil**, Univ. Paris Nanterre (France)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxixius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 2: RESOURCE-EFFICIENT AI AND EMBEDDED VISION SYSTEMS

16 April 2026 • 11:00 - 12:40 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Maryam Dehbashizadeh Chehreghan**, Technische Univ. Eindhoven (Netherlands)

14087-6 • 11:00 - 11:20

Path following of tracked vehicles using LSTM-based model predictive control

Author(s): **Ming-De Lin**, **Chi-Wei Yeh**, National Yang Ming Chiao Tung Univ. (Taiwan); **Kanaya-Defitra Prasetyo Putri**, Univ. Airlangga (Indonesia); **Chun-Yu Lin**, National United Univ. (Taiwan); **Shean-Jen Chen**, National Yang Ming Chiao Tung University (Taiwan)

14087-18 • 11:20 - 11:40

Real-time image segmentation for kidney stone identification using light-weight AI models

Author(s): **Francisco LOPEZ-TIRO**, Univ de Lorraine (France), Tec Monterrey (Mexico); **Clément Larose**, **Samuel Doerler**, CHRU Nancy-Brabois, service d'urologie (France); **Gilberto OCHOA-RUIZ**, Tec de Monterrey (Mexico); **Christian Daul**, CRAN UMR 7039, Université de Lorraine, CNRS (France)

14087-9 • 11:40 - 12:00

AI based lightweight system for indoor pollution estimation

Author(s): **Alejandra Abalo-García**, **Sergio Hernández-García**, **Rodrigo Guerrero San Vicente**, **Iván Ramírez**, **Cintia Casado**, **Antonio S. Montemayor**, **Juan J. Pantrigo**, Univ. Rey Juan Carlos (Spain)

14087-10 • 12:00 - 12:20

Real-time vehicle trajectory prediction on an embedded GPU architecture

Author(s): **Oumaima - Skalli**, Université Paris-Saclay, ENS Paris-Saclay, CNRS, SATIE (France), Ampere Software Technology, RGE-AMS DT1, 78280 Guyancourt, France (France); **Sergio - Rodriguez Florez**, Université Paris-Saclay, ENS Paris-Saclay, CNRS, SATIE, 91190 Gif-sur-Yvette, France (France); **Abdelhafid El Ouardi**, Université Paris-Saclay, ENS Paris-Saclay, CNRS, SATIE (France); **Stefano Masi**, Ampere Software Technology, RGE-AMS DT1, 78280 Guyancourt, France (France)

14087-19 • 12:20 - 12:40

TBA

Lunch Break 12:20 - 13:50

SESSION 3: EMERGING HARDWARE ARCHITECTURES FOR NEURAL NETWORKS

16 April 2026 • 13:50 - 15:10 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Viktor J. Schneider**, Leibniz Univ. Hannover (Germany)

14087-12 • 14:10 - 14:30

Compact Digital-to-Time and Time-to-Digital Converters for In-Memory Computing Circuits toward Real-Time Edge GenAI

Author(s): **Pio Esposito**, Università degli Studi di Salerno (Italy); **Andrea Fasolino**, Rosalba Liguori, **Luigi Di Benedetto**, **Alfredo Rubino**, **Gian Domenico Licciardo**, Univ. degli Studi di Salerno (Italy)

14087-13 • 14:30 - 14:50

Neuromorphic event-data classification on SoC FPGA using Spiking Neural Networks

Author(s): **Kamil Jeziorek**, **Tomasz Kryjak**, **Piotr Wzorek**, **Kacper Pelczarski**, AGH Univ. of Krakow (Poland)

14087-14 • 14:50 - 15:10

One-pass noise-aware training for higher accuracy free-space optical convolution neural networks

Author(s): **Maryam Dehbashizadeh Chehrehghan**, Technische Univ Eindhoven (Netherlands); **Ripalta Stabile**, Technische Univ. Eindhoven (Netherlands)

Coffee Break 15:10 - 15:40

SESSION 4: JOINT SESSION: MEDICAL IMAGE PROCESSING

16 April 2026 • 15:40 - 17:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Gian Domenico Licciardo**, Univ. degli Studi di Salerno (Italy)

Joint Session between Conference 14087, Real-time Processing of Image, Depth and Video Information and Conference 14094, Biomedical Spectroscopy, Microscopy, and Imaging.

NOTE: This session runs concurrently with Session 15, Conference 14094.

14087-15 • 15:40 - 16:20

Improving endoscopy by passing from complex video-sequences to 2D and 3D mosaics (Keynote Presentation)

Author(s): **Christian Daul**, CRAN UMR 7039, Université de Lorraine, CNRS (France); **Tan-Binh Phan**, **Dinh-Hoan Trinh**, Ctr. de recherche en automatique de Nancy, Univ. de Lorraine, CNRS (France)

14087-16 • 16:20 - 16:40

Enforcing scale consistency in monocular depth estimation for multi-view 3D reconstruction

Author(s): **The-Nam Le**, Univ. de Lorraine (France), Univ. of Science and Technology of Hanoi (Vietnam); **Meryem Amaouche**, Univ. de Lorraine (France), Univ. Internationale de Rabat (Morocco); **Hoang-Ha Nguyen**, Univ. of Science and Technology of Hanoi (Vietnam); **Dinh-Hoan Trinh**, Vietnam National Univ. (Vietnam); **Ouassim Karrakchou**, Univ. Internationale de Rabat (Morocco); **Christian Daul**, CRAN UMR 7039, Université de Lorraine, CNRS (France)

14094-77 • 16:40 - 17:00

Comparing algorithms for dynamic contrast on full-field, swept-source, and spectral-domain OCT

Author(s): **Noah Heldt**, Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Tual Monfort**, Sorbonne Univ., INSERM, CNRS, Institut de la Vision (France); **Rion Morishita**, Univ. of Tsukuba (Japan); **Felix Hilge**, Cutaneous Biology Research Ctr., Massachusetts General Hospital, Harvard Medical School (United States), Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany); **Robert Schönherr**, Institut für Anatomie, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Olivier Thouvenin**, Institut Langevin, ESPCI Paris, Université PSL, CNRS (France); **Ibrahim El-Sadek**, Univ. of Tsukuba (Japan); **Peter König**, Institut für Anatomie, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Gereon Hüttmann**, Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Kate Grieve**, Sorbonne Univ., INSERM, CNRS, Institut de la Vision (France); **Yoshiaki Yasuno**, Univ. of Tsukuba (Japan)

14094-79 • 17:00 - 17:20

AI-enhanced FLIM identifies macrophages in human precision-cut lung slices

Author(s): **Stella Greiner**, **Jhonatan Contreras**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Franziska Hornung**, Universitätsklinikum Jena (Germany); **Marko Rodewald**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tobias Meyer-Zedler**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany); **Stefanie Deinhardt-Emmer**, Universitätsklinikum Jena (Germany); **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany)

REAL-TIME PROCESSING OF IMAGE, DEPTH AND VIDEO INFORMATION CONFERENCE BEST PAPER AWARD PRESENTATION

16 April 2026 • 17:20 - 17:30 | Stuttgart/Salon 15 (Niveau/Level 1)

Best Paper Award presentation and winner announcement by **Viktor Schneider**, Leibniz Univ. Hannover (Germany)

Award Sponsor:

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CONFERENCE 14088

Optical and Photonic Microsystems: Technology and Applications

13 - 16 April 2026 | Auditorium Cassin (Niveau/Level 0)

Conference Chair(s): **Hans Zappe**, Univ. of Freiburg (Germany); **Niels Quack**, Univ. of Stuttgart (Germany)

Program Committee: **Timo Aalto**, VTT Technical Research Ctr. of Finland Ltd. (Finland); **Veronique Bardinal**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Ralf Bauer**, Univ. of Strathclyde (United Kingdom); **Jürgen Van Erps**, Vrije Univ. Brussel (Belgium); **Luc Froehly**, FEMTO-ST (France); **Michalina J. Gora**, Wyss Ctr. for Bio and Neuro Engineering (Switzerland); **ShanShan Gu-Stoppel**, Fraunhofer-Institut für Siliziumtechnologie ISIT (Germany); **Kristinn B. Gylfason**, KTH Royal Institute of Technology (Sweden); **Andrew S. Holmes**, Imperial College London (United Kingdom); **Mangirdas Malinauskas**, Vilnius Univ. (Lithuania); **Jeroen Missinne**, Univ. Gent (Belgium); **Milos Nedeljkovic**, Univ. of Southampton (United Kingdom); **Stefano Luigi Oscurato**, Univ. degli Studi di Napoli Federico II (Italy); **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium); **Nicolas Passilly**, FEMTO-ST (France); **Bernhard Roth**, Leibniz Univ. Hannover (Germany); **Thilo Sandner**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany); **Andrea Toulouse**, Institut für Technische Optik (Germany); **Frédéric Zamkotsian**, Lab. d'Astrophysique de Marseille (France)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 1: AR, VR, MR, AND DISPLAYS

13 April 2026 • 11:30 - 13:00 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Hans Zappe**, Univ. of Freiburg (Germany)

14088-1 • 11:30 - 12:00

Advancements in micro mirror arrays: enhancing phase modulation for holographic applications (*Invited Paper*)

Author(s): **Sara Francés González**, **Mario Nitzsche**, **Sebastian Döring**, **Luiz Medeiros Ventura**, **Anmona Pranti**, **Peter Dürre**, Fraunhofer Institut für Photonische Mikrosysteme (Germany)

14088-2 • 12:00 - 12:20

Slanted and blazed surface relief gratings for AR/VR/MR waveguides

Author(s): **Astrit I. Shoshi**, **Julian Hartbaum**, **Stephan Martens**, Institut für Mikroelektronik Stuttgart (Germany); **Mandy Göring**, scia Systems GmbH (Germany); **Julia Tudarinow**, **Alexander Sittig**, **Amadeus Belschner**, **Pauline Reichert**, **Simon Stahl**, Institut für Mikroelektronik Stuttgart (Germany); **Thoralf Dunger**, **Manuela Lötsch**, scia Systems GmbH (Germany); **Niels Quack**, Institut für Mikroelektronik Stuttgart (Germany)

14088-3 • 12:20 - 12:40

Packaging and system integration of a MEMS micromirror Spatial Light Modulator on CMOS for real holographic displays

Author(s): **Alexander Mai**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany); **Thierry Delmot**, **Alessandro Michielin**, nSition (Belgium); **Karol Gutowski**, OmniChip sp. z o.o. (Poland); **Peter Dürre**, **Tino Pügner**, **Mario Nitzsche**, **Hannes Torlee**, **Hagen Sahm**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany)

14088-4 • 12:40 - 13:00

Gradient descent learning applied to design of VHOE-based waveguide for a full-color augmented reality glasses

Author(s): **Shiuan Huei Lin**, **Zih-Fan Chen**, National Yang Ming Chiao Tung Univ. (Taiwan); **Vera Marinova**, Bulgarian Academy of Sciences (Bulgaria); **Ken Yuh Hsu**, National Yang Ming Chiao Tung Univ. (Taiwan)

Lunch Break 13:00 - 14:10

SESSION 2: INTEGRATION OF OPTICS, MECHANICS AND ELECTRONICS

13 April 2026 • 14:10 - 15:40 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Jeroen Missinne**, Univ. Gent (Belgium)

14088-5 • 14:10 - 14:40

An optically-stimulated bug-like actuator based on photo-responsive liquid crystal networks (*Invited Paper*)

Author(s): **Shalini Soman**, University of Freiburg (Germany); **Hans Zappe**, Univ. of Freiburg (Germany)

14088-6 • 14:40 - 15:00

Heterogeneous integration solution for optical electromechanical systems

Author(s): **Jeong-Yeon Hwang**, **Lena Wysocki**, **Nils Burmeister**, **Dirk Kähler**, **Erdem Yazar**, **Gunnar Wille**, **Wolfgang Reinert**, **Hans-Joachim Quenzer**, **Shanshan Gu-Stoppel**, Fraunhofer-ISIT (Germany)

14088-7 • 15:00 - 15:20

Mini-colonoscopy to study in-vivo function and morphology in mice

Author(s): **Michalina J. Gora**, Wyss Ctr. for Bio and Neuro Engineering (Switzerland), ICube, Univ. de Strasbourg (France); **Etienne De Montalivet**, **Arielle Planchette**, **Karol Wojcicki**, **Yoseline Cabara**, **Aleksander Sobolewski**, Wyss Ctr. for Bio and Neuro Engineering (Switzerland)

14088-8 • 15:20 - 15:40

Smart compact lenses integrating loop-antenna for optics and autonomous micro-energy harvesting for advanced photonic systems

Author(s): **Patrice Salzenstein**, **Blandine Guichardaz**, **Aya M. Bessou**, CNRS FEMTO-ST (France); **Laurine Salzenstein**, Université Marie et Louis Pasteur (UMLP) (France)

Coffee Break 15:40 - 16:10

SESSION 3: REFRACTIVE AND DIFFRACTIVE MICRO-OPTICS

13 April 2026 • 16:10 - 18:00 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Mangirdas Malinauskas**, Vilnius Univ. (Lithuania)

14088-9 • 16:10 - 16:40

Comparative Study of One- and Two-Photon Grayscale Lithography for Micro-Optical Fabrication (*Invited Paper*)

Author(s): **Jonas Wiedenmann**, Heidelberg Instruments Mikrotechnik GmbH (Germany)

14088-10 • 16:40 - 17:00

Ultra-miniaturized structured-light projector for tissue profiling in chip-on-tip endoscopy

Author(s): **Marie C. Odenthal**, University of Freiburg (Germany); **Florence Auer, Hans Zappe**, Univ. of Freiburg (Germany)

14088-11 • 17:00 - 17:20

Electron-beam based fabrication of computer-generated holograms for multi-spectral imaging

Author(s): **Michael Warber**, IMS Chips (Germany); **Holger Sailer, Julian Hartbaum**, Institut für Mikroelektronik Stuttgart (Germany); **Tobias Haist, Stephan Reichelt**, Univ. Stuttgart (Germany); **Niels Quack**, Institut für Mikroelektronik Stuttgart (Germany); **Noel Haile, Zetong Zhang**, Institut für Technische Optik, University of Stuttgart (Germany)

14088-12 • 17:20 - 17:40

Inverse design framework for large-area micro-optical elements enabling beam shaping and beam steering applications

Author(s): **Joao Cunha**, International Iberian Nanotechnology Laboratory (Portugal); **Filipe Camarneiro, Diogo E. Aguiam**, INL - International Iberian Nanotechnology Lab. (Portugal)

14088-13 • 17:40 - 18:00

Photomorphable azopolymer-based DOEs: A platform for reconfigurable flat optical components

Author(s): **Francesco Reda, Salvatore Formato, I Komang Januariyasa, Fabio Borbone, Marcella Salvatore, Stefano Luigi Oscurato**, Univ. degli Studi di Napoli Federico II (Italy)

Tuesday 14 April 2026

SESSION 4: MATERIALS AND FABRICATION

14 April 2026 • 8:30 - 10:20 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Andrea Toulouse**, Institut für Technische Optik (Germany)

14088-14 • 8:30 - 9:00

Active 3D Micro-Optics via Laser MultiPhoton Lithography and Calcination (*Invited Paper*)

Author(s): **Mangirdas Malinauskas, Artūr Harnik, Robertas Virkėtis, Dimitra Ladika, Mantas Gaidys, Gordon Zyla, Greta Merkininkaitė**, Vilnius Univ. (Lithuania)

14088-15 • 9:00 - 9:20

Design and Fabrication of Ultra-Compact 3D Photonic Lanterns Using Two-Photon Polymerization-Based Direct Laser Writing

Author(s): **Arié Nacar, Koen Vanmol, Jürgen Van Erps, Tigran Baghdasaryan**, Vrije Universiteit Brussels (Belgium)

14088-16 • 9:20 - 9:40

NIR photopolymerization in a 3D-printed glass coupler for single mode fiber connection

Author(s): **Nessim Jebali, Benjamin Reig, David Bourrier**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France), Univ. de Toulouse (France); **Céline Molinaro**, Univ. de Haute Alsace (France), Institut de Sciences des Matériaux de Mulhouse, CNRS (France); **Julien Roul, Jean-Baptiste Doucet, Samuel Charlot**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France), Univ. de Toulouse (France); **Olivier Soppera**, Univ. de Haute Alsace (France), Institut de Sciences des Matériaux de Mulhouse, CNRS (France); **Veronique Bardinal**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France), Univ. de Toulouse (France)

14088-17 • 9:40 - 10:00

Self-assembled metal-elastomer microstructures for wearable health diagnostics and personalized monitoring

Author(s): **Srijeeta Biswas**, Indian Institute of Science (India); **Tapajyoti Das Gupta**, Indian Institute of Science, Bengaluru (India)

14088-18 • 10:00 - 10:20

Thermo-optic characteristics of RF-sputtered BaTiO₃ thin films

Author(s): **Younes Sohbi, Elie Donadio, Jesukpego Anorlido Capo Chichi, Pascal Dubreuil, Richard Monflier, Alexandre Arnoult, Benoit Lantin, benjamin Reig**, Lab d'Analyse et d'Architecture des Systèmes (France); **Sophie Guillemet, Yoann Thimont, Benjamin Duployer, Lionel Presmanes**, Ctr. Interuniversitaire de Recherche et d'Ingénierie des Matériaux (France); **Stéphane Calvez**, Lab d'Analyse et d'Architecture des Systèmes (France)

Coffee Break 10:20 - 10:50

SESSION 5: ADVANCED APPLICATIONS

14 April 2026 • 10:50 - 12:40 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Niels Quack**, Institut für Mikroelektronik Stuttgart (Germany)

14088-19 • 10:50 - 11:20

Photonics for Next-Generation Compute: Opportunities in higher dimensional processing *(Invited Paper)*

Author(s): **Nikolaos Farmakidis**, Univ. of Oxford (United Kingdom); **Harish Bhaskaran**, Univ. of Oxford (United Kingdom); **Nikolaos Pleros**, Aristotle Univ. of Thessaloniki (Greece); **June Sang Lee**, Massachusetts Institute of Technology (United States); **Yi Zhang**, Univ. of Oxford (United Kingdom); **Giannis Roumpos**, Aristotle Univ. of Thessaloniki (Greece)

14088-20 • 11:20 - 11:40

Integrated micro-optical detection system for ion-trap quantum computing

Author(s): **Lukas Uhlig**, Gregor Büttel, Fraunhofer ENAS (Germany); **Jennifer Ruskowski**, Fraunhofer IMS (Germany); **Aniket Patra**, Kenan Beriša, eleQtron (Germany); **Jörg Martin**, Steffen Kurth, Micha Haase, Christian Helke, Fraunhofer ENAS (Germany); **Stefan Dreiner**, Linda Cousin, Andreas Jansen, Nicolas Schierbaum, Fraunhofer IMS (Germany); **Matthias Prinz**, Fraunhofer ENAS (Germany); **Nathanael Jöhrmann**, TU Chemnitz (Germany); **Danny Reuter**, Fraunhofer ENAS (Germany); **Bernhard Wunderle**, TU Chemnitz (Germany)

14088-21 • 11:40 - 12:00

Visible Light Metalens Collimator for Automotive Lighting

Author(s): **Eduardo Alvear**, Ziad Oussaid, Manèle Chouiter, Pierre Albou, Hafid El-Idrissi, Valeo (France); **Csilla Timar-Fulep**, Ansys UK Ltd. (United Kingdom); **Gregory Baethge**, Ansys France SAS (France)

14088-22 • 12:00 - 12:20

A comprehensive model for directional-coupler-based optical MEMS switches

Author(s): **Alessio Miranda**, Arjan Mejas, Salahuddin Nur, Ryoichi Ishihara, Technische Univ. Delft (Netherlands)

14088-23 • 12:20 - 12:40

All-Silicon Micro-Mirror Array for space applications

Author(s): **Sylwester Bargiel**, FEMTO-ST (France); **Frédéric Zamkotsian**, Lab. d'Astrophysique de Marseille (France); **Ludovic Gauthier-Manuel**, Djaffar Belharet, Roland Salut, FEMTO-ST (France)

Lunch/Exhibition Break 12:40 - 13:50

SESSION 6: PHOTONIC INTEGRATED CIRCUITS AND MEMS

14 April 2026 • 13:50 - 16:00 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Hans Zappe**, Univ. of Freiburg (Germany)

14088-24 • 13:50 - 14:20

Sputtered Aluminum Nitride-on-Insulator for scalable Integrated Photonics *(Invited Paper)*

Author(s): **Jasmin Spettel**, Silicon Austria Labs GmbH (Austria), École polytechnique fédérale de Lausanne (Switzerland); **Bernardo Realista-Ferreira**, **Nikolai Andrianov**, **Tai Nguyen**, Silicon Austria Labs. GmbH (Austria); **Guillermo Villanueva**, EPFL (Switzerland); **Niels Quack**, IMS Chips (Germany); **Thang Duy Dao**, Silicon Austria Labs. GmbH (Austria)

14088-25 • 14:20 - 14:40

Optomechanical displacement sensing with SiN based photonic ring resonators

Author(s): **Anne-Katrin Schumann**, **Julia Wecker**, **Franz Tank**, **Alexey Shaporin**, Fraunhofer-Institut für Elektronische Nanosysteme ENAS (Germany); **Sebastian Weidlich**, Technische Univ. Chemnitz (Germany); **Chris Stoeckel**, **Karla Hiller**, Fraunhofer-Institut für Elektronische Nanosysteme ENAS (Germany), Technische Univ. Chemnitz (Germany); **Petra Kuenzel**, **Jörg Martin**, **Roman Forke**, Fraunhofer-Institut für Elektronische Nanosysteme ENAS (Germany); **Danny Reuter**, Fraunhofer-Institut für Elektronische Nanosysteme ENAS (Germany), Technische Univ. Chemnitz (Germany); **Alexander Weiß**, Fraunhofer-Institut für Elektronische Nanosysteme ENAS (Germany)

14088-26 • 14:40 - 15:00

Low-loss single mode propagation in complex and multimode 3D waveguides

Author(s): **Victor Genin**, **Marco Rovicq**, **Mathilde Hary**, **Daniel Brunner**, FEMTO-ST (France)

14088-27 • 15:00 - 15:20

Simulating nanomechanical cryogenic gas pressure sensors with fiber-optical readout

Author(s): **Daniel Hartwig**, **Christoph Reinhardt**, Deutsches Elektronen-Synchrotron DESY (Germany); **Lea Lara Stankewitz**, Univ. Hamburg (Germany), Deutsches Elektronen-Synchrotron DESY (Germany); **Sandy Croatto**, Deutsches Elektronen-Synchrotron DESY (Germany); **Hossein Masalehdan**, Fraunhofer Institute for Silicon Technology ISIT (Germany); **Nils Sülthmann**, Universität Hamburg (Germany); **Axel Lindner**, Deutsches Elektronen-Synchrotron DESY (Germany); **Axel Lindner**, Deutsches Elektronen-Synchrotron DESY (Germany); **Roman Schnabel**, Universität Hamburg (Germany)

14088-28 • 15:20 - 15:40

Investigation of Piezoelectric SAW modulators for Si₃N₄ waveguides in a Si-Technology platform

Author(s): **Hossein Masalehdan**, **Paul Raschdorf**, **Lena Wysocki**, **Jana Meyer-Strenzke**, **Dirk Kähler**, **Erdem Yarar**, **Fabian Lofink**, **Shanshan Gu-Stoppel**, Fraunhofer-Institut für Siliziumtechnologie ISIT (Germany)

14088-29 • 15:40 - 16:00

Impedance evaluation of two-dimensional MEMS mirrors for failure analysis

Author(s): **Marlene Schneider**, Infineon Technologies Austria AG (Austria), Technical University Graz (Austria); **Norbert Druml**, **David Brunner**, Infineon Technologies Austria AG (Austria); **Bernd Deutschmann**, Technical University Graz (Austria)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 7: SPECTROMETERS AND SENSORS I

15 April 2026 • 9:00 - 10:30 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Ralf Bauer**, Univ. of Strathclyde (United Kingdom)

14088-30 • 9:00 - 9:30

MEMS-based photoacoustic sensing via self-mixing detection (Invited Paper)

Author(s): **Jacopo Pelini**, **Tecla Gabbrielli**, **Simone Borri**, **Francesco Cappelli**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Stefano Dello Russo**, **Mario Siciliani de Cumis**, Agenzia Spaziale Italiana (Italy); **Paolo De Natale**, **Chenghong Zhang**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Maria Concetta Canino**, **Alberto Roncaglia**, Istituto per lo Studio dei Materiali Nanostrutturati (Italy)

14088-31 • 9:30 - 9:50

Improving SERS Reproducibility in Microfluidic Chips Using Integrated Microlens Arrays

Author(s): **Sara Abbasi**, Vrije Univ Brussel (Belgium); **Qing Liu**, Vrije Univ. Brussel (Belgium), Flanders Make (Belgium); **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium), Flanders Make (Belgium)

14088-32 • 9:50 - 10:10

Technological Challenges in Developing a Compact, Spectrometer-Free Raman System for Microplastic Detection

Author(s): **Mehrdad Lotfi Choobbari**, Vrije Univ Brussel (Belgium); **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium)

14088-33 • 10:10 - 10:30

Unlocking Portable Mid-Infrared Fingerprint Sensing Applications Using Broadband Photonic MEMS FTIR

Author(s): **Shady R. Labib**, **Mohamed G. Mahmoud**, Si-Ware Systems (Egypt); **Mazen Erfan**, Si-Ware Systems (France); **Ahmed S. Kishka**, **Islam Samir**, **Eslam Magdy**, **Farris Essam**, **Ahmed Darweesh**, **Mohamed El Elsaedy**, **Ahmed Abdelkhalik**, **Mohamed H. Al Haron**, **Ahmed Gebril**, **Mina Gad**, **Bassem Mortada**, **Ahmed A. Elsayed**, **Yasser M. Sabry**, Si-Ware Systems (Egypt)

Coffee Break 10:30 - 11:00

SESSION 8: SPECTROMETERS AND SENSORS II

15 April 2026 • 11:00 - 12:00 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Ralf Bauer**, Univ. of Strathclyde (United Kingdom)

14088-34 • 11:00 - 11:20

Reconstructive spectroscopy using broadband optical filters as spectral encoders

Author(s): **Leonardo Baini**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Qihao Jin**, **Qiaoshuang Zhang**, Karlsruher Institut für Technologie (Germany); **Guillaume Gomard**, Zeiss Innovation Hub @ KIT (Germany), Carl Zeiss AG (Germany); **Ulrich Lemmer**, Karlsruher Institut für Technologie (Germany); **Paolo Bartolini**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Andrea Taschin**, Consiglio Nazionale delle Ricerche, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Diederik S. Wiersma**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy), Univ. degli Studi di Firenze (Italy), Istituto Nazionale di Ricerca Metrologica (Italy); **Renato Torre**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy), Univ. degli Studi di Firenze (Italy), Dipartimento di Fisica e Astronomia (UNIFI) (Italy); **Alice Boschetti**, Istituto Nazionale di Ricerca Metrologica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy)

14088-35 • 11:20 - 11:40

Variable refractive index waveguides for mid-infrared sensing

Author(s): **Maren Anna Brandsrud**, Norwegian Univ of Life Sciences (Norway); **Beibei Kong**, **Pranish Karki**, **Mehmet Can Erdem**, Norwegian Univ. of Life Sciences (Norway); **Boris Mizaikoff**, Univ. Ulm (Germany); **Achim Kohler**, Norwegian Univ. of Life Sciences (Norway)

14088-36 • 11:40 - 12:00

Overcoming Diffraction-Induced Interferogram Envelope Modulation in Miniaturized Wideband MEMS-Based FTIR Spectrometer

Author(s): **Ahmed Darweesh**, Si-Ware Systems (Egypt); **Islam Samir**, Si-Ware Systems (Egypt), Ain Shams Univ. (Egypt); **Sara Ahmed**, **Mohamed Ismail**, **Momen Anwar**, **Ahmed Shebl**, Si-Ware Systems (Egypt); **Mazen Erfan**, Si-Ware Systems (France), Ain Shams Univ. (Egypt); **Bassem Mortada**, Si-Ware Systems (Egypt); **Yasser M. Sabry**, Si-Ware Systems (Egypt), Ain Shams Univ. (Egypt)

Lunch/Exhibition Break 12:00 - 13:40

SESSION 9: MINIATURIZED AND INTEGRATED MICROSCOPY SYSTEMS

15 April 2026 • 13:40 - 15:30 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Mangirdas Malinauskas**, Vilnius Univ. (Lithuania)

14088-37 • 13:40 - 14:10

Integrated 3D-printed micro-optics for ultrathin fiber-endoscopy (*Invited Paper*)

Author(s): **Marco Alexander Wende**, Institute of Applied Optics (ITO) (Germany), Stuttgart Research Center of Photonic Engineering (SCoPE) (Germany); **Michael Heymann**, Institute of Biomaterials and Biomolecular Systems (Germany); **Travis Sawyer**, Wyant College of Optical Sciences, The Univ. of Arizona (United States); **Valese Aslani**, **Alois M. Herkommer**, **Andrea Toulouse**, Institute of Applied Optics (ITO) (Germany), Stuttgart Research Center of Photonic Engineering (SCoPE) (Germany)

14088-38 • 14:10 - 14:30

Reconfigurable radial scanning endomicroscope enabled by 3D nano-printing

Author(s): **Aybuke Calikoglu**, University of Freiburg (Germany); **Hans Zappe**, **Çağlar Ataman**, Univ. of Freiburg (Germany)

14088-39 • 14:30 - 14:50

Miniaturized illumination system for dual mode microscopic imaging

Author(s): **Kathrin Doth**, **Marco Wende**, **Valese Aslani**, **Alois M. Herkommer**, **Andrea Toulouse**, Institut für Technische Optik, Univ. Stuttgart (Germany)

14088-40 • 14:50 - 15:10

Metasurface-Integrated Lensless Endoscope for Two-Photon Imaging

Author(s): **Amir Loucif**, **Samira Khadir**, CRHEA (France), Univ. Côte d'Azur (France); **Esben Ravn Andresen**, Lab. de Physique des Lasers, Atomes et Molécules, Univ. de Lille (France); **Luca Genchi**, **Hervé Rigneault**, Institut Fresnel, CNRS (France)

14088-41 • 15:10 - 15:30

Integrated VCSEL-metasurface platform for on-chip imaging and sensing

Author(s): **Khosro Zangeneh Kamali**, **Erik Strandberg**, **Oliver Olsson**, **Hana Šípová-Jungová**, **Mikael Käll**, Chalmers Univ. of Technology (Sweden)

Coffee Break 15:30 - 16:00

SESSION 10: METROLOGY, LIDAR, AND BIOMEDICAL SENSING

15 April 2026 • 16:00 - 17:30 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Frédéric Zamkotsian**, Lab. d'Astrophysique de Marseille (France)

14088-42 • 16:00 - 16:30

Ultra sensitive measurement of mechanical displacements with structured light (*Invited Paper*)

Author(s): **Vincenzo D'Ambrosio**, Univ. degli Studi di Napoli Federico II (Italy)

14088-43 • 16:30 - 16:50

Multifunctional Optical Neural Implants: Photonics, Bioelectronics, and Nanotechnology for next generation of neural interfaces

Author(s): **Ferruccio Pisanello**, Istituto Italiano di Tecnologia (Italy); **Linda Piscopo**, Istituto Italiano di Tecnologia (Italy), Univ. del Salento (Italy); **Antonio Balena**, **Claudia Latte Bovio**, Istituto Italiano di Tecnologia (Italy); **Sneha Pottekkad**, Istituto Italiano di Tecnologia (Italy), Univ. del Salento (Italy); **Michele Di Lauro**, **Barbara Spagnola**, **Stella Aslanoglou**, **Mohammadrahim Kazemzadeh**, Istituto Italiano di Tecnologia (Italy); **Mohammad Fayyaz Kashif**, Univ. degli Studi di Napoli Federico II (Italy); **Cinzia Montinaro**, Istituto Italiano di Tecnologia (Italy); **Filippo Pisano**, Univ. degli Studi di Padova (Italy), Istituto Italiano di Tecnologia (Italy), Padova Neuroscience Ctr. (Italy); **Tommaso Fellin**, **Fabio Biscarini**, Istituto Italiano di Tecnologia (Italy); **Massimo De Vittorio**, Istituto Italiano di Tecnologia (Italy), Technical Univ. of Denmark (Denmark)

14088-44 • 16:50 - 17:10

Design, Fabrication and Characterisation of a Grating Coupler for Scene Illumination in Integrated FMCW Flash LiDAR

Author(s): **Paul Camus**, **Laurent Frey**, CEA-LETI-DOPT (France); **Éric Lacot**, Lab. Interdisciplinaire de Physique (France)

14088-45 • 17:10 - 17:30

Silicon Nitride Sensors for VIS-NIR based on Subwavelength and Slot-Waveguide Ring Resonators

Author(s): **Marcin Lelit**, **Dagmara Drecka**, **Lukasz Kozlowski**, **Mateusz Slowikowski**, **Bartłomiej Stonio**, **Marcin Juchniewicz**, **Krystian Pavlov**, **Maciej Filipiak**, **Bartosz Michalak**, **Michał Jarosik**, Warsaw Univ. of Technology (Poland); **Stanisław Stopiński**, **Krzysztof Anders**, **Ryszard Pyramidowicz**, Warsaw Univ. of Technology (Poland), LightHouse Sp. z o.o. (Poland), VIGO Photonics S.A. (Poland)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14088-56 • 17:45 - 19:30

Integrated resonant photonic sensors for real-time monitoring of drying dynamics in opaque industrial and dairy-based colloids

Author(s): **Jordan Gastebois**, Institut d'Electronique et des Technologies du numéRique (IETR) (France); **Cécile Lefloch-Fouéré**, Institut National de la Recherche Agronomique (France); **Véronique Vié**, **Marion Baudoin**, Institut de Physique de Rennes, Univ. de Rennes, CNRS (France); **Hervé Lhermite**, Institut d'Electronique et des Technologies du numéRique (IETR) (France); **Hervé Cormerais**, Institut d'Electronique et des Technologies du numéRique (IETR) (France), CentraleSupélec (France); **Bruno Bêche**, Institut d'Electronique et des Technologies du numéRique (IETR) (France)

14088-57 • 17:45 - 19:30

DC drift characterization of LNOI electro-optic modulators in the visible region

Author(s): **Chenxi Xia**, **J. Rasmus Bankwitz**, **Jan Brandes**, **Philipp Lohmann**, **Xinyu Ma**, **Wolfram H. P. Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14088-58 • 17:45 - 19:30

Edible photonic microcavities as barcodes and sensors

Author(s): **Abdur Rehman Anwar**, Jožef Stefan Institute (Slovenia), Jožef Stefan International Postgraduate School (Slovenia); **Marusa Mur**, **Slavko Kralj**, Jožef Stefan Institute (Slovenia); **Matjaž Humar**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), Ctr. of Excellence in Nanoscience and Nanotechnology (Slovenia)

14088-59 • 17:45 - 19:30

Holographic inscription of adaptive micro-optics on azopolymers

Author(s): **Salvatore Formato**, **Francesco Reda**, **I Komang Januariyasa**, **Fabio Borbone**, **Marcella Salvatore**, **Stefano Luigi Oscurato**, Univ. degli Studi di Napoli Federico II (Italy)

14088-60 • 17:45 - 19:30

Micro-optical 3D structures fabricated by stereolithography for photonic and imaging microsystems

Author(s): **Mangirdas Malinauskas**, Vilnius Univ. (Lithuania); **Yuriy A. Gordienko**, National Technical Univ. of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (Ukraine); **Austėja Kvėdaraitė**, **Ioanna Angeliki Petsi**, **Gordon Zyla**, Vilnius Univ. (Lithuania)

14088-61 • 17:45 - 19:30

Photoluminescence mechanism of deep-level emission from electrically active threading dislocation in GaN

Author(s): **Russel Cruz Sevilla**, Chung Yuan Christian University (Taiwan); **Irwan Saleh Kurniawan**, **Hsiu-Ming Hsu**, **Hsiu-Ying Huang**, **Chi Tsu Yuan**, Chung Yuan Christian Univ. (Taiwan)

14088-62 • 17:45 - 19:30

Fast steering mirror for compensation of tilt error in spectroscopic sensor

Author(s): **Ho Sang Kim**, **Jin Kim**, Institute for Advanced Engineering (Korea, Republic of)

14088-64 • 17:45 - 19:30

Germanium-tin photodetectors operating beyond 3 μm for an integrated CMOS-compatible photonic platform

Author(s): **Antonin Macquart**, **Maria-Alejandra Mendez**, **Etienne Herth**, **Jean-René Coudeville**, **Xavier Lafosse**, **David Bouville**, Université Paris-Saclay, CNRS, Centre de Nanosciences et de Nanotechnologies (France); **Léana Bonin**, **Paul Goulain**, **Jean-Michel Hartmann**, Univ. Grenoble Alpes, CEA, LETI (France); **Nicolas Pauc**, Univ. Grenoble Alpes, CEA, Grenoble INP, IRIG, PHELIQS (France); **Alexei Chelnokov**, **Vincent Reboud**, Univ. Grenoble Alpes, CEA, LETI (France); **Moustapha El-Kurdi**, LTCI, Télécom Paris, Institut Polytechnique de Paris (France)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 11: HYBRID AND CHIP-BASED PHOTONIC SYSTEMS

16 April 2026 • 11:00 - 12:50 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Niels Quack**, Institut für Mikroelektronik Stuttgart (Germany)

14088-46 • 11:00 - 11:30

Low-loss single mode polymer waveguides for visible and near-infrared applications (*Invited Paper*)

Author(s): **Jeroen Missinne**, **Federico Pazzaglia**, **Jef Van Asch**, **Toon De Baere**, **Viktor Geudens**, **Harindra Kumar Kannoja**, **Geert Van Steenberge**, Univ. Gent (Belgium), imec (Belgium)

14088-47 • 11:30 - 11:50

Versatile Bragg mirrors on lithium niobate nanowaveguides

Author(s): **Théo Dutron**, **Arthur De Sousa Lopes Moreira**, **Nathanaëll Benon**, **Nadège Courjal**, **Djaffar Belharet**, FEMTO-ST (France); **Thomas Baron**, FEMTO-ST (France), Ecole Nationale Supérieure de Mécanique et des Microtechniques (France); **Mathieu Chauvet**, FEMTO-ST (France)

14088-48 • 11:50 - 12:10

Link-Level Performance of a Monolithic InP Microwave-Photonic Transceiver for a LEO Distributed-Radar Satellite System

Author(s): **Maria Eugenia Serrano Flores**, Bright Photonics B.V. (Netherlands), Institute of Technologies of Communications, Information, and Perception (TeCIP), Scuola Superiore Sant'Anna Pisa (Italy); **Katarzyna Lawniczuk**, Bright Photonics B.V. (Netherlands); **Paolo Ghelfi**, National, Inter-University Consortium for Telecommunications (Italy); **Antonella Bogoni**, Scuola Superiore Sant'Anna (Italy)

14088-49 • 12:10 - 12:30

Atomic-Scale Approaches to Functional and Scalable Neuromorphic Quantum Photonics

Author(s): **Shabnam Taheriniya**, Ruprecht-Karls-Univ. Heidelberg, Kirchhoff-Institute for Physics (Germany); **Rongyang Xu, Xinyu Ma, Akhil Varri, Julian Rasmus Bankwitz**, Kirchhoff-Institute for Physics, Ruprecht-Karls-Univ. Heidelberg (Germany); **Finn Kröger**, Institute for Molecular Systems Engineering and Advanced Materials, Ruprecht-Karls-Univ. Heidelberg (Germany); **Daniel Ryklin**, BioQuant, Ruprecht-Karls-Univ. Heidelberg (Germany); **Eva Blasco**, Institute for Molecular Systems Engineering and Advanced Materials, Ruprecht-Karls-Univ. Heidelberg (Germany); **Rasmus R. Schröder**, BioQuant, Ruprecht-Karls-Univ. Heidelberg (Germany); **Wolfram Pernice**, Kirchhoff-Institute for Physics, Ruprecht-Karls-Univ. Heidelberg (Germany)

14088-50 • 12:30 - 12:50

Photonic Integrated Circuits Enabled Visible Light Communication Applied to Underwater Robot

Author(s): **Yu Wang**, Key Lab. of Coastal Environment and Resources of Zhejiang Province, Westlake Univ. (China), Technische Univ. Eindhoven (Netherlands); **Zihuan Yu**, Key Lab. of Coastal Environment and Resources of Zhejiang Province, Westlake Univ. (China), Friedrich-Schiller-Univ. Jena (Germany); **Zhe Li**, Key Lab. of Coastal Environment and Resources of Zhejiang Province, Westlake Univ. (China); **Kai Sun**, Key Lab. of Coastal Environment and Resources of Zhejiang Province, Westlake Univ. (China), Institute of Advanced Technology, Westlake Institute for Advanced Study (China); **Dixia Fan, Weicheng Cui**, Key Lab. of Coastal Environment and Resources of Zhejiang Province, Westlake Univ. (China)

Lunch Break 12:50 - 14:00

SESSION 12: TUNABLE LENSES, FILTERS, MIRRORS, AND LIGHT EMITTERS

16 April 2026 • 14:00 - 15:50 | Auditorium Cassin (Niveau/Level 0)

Session Chair(s): **Shanshan Gu-Stoppel**, Fraunhofer-Institut für Siliziumtechnologie ISIT (Germany)

14088-51 • 14:00 - 14:30

Affordable 3D printed optics with nanoparticle enhanced optical and opto-mechanical performance (Invited Paper)

Author(s): **Charlie Butterworth, Jay Christopher**, Univ. of Strathclyde (United Kingdom); **Dickon Walker**, National Manufacturing Institute Scotland (United Kingdom); **Margaret Cunningham**, Univ. of Strathclyde (United Kingdom); **Liam Rooney**, Univ. of Glasgow (United Kingdom); **Gail McConnell**, Univ. of Strathclyde (United Kingdom); **Ralf Bauer**, University of Strathclyde (United Kingdom)

14088-52 • 14:30 - 14:50

Real-time feedback control for piezo-driven tunable optics, with minimal compromise on their core advantages

Author(s): **Shahab Haidarian, Ulrike Wallrabe**, Univ. of Freiburg (Germany)

14088-53 • 14:50 - 15:10

Integrated Metalens with Piezoelectric Actuation: Towards Compact, Multifunctional Adaptive Optics

Author(s): **ARPITA DE**, NIL Technology (Denmark); **Fredrik Mattinson**, NIL Technology ApS (Sweden); **Andreas Feldinger, Ane Jensen, Mikkel Beri Lotz**, NIL Technology ApS (Denmark); **Håvard Hem Toftevaag, Paul C. V. Thrane, Zeljko Skokic, Christopher Andrew Dirdal**, SINTEF DIGITAL (Norway); **Aleksandrs Leitis, Ludovic Marigo**, NIL Technology Switzerland GmbH (Switzerland); **Villads Egede Johansen, Evangelos Dimopoulos**, NIL Technology (Denmark)

14088-54 • 15:10 - 15:30

An unsupervised two-stage deep learning framework integrated with tunable lens for OCT imaging depth enhancement

Author(s): **Yuhui Chu, Sicheng Li**, Binjiang Institute of Zhejiang Univ. (China); **Mai Dan**, Zhejiang Univ. (China); **Pengpeng Zhao**, Zhejiang University (China), Binjiang Institute of Zhejiang University (China); **Yunpeng Zhao**, Zhejiang Univ. (China)

14088-55 • 15:30 - 15:50

hyperspectral imaging enabled by air-gap cavity tunable filter

Author(s): **Nayeon Kim, Sunghyun Hwang, Eui-Hyoun Ryu, Ji-Hwan Son, Nayoung Kim**, Korea Institute of Science and Technology (Korea, Republic of), Korea Univ. (Korea, Republic of); **In-Ho Lee**, Korea Institute of Science and Technology (Korea, Republic of)

CONFERENCE 14089

Specialty Optical Fibres 2026

15 - 16 April 2026 | Leicester/Salon 12 (Niveau/Level 1)

CONFERENCE CO-SPONSOR



Conference Chair(s): **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus); **Pavel Peterka**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Stephanos Yerolatsitis**, Cyprus Univ. of Technology (Cyprus)

Program Committee: **Jean-Luc Adam**, Univ. de Rennes 1 (France); **Jean-Louis Auguste**, XLIM Institut de Recherche (France); **Ole Bang**, Technical Univ. of Denmark (Denmark); **Neil G. R. Broderick**, The Univ. of Auckland (New Zealand); **Ryszard Buczynski**, Institute of Electronic Materials Technology (Poland); **Liang Dong**, Ctr. for Optical Materials Science + Engineering Technologies (United States); **Dominik Dorosz**, AGH Univ. of Science and Technology (Poland); **Henry H. Du**, Stevens Institute of Technology (United States); **Sebastien Fevrier**, XLIM Institut de Recherche (France); **Karl-Friedrich Klein**, Technische Hochschule Mittelhessen (Germany); **Michael Komodromos**, Frederick Univ. (Cyprus); **Walter Margulis**, Acreo Swedish ICT AB (Sweden); **Carlos F. Marques**, Univ. de Aveiro (Portugal); **Chengbo Mou**, Shanghai Univ. (China); **Saeed Rehman**, Fibercore Ltd. (United Kingdom); **Valerio Romano**, Bern Univ. of Applied Sciences (Switzerland); **Kunimasa Saitoh**, Hokkaido Univ. (Japan); **Radan Slavik**, Univ. of Southampton (United Kingdom); **Hwa-Yaw Tam**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Antreas Theodosiou**, Lumoscribe Ltd. (Cyprus); **Waclaw Urbanczyk**, Wroclaw Univ. of Technology (Poland); **David J. Webb**, Aston Univ. (United Kingdom); **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

INFORMATION

Best Paper Award

SPIE Photonics Europe 2026 conference on Specialty Optical Fibres will offer a Best Paper Award. Eligibility is extended to all speakers who are present to deliver their research work in person at the conference. Papers will be judged based on clarity of presentation, scientific merit, and potential innovative impact. The Best Paper Award will include a cash reward and an award certificate.

Wednesday 15 April 2026

SESSION 1: SPECIALTY OPTICAL FIBRE-BASED DEVICES I

15 April 2026 • 9:00 - 10:10 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

14089-1 • 9:00 - 9:30

Microstructured D-Shape optical fibers for evanescent field applications (*Invited Paper*)

Author(s): **Tadeusz Martynkien**, **Jacek Olszewski**, Wroclaw Univ. of Science and Technology (Poland); **Alicja Anuszkiewicz**, Warsaw Univ. of Technology (Poland); **Pawel Mergo**, Maria Curie-Skłodowska Univ. (Poland)

14089-3 • 9:30 - 9:50

Rigorous simulations for the design of specialty fiber dielectric microlenses applications.

Author(s): **Stefan M. Jensen**, **Tony Hajj**, **Philippe Gérard**, ICube, Univ. de Strasbourg (France), Institut National des Sciences Appliquées de Strasbourg (France); **Michele Diana**, Hôpitaux Univ. Genève (Switzerland), ICube, Univ. de Strasbourg (France); **Sylvain Lecler**, ICube, Univ. de Strasbourg (France), Institut National des Sciences Appliquées de Strasbourg (France)

14089-5 • 9:50 - 10:10

Wearable Cardiac Monitoring Using Femtosecond-Inscribed advanced polymer CYTOP FBG Sensors

Author(s): **Antonios Papadopoulos**, **Andreas A. Ioannou**, **Yuchi Hu**, Cyprus Univ. of Technology (Cyprus); **Changqiu Yu**, Hangzhou Dianzi Univ. (China); **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

Coffee Break 10:10 - 10:40

SESSION 2: HOLLOW-CORE FIBRE APPLICATIONS I

15 April 2026 • 10:40 - 12:10 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Kerrianne Harrington**, Univ. of Bath (United Kingdom)

14089-6 • 10:40 - 11:10

Revealing Motions at the Nanoscale: Tracking Diffusing Nano-objects via Optofluidic Optical Fibers *(Invited Paper)*

Author(s): **Markus A. Schmidt, Torsten Wieduwilt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14089-7 • 11:10 - 11:30

Pressure monitoring in hollow core fibres via gas absorption spectroscopy

Author(s): **Amalie Gjelsvik, Thomas W. Kelly, Radan Slavik, Natalie V. Wheeler, Chiang Ping Saw, Austin Taranta**, Univ. of Southampton (United Kingdom)

14089-8 • 11:30 - 11:50

Distributed measurements of gas pressure and content in hollow-core optical fibres via stimulated Raman scattering

Author(s): **Mitchell Gerrard, Peter Horak, Radan Slavik**, Univ. of Southampton (United Kingdom)

14089-9 • 11:50 - 12:10

Optimizing galvo-scanner-based microchannel ablation in hollow-core fibres for a fast fabrication process

Author(s): **Andres M. Biondi Vaccariello, Timothy Lee, Thomas W. Kelly, Peter Horak, Ian A. Davidson, Radan Slavik, Natalie Wheeler, Martynas Beresna**, Univ. of Southampton (United Kingdom)

Lunch/Exhibition Break 12:10 - 13:30

SESSION 3: SPECIALTY OPTICAL FIBRE-BASED DEVICES II

15 April 2026 • 13:30 - 15:10 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14089-10 • 13:30 - 13:50

Supermode fiber Bragg grating for temperature and directional bending sensing

Author(s): **Joel Villatoro**, Univ. del País Vasco (Spain); **M. Alonso Murias**, Centro de Investigaciones en Óptica, A.C. (Mexico); **D. Maldonado-Hurtado**, iTEAM Research Institute, Univ. Politècnica de València (Spain); **A. Zornoza**, Univ. del País Vasco (Spain); **F. Lindner, J. Bierlich**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **S. Sales Maicas**, iTEAM Research Institute, Univ. Politècnica de València (Spain); **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14089-11 • 13:50 - 14:10

Embedded Fiber Bragg Grating Sensors in Biocomposites for Multi-Parameter Structural Monitoring

Author(s): **Antreas Theodosiou**, Lumoscribe Ltd. (Cyprus); **Michael Haslinger, Viktorija Jonaityte**, PROFACOR GmbH (Austria); **Rafal Kozera**, Noma Resins Sp. z o.o. (Poland); **Rebeca Cid**, Amura SL (Spain); **Andreas A. Ioannou, Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus); **Angeles Rosales**, Amura SL (Spain); **Piotr Sobotka**, Warsaw Univ. of Technology (Poland)

14089-12 • 14:10 - 14:30

Phase mask femtosecond inscription of fiber Bragg grating arrays in specific cores of a multicore fiber for shape measurements

Author(s): **Aviran Halstuch, Avri Shirakov, Amiel Ishaaya**, Ben-Gurion Univ. of the Negev (Israel)

14089-13 • 14:30 - 14:50

Femtosecond laser inscription and connectorization of sapphire fibre Bragg gratings

Author(s): **Andreas A. Ioannou, Stephanos Yerolatsitis**, Cyprus Univ of Technology (Cyprus); **Saeed Rehman**, Lightwave Consulting Ltd (United Kingdom); **Andreas Pospori, Kyriacos Kalli**, Cyprus Univ of Technology (Cyprus)

14089-14 • 14:50 - 15:10

Femtosecond laser inscription in indium fluoride fibres for mid-infrared fibre laser applications

Author(s): **Andreas A. Ioannou**, Cyprus Univ of Technology (Cyprus); **Antreas Theodosiou**, Lumoscribe Ltd. (Cyprus); **Andreas Pospori, Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

Coffee Break 15:10 - 15:40

SESSION 4: FIBRES AND SENSORS FOR BIOMEDICAL APPLICATIONS

15 April 2026 • 15:40 - 17:50 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Stephanos Yerolatsitis**, Cyprus Univ. of Technology (Cyprus)

14089-15 • 15:40 - 16:10

Flexible Multimaterial Polymer Fiber Implants for Integrated Brain Interrogation: Enlarged Illumination, Bidirectional Interfaces, and Deep-brain temperature Sensing *(Invited Paper)*

Author(s): **Christos Markos, Marcello Meneghetti, Kunyang Sui, Cuiling Zhang**, DTU Electro (Denmark); **Stephanos Yerolatsitis, Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus); **Emilija Bostogaite, Thomas Stieglitz, Linda Rudmann**, Univ. of Freiburg (Germany); **Grace Houser, Rune W. Berg**, Univ. of Copenhagen (Denmark); **Andreas A. Ioannou**, Cyprus Univ. of Technology (Cyprus)

14089-16 • 16:10 - 16:30

Polymer fibre FBG sensor array for force and bend monitoring in lumbar puncture procedures

Author(s): **Andreas A. Ioannou**, Cyprus Univ of Technology (Cyprus); **Andreas Pospori**, Kyriacos Kalli, Cyprus Univ. of Technology (Cyprus)

14089-17 • 16:30 - 16:50

Deep Learning-Enabled Imaging Through CYTOP Multimode Polymer Optical Fiber under varying input conditions

Author(s): **Andreas Nicolaides**, Lumoscribe Ltd. (Cyprus); **Antreas Theodosiou**, Lumoscribe Ltd (Cyprus); **Sotirios Chatzis**, Cyprus Univ. of Technology (Cyprus)

14089-18 • 16:50 - 17:10

All Silica Air-Clad Coherent Fibre Bundle for Ultraviolet Imaging

Author(s): **Kerrianne Harrington**, **Thomas A. Wright**, **Harry A. C. Wood**, **Daniel Wolverson**, **William J. Wadsworth**, **Jonathan C. Knight**, **Tim A. Birks**, **James M. Stone**, Univ. of Bath (United Kingdom)

14089-19 • 17:10 - 17:30

Harnessing rotational memory effect in multimode fibre-based holographic endoscopy imaging

Author(s): **Francesco Bello**, **André Gomes**, **Tomas Čizmar**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14089-20 • 17:30 - 17:50

Femtosecond-laser-fabricated FBGs in multifunctional polymer fibres for temperature and humidity sensing in agar-agar brain phantom

Author(s): **Andreas A. Ioannou**, Cyprus Univ of Technology (Cyprus); **Andreas Pospori**, **Stephanos Yerolatsitis**, Cyprus Univ. of Technology (Cyprus); **Marcello Meneghetti**, Technical Univ. of Denmark (Denmark); **Kunyang Sui**, Univ. of Copenhagen (Denmark); **Christos Markos**, Technical Univ. of Denmark (Denmark); **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14089-2 • 17:45 - 19:30

Excitation of whispering gallery modes in polymer microbottle resonators using a grin-capillary fiber coupling structure

Author(s): **Enrique De La Cruz**, CICESE (Mexico); **Daniel Jauregui-Vazquez**, Ctr. de Investigación Científica y de Educación Superior de Ensenada B.C. (Mexico); **Steven A. van den Berg**, **J. A. Alvarez-Chavez**, The Hague Univ. of Applied Sciences (Netherlands)

14089-35 • 17:45 - 19:30

Zinc Aluminosilicate Preform for Large-Core Optical Fibers Prepared via Powder-based Synthesis

Author(s): **Dennis Köhler**, **Robert Müller**, Leibniz Institute of Photonic Technology (Leibniz IPHT) (Germany); **Jan Mrázek**, Institute of Photonics and Electronics (UFE) (Czech Republic); **Lothar Wondraczek**, Otto Schott Institute of Materials Research (OSIM), Friedrich Schiller University Jena (FSU Jena) (Germany); **Katrin Wondraczek**, Leibniz Institute of Photonic Technology (Leibniz IPHT) (Germany)

14089-36 • 17:45 - 19:30

Bi-doped germanoaluminophosphosilicate optical fibers for T+O-band fiber lasers and amplifiers

Author(s): **Denis Lipatov**, Devyatykh Institute of Chemistry of High-Purity Substances of the Russian Academy of Sciences (Russian Federation); **Fedor Afanasiev**, **Alexey Abramov**, **Aleksey S. Lobanov**, G.G. Devyatykh Institute of Chemistry of High-Purity Substances, RAS (Russian Federation); **Alexander Elopov**, **Vitaliya Agakhanova**, **Egor K. Mikhailov**, **Sergey Ostrikov**, **Alexander Kharakhordin**, **Konstantin Riumkin**, **Elena Firstova**, **Sergey Alyshev**, **Aleksandr Khagai**, **Sergei Firstov**, **Mikhail Melkumov**, Prokhorov General Physics Institute of the Russian Academy of Sciences, Dianov Fiber Optics Research Center (Russian Federation)

14089-37 • 17:45 - 19:30

Exploring birefringence-induced polarization coupling in graded-index fibers

Author(s): **Kristína Herzánová**, **Tomáš Pikálek**, **Miroslav Stibůrek**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Tomáš Tyc**, Masaryk Univ. (Czech Republic), Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Tomáš Čizmar**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic), Leibniz-Institut für Photonische Technologien e.V. (Germany), Institute of Applied Optics, Friedrich-Schiller-Univ. Jena (Germany)

14089-38 • 17:45 - 19:30

Influence of pump wavelength on ASE generation in Yb MOPA

Author(s): **Jan Macháček**, Institute of Photonics and Electronics of the CAS (Czech Republic); **Ondřej Schreiber**, Narran s.r.o. (Czech Republic); **Jan Pokorný**, **Jan Aubrecht**, **Pavel Peterka**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

14089-39 • 17:45 - 19:30

rGO-AgNP functionalized etched fiber Bragg grating sensor for multiheavy metal ion detection

Author(s): **Md Tauseef Iqbal Ansari**, Indian Institute of Technology (Indian School of Mines) Dhanbad (India); **Metta Sumanth**, Indian Institute of Technology (Indian School of Mines), Dhanbad (India); **Sanjeev Kumar Raghuwanshi**, Indian Institute of Technology (Indian School of Mines) Dhanbad (India)

14089-40 • 17:45 - 19:30

Calibration of Hybrid Optical-Electrical Cables for Distributed Temperature Sensing Using Two- and Four-Cable Configurations

Author(s): **Antreas Theodosiou**, Lumoscribe Ltd (Cyprus); **Lazaros Aresti**, **Pavlos Christodoulides**, Cyprus Univ. of Technology (Cyprus)

14089-41 • 17:45 - 19:30

PMMA Fiber Coupler-Like Pressure Sensor With Polished Interaction Region: Power and Speckle-Based Characterization

Author(s): **Antreas Theodosiou**, Lumoscribe Ltd. (Cyprus); **Arnaldo Leal**, UFES (Brazil)

14089-42 • 17:45 - 19:30

Pressure Magnitude and Localization Along a CYTOP Polymer Fiber Using Speckle-Based Sensing and Neural Network Models

Author(s): **Antreas Theodosiou**, **Marios Panayiotou**, **Yiannis Charalambous**, **Andreas Nicolaides**, Lumoscribe Ltd. (Cyprus)

14089-43 • 17:45 - 19:30

Advanced fiber-optic platforms for radiation sensing

Author(s): **Andrei Stancalie**, Center for Advanced Lasers Technologies, National Institute for Laser, Plasma and Radiation Physics (Romania); **Flavio Esposito**, Department of Engineering, University of Naples "Parthenope" (Italy); **Tony Constantin**, **Razvan Mihalcea**, Center for Advanced Lasers Technologies, National Institute for Laser, Plasma and Radiation Physics (Romania); **Daniel Negut**, Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering (Romania); **Laura Mihai**, **Daniel Ighigeanu**, Center for Advanced Lasers Technologies, National Institute for Laser, Plasma and Radiation Physics (Romania); **Ivo Bartoň**, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic); **Anubhav Srivastava**, **Stefania Campopiano**, Department of Engineering, University of Naples "Parthenope" (Italy); **Jan Mrazek**, Institute of Photonics and Electronics, Czech Academy of Sciences (Czech Republic); **Mateusz Śmietana**, Institute of Microelectronics and Optoelectronics, Warsaw University of Technology, Warsaw, Poland (Poland); **Agostino Iadicicco**, Department of Engineering, University of Naples "Parthenope" (Italy)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 5: HOLLOW-CORE FIBRE APPLICATIONS II

16 April 2026 • 11:00 - 12:30 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Chun-Wei Chen**, Univ. of Bath (United Kingdom)

14089-21 • 11:00 - 11:30

From Fabrication to Function: Acoustic Properties of Hollow-Core Fibers (Invited Paper)

Author(s): **Ivo Bartoň**, **Andrei Borodkin**, **Ondřej Podrazky**, **Yauhen Baravets**, **Ondřej Moravec**, **Martin Grábner**, **Zuzana Záborská**, **Ali A. Jasim**, **Pavel Honzátko**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic)

14089-22 • 11:30 - 11:50

Influence of cladding geometry on hollow-core fibre losses

Author(s): **Stephanos Yerolatsitis**, Cyprus Univ. of Technology (Cyprus), Univ. of Bath (United Kingdom); **Kyriacos Kalli**, Cyprus Univ. of Technology (Cyprus)

14089-23 • 11:50 - 12:10

Far field measurements of mode dependent losses in multi-mode hollow core fibres

Author(s): **Robbie Mears**, **William J. Wadsworth**, **Kerianne Harrington**, **James M. Stone**, **Tim A. Birks**, Univ. of Bath (United Kingdom)

14089-24 • 12:10 - 12:30

FIB micromachining of hollow-core fibers for gas spectroscopy

Author(s): **Patrycja Gronowicz**, Wroclaw Univ. of Science and Technology (Poland), Nanores sp. z o.o. sp. k. (Poland); **Piotr Perehiniec**, Wroclaw Univ. of Science and Technology (Poland); **Ryszard Buczynski**, Univ. of Warsaw (Poland); **Michal Nikodem**, Wroclaw Univ. of Science and Technology (Poland)

Lunch Break 12:30 - 13:40

SESSION 6: FIBRE LASERS I

16 April 2026 • 13:40 - 15:30 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Andreas A. Ioannou**, Cyprus Univ. of Technology (Cyprus)

14089-25 • 13:40 - 14:10

Active spun tapered double-clad fiber for high-power amplification of Gaussian and structured light beams (*Invited Paper*)

Author(s): **Regina V. Gumenyuk**, Tampere Univ. (Finland)

14089-26 • 14:10 - 14:30

Multimode fiber amplifiers: the uncharted potential of specialty fibers

Author(s): **Chun-Wei Chen**, Univ. of Bath (United Kingdom)

14089-27 • 14:30 - 14:50

Multilayer pumping configurations for enhanced coupling and spectral utilization in solar-pumped fiber lasers

Author(s): **Anvarjon Sherniyozov**, Karlsruhe Institute of Technology (Germany); **Bryce Richards**, **Dmitry Busko**, Karlsruher Institut für Technologie (Germany)

14089-28 • 14:50 - 15:10

Compact Fiber-Based Compressor for Generating 15-fs Pulses from a 1-W femtosecond Yb laser

Author(s): **Marco Polastri**, **Erika Benedetti**, Politecnico di Milano (Italy); **Eva Arianna Aurelia Pogna**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Nicola Coluccelli**, Politecnico di Milano (Italy)

14089-29 • 15:10 - 15:30

Optimization of 26-OAM mode erbium-doped ring-core fiber amplifier using genetic algorithm.

Author(s): **Ishani De**, **Vipul Rastogi**, Indian Institute of Technology Roorkee (India)

Coffee Break 15:30 - 16:00

SESSION 7: FIBRE LASERS II

16 April 2026 • 16:00 - 17:40 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Stephanos Yerolatsitis**, Cyprus Univ. of Technology (Cyprus)

14089-30 • 16:00 - 16:20

Tunability of a 2 µm all-fiber laser source by FBG heating and stretching

Author(s): **Sylvain Andraud**, French-German Research Institute of Saint-Louis (ISL), F-68300 Saint-Louis, FRANCE and Université Strasbourg, CNRS, LBS, Chimie de la Matière Complexe, UMR7140, F-67081 Strasbourg, FRANCE. (France); **Christophe Louot**, **Félix Billaud**, **Stefano Bigotta**, Institut Franco-Allemand de Recherches de Saint-Louis (France); **Nicolas Javahirali**, Univ. de Strasbourg (France), Chimie de la Matière Complexe, CNRS (France); **Anne Hildenbrand-Dhollande**, Institut Franco-Allemand de Recherches de Saint-Louis (France)

14089-31 • 16:20 - 16:40

SiC Heat-spreaders as a passive thermal management element for SWIR fiber lasers

Author(s): **Helena Picmausová**, Fraunhofer IOSB (Germany), University of Defence (Czech Republic); **Michael Písařík**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Clement Romano**, Cybel, LLC (United States); **Dieter Panitzek**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Jan Farlík**, Univ. of Defence (Czech Republic); **Marc Eichhorn**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Institut für Regelungs- und Steuerungssysteme, Karlsruher Institut für Technologie (Germany); **Christelle Kieleck**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany)

14089-32 • 16:40 - 17:00

Characterization and Optimization of Yb-doped Tapered Fiber Amplifiers for Narrow-linewidth Sources using Spatially Resolved Spectral Interferometry

Author(s): **Egor K. Mikhailov**, **Andrey E. Levchenko**, **Vladimir V. Velmiskin**, **Tatiana S. Zaushitsyna**, **Mikhail M. Bubnov**, Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation); **Denis S. Lipatov**, G.G. Devyatikh Institute of Chemistry of High-Purity Substances of the Russian Academy of Sciences (Russian Federation); **Mikhail E. Likhachev**, Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation)

14089-33 • 17:00 - 17:20

Extra-wide-SBS-gain single-mode optical fiber

Author(s): **Sergey V. Tsvetkov**, A. M. Prokhorov General Physics Institute RAS (Russian Federation); **Tatiana S. Zaushitsyna**, **Vitalya A. Agakhanova**, A. M. Prokhorov General Physics Institute of the RAS (Russian Federation); **Mikhail M. Yashkov**, G.G. Devyatikh Institute of Chemistry of High-Purity Substances, RAS (Russian Federation); **Mikhail E. Likhachev**, **Egor K. Mikhailov**, A. M. Prokhorov General Physics Institute of the RAS (Russian Federation)

14089-34 • 17:20 - 17:40

The suppression of amplified spontaneous emission in neodymium-doped fibers, emitting in the spectral region around 915 nm

Author(s): **Danila Davydov**, the Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation); **Svetlana Aleshkina**, **Vladimir Velmiskin**, A. M. Prokhorov General Physics Institute of the RAS (Russian Federation); **Alexey S. Lobanov**, **Mikhail M. Yashkov**, **Denis S. Lipatov**, G.G. Devyatikh Institute of Chemistry of High-Purity Substances, RAS (Russian Federation); **Dmitry Przhiialkovskii**, **Oleg Butov**, Kotelnikov Institute of Radio Engineering and Electronics (Russian Federation); **Mikhail E. Likhachev**, A. M. Prokhorov General Physics Institute of the RAS (Russian Federation); **Egor K. Mikhailov**, the Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation)

CONFERENCE 14090

Semiconductor Lasers and Laser Dynamics XII

12 - 14 April 2026 | Leicester/Salon 12 (Niveau/Level 1)

Conference Chair(s): **Marc Sciamanna**, CentraleSupélec (France); **Fan-Yi Lin**, National Tsing Hua Univ. (Taiwan); **Jesper Mørk**, Technical Univ. of Denmark (Denmark)

Program Committee: **Erwin A.J.M. Bente**, Technische Univ. Eindhoven (Netherlands); **Weng W. Chow**, Sandia National Labs. (United States); **Kent D. Choquette**, Univ. of Illinois at Urbana-Champaign (United States); **Gadi Eisenstein**, Technion-Israel Institute of Technology (Israel); **Frédéric Grillot**, Univ. Laval (Canada), Telecom Paris (France); **Massimo Giudici**, Univ. Côte d'Azur (France); **Antonio Hurtado**, Univ. of Strathclyde (United Kingdom); **Yiannis Kominis**, National Technical Univ. of Athens (Greece); **Michael Kneissl**, Technische Univ. Berlin (Germany); **Anders G. Larsson**, Chalmers Univ. of Technology (Sweden); **Luke J. Mawst**, Univ. of Wisconsin-Madison (United States); **Rainer Michalzik**, Univ. Ulm (Germany); **Johann Peter Reithmaier**, Univ. Kassel (Germany); **Carlo Sirtori**, Univ. Paris 7-Denis Diderot (France); **Peter M. Smowton**, Cardiff Univ. (United Kingdom); **Miguel C. Soriano**, Univ. of the Balearic Islands (Spain)

Sunday 12 April 2026

SESSION 1: MODE-LOCKING DYNAMICS I

12 April 2026 • 14:00 - 15:20 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Marc Sciamanna**, CentraleSupélec (France)

14090-1 • 14:00 - 14:20

Passive and Self-Mode locking in two section InGaAsP/InP Quantum Well Laser in an External Cavity

Author(s): **Joshua N. Onkangi**, **Navina Kleemann**, **Carsten Brenner**, **Nils Surkamp**, **Rejdi N. Y. Gjoni**, **Lukas Dierkes**, **Marcel van Delden**, **Phillip Scherer**, Ruhr-Univ. Bochum (Germany); **Martin Moehle**, Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI (Germany); **Martin R. Hofmann**, Ruhr-Univ. Bochum (Germany)

14090-2 • 14:20 - 14:40

feedback-controlled frequency comb generation in a quantum-dash laser

Author(s): **Youcef Driouche**, CNRS C2N, Université Paris-Saclay (France); **Abderrahim Ramdane**, Ctr. de Nanosciences et de Nanotechnologies, Univ. Paris-Saclay, CNRS (France); **Kamel Merghem**, Télécom SudParis, Institut Polytechnique de Paris (France)

14090-3 • 14:40 - 15:00

Electro-optic frequency comb and dual-comb spectroscopy using free-space ultrafast mid-IR modulators

Author(s): **Gia Long Ngo**, **Luca Lucia**, Ctr. de Nanosciences et de Nanotechnologies (France); **Mario Malerba**, Istituto Nazionale di Ricerca Metrologica (Italy); **Stefano Pirotta**, **Guy Aubin**, Ctr. de Nanosciences et de Nanotechnologies (France); **Lianhe Li**, Univ. of Leeds (United Kingdom); **Stefano Barbieri**, Univ. de Lille (France); **Edmund Linfield**, Univ. of Leeds (United Kingdom); **Jean-Michel Manceau**, **Adel Bousseksou**, **Raffaele Colombelli**, Ctr. de Nanosciences et de Nanotechnologies (France)

14090-4 • 15:00 - 15:20

Tunable densification of gain switched optical frequency combs via subharmonic generation

Author(s): **Diarmuid O' Sullivan**, **John McCarthy**, Tyndall National Institute (Ireland), Univ. College Cork (Ireland); **Bryan Kelleher**, **Frank Peters**, Univ. College Cork (Ireland), Tyndall National Institute (Ireland)

Coffee Break 15:20 - 15:50

SESSION 2: MULTIMODE LASERS AND SPIN LASERS

12 April 2026 • 15:50 - 17:50 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Sze-Chun Chan**, City Univ. of Hong Kong (Hong Kong, China)

14090-5 • 15:50 - 16:10

Compact monolithic dual-wavelength DFB laser based on a waveguide Bragg grating microcavity

Author(s): **Mohanad Al-Rubaiee**, Univ. of Glasgow (United Kingdom), EPSRC Ctr. for Doctoral Training in Applied Photonics (United Kingdom), Al-Karkh Univ. for Science (Iraq); **Xiao Sun, Jue Wang, Ahmet Hezarfen, Simeng Zhu, Zhefan Wang, John H. Marsh, Anthony E. Kelly, Stephen J. Sweeney, Lianping Hou**, Univ. of Glasgow (United Kingdom)

14090-6 • 16:10 - 16:30

Multimode vertical-cavity surface-emitting lasers under spin-injection

Author(s): **Uliana Diiankova**, Ruhr-University Bochum (Germany); **Mariusz Drong**, VŠB-Technical Univ. of Ostrava (Czech Republic); **Tobias Pusch, Rainer Michalzik**, Univ. Ulm (Germany); **Markus Lindemann**, Ruhr-Univ. Bochum (Germany); **Nils C. Gerhardt**, Univ. Paderborn (Germany); **Martin R. Hofmann**, Ruhr-Univ. Bochum (Germany)

14090-7 • 16:30 - 16:50

Nanosecond wavelength switching in integrated feedback-controlled Multi-Wavelength Lasers

Author(s): **Mathieu Ladouce, Pablo Marin-Palomo**, Vrije Univ. Brussel (Belgium); **Martin Virte**, Vrije Univ Brussel (Belgium)

14090-8 • 16:50 - 17:10

All-optical multi-wavelength conversion over THz via laser-assisted cross-gain modulation in a multi-wavelength laser

Author(s): **Pablo Marin-Palomo**, Vrije Universiteit Brussel (Belgium); **Bidyut Bikash-Boruah, Shahab Abdollahi, Mathieu Ladouce, Martin Virte**, Vrije Univ. Brussel (Belgium)

14090-9 • 17:10 - 17:30

Polarization dynamics of an optically injected spin-VECSEL

Author(s): **Quentin Le Mignon**, Institut Foton, Univ. de Rennes (France); **Ghaya Baili, Daniel Dolfi**, Thales Research & Technology (France); **Sophie Bouchoule**, Ctr. de Nanosciences et de Nanotechnologies (France); **Marco Romanelli, Mehdi Alouini**, Institut Foton, Univ. de Rennes (France)

14090-10 • 17:30 - 17:50

Optical neurons based on VCSELs with broken symmetry

Author(s): **Krzysztof Tyszk**, Univ. of Warsaw (Poland); **Marcin Gębski, Tomasz Czyszanowski**, Lodz Univ. of Technology (Poland); **Barbara Piętka**, Univ. of Warsaw (Poland)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticaean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: QUANTUM CASCADE LASERS

13 April 2026 • 11:30 - 12:30 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Alexander Cerjan**, Sandia National Labs. (United States)

14090-11 • 11:30 - 11:50

Dispersion-Controlled Quantum-Walk Comb Generation in Metasurface THz QC-VECSELS

Author(s): **Marco Raffa**, ETH Zurich (Switzerland); **Jordane Bloomfield**, Univ. of California, Los Angeles (United States); **Yu Wu**, Stanford Univ. (United States), Univ. of California, Los Angeles (United States); **Jérôme Faist**, ETH Zurich (Switzerland); **Benjamin Williams**, Univ. of California, Los Angeles (United States); **Giacomo Scalari**, ETH Zurich (Switzerland)

14090-12 • 11:50 - 12:10

MOEMS-based EC-QCLs: Automated module assembly and multicore modules

Author(s): **Marko Härtelt**, **Christian Schilling**, **Stefan Hugger**, **Bernd Rothenberger**, **Yuri V. Flores**, Fraunhofer-Institut für Angewandte Festkörperphysik IAF (Germany); **Markus Schwarzenberg**, **Tino Pügner**, **Andre Dreyhaupt**, Fraunhofer-Institut für Photonische Mikrosysteme IPMS (Germany)

14090-13 • 12:10 - 12:30

Subharmonic RF locking in THz quantum walk comb lasers

Author(s): **Valerio Digiorgio**, **Paolo Micheletti**, **Marco Raffa**, **Robert M. Gray**, **Alexander Dikopoltsev**, **Mattias Beck**, **Jérôme Faist**, **Giacomo Scalari**, ETH Zurich (Switzerland)

Lunch Break 12:30 - 13:40

SESSION 4: EXTERNAL CAVITY LASERS AND FEEDBACK

13 April 2026 • 13:40 - 15:00 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Jesper Mørk**, Technical Univ. of Denmark (Denmark)

14090-14 • 13:40 - 14:00

Optical feedback-induced quasiperiodic cascade in optically injected semiconductor lasers

Author(s): **Lucas Oliverio**, CentraleSupélec - LMOPS (France); **Jules Poncelet**, **Marc Sciamanna**, CentraleSupélec (France)

14090-15 • 14:00 - 14:20

Modelling and analysis of semiconductor lasers subject to fibre Bragg grating feedback

Author(s): **Joe Steele**, **Bernd Krauskopf**, **Neil G. R. Broderick**, The Univ. of Auckland (New Zealand), The Dodd-Walls Ctr. for Photonic and Quantum Technologies (New Zealand)

14090-16 • 14:20 - 14:40

Achieving 170 Hz intrinsic linewidth with a 452 nm GaN DFB Laser Diode through FBG external cavity injection locking

Author(s): **Georges Perin**, L'Institut Foton, Univ. de Rennes, CNRS (France); **Laurent Lablonde**, Exail SAS (France); **Marco Rossetti**, **Marco Malinverni**, **Antonino Castiglia**, **Marcus Duelk**, Indie Technologies Switzerland AG (Switzerland); **Stéphane Trebaol**, L'Institut Foton, Univ. de Rennes, CNRS (France)

14090-17 • 14:40 - 15:00

Noise induced modulations in passively mode-locked semiconductor laser with optical self-feedback

Author(s): **Kathy Lüdge**, **Lina Jaurigue**, Technische Univ. Ilmenau (Germany)

Coffee Break 15:00 - 15:30

SESSION 5: SEMICONDUCTOR LASER DESIGN AND PERFORMANCES

13 April 2026 • 15:30 - 17:40 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Kamel Merghem**, Télécom SudParis (France)

14090-18 • 15:30 - 16:00

Steerable surface emitting laser design based on a line of bound states in the continuum (Invited Paper)

Author(s): **Alexander Cerjan**, Sandia National Labs. (United States)

14090-19 • 16:00 - 16:20

Experimental demonstration and theoretical analysis of electrically-driven photonic crystal nanobeam lasers

Author(s): **Mathias Marchal**, Technical University of Denmark (Denmark); **Evangelos Dimopoulos**, Technical Univ. of Denmark (Denmark); **Meng Xiong**, Technical University of Denmark (Denmark); **Yi Yu**, **Kresten Yvind**, **Jesper Mørk**, Technical Univ. of Denmark (Denmark)

14090-20 • 16:20 - 16:40

Investigation of 775 nm emitting InGaAsP QW VECSEL for optimised efficiency and output power

Author(s): **Rebecca Rühle**, Institut für Halbleiteroptik und Funktionale Grenzflächen, Univ. Stuttgart (Germany); **Maxim Leyzner, Marwan Adbou Ahmed, Thomas Graf**, Institut für Strahlwerkzeuge, Univ. Stuttgart (Germany); **Michael Jetter, Peter Michler**, Institut für Halbleiteroptik und Funktionale Grenzflächen, Univ. Stuttgart (Germany)

14090-21 • 16:40 - 17:00

Compact ECL at 637 nm Using a Flip-Chip-Bonded RSOA on SiN PIC

Author(s): **Paulomi Mandal**, RWTH Aachen University Institut und Lehrstuhl für (Germany); **Alireza Tabatabaei Mashayekh, Rebecca Rodrigo**, RWTH Aachen Univ. (Germany); **Georgios Sinatkas**, Black Semiconductor GmbH (Germany); **Aqeel Abbas**, Univ. Münster (Germany); **Alvaro Moscoso Martir, Florian Merget, Jeremy Witzens**, RWTH Aachen Univ. (Germany)

14090-22 • 17:00 - 17:20

Spatio-temporal characterization of nanoscale thermal dynamics in electrically pumped (Si)GeSn microdisk lasers

Author(s): **Agnieszka Corley-Wiciak, Cedric Corley-Wiciak**, ESRF - The European Synchrotron (France); **Lukas Seidel**, Institut für Halbleitertechnik, Univ. Stuttgart (Germany); **Gianfranco Sfuncia**, Istituto per la Microelettronica e Microsistemi, Consiglio Nazionale delle Ricerche (Italy); **Jhonny Tiscareno Ramirez**, Peter Grünberg Institute, Forschungszentrum Jülich GmbH (Germany); **Peter Boesecke**, ESRF - The European Synchrotron (France); **Michael Oehme**, Institut für Halbleitertechnik, Univ. Stuttgart (Germany); **Giuseppe Nicotra**, Istituto per la Microelettronica e Microsistemi, Consiglio Nazionale delle Ricerche (Italy); **Dan Mihai Buca**, Peter Grünberg Institute, Forschungszentrum Jülich GmbH (Germany); **Tobias Schulli**, ESRF - The European Synchrotron (France); **Bernd Witzigmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Giovanni Capellini**, IHP GmbH - Leibniz-Institut für innovative Mikroelektronik (Germany)

14090-23 • 17:20 - 17:40

Birefringence characterization of coupled-cavity VCSELs

Author(s): **Thomas de Adelsburg Ettmayer**, Ruhr-Univ. Bochum (Germany); **Nikolay Ledentsov, Nikolay N. Ledentsov, Vitaly A. Shchukin, Alexander N. Ledentsov, Oleg Y. Makarov, Ilya E. Titkov**, VI Systems GmbH (Germany); **Martino D'Alessandro, Alberto Tibaldi**, Politecnico di Torino (Italy); **Guido Giuliani**, Julight S.r.l. (Italy); **Nils C. Gerhardt**, Univ. Paderborn (Germany); **Martin R. Hofmann, Markus Lindemann**, Ruhr-Univ. Bochum (Germany)

Tuesday 14 April 2026

SESSION 6: LASER-BASED COMPUTING AND NETWORK DYNAMICS

14 April 2026 • 8:30 - 10:20 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Marc Sciamanna**, CentraleSupélec (France)

14090-28 • 8:30 - 9:00

Neuromorphic computing with large-area VCSELs (Invited Paper)

Author(s): **Xavier Porte**, Univ. of Strathclyde (United Kingdom)

14090-29 • 9:00 - 9:20

Deep photonic reservoir computer for fiber nonlinearity compensation of coherent signals

Author(s): **Yi-Wei Shen**, ShanghaiTech University (China); **Rui-Qian Li, Zheng-Can Sun**, ShanghaiTech Univ. (China); **Cheng Wang**, ShanghaiTech University (China)

14090-30 • 9:20 - 9:40

Simulated Annealing of the Ising Model using an Excitable Laser Device

Author(s): **Seán O'Donoghue, Odhran Liston, Frank Peters, Bryan Kelleher**, Univ. College Cork (Ireland), Tyndall National Institute (Ireland)

14090-31 • 9:40 - 10:00

Experimental and numerical analysis of semiconductor laser network dynamics

Author(s): **Mohammadreza Mokhtari**, Instituto de Física Interdisciplinar y Sistemas Complejos - IFISC (UIB-CSIC) (Spain); **Adam Mackowiak, Moritz Pflüger, Miguel Soriano, Apostolos Argyris**, Instituto de Física Interdisciplinar y Sistemas Complejos (Spain)

14090-32 • 10:00 - 10:20

Tailoring laser coupling for efficient synchronization

Author(s): **Nathan Vigne**, Yale Univ. (United States); **Amit Pando**, Weizmann Institute of Science (Israel); **Li-Li Ye**, Arizona State Univ. (United States); **Mehmet Bütün**, Yale Univ. (United States); **Ying-Cheng Lai**, Arizona State Univ. (United States); **Nir Davidson**, Weizmann Institute of Science (Israel); **Fan-Yi Lin**, National Tsing Hua Univ. (Taiwan), Yale Univ. (United States); **Hui Cao**, Yale Univ. (United States)

Coffee Break 10:20 - 10:50

SESSION 7: LASER DYNAMICS AND CHAOS

14 April 2026 • 10:50 - 12:40 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Miguel Cornelles Soriano**, Instituto de Física Interdisciplinar y Sistemas Complejos (Spain)

14090-33 • 10:50 - 11:20

Locking-unlocking dynamics of mutually coupled laser diodes for extreme events (*Invited Paper*)

Author(s): **Shiya Wang, Wen-Hao Jiang, Mu-Yang Li**, City Univ. of Hong Kong (Hong Kong, China); **Sze-Chun Chan**, City University of Hong Kong (Hong Kong, China)

14090-34 • 11:20 - 11:40

Permutation-Entropy Mapping of Dynamical Complexity in Modulated Optically Injected Semiconductor Lasers

Author(s): **Georgia Himona, Yannis Kominis**, National Technical Univ. of Athens (Greece)

14090-35 • 11:40 - 12:00

Response of pulsing oscillators to any abrupt and possibly strong perturbations

Author(s): **Hinke M. Osinga, Kyoung Lee, Neil G. R. Broderick, Bernd Krauskopf**, The Univ. of Auckland (New Zealand)

14090-36 • 12:00 - 12:20

Nonlinear and chaotic dynamics of a multimode VCSEL

Author(s): **Yohann Sanvert**, Université de Lorraine, CentraleSupélec, LMOPS (France), Chaire Photonique, CentraleSupélec, LMOPS (France); **Jules Mercadier, Stefan Bittner**, Lab. Matériaux Optiques, Photonique et Systèmes (France), CentraleSupélec (France); **Angel Valle**, Univ. de Cantabria (Spain); **Marc Sciamanna**, Lab. Matériaux Optiques, Photonique et Systèmes (France), CentraleSupélec (France)

14090-37 • 12:20 - 12:40

Chaos Raman distributed optical fiber sensing using bandwidth-tailored chaos laser for enhanced SNR and temperature localization

Author(s): **Chih-Wei Chen**, National Tsinghua University (Taiwan); **Fan-Yi Lin**, National Tsing Hua Univ. (Taiwan)

Lunch/Exhibition Break 12:40 - 14:00

SESSION 8: MODE-LOCKING DYNAMICS II

14 April 2026 • 14:00 - 15:30 | Leicester/Salon 12 (Niveau/Level 1)

Session Chair(s): **Fan-Yi Lin**, National Tsing Hua Univ. (Taiwan)

14090-24 • 14:00 - 14:30

Self-injected quantum-dash lasers for broadband frequency comb generation and application to multi-Tbit/s data transmission

(*Invited Paper*)

Author(s): **Youssef Driouche, Guy Aubin**, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France), Univ. Paris-Saclay (France); **Sofiane Belahsene**, SAMOVAR (France), Télécom SudParis (France), Institut Polytechnique de Paris (France); **Abderrahim Ramdane**, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France), Univ. Paris-Saclay (France); **Kamel Merghem**, Télécom SudParis, Institut Polytechnique de Paris (France)

14090-25 • 14:30 - 14:50

Photonics-Assisted Radio Frequency Down Conversion with Quantum-Dot Mode-Locked Lasers

Author(s): **Lakshmi Narayanan Venkatasubramani**, Dublin City Univ. (Ireland); **Lucia Amaro Losada, Muneeb Farooq**, mBryonics Ltd. (Ireland); **Liam Barry**, Dublin City Univ. (Ireland)

14090-26 • 14:50 - 15:10

Frequency locking by master lasers with intrinsic linewidth ranging from millihertz to megahertz

Author(s): **Sabarinath Sunil, Thidsanu Apiphatnaphakul**, Fonctions Optiques pour les Technologies de l'information (France); **Amith Karuvath**, Novanta (United Kingdom); **Arjun Rajeev, Pascal Besnard**, Fonctions Optiques pour les Technologies de l'information (France)

14090-27 • 15:10 - 15:30

Optical frequency comb stabilization using cascaded injection locking for DAS applications in ISAC systems

Author(s): **Yu-Han Hung, Ting-Kuan Lin, Jin-Yi Ou, Guan-Wei Chen**, National Sun Yat-sen Univ. (Taiwan)

Coffee Break 15:30 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14090-38 • 18:10 - 20:00

Phase singularity HOTI quantum cascade laser

Author(s): **Hanyu Liu**, Nanyang Technological Univ (Singapore); **Bofeng Zhu**, **Jieyuan Cui**, Nanyang Technological Univ. (Singapore); **Qian Wang**, A*STAR Institute of Materials Research and Engineering (Singapore); **Qi Jie Wang**, Nanyang Technological Univ. (Singapore)

14090-39 • 18:10 - 20:00

Temporal cloak for secure communication based on optical injection semiconductor laser

Author(s): **Xin Zhang**, **Xiangming Xu**, **Huatao Zhu**, **Feiyu Li**, **Shuwen Chen**, **Tong Xu**, Information Support Force Engineering Univ. (China)

14090-40 • 18:10 - 20:00

Observation of the spontaneous symmetry-breaking of tilted waves in a mode-locked VECSEL

Author(s): **Lucas Sarrazin**, CNRS (France); **Mathias Marconi**, **Massimo Giudici**, Univ. Côte d'Azur (France); **Arnaud Garnache**, **Isabelle Sagnes**, **Grégoire Beaudoin**, **Konstantinos Pantzas**, **Luc Le Gratiet**, CNRS (France)

14090-41 • 18:10 - 20:00

Development of a high-speed, high-spectral-resolution grating spectrometer for a low-cost VCSEL swept-source laser diode for hydrogen gas sensing

Author(s): **Daniel Ruf**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Tobias Baselt**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Forschungs- und Transferzentrum e.V. (Germany); **Dominik Becher**, **Philipp Halusa**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Andreas Hänel**, DBI - Gastechnologisches Institut gGmbH Freiberg (Germany); **Peter Hartmann**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany)

14090-42 • 18:10 - 20:00

Waveguide-pair design co-optimization and tolerance study for CMOS-compatible hybrid III-V/Si quantum dot DBR lasers

Author(s): **Konstantinos Papatryfonos**, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); **Peter Raymond Smith**, **David R. Selviah**, Univ. College London (United Kingdom)

14090-43 • 18:10 - 20:00

Phase resetting in the Yamada model of a Q-switched laser

Author(s): **Jacob Ngaha**, Instituto de Ciencia de Materiales de Madrid (Spain); **Neil G. R. Broderick**, **Hinke M. Osinga**, **Bernd Krauskopf**, The Univ. of Auckland (New Zealand)

14090-44 • 18:10 - 20:00

Cavity-enhanced high-speed mid-infrared trace gas measurement system using a narrowband-filtered InAs detector and a quantum interband cascade LED

Author(s): **David Geßner, Tobias Baselt, Daniel Ruf**, Fraunhofer IWS (Germany); **Peter Hartmann**, Fraunhofer IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Thomas Brabant**, fiberware (Germany); **Annett Isserstedt-Trinke, Jeffrey Knossalla**, Micro-Hybrid Electronic GmbH (Germany); **Andreas Hänel**, DBI Gas- und Umwelttechnik GmbH (Germany); **Steffan Braun**, Westsächsische Hochschule Zwickau (Germany)

14090-45 • 18:10 - 20:00

The description of heat dissipation stages in quantum cascade lasers: experiment and analytics

Author(s): **Ivan Vrubel, Evgeniia Cherotchenko**, Ioffe Institute (Russian Federation); **Alexey Nikitin, Valentin Podoprigora**, Ioffe Institute (Russian Federation), Saint Petersburg Electrotechnical Univ. "LETI" (Russian Federation); **Dmitrii Mikhailov, Dmitrii Chistyakov, Valentin Mylnikov, Sergei Losev, Elena Kognovitskaya, Andrey Lutetskiy, Sergey Slipchenko**, Ioffe Institute (Russian Federation); **Andrey Gladyshev**, Connector Optics LLC (Russian Federation); **Konstantin Podgaetskiy**, POLYUS Research Institute of M. F. Stelmakh JSC (Russian Federation); **Andrey Babichev, Denis Papylev**, ITMO Univ. (Russian Federation); **Andrey Andreev, Maxim Ladugin, Alexander Marmalyuk**, POLYUS Research Institute of M. F. Stelmakh JSC (Russian Federation); **Innokentiy Novikov**, Connector Optics LLC (Russian Federation), ITMO Univ. (Russian Federation); **Vladimir Kuchinskii**, Ioffe Institute (Russian Federation); **Leonid Karachinsky**, ITMO Univ. (Russian Federation), Connector Optics LLC (Russian Federation); **Nikita Pikhtin**, Ioffe Institute (Russian Federation); **Anton Egorov**, Connector Optics LLC (Russian Federation); **Nickolay Deryagin, Vladislav Dudelev, Grigori Sokolovskii, Sausan Felchina-Abdulrazak**, Ioffe Institute (Russian Federation)

14090-46 • 18:10 - 20:00

Frequency comb generation in self-injected quantum-dash and quantum-well single-section mode-locked lasers: a comparison

Author(s): **Youcef Driouche, Guy Aubin, Abderrahim Ramdane**, Ctr. de Nanosciences et de Nanotechnologies (France); **Kamel Merghem**, Télécom SudParis (France)

14090-47 • 18:10 - 20:00

Beam quality enhancement of broad-area semiconductor lasers achieved through lateral and longitudinal current modulation

Author(s): **Margarida Facao**, Universitat Politècnica de Catalunya (Spain); **Cristina Masoller, Muriel Botey, Ramon Herrero, Kestutis Staliunas**, Univ. Politècnica de Catalunya (Spain); **Carles Oriach, Jose Ramos-de-Campos**, MONOCROM S.L. (Spain)

14090-48 • 18:10 - 20:00

Time domain modeling of actively modulated semiconductor lasers

Author(s): **Michael A. Schreiber**, Technische Universität München (Germany); **Urban Senica**, Harvard Univ. (United States); **Johannes Stowasser, Lukas Seitner**, Technische Univ. München (Germany); **Michael Haider**, Univ. der Bundeswehr München (Germany); **Giacomo Scalari**, ETH Zurich (Switzerland); **Christian Jirauschek**, Technische Univ. München (Germany)

14090-49 • 18:10 - 20:00

Shot-noise-limited operation of quantum and interband cascade lasers

Author(s): **Jacopo Pelini, Francesco Cappelli, Tecla Gabbrielli, Simone Borri**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Irene La Penna**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Luigi Consolino, Paolo De Natale**, Istituto Nazionale di Ottica (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy)

14090-50 • 18:10 - 20:00

Compact frequency-stabilized diode laser module for quantum technology applications

Author(s): **Carlo Sias, Lucia Duca**, Istituto Nazionale di Ricerca Metrologica (Italy); **Pierre Brochard, Patrick O'Donoghue**, SILENTSYS SAS (France); **Emilien Beck**, IDIL Fibres Optiques (France); **Roberto Concas**, Istituto Nazionale di Ricerca Metrologica (Italy)

14090-51 • 18:10 - 20:00

Revisiting Optical Feedback: Dynamic Targeting for Rapid and Precise Laser Tuning

Author(s): **Robbe de Mey**, Vrije Univ. Brussel (Belgium); **Spencer W. Jolly**, Univ. Libre de Bruxelles (Belgium); **Alexandre Locquet**, Georgia Tech-Europe (France), Georgia Institute of Technology (United States); **Martin Virte**, Vrije Univ. Brussel (Belgium)

14090-52 • 18:10 - 20:00

Recent progress in self-injection-locked DFB semiconductor lasers using optical fiber ring cavities

Author(s): **Ivan Panyayev, Pavel Itrin, Dmitry Korobko, Maxim Pribylov, Daniil Kachalkin, Aleksei Abanin, Igor Yavtushenko**, Ulyanovsk State University (Russian Federation); **Dmitrii Stoliarov**, Aston University (United Kingdom); **Andrei A. Fotiadi**, Univ of Mons (Belgium), Ulyanovsk State University (Russian Federation)

CONFERENCE 14091

Fiber Lasers and Glass Photonics: Materials through Applications V

12 - 16 April 2026 | Berlin/Salon 9 (Niveau/Level 0)

Conference Chair(s): **Stefano Taccheo**, Politecnico di Torino (Italy); Swansea Univ. (United Kingdom); **Maria Rita Cicconi**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Matthias L. Jäger**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

Program Committee: **Lidia Armelao**, CNR-DSCTM (Italy); **Rolindes Balda**, Univ. del País Vasco (Spain); **John M. Ballato**, Clemson Univ. (United States); **Wilfried Blanc**, Lab. de physique de la matière condensée (France); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Amol Choudhary**, Indian Institute of Technology Delhi (India); **Cosimo D'Andrea**, Politecnico di Milano (Italy); **Dominik Dorosz**, AGH Univ. of Science and Technology (Poland); **Miroslav Dramićanin**, Vinca Institute of Nuclear Sciences (Serbia); **Marc Eichhorn**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Maurizio Ferrari**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Shibin Jiang**, AdValue Photonics, Inc. (United States); **Matthieu Lancry**, Univ. Paris-Saclay (France); **Anna Lukowiak**, Institute of Low Temperature and Structure Research PAN (Poland); **Christos Markos**, Technical Univ. of Denmark (Denmark); **Virginie Nazabal**, Univ. de Rennes 1 (France); **Laetitia C. Petit**, Tampere Univ. (Finland); **Nasser N. Peyghambarian**, College of Optical Sciences, The Univ. of Arizona (United States); **Francesco Prudenzano**, Politecnico di Bari (Italy); **Alexander Quandt**, Univ. of the Witwatersrand (South Africa); **Gediminas Račiukaitis**, Ctr. for Physical Sciences and Technology (Lithuania); **Mariola O. Ramirez**, Univ. Autónoma de Madrid (Spain); **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Roberto Scotti**, Univ. degli Studi di Milano-Bicocca (Italy); **Angela B. Seddon**, The Univ. of Nottingham (United Kingdom); **Lukasz Sojka**, Wroclaw Univ. of Science and Technology (Poland); **Irina T. Sorokina**, Norwegian Univ. of Science and Technology (Norway)

Sunday 12 April 2026

SESSION 1: NOVEL MATERIALS AND COMPONENTS I

12 April 2026 • 15:30 - 17:00 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Maria Rita Cicconi**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14091-1 • 15:30 - 16:00

Silicate glass and glass-ceramics for applications in scintillators: Towards near-infrared region (*Invited Paper*)

Author(s): **Petr Vařák**, Institute of Photonics and Electronics of the CAS vvi (Czech Republic), University of Chemistry and Technology, Prague (Czech Republic); **Vítězslav Jarý**, **Vladimir Babin**, Institute of Physics of the CAS, v.v.i. (Czech Republic); **Artem Simoniakin**, **Jan Abrham**, **Jakub Volf**, Univ. of Chemistry and Technology Prague (Czech Republic); **Jan Mrazek**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Pavla Nekvindová**, Univ. of Chemistry and Technology Prague (Czech Republic)

14091-2 • 16:00 - 16:20

Enhanced upconversion luminescence in Er³⁺-Yb³⁺ codoped LaF₃ glass-ceramic optical fibers for efficient photonic devices

Author(s): **Rolindes Balda**, University of the Basque Country (Spain); **Mercedes Sedano**, Instituto de Cerámica y Vidrio (Spain); **Marcin Kochanowicz**, Białystok Univ. of Technology (Poland); **Dominik Dorosz**, AGH Univ. of Krakow (Poland); **Alicia Durán**, Instituto de Cerámica y Vidrio (Spain); **Joaquín Fernández**, Donostia International Physics Ctr. (Spain); **María Jesús Pascual**, Instituto de Cerámica y Vidrio (Spain)

14091-3 • 16:20 - 16:40

Dual-polarized laser emission from a Yb:LiYF₄ crystal cut along the optical axis

Author(s): **Marc Brunel**, Fonctions Optiques pour les Technologies de l'information, CNRS (France), Univ. de Rennes (France); **Pavel A. Loiko**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Antonio Tawik**, Fonctions Optiques pour les Technologies de l'information, CNRS (France), Univ. de Rennes (France); **Abdelmjid Benayad**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Goulc'hén Loas**, Fonctions Optiques pour les Technologies de l'information, CNRS (France), Univ. de Rennes (France); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Marc Vallet**, Fonctions Optiques pour les Technologies de l'information, CNRS (France), Univ. de Rennes (France)

14091-4 • 16:40 - 17:00

Broadband near-infrared luminescence in glasses doped with PbS quantum dots and rare-earth ions for optical fiber applications

Author(s): **Jakub Markiewicz, Tomasz Ragiń, Piotr Miluski**, Białystok Univ. of Technology (Poland); **María Jesús Pascual**, Instituto de Cerámica y Vidrio (Spain); **Vladyslav Ovsynskyi, Dominik Dorosz**, AGH Univ. of Krakow (Poland); **Jan Dorosz, Marcin Kochanowicz**, Białystok Univ. of Technology (Poland)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 2: KEYNOTE SESSION: NOVEL MATERIALS AND COMPONENTS

13 April 2026 • 11:30 - 12:45 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Stefano Taccheo**, Politecnico di Torino (Italy)

14091-6 • 11:30 - 12:15

Novel thermal management techniques in fiber lasers and amplifiers (Keynote Presentation)

Author(s): **Michel J. F. Digonnet**, Stanford Univ. (United States)

14091-7 • 12:15 - 12:45

Print, draw, and guide: Additive manufacturing of microstructured optical fibres (*Invited Paper*)

Author(s): **Azim Onur Yazici, Michael Frosz**, Max-Planck-Institut für die Physik des Lichts (Germany); **Frederik Kotz-Helmer**, Glassomer GmbH (Germany), Univ. of Freiburg (Germany), Freiburg Materials Research Ctr. (Germany)

Lunch Break 12:45 - 14:00

SESSION 3: NOVEL MATERIALS AND COMPONENTS II

13 April 2026 • 14:00 - 15:20 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Wilfried Blanc**, Institut de Physique de Nice (France)

14091-8 • 14:00 - 14:20

Limitations of the aluminophospho-silica glasses for 2µm fiber lasers

Author(s): **Julien Le Gouët, Arnaud Motard**, ONERA (France); **Thierry Robin**, Exail SAS (France)

14091-9 • 14:20 - 14:40

Dy-doped silica materials for yellow optical fiber lasers

Author(s): **Katrin Wondraczek, Roman Sajzew, Florian Lindner, Andre Kalide, Jörg Bierlich, Martin Lorenz, Arni Pratiwi, Martin Leich,** Leibniz IPHT (Germany); **Igor Seibel-Geraschenko,** Friedrich-Schiller-Univ. Jena (Germany); **Robert Müller, Jan Dellith,** Leibniz IPHT (Germany); **Lothar Wondraczek,** OSIM FSU Jena (Germany); **Matthias Jäger,** Leibniz IPHT (Germany)

14091-10 • 14:40 - 15:00

Processing and optical degradation assessment of Eu³⁺-doped 13-93 bioactive glass fibers

Author(s): **Agata Baranowska, Krzysztof Markowski, Izabela Zglobicka, Piotr Miluski, Tomasz Ragiń, Marcin Kochanowicz,** Bialystok Univ. of Technology (Poland); **Dominik Dorosz,** AGH Univ. of Krakow (Poland)

14091-11 • 15:00 - 15:20

Advances of fluorescence measurements and photodarkening studies of dysprosium-doped silica fibers for efficient yellow emission

Author(s): **Arni C. Pratiwi,** Leibniz-Institut für Photonische Technologien eV (Germany); **Martin Leich, Robert Müller, Martin Lorenz, Katrin Wondraczek,** Leibniz-Institut für Photonische Technologien e.V. (Germany); **Jonathan Demaimay, Alain Braud, Patrice Camy, Pavel A. Loiko,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Matthias L. Jäger,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

Coffee Break 15:20 - 15:50

SESSION 4: NOVEL MATERIALS AND COMPONENTS III

13 April 2026 • 15:50 - 17:10 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Maria Rita Cicconi,** Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14091-16 • 15:50 - 16:10

Femtosecond-laser waveguide inscription in fluoride glasses (*Invited Paper*)

Author(s): **Alexander Fuerbach,** Macquarie Univ (Australia); **Simon Gross,** Macquarie Univ. (Australia); **Toney T. Fernandez,** Adelaide Univ. (Australia)

14091-13 • 16:10 - 16:30

Femtosecond direct laser writing of an integrated gain medium in the near-IR range in a bismuth-containing glass

Author(s): **Mathis Carpentier,** Univ. de Bordeaux (France); **Fouad Alassani, Thierry Cardinal,** Institut de Chimie de la Matière Condensée de Bordeaux, CNRS (France); **Lionel Canioni, Yannick Petit,** Univ. de Bordeaux (France)

14091-14 • 16:30 - 16:50

Femtosecond-laser-written waveguides in Pr³⁺-doped sulfide glass: μ -spectroscopy and birefringence analysis

Author(s): **Ngoc Quynh Hoa Nguyen,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Mariel Ledesma Molinero,** Institut des Sciences Chimiques de Rennes, CNRS (France), Univ. de Rennes (France); **Pavel A. Loiko,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Thien Le Phu, Pascal Masselin,** Univ. du Littoral Côte d'Opale (France); **Patrice Camy,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Alain Braud,** Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Catherine Boussard-Plédel, David Le Coq,** Institut des Sciences Chimiques de Rennes, CNRS (France), Univ. de Rennes (France)

14091-15 • 16:50 - 17:10

Engineering dielectric nanoparticles in optical fibre by using a femtosecond laser

Author(s): **Floriane Pellerin,** Institut de Physique de Nice, CNRS (France); **Imane Sahnoune,** Ctr. de Mise en Forme des Matériaux (France); **Geoffroy Aubry,** Institut de Physique de Nice, CNRS (France); **Martiane Cabié, Thomas Neisius,** Aix-Marseille Univ. (France), Ecole Centrale de Marseille (France), CNRS (France); **Claire Petuya,** Institut des Sciences Moléculaires, Univ. Bordeaux (France); **Marc Dussauze,** Institut des Sciences Moléculaires, Univ. de Bordeaux (France); **Franck Pigeonneau,** Ctr. de Mise en Forme des Matériaux (France); **Matthieu Bellec, Wilfried Blanc,** Institut de Physique de Nice, CNRS (France)

Tuesday 14 April 2026

SESSION 5: NOVEL MATERIALS AND COMPONENTS IV

14 April 2026 • 8:30 - 10:10 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Thi Ngoc Lam Tran,** Univ. Gent (Belgium)

14091-17 • 8:30 - 8:50

Judd-Ofelt analysis and emission spectroscopy of Dy³⁺-doped InF₃-based glass for visible fiber lasers

Author(s): **Jonathan Demaimay**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen (France); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Thiphane Rault**, **Solenn Cozic**, **Laurine Bodin**, Le Verre Fluoré (France); **Elena Dunina**, Vitebsk State Technological Univ. (Belarus); **Liudmila Fomicheva**, Belarusian State Univ. of Informatics and Radioelectronics (Belarus); **Alexey Kornienko**, Vitebsk State Technological Univ. (Belarus); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Ammar Hideur**, Complexe de Recherche Interprofessionnel en Aérothermochimie (France), Institut National des Sciences Appliquées de Rouen, CNRS (France), Univ. de Rouen Normandie (France); **Alain Braud**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France)

14091-18 • 8:50 - 9:10

The influence of Pt ions on the optical and morphological properties of NaYF₄

Author(s): **Julia Potempa**, **Gloria Lesly Jimenez Miranda**, **Michał Welna**, AGH University of Krakow (Poland); **Carlos Vazquez-Lopez**, Center for Research and Advanced Studies of the National Polytechnic Institute (Mexico); **Anita Trenczek-Zajac**, AGH University of Krakow (Poland); **Stephan Mario Lopez-Lopez**, Center for Research and Advanced Studies of the National Polytechnic Institute (Mexico); **Agata Baranowska**, Białystok University of Technology (Poland); **Wojciech Talik**, **Krzysztof Dzierżęga**, Jagiellonian University (Poland); **Marcin Kochanowicz**, Białystok University of Technology (Poland); **Dominik Dorosz**, AGH University of Krakow (Poland)

14091-19 • 9:10 - 9:30

Er³⁺ optimized tellurite glass for enhanced spectroscopic properties and waveguiding

Author(s): **Pradeep Ramanan**, Tampere Univ. (Finland), Univ. of Pardubice (Czech Republic); **Jan Gutwirth**, Univ. of Pardubice (Czech Republic); **Virginie Nazabal**, Univ. de Rennes 1 (France), Univ. of Pardubice (Czech Republic); **Matthieu Roussey**, Univ. of Eastern Finland (Finland); **Petr Nemec**, Univ. of Pardubice (Czech Republic); **Laeticia C. Petit**, Tampere Univ. (Finland)

14091-20 • 9:30 - 9:50

Impact of Argon Sputtering Pressure on Mid-Infrared Emission from Dy³⁺-Doped Ga-Ge-Sb-Se Waveguides

Author(s): **Taghrid Ghanawi**, Univ. de Rennes 1 (France); **Florent Starecki**, Institut des Sciences Chimiques de Rennes (France); **Marion Baillieul**, Univ. of Pardubice (Czech Republic); **Abdelali Hammouti**, Fonctions Optiques pour les Technologies de l'information (France); **Mélanie Joubaud**, Institut des Sciences Chimiques de Rennes (France); **Jan Gutwirth**, Univ. of Pardubice (Czech Republic); **Jonathan Lemaître**, Fonctions Optiques pour les Technologies de l'information (France); **Albane Benardais**, Institut des Sciences Chimiques de Rennes (France); **Stanislav Slang**, Univ. of Pardubice (Czech Republic); **Joël Charrier**, Fonctions Optiques pour les Technologies de l'information (France); **Petr Nemec**, Univ. of Pardubice (Czech Republic); **Loïc Bodiou**, Fonctions Optiques pour les Technologies de l'information (France); **Virginie Nazabal**, Université de Rennes (France)

14091-21 • 9:50 - 10:10

Flexible ZnO-PDMS Microneedle Waveguides for Controlled Red-Light Delivery in Photomedical Applications

Author(s): **Moqaddaseh Afzali Naniz**, **Amr Al Abed**, **Danyang Wang**, **Nigel Lovell**, **Dorna Esrafilzadeh**, The Univ. of New South Wales (Australia)

Coffee Break 10:10 - 10:40

SESSION 6: NOVEL LASERS AND LUMINESCENCE MATERIALS I

14 April 2026 • 10:40 - 12:20 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Rolindes B. Balda**, Univ. del País Vasco (Spain)

14091-22 • 10:40 - 11:10

Hollow resonators for photoacoustic and photothermal spectroscopy (Invited Paper)

Author(s): **Gualtiero Nunzi Conti**, **Gabriele Frigenti**, **Lucia Cavigli**, **Fulvio Ratto**, **Sonia Centi**, **Daniele Farnesi**, **Stefano Pelli**, **Giancarlo C. Righini**, **Silvia Soria**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14091-23 • 11:10 - 11:30

Fibre-coupled whispering-gallery-mode Dy³⁺ : LiYF₄ microspheres for yellow lasers and amplifiers

Author(s): **Abhishek Sureshkumar**, Univ. de Rennes (France); **Jonathan Demaimay**, Univ. de Caen Normandie (France); **Georges Perin**, **Loraïen Raju Kalathil**, **Christelle Velly**, **Helene Ollivier**, **Yannick Dumeige**, **Pavel A. Loiko**, Univ. de Rennes (France); **Alain Braud**, **Patrice Camy**, Univ. de Caen Normandie (France); **Stéphane Trébaol**, Univ. de Rennes (France)

14091-24 • 11:30 - 12:00

New technologies for rare-earth-doped fiber materials: trends and challenges (Invited Paper)

Author(s): **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14091-26 • 12:00 - 12:20

From crystal to microsphere: pressureless amorphization of Dy³⁺-doped tungstate revealed by μ -spectroscopy

Author(s): **Jonathan Demaimay**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Abhishek Sureshkumar**, ENSSAT, UMR 6082-CNRS-Institut FOTON, Université de Rennes (France); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Georges Perin**, **Christelle Velly**, **Helene Ollivier**, **Yannick Dumeige**, ENSSAT, UMR 6082-CNRS-Institut FOTON, Université de Rennes (France); **Anatoly Pavlyuk**, **Nikolay Naumov**, A.V. Nikolaev Institute of Inorganic Chemistry, Siberian Branch of Russian Academy of Sciences (Russian Federation); **Patrice Camy**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Stéphane Trébaol**, ENSSAT, UMR 6082-CNRS-Institut FOTON, Université de Rennes (France); **Alain Braud**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France)

Lunch/Exhibition Break 12:20 - 13:50

SESSION 7: TWO MICRON SOURCES

14 April 2026 • 13:50 - 16:00 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Till Walbaum**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-27 • 13:50 - 14:20

High-power narrow linewidth thulium-doped fiber MOPA at 2 μ m (Invited Paper)

Author(s): **Julian Schaal**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Michael Písařík**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Dieter Panitzek**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Helena Picmausová**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Univ. of Defence (Czech Republic); **Kimberley Lynn Goodwin**, **Jan Lautenschläger**, **Dominik Lorenz**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Christelle Kieleck**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Marc Eichhorn**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany)

14091-28 • 14:20 - 14:40

ACTIVE SELF-PULSING STABILIZATION AND CONTROL IN A THULIUM DOPED FIBER LASER WITH MODULATED DUAL WAVELENGTH PUMPING

Author(s): **Félix Billaud**, French German research institute of Saint Louis (France); **Nicolas Dalloz**, Institut Franco-Allemand de Recherches de Saint-Louis (France); **Inka Manek-Hönninger**, Univ. de Bordeaux (France); **Stefano Bigotta**, **Christophe Louot**, **Anne Hildenbrand-Dhollande**, Institut Franco-Allemand de Recherches de Saint-Louis (France)

14091-29 • 14:40 - 15:00

Numerical analysis of an optical fiber with an structural multi ring invert gradient refractive index profile for applications in flat-top lasers operating in the 1.8–2.0 μ m range

Author(s): **Piotr Miluski**, **Jakub Markiewicz**, **Marcin Kochanowicz**, Białystok Univ. of Technology (Poland); **Maria Michalska**, **Jacek Świderski**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Dominik Dorosz**, AGH Univ. of Krakow (Poland); **Krzysztof Markowski**, **Jacek Żmojda**, **Jan Dorosz**, Białystok Univ. of Technology (Poland)

14091-30 • 15:00 - 15:20

ASE Suppression in a 2120 nm all-fiber MOPA

Author(s): **Jan Lautenschläger**, **Dominik Lorenz**, **Dieter Panitzek**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Michael Písařík**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Marc Eichhorn**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Christelle Kieleck**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany)

14091-31 • 15:20 - 15:40

All-fiber picosecond 1950nm/35W MOPA system with Tm-doped spun tapered double-clad fiber

Author(s): **Valery Filippov**, **Evgeny V. Savelyev**, **Andrey Chumachenko**, **Konstantin Miroshnichenko**, Ampliconix Oy (Finland); **Farrukh Safin**, **Andrey Grishchenko**, CeramOptec SIA (Latvia); **Florian Lindner**, **Andre Kalide**, **Jörg Bierlich**, **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Regina Gumenyuk**, Tampere Univ. (Finland), Ampliconix Oy (Finland); **Hossien Fathi**, Tampere Univ. (Finland)

14091-32 • 15:40 - 16:00

1.9 μ m ring fiber laser modelocked with nonlinear polarization evolution

Author(s): **Sacha Petit**, French-German Research Institute of Saint-Louis (France); **Nicolas Dalloz**, **Stefano Bigotta**, Institut Franco-Allemand de Recherches de Saint-Louis (France); **Inka Manek-Hönninger**, Univ. de Bordeaux (France); **Anne Hildenbrand-Dhollande**, Institut Franco-Allemand de Recherches de Saint-Louis (France)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)
2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks
SPIE Directors' Award Presentation
Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14091-66 • 18:10 - 20:00

Ultra-narrow linewidth fiber laser based on saturable absorber and randomly distributed weak feedback

Author(s): **Fujun Xu**, Beihang University (China); **Xiaoxiao Wang**, **Xiaobin Xu**, **Ningfang Song**, Beihang Univ. (China)

14091-67 • 18:10 - 20:00

Ultra-sharp edge distributed spectral filtering in optical fibers

Author(s): **Soorej Thekkeyil**, **Deepak Jain**, Indian Institute of Technology Delhi (India)

14091-68 • 18:10 - 20:00

In-Band Pumped Ho:Germanate Fiber Laser Emitting at 2.1 μm

Author(s): **Nadia Giovanna Boetti**, Fondazione Links (Italy); **Joris Lousteau**, Politecnico di Milano (Italy); **Guy Shafri**, **Amiel Ishaaya**, Ben-Gurion Univ. of the Negev (Israel)

14091-69 • 18:10 - 20:00

Optimization of acquisition time by using parameters determination method for laser inter-satellite links

Author(s): **Xiangnan Liu**, Xi'an University of Electronic Science and Technol (China); **Xiaoping Li**, **Zhongwen Deng**, **Haifeng Sun**, Xi'an Univ. of Electronic Science and Technology (China)

14091-70 • 18:10 - 20:00

Deep bone ablation using a fiber-coupled Er:YAG laser

Author(s): **Mingyi Liu**, Univ of Basel (Switzerland); **Dunia Blaser**, **Arsham Hamidi**, Univ. Basel (Switzerland); **Darren Wilson**, Smith & Nephew plc (United Kingdom); **Kenneth Garcia**, Smith & Nephew Schweiz AG (Switzerland); **Ferda Canbaz**, Univ. Basel (Switzerland)

14091-71 • 18:10 - 20:00

Boron co-doped silica based fiber with an ultra-high ytterbium concentration

Author(s): **Egor K. Mikhailov**, **Tatiana S. Zaushitsyna**, **Mikhail M. Bubnov**, Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation), G.G. Devyatkh Institute of Chemistry of High Purity Substances of the Russian Academy of Sciences (Russian Federation); **Denis S. Lipatov**, **Alexey S. Lobanov**, **Alexey N. Abramov**, G.G. Devyatkh Institute of Chemistry of High Purity Substances of the Russian Academy of Sciences (Russian Federation); **Mikhail E. Likhachev**, Prokhorov General Physics Institute of the Russian Academy of Sciences (Russian Federation), G.G. Devyatkh Institute of Chemistry of High Purity Substances of the Russian Academy of Sciences (Russian Federation)

14091-72 • 18:10 - 20:00

Thermo-responsive multilevel hybrid encryption device with adaptive tunability

Author(s): **Srijeeta Biswas**, Indian Institute of Science (India); **Tapajyoti Das Gupta**, Indian Institute of Science, Bengaluru (India)

14091-73 • 18:10 - 20:00

Spectroscopy and laser operation of multicomponent Tm,Ln:CaF₂ crystals: The role of buffer ions

Author(s): **Pavel A. Loiko**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Univ. de Caen Normandie (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche (France); **Dominika Popelová**, **Karel Veselský**, **Jan Šulc**, **Helena Jelínková**, Czech Technical Univ. in Prague (Czech Republic); **Abdelmjid Benayad**, **Patrice Camy**, **Alain Braud**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Univ. de Caen Normandie (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche (France)

14091-75 • 18:10 - 20:00

Composite phosphors with the possibility of shaping luminescence in the optical range of 0.7-1.7µm

Author(s): **Karolina Sadowska**, Bialystok Univ. of Technology (Poland); **Katarzyna Rečko**, Univ. of Bialystok (Poland); **Magdalena Leśniak**, **Dominik Dorosz**, AGH Univ. of Krakow (Poland); **Marcin Kochanowicz**, **Jan Dorosz**, Bialystok Univ. of Technology (Poland); **Marta Kuwik**, **Joanna Pisarska**, **Wojciech Pisarski**, Univ. of Silesia (Poland); **Jacek Mariusz Żmojda**, Bialystok Univ. of Technology (Poland)

14091-76 • 18:10 - 20:00

Development of a Compact, Eye-Safe, Ultra-Long-Range Laser Rangefinder Module

Author(s): **Thinh Hoang Van**, **Khanh Duong Duy**, **Manh Ngo Duc**, Viettel High-Tech Industrial Corp (Vietnam); **Khanh Nguyen Duy**, Viettel High-Tech Industrial Corp. (Vietnam); **Duc Cao Xuan**, Viettel High-Tech Industrial Corp (Vietnam)

14091-77 • 18:10 - 20:00

Preparation, characterization, and properties of nanocomposites based on alpha-Zn₂SiO₄ glass ceramics for photonics

Author(s): **Jakub Volf**, UCT Prague (Czech Republic); **Petr Vařák**, Univ. of Chemistry and Technology Prague (Czech Republic); **Vítězslav Jarý**, **Vladimir Babin**, Institute of Photonics and Electronics of the CAS, v.v.i. (Czech Republic); **Michael Pitcher**, **Emmanuel Veron**, **Mathieu Allix**, Conditions Extrêmes et Matériaux : Haute Température et Irradiation (France); **Pavla Nekvindová**, Univ. of Chemistry and Technology Prague (Czech Republic)

Wednesday 15 April 2026

SESSION 8: SPECIAL SESSION: EARLY CAREER RESEARCHERS

15 April 2026 • 9:00 - 10:20 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Azim Onur Yazici**, Max-Planck-Institut für die Physik des Lichts (Germany)

14091-34 • 9:00 - 9:20

Improvement of effective conductivity in solid state laser medium through transparent heat sink face bonding

Author(s): **Laura Blanchet**, **Sébastien Montant**, CEA (France); **Patrice Camy**, CIMAP, UMR 6252 CEA-CNRS-ENSICAEN, université de Caen (France)

14091-35 • 9:20 - 9:40

Combining optical topologies for ultra-robust high dimensional states of light in optical fibre

Author(s): **Cade Ribeiro Peters**, University of the Witwatersrand (South Africa); **Vineetha Ashok**, **Siddharth Ramachandran**, Boston Univ. (United States); **Andrew Forbes**, Univ. of the Witwatersrand, Johannesburg (South Africa)

14091-36 • 9:40 - 10:00

Integrated fiber-optic microlenses for enhanced femtosecond SHG in PPLN crystals

Author(s): **Szymon Matczak**, Wroclaw University of Science and Technology (Poland); **Dorota Stachowiak**, **Grzegorz Soboń**, Wroclaw Univ. of Science and Technology (Poland)

14091-37 • 10:00 - 10:20

Microstructure, light scattering, and mid-infrared emission of Er:CaF₂ transparent ceramics

Author(s): **Meryem Bakbir**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CNRS (France), Univ. de Caen Normandie (France); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Dong Chai**, **Weiwei Li**, **Bingchu Mei**, Wuhan Univ. of Technology (China); **Abdelmjid Benayad**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CNRS (France), Univ. de Caen Normandie (France); **Oleg Lebedev**, Lab. de Cristallographie et Sciences des Matériaux, Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CNRS (France); **Gurvan Brasse**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CNRS (France), Univ. de Caen Normandie (France); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France); **Weidong Chen**, Fujian Institute of Research on the Structure of Matter (China); **Liangbi Su**, Shanghai Institute of Ceramics (China); **Alain Braud**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CNRS (France), Univ. de Caen Normandie (France)

Coffee Break 10:20 - 10:50

SESSION 9: VIS

15 April 2026 • 10:50 - 12:20 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Matthias L. Jäger**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14091-38 • 10:50 - 11:10

460 nm Low Frequency Noise Brillouin Laser for Quantum Technologies

Author(s): **Sharon Sha**, **Georges Perin**, Ecole Nationale Supérieure des Sciences Appliquées et de Technologie (France), L'Institut Foton, CNRS (France), Univ. de Rennes (France); **Romain Frénéhard**, **Pierre Brochard**, SILENTSYS SAS (France); **Mehdi Alouini**, **Pascal Besnard**, **Stéphane Trébaol**, Ecole Nationale Supérieure des Sciences Appliquées et de Technologie (France), L'Institut Foton, CNRS (France), Univ. de Rennes (France)

14091-39 • 11:10 - 11:30

Multimode diode-pumped yellow Dy:ZBLAN fiber laser

Author(s): **Esrom Kifle**, OXXIUS (France); **Raphaël Florentin**, **Pavel A. Loiko**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CEA, CNRS (France), Univ. de Caen Normandie (France); **Gilles Recoque**, Oxxius SA (France); **Laurine Bodin**, **Franck Joulain**, **Thibaud Berthelot**, Le Verre Fluoré (France); **Thierry Georges**, Oxxius SA (France); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CEA, CNRS (France), Univ. de Caen Normandie (France)

14091-40 • 11:30 - 11:50

A new look at a dye-based solid-state random laser: a simple photon model

Author(s): **Joaquín Fernández**, Donostia International Physics Ctr (Spain), University of the Basque Country (EHU) (Spain); **Ignacio Iparraguirre**, **Sara García-Revilla**, **Jon Azkargorta**, **Rolindes Balda**, Univ. del País Vasco (Spain)

14091-41 • 11:50 - 12:20

All-glass double-clad diode-pumped Pr:ZBLAN red fiber laser (Invited Paper)

Author(s): **Raphaël Florentin**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Esrom Kifle**, Oxxius SA (France); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen (France); **Jonathan Demaimay**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France); **Thibaud Berthelot**, **Laurine Bodin**, **Franck Joulain**, Le Verre Fluoré (France); **Thierry Georges**, **Gilles Recoque**, Oxxius SA (France); **Patrice Camy**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), CEA-CNRS-ENSICAEN (France), Univ. de Caen Normandie (France)

Lunch/Exhibition Break 12:20 - 13:30

SESSION 10: HIGH-POWER SOURCES AND COMPONENTS

15 April 2026 • 13:30 - 15:20 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-42 • 13:30 - 14:00

High power fiber laser systems for long-range and defense applications (Invited Paper)

Author(s): **Till Walbaum**, **Tilman Lühder**, **Friedrich Möller**, **Anke Heilmann**, **Maximilian Strecker**, **Peter Krause**, **Marco Plötner**, **Benjamin Yildiz**, **Stefan Kuhn**, **Johannes Nold**, **Matthias Goy**, **Nicoletta Haarlammert**, **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-43 • 14:00 - 14:20

Pump-signal combiner for high-power fiber lasers at 2 µm wavelength

Author(s): **Kimberley Lynn Goodwin**, Fraunhofer IOSB (Institute of Optronics, System Technologies and Image Exploitation) (Germany), Institute of Control Systems (IRS), Karlsruhe Institute of Technology (KIT) (Germany); **Michael Písařík**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Dieter Panitzek**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Helena Picmausová**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Univ. of Defence (Czech Republic); **Julian Schaal**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany); **Christelle Kieleck**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany); **Marc Eichhorn**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany), Karlsruher Institut für Technologie (Germany)

14091-44 • 14:20 - 14:40

Simultaneous suppression of TMI and SBS in polarization maintaining fiber amplifiers

Author(s): **Friedrich Möller**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Maximilian Strecker**, Fraunhofer-IOF (Germany); **Till Walbaum**, **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-45 • 14:40 - 15:00

Comprehensive analysis of laser-induced damage mechanism of resonant waveguide gratings exposed to sub-picosecond pulses

Author(s): **Ayoub Boubekraoui**, University of Stuttgart, Institut für Strahlwerkzeuge (Germany); **Georgia Mourkioti**, Jacob I. Mackenzie, ORC, Southampton (United Kingdom); **Laurent Gallais**, Institut Fresnel, Aix-Marseille University (France); **Thomas Graf**, **Marwan Abdou Ahmed**, University of Stuttgart, Institut für Strahlwerkzeuge (Germany)

14091-46 • 15:00 - 15:20

High-efficiency grating-waveguide structure for pulse compression of 2 μm high-power lasers

Author(s): **Danish Bashir**, **Thomas Graf**, **Marwan Abdou Ahmed**, Univ. Stuttgart (Germany)

Coffee Break 15:20 - 15:50

SESSION 11: NOVEL LASERS AND LUMINESCENCE MATERIALS II

15 April 2026 • 15:50 - 17:50 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14091-47 • 15:50 - 16:20

Advances of powder sintering technology for high power amplifiers (*Invited Paper*)

Author(s): **Baptiste Leconte**, BLOOM Lasers (France), XLIM (France); **Philippe Roy**, **Raphael Jamier**, XLIM (France); **Julien Didierjean**, Bloom Lasers (France); **Amelie Chervet**, Bloom Lasers (France), XLIM (France); **Katrin Wondraczek**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14091-48 • 16:20 - 16:40

Er/Yb-activated barium gallo-germanate glass thin films deposited by RF magnetron co-sputtering for near- and mid-infrared photonic structures

Author(s): **Tomasz Ragiń**, **Agata Baranowska**, **Jakub Markiewicz**, **Krzysztof Markowski**, **Magdalena Łepicka**, **Magdalena Rodziejcz-Weremczuk**, **Marcin Kochanowicz**, Bialystok Univ. of Technology (Poland); **Dominik Dorosz**, **Vladyslav Ovsynskyi**, AGH Univ. of Krakow (Poland); **Alessandro Chiasera**, **Maurizio Ferrari**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Krzysztof Dzierzega**, **Wojciech Talik**, Jagiellonian Univ. in Krakow (Poland); **Karolina Sadowska**, Bialystok Univ. of Technology (Poland)

14091-49 • 16:40 - 17:00

Fabrication and emission properties of infrared-transparent erbium-doped lanthanum oxysulfide (Er:La₂O₂S) ceramics

Author(s): **Marine Poitou**, Université Rennes (France); **Odile Merdrignac**, Université de Rennes (France); **Pavel Loiko**, **Alain Braud**, **Patrice Camy**, **Nguyen Hoa**, Université de Caen (France); **Alexandre Le Coz**, Université de Rennes (France)

14091-50 • 17:00 - 17:20

Eu³⁺-doped Y₂O₃ thin films for magnetic dipole-based spectroscopy

Author(s): **Elizaveta Gangskaia**, Photonics Institute, TU Wien (Austria); **Christoph Eisenmenger-Sittner**, Institute of Solid State Physics, TU Wien (Austria); **Amandine Baillard**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen Normandie (France); **Thomas Schachinger**, University Service Centre for Transmission Electron Microscopy (USTEM), TU Wien (Austria); **Patrice Camy**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen Normandie (France); **Andrius Baltuška**, **Audrius Pugžlys**, Photonics Institute, TU Wien (Austria), Center for Physical Sciences & Technology (Lithuania); **Alessandra Bellissimo**, Photonics Institute, TU Wien (Austria); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen Normandie (France)

14091-51 • 17:20 - 17:50

Polymer-based nanocomposite materials co-doped with core-shell CdSe/ZnS quantum dots and lanthanides for photonic applications (*Invited Paper*)

Author(s): **Marcin Kochanowicz**, **Valiantsin Askirka**, Bialystok Univ. of Technology (Poland); **Dominik Dorosz**, AGH Univ. of Krakow (Poland); **Jan Dorosz**, Bialystok Univ. of Technology (Poland); **Vladyslav Ovsynskyi**, AGH Univ. of Krakow (Poland); **María Jesús Pascual**, Instituto de Cerámica y Vidrio (Spain); **Joanna Mastalska-Popławska**, AGH Univ. of Krakow (Poland); **Krzysztof Dzierzega**, **Wojciech Talik**, Jagiellonian Univ. in Krakow (Poland); **Piotr Miluski**, Bialystok Univ. of Technology (Poland)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 12: NIR SOURCES

16 April 2026 • 11:00 - 12:30 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Matthias L. Jäger**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14091-52 • 11:00 - 11:30

High-power O-band bismuth-doped fiber amplifier (*Invited Paper*)

Author(s): **Dmitrii A. Stoliarov**, Aston Institute of Photonics Technology, Aston University (United Kingdom); **Aleksandr Donodin**, Aston Univ. (United Kingdom); **Kirill Grebnev**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Vitaly Mikhailov**, Jiawei Luo, David J. DiGiovanni, Lightera Labs., LLC (United States); **Sergei K. Turitsyn**, Aston Univ. (United Kingdom)

14091-53 • 11:30 - 11:50

Phase investigation of multimode interference based multi-spot patterns in square core fibers

Author(s): **Benjamin Yildiz**, **Till Walbaum**, **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-54 • 11:50 - 12:10

Highly energy efficient 12-core erbium doped multicore fiber amplifier system for telecommunications

Author(s): **Benjamin Yildiz**, **Till Walbaum**, **Thomas Schreiber**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14091-55 • 12:10 - 12:30

Radio frequency-resolved relative intensity noise characteristics of conventional high-power CW Yb-doped fiber laser systems

Author(s): **Anitta Augustine**, **V. Meher**, **V Balaswamy**, Indian Institute of Science, Bengaluru (India)

Lunch Break 12:30 - 13:40

SESSION 13: MIR SOURCES AND DEVICES

16 April 2026 • 13:40 - 15:30 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Francesco Prudeniano**, Politecnico di Bari (Italy)

14091-56 • 13:40 - 14:10

All-fibre ring cavity laser emitting at a wavelength of 2.8 μm enabled via low-loss fluoride optical fibre couplers (*Invited Paper*)

Author(s): **Martin Rochette**, McGill Univ (Canada)

14091-57 • 14:10 - 14:30

Efficient pump delivery for mid-infrared fiber lasers

Author(s): **Francesco Anelli**, **Antonella Maria Loconsole**, **Federico Moscatelli**, **Francesco Prudeniano**, Politecnico di Bari (Italy)

14091-58 • 14:30 - 14:50

Broadly tunable erbium fluoroindate glass laser at 2.8µm

Author(s): **Ngoc Quynh Hoa Nguyen**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CEA, CNRS (France), Univ. de Caen Normandie (France); **Pavel A. Loiko**, Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), UMR 6252 CEA-CNRS-ENSICAEN, Université de Caen Normandie (France); **Thiphaine Rault**, **Jean Letourneur**, **Solenn Cozic**, Le Verre Fluoré (France); **Saad Hatim**, **Kirill Eremeev**, **Pierre-Henry Hanzard**, **Tristan Guezennec**, **Thomas Godin**, Complexe de Recherche Interprofessionnel en Aérothermochimie (France), Institut National des Sciences Appliquées, CNRS (France), Univ. de Rouen Normandie (France); **Patrice Camy**, **Alain Braud**, Ctr. de Recherche sur les Ions, les Matériaux et la Photonique (France), Ecole Nationale Supérieure d'Ingenieurs de Caen et Ctr. de Recherche, CEA, CNRS (France), Univ. de Caen Normandie (France); **Ammar Hideur**, Complexe de Recherche Interprofessionnel en Aérothermochimie (France), Institut National des Sciences Appliquées, CNRS (France), Univ. de Rouen Normandie (France)

14091-59 • 14:50 - 15:10

Direct laser writing of power splitters with controlled splitting ratio for mid-infrared applications

Author(s): **Thien Le Phu**, Univ. du Littoral Côte d'Opale (France); **Mariel Ledesma Molinero**, Univ. de Rennes (France); **Catherine Boussard-Plédel**, Univ. de Rennes 1 (France); **Andy Cassez**, **Laurent Bigot**, Univ. de Lille (France); **David Le Coq**, Univ. de Rennes 1 (France); **Pascal Masselin**, Université du Littoral-Côte d'Opale (France)

14091-60 • 15:10 - 15:30

Investigation on a passively Q-switched laser based on a Er3+-doped ZBLAN fiber for Mid-IR emission

Author(s): **Antonella Maria Loconsole**, **Francesco Anelli**, **Federico Moscatelli**, **Francesco Prudeniano**, Politecnico di Bari (Italy)

Coffee Break 15:30 - 15:50

SESSION 14: PULSED SOURCES

16 April 2026 • 15:50 - 17:40 | Berlin/Salon 9 (Niveau/Level 0)

Session Chair(s): **Stefano Taccheo**, Politecnico di Torino (Italy)

14091-61 • 15:50 - 16:20

High-repetition rate THz pulse generation in a laser-enhancement cavity locked system *(Invited Paper)*

Author(s): **Francesco Canella**, Institute for Photonics and Nanotechnologies - CNR (Italy)

14091-62 • 16:20 - 16:40

Wavelength-tunable all-fiber polarization-maintaining laser source delivering narrow-linewidth picosecond pulses with peak-power exceeding 10kW

Author(s): **Leon Vom Kothen**, CEA-Cesta (France), Lab. de Physique des Lasers, Atomes et Molécules, CNRS (France), Univ. de Lille (France); **Florent Scol**, CEA-Cesta (France); **Simon Boivinnet**, Lab. de Physique des Lasers, Atomes et Molécules, CNRS (France), Univ. de Lille (France); **Olivier Vanvincq**, **Géraud Bouwmans**, Lab. de Physique des Lasers, Atomes et Molécules, CNRS (France), Univ. de Lille (France); **Emmanuel Hugonnot**, CEA-Cesta (France)

14091-63 • 16:40 - 17:00

Data-driven control of experimental mode-locked fibre lasers with reinforcement learning

Author(s): **Jordan McConnell**, **James Brooks**, **Adeniyi Osinowo**, **Antonio Cutrona**, **Alessia Pasquazi**, **Marco Peccianti**, Loughborough Univ. (United Kingdom); **Juan Sebastian Toterog Gongora**, Loughborough University (United Kingdom)

14091-64 • 17:00 - 17:20

Mode-locked lasers with ion-exchanged waveguides on Er-Yb doped glass.

Author(s): **Antoine Suplisson**, CROMA (France); **Christelle Monat**, Institut des Nanotechnologies de Lyon (France); **Malik Kemiche**, CROMA (France); **Jean-Emmanuel Broquin**, CROMA (France)

14091-65 • 17:20 - 17:40

Control of optical fiber laser pulse dynamics using graphene-advanced photonic devices

Author(s): **Oleksiy Kovalchuk**, Chungnam National University (Korea, Republic of); **Denys Didychenko**, Univ. Stuttgart (Germany); **Siam Uddin**, **Sungjae Lee**, Korea Institute of Science and Technology (Korea, Republic of); **Andrea M. Armani**, The Univ. of Southern California (United States); **Hyowon Moon**, **Yong-Won Song**, Korea Institute of Science and Technology (Korea, Republic of); **Min Yong Jeon**, Chungnam National Univ. (Korea, Republic of)

CONFERENCE 14092

Nonlinear Optics and its Applications 2026

13 - 15 April 2026 | Churchill (Niveau/Level 1)

Conference Chair(s): **John M. Dudley**, Institut Franche-Comte Electronique Mecanique Thermique et Optique (France); **Anna C. Peacock**, Univ. of Southampton (United Kingdom); **Birgit Stiller**, Max-Planck-Institut für die Physik des Lichts (Germany); **Giovanna Tissoni**, Institut de Physique de Nice (France)

Program Committee: **Andrea Blanco-Redondo**, Nokia Bell Labs. (United States); **Camille Bres**, EPFL (Switzerland); **Zhigang Chen**, Nankai Univ. (China); **Maria Chernysheva**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Moti Fridman**, Bar-Ilan Univ. (Israel); **Goëry Genty**, Tampere Univ. of Technology (Finland); **Alexander M. Heidt**, Univ. Bern (Switzerland); **Nicolas Y. Joly**, Max-Planck-Institut für die Physik des Lichts (Germany); **Mariusz Klimczak**, Univ. of Warsaw (Poland); **François Leo**, Univ. Libre de Bruxelles (Belgium); **Marco Liscidini**, Univ. degli Studi di Pavia (Italy); **Arnaud Mussot**, Lab de Physique des Lasers, Atomes et Molécules (France); **Auro Michele Perego**, Aston Univ. (United Kingdom); **Antoine F. J. Runge**, The Univ. of Sydney (Australia); **Michelle Y. Sander**, Boston Univ. (United States); **Daria A. Smirnova**, The Australian National Univ. (Australia)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 1: NONLINEAR PHOTONICS FOR QUANTUM APPLICATIONS

13 April 2026 • 11:30 - 12:40 | Churchill (Niveau/Level 1)

Session Chair(s): **Nikoleta Kotsina**, Heriot-Watt Univ. (United Kingdom)

14092-1 • 11:30 - 12:00

Ultracompact nonlinear platforms based on van der Waals semiconductors for classical and quantum states of light (*Invited Paper*)

Author(s): **Chiara Trovatello**, Politecnico di Milano (Italy)

14092-2 • 12:00 - 12:20

Direct polarization-entangled photon pair generation using domain-engineered nonlinear crystals

Author(s): **Inbar Hurvitz**, Tel Aviv Univ. (Israel); **Anatoly Shukhin, Leonid Vidro, Hagai Eisenberg**, The Hebrew Univ. of Jerusalem (Israel);

Ady Arie, Tel Aviv Univ. (Israel)

14092-3 • 12:20 - 12:40

A fibre-integrated SPDC heralded single-photon source using Zn-indiffused LiNbO₃ ridge waveguides at telecom wavelengths

Author(s): **Peter Iveson**, University of Southampton (United Kingdom); **Paolo L. Mennea, Goronwy L. Tawy, Rex H. Bannerman**, Optoelectronics Research Ctr. (United Kingdom); **Noe Palomar-Davidson**, Univ. of Southampton (United Kingdom); **Lewis D. Wright**, Covesion Ltd. (United Kingdom); **Peter G. R. Smith, James C. Gates**, Univ. of Southampton (United Kingdom); **Corin B. Gawith**, Univ. of Southampton (United Kingdom), Covesion Ltd. (United Kingdom)

Lunch Break 12:40 - 13:50

SESSION 2: SPATIOTEMPORAL AND MULTIMODE EFFECTS

13 April 2026 • 13:50 - 15:20 | Churchill (Niveau/Level 1)

Session Chair(s): **Chiara Trovatello**, Politecnico di Milano (Italy)

14092-4 • 13:50 - 14:20

Generation of attosecond spatiotemporal optical vortices via high-order harmonic generation (*Invited Paper*)

Author(s): **Rodrigo Martin-Hernandez**, Univ. de Salamanca (Spain); **Guan Gui**, JILA, Univ. of Colorado Boulder (United States); **Luis Plaja**, Univ. de Salamanca (Spain); **Henry C. Kapteyn, Margaret M. Murnane**, JILA, Univ. of Colorado Boulder (United States); **Chen-Ting Liao**, Indiana Univ. Bloomington (United States); **Miguel A. Porras**, Univ. Politécnica de Madrid (Spain); **Carlos Hernández-García**, Univ. de Salamanca (Spain)

14092-5 • 14:20 - 14:40

Understanding and controlling spatially multimode noise

Author(s): **Michael Horodyski**, Massachusetts Institute of Technology (United States), Technische Univ. Wien (Austria); **Jamison Sloan**, Massachusetts Institute of Technology (United States), Stanford Univ. (United States); **Shiekh Z. Uddin, Yannick Salamin**, Massachusetts Institute of Technology (United States); **Michael Birk, Pavel Sidorenko, Ido Kaminer**, Technion-Israel Institute of Technology (Israel); **Marin Soljačić**, Massachusetts Institute of Technology (United States); **Nicholas Rivera**, Harvard Univ. (United States), Cornell Univ. (United States)

14092-6 • 14:40 - 15:00

On-Fiber 3D-Printed Metalenses for Higher-Order Mode Supercontinuum Generation

Author(s): **Shahrazad Hosseinabadi, Johannes Hofmann, Torsten Wieduwilt, Bennet Fischer**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe Ctr. of Photonics (Germany), Friedrich-Schiller-Univ. Jena (Germany)

14092-7 • 15:00 - 15:20

Spatial dispersion control for self-focusing suppression by Laue-type photonic crystals

Author(s): **Edvinas Aleksandravicius, Gabrielius Kontenis, Indre Meskelaite**, Vilnius Univ. (Lithuania); **Kestutis Staliunas**, Vilnius Univ. (Lithuania), ICREA - Institució Catalana de Recerca i Estudis Avançats (Spain), Univ. Politècnica de Catalunya (Spain); **Audrius Dubietis, Darius Gailevicius**, Vilnius Univ. (Lithuania)

Coffee Break 15:20 - 15:50

SESSION 3: NOVEL OPTICAL SOURCES, ULTRAFAST, HIGH FIELD, APPLICATIONS

13 April 2026 • 15:50 - 18:00 | Churchill (Niveau/Level 1)

Session Chair(s): **Rodrigo Martin-Hernandez**, Univ. de Salamanca (Spain)

14092-8 • 15:50 - 16:20

Generation and characterisation of terawatt-scale optical attosecond pulses, tunable DUV-VUV pulses, and single-cycle vector beams (*Invited Paper*)

Author(s): **Nikoleta Kotsina, Michael Heynck, Joleik Nordmann, Martin Gebhardt, Teodora Grigороva, Christian Brahms, John C. Travers**, Heriot-Watt Univ. (United Kingdom)

14092-9 • 16:20 - 16:40

Fiber active optical parametric oscillators for generation of phase-coherent picosecond pulses

Author(s): **Francesco De Lucia**, Univ. de Lille, CNRS (France); **Yifan Sun, Clément Dupont**, Univ. Libre de Bruxelles (Belgium); **Nicolas Englebert**, Caltech (United States); **Georges Semaan, Simon-Pierre Gorza, François Leo**, Univ. Libre de Bruxelles (Belgium)

14092-10 • 16:40 - 17:00

High energy 1.53 - cycle pulses via homogeneous post-compression in a single thin-plate

Author(s): **Gaudenis Janssonas**, Vilnius Univ (Lithuania); **Dominykas Karvelis, Pija Gadonaitė, Arūnas Varanavičius**, Vilnius Univ. (Lithuania)

14092-11 • 17:00 - 17:20

Efficient high harmonic generation at the paraxial limit with sub- μ J pulse energies

Author(s): **Maria-Carla Lupu, Filchito Renee Bagsican, Tatsunosuke Hanano, Michael Man, Julien Madeo, Keshav Dani**, Okinawa Institute of Science and Technology Graduate Univ. (Japan)

14092-12 • 17:20 - 17:40

EUV harmonic generation in MgO shaped by nonlinear propagation

Author(s): **Anastasiia Mikhneva**, GPM UMR 6634, CNRS - University of Rouen Normandie - INSA Rouen Normandie (France), CORIA UMR 6634, CNRS - University of Rouen Normandie - INSA Rouen Normandie (France); **Angela Vella**, Groupe de Physique des Matériaux, Univ. de Rouen Normandie, CNRS (France), Univ. de Rouen Normandie (France), Institut National des Sciences Appliquées de Rouen (France); **Ammar Hideur, Saïd Idlahcen**, Complexe de Recherche Interprofessionnel en Aérothermochimie, CNRS (France), Univ. de Rouen Normandie (France), Institut National des Sciences Appliquées de Rouen (France); **Jonathan Houard, Ivan Blum**, Groupe de Physique des Matériaux, Univ. de Rouen Normandie, CNRS (France), Institut National des Sciences Appliquées de Rouen (France); **David Gauthier, Willem Boutu**, Lab. Interactions, Dynamiques et Lasers, CEA (France), Univ. Paris-Saclay (France), CY Cergy Paris Univ. (France); **Hamed Merdji**, Lab. d'Optique Appliquée, CNRS (France), École Polytechnique, Ecole Nationale Supérieure de Techniques Avancées (France), Institut Polytechnique de Paris (France)

14092-13 • 17:40 - 18:00

Post-compression of 2- μ m few-ps pulses with >50 mJ energy in CaF₂

Author(s): **Uwe Griebner, Dennis Ueberschaer, Martin Bock**, Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie (Germany)

Tuesday 14 April 2026

SESSION 4: NOVEL NONLINEAR DYNAMICS AND APPLICATIONS

14 April 2026 • 8:30 - 10:20 | Churchill (Niveau/Level 1)

Session Chair(s): **Kathy Lüdge**, Technische Univ. Ilmenau (Germany)

14092-14 • 8:30 - 9:00

Thin film lithium niobate for integrated oscillator and entangled photons (*Invited Paper*)

Author(s): **Rachel Grange**, ETH Zurich (Switzerland)

14092-15 • 9:00 - 9:20

Cat-and-mouse dynamics in faticons for fine-tuning comb line spacing

Author(s): **Lewis Hill**, Max Planck Institute for the Science of Light (Germany); **Erwan Lucas**, Lab. Interdisciplinaire Carnot de Bourgogne (France); **Alekhy Ghosh, Juan Diego Mazo-Vásquez, Julius T. Gohsrich, Arghadeep Pal, Haochen Yan, Pascal Del'Haye**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Gian-Luca Oppo**, Univ. of Strathclyde (United Kingdom); **Stéphane Coen**, The Univ. of Auckland (New Zealand), The Dodd-Walls Ctr. for Photonic and Quantum Technologies (New Zealand); **Flore K. Kunst**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Julien Fatome**, Lab. Interdisciplinaire Carnot de Bourgogne (France)

14092-16 • 9:20 - 9:40

Mid-infrared optical bistability in germanium-based ring resonators

Author(s): **Ujjal Chettri, Mohamed Lamine Ferhat**, Institut des Nanotechnologies de Lyon (France); **Marko Perestjuk**, Institut des Nanotechnologies de Lyon (France), RMIT Univ. (Australia); **Rémi Armand**, CEA-LETI, Univ. Grenoble Alpes (France), Institut des Nanotechnologies de Lyon (France); **Jean-Michel Hartmann, Vincent Mathieu**, CEA-LETI, Univ. Grenoble Alpes (France); **Guanghui Ren**, RMIT Univ. (Australia); **Andreas Boes**, Institute for Photonics and Advanced Sensing, The Univ. of Adelaide (Australia); **Arnan Mitchell**, RMIT Univ. (Australia); **Nicolas Bresson, Vincent Reboud**, CEA-LETI, Univ. Grenoble Alpes (France); **Christelle Monat, Christian Grillet**, Institut des Nanotechnologies de Lyon (France)

14092-17 • 9:40 - 10:00

Four-wave mixing in an optically injected feedback-controlled Fabry-Perot laser for tunable THz signal generation

Author(s): **Mohammadshahab Abdollahi, Pablo Marin-Palomo, Nathalie Vermeulen**, Vrije Univ Brussel (Belgium); **Martin Virte**, Vrije Univ. Brussel (Belgium)

14092-18 • 10:00 - 10:20

Higher-order exceptional points in an optical fiber using stimulated Brillouin scattering

Author(s): **Grigori Slinkov**, Max-Planck-Institut für die Physik des Lichts (Germany), Department of Physics, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany (Germany); **Anton Montag, Julius Gohsrich**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Paulina Rivera, Quentin Levoy**, Max-Planck-Institut für die Physik des Lichts (Germany); **Flore Kunst**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Birgit Stiller**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany), Institut für Photonik, Leibniz Univ. Hannover (Germany)

Coffee Break 10:20 - 10:50

SESSION 5: NONLINEAR PHOTONICS AND MACHINE LEARNING

14 April 2026 • 10:50 - 12:40 | Churchill (Niveau/Level 1)

Session Chair(s): **William Renninger**, The Institute of Optics, Univ. of Rochester (United States)

14092-19 • 10:50 - 11:20

Dynamical Aspects of Physical Reservoir Computing with Photonic Devices (*Invited Paper*)

Author(s): **Kathy Lüdge**, Technische Univ. Ilmenau (Germany)

14092-20 • 11:20 - 11:40

Principles and metrics of photonic learning machines

Author(s): **Mathilde Hary, Anas Skalli, Lucero Cardenas Razo, Andrei V. Ermolaev**, FEMTO-ST (France); **Magda Marciniak, Marcin Gębski, Tomasz Czystanowski**, Institute of Physics, Lodz Univ. of Technology (Poland); **James A. Lott**, Technische Univ. Berlin (Germany); **John M. Dudley**, FEMTO-ST (France); **Goëry Genty**, Tampere Univ. (Finland); **Daniel Brunner**, FEMTO-ST (France)

14092-21 • 11:40 - 12:00

Ultrafast nonlinear fiber amplifier in the 1560-1670 nm spectral range optimized with machine learning

Author(s): **Mikołaj Krakowski**, Politechnika Wrocławska (Poland); **Alicja Kwaśny, Dorota Stachowiak, Grzegorz Soboń**, Wroclaw Univ. of Science and Technology (Poland)

14092-22 • 12:00 - 12:20

Integrated nano electro-optomechanical spiking neuron

Author(s): **Gregorio Beltramo, Sylvain Barbay**, Ctr. de Nanosciences et de Nanotechnologies (France); **Rémy Braive**, Ctr de Nanosciences et de Nanotechnologies (France)

14092-23 • 12:20 - 12:40

Diffusion models for robust full-field prediction of soliton propagation

Author(s): **Jordan McConnell, James Brooks**, Loughborough Univ. (United Kingdom); **Juan Sebastian Toter Gongora**, Loughborough University (United Kingdom)

Lunch/Exhibition Break 12:40 - 13:50

SESSION 6: NONLINEAR EFFECTS IN FIBRE AND/OR MICRORESONATORS

14 April 2026 • 13:50 - 16:00 | Churchill (Niveau/Level 1)

Session Chair(s): **Rachel Grange**, ETH Zurich (Switzerland)

14092-24 • 13:50 - 14:20

Brillouin interactions with fundamental acoustic waves (*Invited Paper*)

Author(s): **William Renninger**, The Institute of Optics, Univ. of Rochester (United States)

14092-25 • 14:20 - 14:40

Algorithm-free optical phase recovery via Kerr-induced in-fiber interferometry

Author(s): **Glitta R. Cheeran, Mehmet Müftüoğlu, Sobhi Saeed, Bennet Fischer**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Mario Chemnitz**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany)

14092-26 • 14:40 - 15:00

Low-noise supercontinuum using a 1.85 μm fs pump in elliptical-core and normal dispersion ZBLAN fibres

Author(s): **Shreesha Rao D. S.**, Technical Univ. of Denmark (Denmark), Univ. of Bern (Switzerland); **Anupamaa Rampur**, Univ. Bern (Switzerland); **Ole Bang**, Technical Univ. of Denmark (Denmark), NKT Photonics A/S (Denmark), NORBLIS ApS (Denmark); **Alexander M. Heidt**, Univ. Bern (Switzerland)

14092-27 • 15:00 - 15:20

Design of an all-normal dispersion photonic crystal fiber for stable and coherent supercontinuum generation

Author(s): **Romain Morel**, Université Marie et Louis Pasteur, CNRS, Institut FEMTO-ST (France); **Victoir Thibaut**, **Mathis Marcadier**, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France); **Yoann Pertot**, Fastlite (France); **Aurelie Jullien**, **Nicolas Forget**, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France); **Andy Cassez**, **Vincent Andrieux**, **Damien Labat**, **Alexandre Kudlinski**, Univ. de Lille (France), Lab. de Physique des Lasers, Atomes et Molécules, CNRS (France); **John M. Dudley**, **Thibaut Sylvestre**, Univ. Marie et Louis Pasteur (France), CNRS (France), FEMTO-ST (France)

14092-28 • 15:20 - 15:40

Tuneable far-detuned intramodal Four-Wave Mixing via diameter control of optical microfibres

Author(s): **Gil Fanjoux**, institut FEMTO-ST / université UBFC (France); **Maxime Zerbib**, **Romain Morel**, **Simon Colombel**, **Kien Phan-Huy**, **Thibaut Sylvestre**, **Jean-Charles Beugnot**, FEMTO-ST (France), Univ. Marie et Louis Pasteur (France)

14092-29 • 15:40 - 16:00

Phase noise properties of super-continuum generation in all-normal dispersion fibers

Author(s): **Matis Marcadier**, Fastlite (France), Institut de Physique de Nice (France); **Nicolas Forget**, Institut de Physique de Nice (France); **Yoann Pertot**, Fastlite (France); **Aurelie Jullien**, Institut de Physique de Nice (France)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14092-49 • 18:10 - 20:00

High two-mode squeezing in a temporal Fourier cavity

Author(s): **Yuval Tamir**, **Moti Fridman**, **Sara Meir**, **Hamootal Duadi**, Bar-Ilan Univ. (Israel)

14092-50 • 18:10 - 20:00

Cascade time-lens

Author(s): **Sara Meir**, **Yuval Tamir**, **Hamootal Duadi**, **Moti Fridman**, Bar-Ilan Univ. (Israel)

14092-51 • 18:10 - 20:00

Photonic and nonlinear optical response of lab-grown WTe₂ Weyl semimetal crystal: structure, dielectric properties, and harmonic generation

Author(s): **Sardar A. Shah**, **Khalil A. Ziq**, **Ahmed M. El-Zohry**, **Watheq Al-Basheer**, King Fahd Univ. of Petroleum & Minerals (Saudi Arabia)

14092-52 • 18:10 - 20:00

Laser-driven excitation regimes in microwave-engineered NiO nano-thin films for ultrafast nonlinear applications

Author(s): **Ramseena Thundiylil**, Manipal Academy of Higher Education (India); **Poornesh P.**, Manipal Institute of Technology, Manipal Academy of Higher Education (India); **K. Ozga**, Czestochowa Univ. of Technology (Poland); **Dominique Guichaoua, Bouchta Sahraoui**, Univ. d'Angers (France)

14092-53 • 18:10 - 20:00

Optical characterization of thin films made from halogenated diamondoid-based cluster molecules

Author(s): **Orlando Torres Perales**, Karlsruher Institut für Technologie (Germany); **Gowrisankar Saravanan, Peter R. Schreiner**, Justus-Liebig-Universität Giessen (Germany); **Ulrich Lemmer, Nils W. Rosemann**, Karlsruher Institut für Technologie (Germany)

14092-54 • 18:10 - 20:00

Microwave-Assisted Control of Nonlinear Optical Behaviors in Mn–NiO Nanostructures Across Diverse Laser Excitation Regimes

Author(s): **Ramseena Thundiylil, Poornesh P.**, Manipal Institute of Technology, Manipal Academy of Higher Education (India); **K. Ozga**, Czestochowa Univ. of Technology (Poland); **D. Guichaoua, S. Taboukhat, Bouchta Sahraoui**, Lab. de Photonique d'Angers, SFR MATRIX, Univ. d'Angers (France)

14092-55 • 18:10 - 20:00

From solitons to wave-breaking: let the data classify the light

Author(s): **Anastasiia Sheveleva**, Univ. de Bourgogne (France); **Andrei V. Ermolaev, John M. Dudley**, FEMTO-ST (France); **Christophe Finot**, Université Bourgogne Europe, CNRS, Laboratoire Interdisciplinaire Carnot de Bourgogne (France)

14092-56 • 18:10 - 20:00

The impact of nonlinear polarisation coupling in optical fibre-based extreme learning machines.

Author(s): **Lilian Emonin, Andrei V. Ermolaev, Mathilde Hary, Daniel Brunner**, Univ. Marie et Louis Pasteur (France); **Christophe Finot**, Lab. Interdisciplinaire Carnot de Bourgogne (France); **Goëry Genty**, Tampere Univ. (Finland); **John M. Dudley, Anas Skalli**, Univ. Marie et Louis Pasteur (France)

14092-57 • 18:10 - 20:00

Ultrashort pulses characterization by two-photon absorption signal in thick samples

Author(s): **Renato Mafrá Moysés, Matheus Geremias, Leonardo Ferreira**, University of Sao Paulo (USP) (Brazil); **Emerson Barbano**, Federal University of Parana (Brazil); **Lino Misoguti**, University of Sao Paulo (USP) (Brazil)

14092-58 • 18:10 - 20:00

Ultrafast ESIPT dynamics and two-photon absorption in a 2-(2'-hydroxyphenyl)benzoxazole derivative

Author(s): **João Victor Pereira Valverde**, Univ. de São Paulo (Brazil)

14092-59 • 18:10 - 20:00

Modelling and dynamics of multi-peaks temporal cavity solitons in Kerr cavities with bichromatic pumping

Author(s): **Pedro Parra-Rivas**, Univ. de Almería (Spain); **Edem Kossi Akakpo, Yifan Sun, Francois Leo**, Univ. Libre de Bruxelles (Belgium); **Miro Erkintalo**, The Univ. of Auckland (New Zealand)

14092-60 • 18:10 - 20:00

Fiber-optic communication using Hirota modulation and neural networks

Author(s): **MEGHNA MUKHOPADHYAY**, LTCI, Telecom Paris, Institut Polytechnique de Paris (France); **Mansoor Yousefi, Bruno Thedrez**, Télécom Paris (France)

14092-61 • 18:10 - 20:00

All optical exceptional-line semimetal in thermal atomic vapor.

Author(s): **Arannya Ghosh**, Indian Institute of Technology Delhi (India); **Soumik Nandi**, National Institute of Science Education and Research (India); **Ritwick Das**, Indian Institute of Technology Delhi (India)

14092-63 • 18:10 - 20:00

Kerr frequency combs for integrated polymer photonics

Author(s): **Anete Sapne**, Institute of Solid State Physics, University of Latvia (Latvia); **Arturs Bundulis**, Institute of Solid State Physics, Univ. of Latvia (Latvia); **Alessio Baldazzi**, University of Trento (Italy)

14092-64 • 18:10 - 20:00

A 2.4 GHz axial optical comb from a Fabry-Perot laser self-injection locked to a SNAP microresonator

Author(s): **Dmitry V. Kudashkin**, Novosibirsk State University (Russian Federation); **Ilya D. Vatik**, Novosibirsk State Univ. (Russian Federation)

14092-65 • 18:10 - 20:00

Frequency-tunable narrow-linewidth watt-level 318-nm UV laser system and single-step Rydberg excitation of cesium cold atoms

Author(s): **Jun-Min WANG, Yue-Wei Wang, Yi-Rong Wei, Zi-Wen Wang, Rui Sun**, Shanxi University (China)

14092-66 • 18:10 - 20:00

Unveiling Van Cittert-Zernike theorem in nonlinear optics

Author(s): **Zihao Pang, Ady Arie**, Tel Aviv Univ. (Israel)

14092-67 • 18:10 - 20:00

Investigating nonlinearity-loss-footprint tradeoffs in foundry fabricated photon pair sources

Author(s): **Tom Dixon**, Univ. of Bristol (United Kingdom); **Yisbel Marin**, VTT Technical Research Ctr. of Finland Ltd. (Finland); **Imad I. Faruque**, The Univ. of Sheffield (United Kingdom); **Krishna C. Balram**, Univ. of Bristol (United Kingdom)

14092-68 • 18:10 - 20:00

Ultrafast QPM for the generation higher-order DW using resonance-enhanced microstructured fibers

Author(s): **Chunxiao Chen**, IPHT (Germany); **Markus A. Schmidt**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14092-69 • 18:10 - 20:00

Assessment of polymer host-guest materials for all-optical photonic applications by COMSOL simulation

Author(s): **Evelina Klusa**, Institute of Solid State Physics (Latvia); **Arturs Bundulis, Mārtiņš A. Rutkis**, Institute of Solid State Physics, Univ. of Latvia (Latvia)

14092-70 • 18:10 - 20:00

Nonlinear dynamics and stability of Kerr degenerate optical parametric oscillators

Author(s): **Luca O. Trinchão**, University of Campinas (Brazil), Max Planck Institute for the Science of Light (Germany); **Juan Diego Mazo Vasquez**, Max Planck Institute for the Science of Light (Germany), Friedrich Alexander University (Germany); **Miguel Nienstedt, Luiz Peres, Eduardo S. Gonçalves**, University of Campinas (Brazil); **Alekhy Ghosh, Arghadeep Pal, Julius T. Gohsrich Gohsrich**, Max Planck Institute for the Science of Light (Germany), Friedrich Alexander University (Germany); **Laís Fujii dos Santos**, University of Ottawa (Canada); **Paulo F. Jarschel, Thiago P. Mayer Alegre**, University of Campinas (Brazil); **Nathalia B. Tomazio**, Universidade de São Paulo (Brazil); **Flore K. Kunst, Pascal Del'Haye**, Max Planck Institute for the Science of Light (Germany), Friedrich Alexander University (Germany); **Lewis Hill**, Max Planck Institute for the Science of Light (Germany); **Gustavo S. Wiederhecker**, University of Campinas (Brazil)

14092-71 • 18:10 - 20:00

Exceptional points and bifurcations in single Kerr ring and Fabry-Perot resonators: new insights for integrated photonics

Author(s): **Juan Diego Mazo-Vásquez**, Max Planck Institute for the Science of Light (Germany), Friedrich Alexander University (Germany); **Julius T. Gohsrich, Flore K. Kunst**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Lewis Hill**, Max-Planck-Institut für die Physik des Lichts (Germany)

14092-72 • 18:10 - 20:00

Nonlinear optical properties of AlN thin films characterized by the Nonlinear elliptical polarization rotation technique

Author(s): **Orlando Marbello Ospina**, Univ of São Paulo (Brazil); **Lukas Peters, Barbara Szafranski, Tobias Voss, Andreas Waag**, Institut für Halbleitertechnik, Technische Univ. Braunschweig (Germany); **Cleber Renato Mendonça**, Univ. de São Paulo (Brazil)

14092-73 • 18:10 - 20:00

Arbitrary dispersion-engineered integrated gallium phosphide photonic crystal cavities for coherent dissipative structures generation

Author(s): **Alisa Davydova**, Swiss Federal Institute of Technology Lausanne (EPFL) (Switzerland); **Alberto Nardi**, IBM research Europe (Switzerland); **Miles Anderson**, EPFL (Switzerland); **Andrey Gelash, Nikolai Kuznetsov**, Swiss Federal Institute of Technology Lausanne (EPFL) (Switzerland); **Johann Riemensberger**, EPFL (Switzerland); **Paul Seidler**, IBM research Europe (Switzerland); **Tobias J. Kippenberg**, Swiss Federal Institute of Technology Lausanne (EPFL) (Switzerland)

14092-74 • 18:10 - 20:00

A simplified explicit FDTD model for dispersive Kerr media

Author(s): **Lucas Sarrazin**, CNRS (France); **Mathias Marconi, Massimo Giudici**, Univ. Côte d'Azur (France); **Nicolas Forget, Aurélie Jullien, Matis Marcadier, Arnaud Garnache, Isabelle Sagnes**, CNRS (France)

14092-75 • 18:10 - 20:00

Second hyperpolarizability measurements of organic materials by third harmonic Hyper-Rayleigh scattering

Author(s): **Egons Oskars Judrups**, Institute of Solid State Physics (Latvia); **Arturs Bundulis, Mārtiņš A. Rutkis**, Institute of Solid State Physics, Univ. of Latvia (Latvia)

14092-77 • 18:10 - 20:00

Multimode solitons and soliton trains driven by space-time inputs to multimode fibers

Author(s): **Julien Dechanxhe, Pascal Kockaert, Spencer W. Jolly**, Univ. Libre de Bruxelles (Belgium)

14092-79 • 18:10 - 20:00

Air-hole-assisted ring-core fiber: a new platform for enhanced intermodal spatial overlap and nonlinearity

Author(s): **Shruti Jain**, IIT DELHI (India); **Deepak Jain**, Indian Institute of Technology Delhi (India)

14092-80 • 18:10 - 20:00

Temporal compression of picosecond low peak power optical pulses using freeform SiN waveguides

Author(s): **Maria Camila Diaz Sanchez**, Center of Nanosciences and Nanotechnologies (France); **Jérémy Saucourt**, XLIM (France); **Yijun Yang**, **Victor Turpaud**, Ctr. de Nanosciences et de Nanotechnologies (France); **Arnaud Mussot**, Lab. de Physique des Lasers, Atomes et Molécules (France); **Benjamin Wetzel**, XLIM (France); **Etienne Herth**, **Samson Edmond**, **David Bouville**, **Carlos Alonso Ramos**, **Delphine Marris-Morini**, **Daniele Melati**, **Laurent Vivien**, **Eric Cassan**, Ctr. de Nanosciences et de Nanotechnologies (France)

14092-81 • 18:10 - 20:00

Laser harmonic generation in chiral media: a beat-wave approach

Author(s): **Raoul Trines**, **Holger Schmitz**, **Robert Bingham**, STFC Rutherford Appleton Lab. (United Kingdom); **Martin King**, **Paul McKenna**, Univ. of Strathclyde (United Kingdom); **David Ayuso Molinero**, Imperial College London (United Kingdom); **Laura Rego Cabezas**, Instituto de Ciencia de Materiales de Madrid, Consejo Superior de Investigaciones Científicas (Spain)

14092-82 • 18:10 - 20:00

Information embedding and spectral correlations in extreme learning machines based on fiber supercontinuum generation

Author(s): **Andrei V. Ermolaev**, **Mathilde Hary**, **Lilian Emonin**, Université Marie et Louis Pasteur, FEMTO-ST Institute, CNRS UMR 6174 (France); **Goëry Genty**, Photonics Laboratory, Tampere University (Finland); **Daniel Brunner**, **John M. Dudley**, Université Marie et Louis Pasteur, FEMTO-ST Institute, CNRS UMR 6174 (France)

14092-83 • 18:10 - 20:00

Observation and characterization of oscillating Turing rolls and intermittency in Kerr microresonators

Author(s): **Alisa Davydova**, Swiss Federal Institute of Technology Lausanne (EPFL) (Switzerland); **Andrey Gelash**, **Ali Torkaman**, **Savyaraj Deshmukh**, **Nikolai Kuznetsov**, **Tobias Schneider**, **Tobias J. Kippenberg**, EPFL (Switzerland)

14092-84 • 18:10 - 20:00

Investigating the Anisotropy of Even and Odd Harmonics in ZnSe

Author(s): **Madison Dorrzapf**, Imperial College London (United Kingdom)

14092-85 • 18:10 - 20:00

Nonlinear metal-organic framework crystals: From bulk to nanometer scales

Author(s): **Valentin A. Milichko**, New Uzbekistan Univ. (Uzbekistan); **Pavel Alekseevskiy**, **Nikolaj Zhestkij**, ITMO Univ. (Russian Federation); **Xiaolin Yu**, Dalian Univ. of Technology (China)

14092-86 • 18:10 - 20:00

Dual-Wavelength Pumped Supercontinuum Generation and Temporal Reflection Dynamics in a Nonlinear Photonic Integrated Circuit

Author(s): **Charbel Khallouf**, FEMTO-ST (France); **Lynn Sader**, **Alexis Bougaud**, XLIM (France), Univ. de Limoges (France); **Brent Little**, QXP Technologies Inc. (China); **Sait Chu**, City Univ. of Hong Kong (China); **David J. Moss**, Swinburne Univ. of Technology (Australia); **Roberto Morandotti**, Institut National de la Recherche Scientifique (Canada); **Govind Agrawal**, The Institute of Optics, Univ. of Rochester (United States); **John M. Dudley**, FEMTO-ST, CNRS (France), Univ. Marie et Louis Pasteur (France); **Benjamin Wetzel**, XLIM (France), Univ. de Limoges (France); **Thibaut Sylvestre**, FEMTO-ST (France)

14092-87 • 18:10 - 20:00

Effect of Strong Magnetic field on a Two-Electron Quantum Dots in a Quartic Anharmonic potential

Author(s): **SOUMEN DAS**, Visva Bharati (India)

14092-88 • 18:10 - 20:00

Revealing nonlinear modal interactions in silicon nitride waveguides integrated with MoS2 monolayer through full vectorial description

Author(s): **Daniel A. Matos**, Universidade de São Paulo (Brazil); **Nathalia B. Tomazio**, Univ. de São Paulo (Brazil), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Gustavo S. Wiederhecker**, Instituto de Física "Gleb Wataghin" (Brazil), Univ. of Campinas (Brazil); **Daniel F. Londoño-Giraldo**, MackGrappe, Univ. Presbiteriana Mackenzie (Brazil); **Alisson R. Cadore**, Brazilian Nanotechnology National Lab. (Brazil); **Christiano J. de Matos**, MackGrappe, Univ. Presbiteriana Mackenzie (Brazil); **Mohd Rehan**, MackGrappe, Univ. Presbiteriana Mackenzie (Brazil), Göteborgs Univ. (Sweden)

14092-90 • 18:10 - 20:00

A generalized perturbative approach for the computation of nonlinear scattering problems

Author(s): **Jérémy Itier**, **Gilles Renversez**, **Frédéric Zolla**, Institut Fresnel (France)

14092-91 • 18:10 - 20:00

Vectorial Kerr Solitons: 2D Symmetry Breaking Phenomena

Author(s): **Jianxing Pan**, **Xia Yu**, Beihang Univ. (China); **Perry Ping Shum**, Southern Univ. of Science and Technology (China)

14092-92 • 18:10 - 20:00

Investigation of ultrafast dynamics in dye-sensitized solar cells by two-dimensional electronic spectroscopy

Author(s): **Kosmas Giannaris**, Univ. du Luxembourg (Luxembourg)

14092-93 • 18:10 - 20:00

Photo-induced on-chip second harmonic generation for Hz-level optical metrology

Author(s): **Andrei Diakonov**, **Liron Stern**, The Hebrew Univ. of Jerusalem (Israel); **Roy Zektzer**, Bar-Ilan Univ. (Israel); **Xiyuan Lu**, **Gregory Moille**, **Kartik Srinivasan**, National Institute of Standards and Technology (United States)

14092-94 • 18:10 - 20:00

Resonant second-harmonic generation at 300 nm exceeding 4.5 W

Author(s): **Stefan Kresta**, **Florian Figge**, **Philipp Jahn**, **Piotr T. Adamowski**, **Marcel Holtz**, **Matthias Scholz**, TOPTICA Photonics SE (Germany)

14092-95 • 18:10 - 20:00

Nonlinearity-enabled optical vortices with dual-topological protection

Author(s): **Zhichan Hu**, **Ziteng Wang**, Nankai Univ. (China); **Domenico Bongiovanni**, Institut National de la Recherche Scientifique (Canada); **Ruoqi Cheng**, **Zhenghua Huang**, **Liqin Tang**, **Daohong Song**, Nankai Univ. (China); **Roberto Morandotti**, Institut National de la Recherche Scientifique (Canada); **Mrvoje Buljan**, Univ. of Zagreb (Croatia); **Zhigang Chen**, Nankai Univ. (China)

14092-96 • 18:10 - 20:00

Dissipative Self-organization, Coherence Transition Dynamics in a Mamyshev Oscillator

Author(s): **Changxi Yang**, **Zhenghao Jiao**, **Chengying Bao**, Tsinghua Univ (China)

14092-97 • 18:10 - 20:00

Single-frequency mid-infrared source based on unidirectional ring-laser exploiting differential parametric gain from tunable, single-frequency pump source

Author(s): **Rasmus Torp**, Technical University of Denmark (Denmark); **Samson Alfred Adersen**, **Ole Bjarlin Jensen**, **Peter Tidemand-Lichtenberg**, Technical Univ. of Denmark (Denmark)

14092-98 • 18:10 - 20:00

Propagation dynamics of nonlinear Airy beams in photonic lattices with negative defects

Author(s): **Nacera Bouldja**, **Clara Ethuin**, **Delphine Wolfersberger**, CentraleSupélec (France)

14092-99 • 18:10 - 20:00

High-harmonic spectroscopy probes the anisotropic charge-density-wave strengths of TiSe₂

Author(s): **Igor Tyulnev**, ICFO - Institut de Ciències Fotòniques (Spain); **Lin Zhang**, **Lenard Vamos**, **Julita Poborska**, ICFO - Institut de Ciències Fotòniques (Spain); **Utsa Battacharya**, Institute for Theoretical Physics (Switzerland); **Ravindra W. Chhajlany**, Institute of Spintronics and Quantum Information (Poland); **Tobias Grass**, Donostia International Physics Ctr. (Spain), IKERBASQUE, Basque Foundation for Science (Spain); **Samuel Mañas-Valero**, **Eugenio Coronado**, Instituto de Ciencia Molecular (Spain); **Maciej Lewenstein**, **Jens Biegert**, ICFO - Institut de Ciències Fotòniques (Spain), ICREA - Institució Catalana de Recerca i Estudis Avançats (Spain)

14092-100 • 18:10 - 20:00

Efficient second harmonic generation in thin film lithium niobate nanowaveguides

Author(s): **Nathanaël Benon**, **Arthur De Sousa Lopes Moreira**, **Théo Dutron**, **Ludovic Gauthier-Manuel**, **Mathieu Chauvet**, Univ. Marie et Louis Pasteur (France), FEMTO-ST, CNRS (France)

14092-102 • 18:10 - 20:00

Elimination of beam walk-off in second-harmonic generation

Author(s): **Edvinas Aleksandravicius**, **Darius Gailevicius**, Vilnius Univ. (Lithuania); **Kestutis Staliunas**, Vilnius Univ. (Lithuania), ICREA - Institució Catalana de Recerca i Estudis Avançats (Spain), Univ. Politècnica de Catalunya (Spain)

14092-104 • 18:10 - 20:00

An experiment using a high-repetition rate femtosecond laser to study the NL optical behavior of a nanoalloy for photonic applications

Author(s): **Mohamed Ashour**, The Higher Institute for Optics Technology (Egypt), Laser Institute for Research and Applications (Egypt)

14092-105 • 18:10 - 20:00

Transition from narrowband generation to turbulent multimode spectrum in a random fiber laser

Author(s): **Oleg A. Gorbunov**, Novosibirsk State University (Russian Federation); **Ilya D. Vatrik**, Novosibirsk State Univ. (Russian Federation); **Oleg A. Gorbunov**, Novosibirsk State Univ (Russian Federation)

14092-106 • 18:10 - 20:00

Slot Sb₂Se₃-Tunable Directional Couplers: a Compact, Reconfigurable Building-Block for Neuromorphic Photonics

Author(s): **Mobin Motaharifar**, **Yaser M. Banad**, **Sarah S. Sharif**, The Univ. of Oklahoma (United States)

14092-107 • 18:10 - 20:00

High repetition rate pulse train generation in fibers with linear anomalous dispersion decrement: algorithm for refining the longitudinal dispersion profile of the fiber

Author(s): **Dmitry A. Korobko, Ivan Panyaev**, Ulyanovsk State Univ (Russian Federation); **Pavel Mironov**, Ulyanovsk State Univ. (Russian Federation); **Andrei Fotiadi**, Ulyanovsk State Univ (Russian Federation), University of Mons, Mons, 7000, Place du Parc, 20 (Belgium); **Dmitrii Stoliarov**, Aston University (United Kingdom)

14092-108 • 18:10 - 20:00

Enhancement of multipulse generation threshold in SESAM-based PM fiber soliton laser

Author(s): **Dmitry A. Korobko**, Ulyanovsk State Univ (Russian Federation); **Valeria Ribenek, Galina Tertysnikova, Pavel Itrin**, Ulyanovsk State Univ. (Russian Federation); **Andrei Fotiadi**, Ulyanovsk State Univ. (Russian Federation), Univ. de Mons (Belgium); **Maxim Pribylov**, Ulyanovsk State Univ. (Russian Federation); **Sergey Sokolovsky**, Aston University (United Kingdom)

14092-109 • 18:10 - 20:00

Femtosecond laser parameter effects on anisotropic thermal conduction in CFRP for medical applications

Author(s): **Honghao Zhang**, Gongli Hospital of Shanghai (China)

Wednesday 15 April 2026

SESSION 7: FREQUENCY COMBS, NOVEL RESONATORS

15 April 2026 • 8:30 - 10:30 | Churchill (Niveau/Level 1)

Session Chair(s): **Birgit Stiller**, Max-Planck-Institut für die Physik des Lichts (Germany)

14092-30 • 8:30 - 9:10

A quarter-century of optical frequency combs (Keynote Presentation)

Author(s): **Scott A. Diddams**, Univ. of Colorado Boulder (United States)

14092-31 • 9:10 - 9:30

Phase-controlled nonlinear dynamics and bistability in a non-Hermitian silicon microresonator

Author(s): **Bulent Aslan, Stefano Biasi, Stefano Gretter, Davide Olivieri**, Univ. degli Studi di Trento (Italy); **Riccardo Franchi**, Boston Univ. (United States), Univ. degli Studi di Trento (Italy); **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy)

14092-32 • 9:30 - 9:50

Microcomb generation in normal dispersion spiral resonators

Author(s): **Van Doan Le, Julien Fatome, Roseni Vences Robert, Erwan Lucas**, Lab. Interdisciplinaire Carnot de Bourgogne (France)

14092-33 • 9:50 - 10:10

Precision fabrication of a microbubble resonator for mode control

Author(s): **Amal Jose, Ramgopal Madugani, Metin Ozer, Christophe Pin, Sile Nic Chormaic**, Okinawa Institute of Science and Technology (Japan)

14092-34 • 10:10 - 10:30

Sub-femtosecond relative timing jitter of a all-fiber, dual-color laser at 1.0 μ m and 1.5 μ m

Author(s): **Yi Hua, Sinem Sipahi, Theia E. Sharkawy, Marvin Edelmann, Wei Lu, Kemal Shafak, Daniel Petters, Franz X. Kärtner**, Cycle GmbH (Germany)

Coffee Break 10:30 - 11:00

SESSION 8: NONLINEAR PHOTONICS IN NOVEL PLATFORMS

15 April 2026 • 11:00 - 12:30 | Churchill (Niveau/Level 1)

Session Chair(s): **Stéphane Coen**, The Univ. of Auckland (New Zealand)

14092-35 • 11:00 - 11:30

Ultrafast quantum and classical nonlinear nanophotonic circuits (Invited Paper)

Author(s): **Alireza Marandi**, Caltech (United States)

14092-110 • 11:30 - 11:50

TBA I

14092-37 • 11:50 - 12:10

Pseudospin light circuits in nonlinear photonic crystals

Author(s): **Shani Izhak, Ofir Yesharim, Ady Arie**, Tel Aviv Univ. (Israel)

14092-111 • 12:10 - 12:30

TBA II

Lunch/Exhibition Break 12:30 - 13:40

SESSION 9: NOVEL SOLITON DYNAMICS AND APPLICATIONS

15 April 2026 • 13:40 - 15:30 | Churchill (Niveau/Level 1)

Session Chair(s): **Giovanna Tissoni**, Institut de Physique de Nice (France)

14092-39 • 13:40 - 14:10

Probabilistic photonic computing in symmetry broken Kerr resonators (*Invited Paper*)

Author(s): **Stéphane Coen**, Univ of Auckland (New Zealand), Te Whai Ao - Dodd Walls Centre (New Zealand); **Kane Hill, Yiqing Xu**, The Univ. of Auckland (New Zealand), The Dodd-Walls Ctr. for Photonic and Quantum Technologies (New Zealand); **Julien Fatome**, Univ. Bourgogne Europe (France); **Stuart G. Murdoch, Miro Erkintalo, Liam Quinn**, The Univ. of Auckland (New Zealand), The Dodd-Walls Ctr. for Photonic and Quantum Technologies (New Zealand)

14092-40 • 14:10 - 14:30

The strange map of synchronization: breathing solitons beyond the ordinary Arnold's tongues

Author(s): **Xiuqi Wu, Junsong Peng**, Hainan Institute (China), Chongqing Institute, East China Normal Univ. (China); **Bo Yuan**, Hainan Institute, East China Normal Univ. (China); **Sonia Boscolo**, Aston Institute of Photonics Technology, Aston Univ. (United Kingdom); **Christophe Finot**, Université Bourgogne Europe, CNRS, Laboratoire Interdisciplinaire Carnot de Bourgogne (France); **Heping Zeng**, Hainan Institute (China), Chongqing Institute, East China Normal Univ. (China), Shanghai Research Ctr. for Quantum Sciences (China)

14092-41 • 14:30 - 14:50

Temporal chirpless near-field microscope

Author(s): **Or Refaely, Melissa Bogdanov Berezovsky, Sagi Bruck, Sara Meir, Yuval Tamir, Hamootal Duadi, Moti Fridman**, Bar-Ilan Univ. (Israel)

14092-42 • 14:50 - 15:10

Reverse time-lens

Author(s): **Melissa Bogdanov Berezovsky, Or Refaely, Yuval Tamir, Sara Meir, Hamootal Duadi, Moti Fridman**, Bar-Ilan Univ. (Israel)

14092-43 • 15:10 - 15:30

Temporal optical parametric oscillator

Author(s):

Coffee Break 15:30 - 16:00

SESSION 10: FREQUENCY COMBS, SOLITONS

15 April 2026 • 16:00 - 17:50 | Churchill (Niveau/Level 1)

Session Chair(s): **Alireza Marandi**, Caltech (United States)

14092-44 • 16:00 - 16:30

Ultraviolet dual comb spectroscopy (*Invited Paper*)

Author(s): **Birgitta Bernhardt, Mithun Pal, Christoph Gruber, Marcus Osslander, Lukas Fürst, Alexander Eber, Robert di Vora, Elias Ehl, Emily Hruska, Adrian Kirchner, Armin Speletzt**, Technische Univ. Graz (Austria)

14092-45 • 16:30 - 16:50

Self-starting 100 GHz broadband Kerr optical frequency comb

Author(s): **Dmitrii A. Stoliarov**, Aston Institute of Photonic Technologies, Aston University (United Kingdom); **Nikolay G. Pavlov, Sergey Koptyaev, John D. Jost, Maxim Karpov**, Enlighthra (Switzerland); **Sergei K. Turitsyn**, Aston Institute of Photonics Technology, Aston Univ. (United Kingdom)

14092-46 • 16:50 - 17:10

Octave-spanning soliton Kerr microcomb with a record number of comb lines at an electronically detectable repetition rate in a single Si₃N₄ racetrack resonator

Author(s): **Alisa Davydova, Miles H. Anderson, Zheru Qiu, Tobias J. Kippenberg**, Swiss Federal Institute of Technology Lausanne (EPFL) (Switzerland)

14092-47 • 17:10 - 17:30

Engineered mode coupling in high-Q microresonators enables deterministic low-repetition-rate soliton microcombs

Author(s): **Yang Liu**, Technical University of Denmark (Denmark); **Yi Zheng, Haoyang Tan, Yanjing Zhao, Andreas Jacobsen, Kresten Yvind, Minhao Pu**, Technical Univ. of Denmark (Denmark)

14092-48 • 17:30 - 17:50**Perfect soliton crystals in Kerr cavities with negative pure-quartic dispersion**

Author(s): **Krupamaya Panda**, Institute of Photonics and Optical Science (IPOS), School of Physics, University of Sydney (Australia), ARC Centre of Excellence for Optical Microcombs for Breakthrough Science (COMBS), School of Physics, University of Sydney (Australia), Ecole Centrale de Lyon, INSA Lyon, CNRS, Université Claude Bernard Lyon 1, CPE Lyon, INL, UMR5270 (France); **Carlo Silvestri**, The Univ. of Sydney (Australia), ARC Ctr. of Excellence for Optical Microcombs for Breakthrough Science (Australia); **Christelle Monat**, Ecole Centrale de Lyon (France); **Christian Grillet**, CNRS, Ecole Centrale de Lyon (France); **Antoine F.J. Runge**, **Martijn de Sterke**, The Univ. of Sydney (Australia), ARC Ctr. of Excellence for Optical Microcombs for Breakthrough Science (Australia)



CONFERENCE 14093

Lasers and Photonics for Advanced Manufacturing II

12 - 16 April 2026 | Curie A (Niveau/Level 1)

Conference Chair(s): **François Courvoisier**, FEMTO-ST (France); **Sylvain Lecler**, ICube (France); **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

Program Committee: **Jörn Bonse**, Bundesanstalt für Materialforschung und -prüfung (Germany); **Stefan Dimov**, Univ. of Birmingham (United Kingdom); **Anming Hu**, The Univ. of Tennessee Knoxville (United States); **Rainer Kling**, Berner Fachhochschule (Switzerland); **John Lopez**, Univ. de Bordeaux, CNRS-CEA (France); **Yongfeng Lu**, Univ. of Nebraska-Lincoln (United States); **Santiago M. Olaizola**, Univ. of Navarra (Spain); **Roberto Osellame**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Gert-Willem Römer**, Univ. Twente (Netherlands); **Shuntaro Tani**, RIKEN (Japan)

Sunday 12 April 2026

SESSION 1: SURFACE FUNCTIONALIZATION

12 April 2026 • 15:30 - 17:30 | Curie A (Niveau/Level 1)

Session Chair(s): **François Courvoisier**, Univ. Marie et Louis Pasteur (France)

14093-1 • 15:30 - 16:00

DLIP: The tool for periodic-precise nanostructure fabrication (*Invited Paper*)

Author(s): **Irene Solana**, Consejo Superior de Investigaciones Científicas (Spain); **Fernando Chacon-Sanchez**, **Mario Garcia-Lechuga**, Instituto de Óptica - CSIC (Spain); **Fernando Agulló-Rueda**, Instituto de Ciencia de Materiales de Madrid (ICMM) - CSIC (Spain); **Fernando Agulló-Rueda**, Instituto de Ciencia de Materiales de Madrid (ICMM) - CSIC (Spain); **Jan Siegel**, Instituto de Óptica - CSIC (Spain)

14093-2 • 16:00 - 16:15

High-resolution diode laser-based patterning of composite PMMA thin films doped with silver nanoparticles

Author(s): **Christos Riziotis**, National Hellenic Research Foundation (Greece); **Theodore Manouras**, Foundation for Research and Technology-Hellas (Greece); **Alexandra Sinani**, National Hellenic Research Foundation (Greece); **Konstantinos Karachousos-Spiliotakopoulos**, Univ. of Patras (Greece); **Maria Vamvakaki**, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); **Evangelos Angelakos**, Opticon Group ABEE (Greece); **Vassilis Tangoulis**, Univ. of Patras (Greece)

14093-3 • 16:15 - 16:30

Controlling wrinkles nanopatterns induced by femtosecond laser

Author(s): **Navya Koovaparambil Gigimon**, CELIA, Univ. Bordeaux, CNRS, CEA, UMR 5107, 43 rue Pierre Noailles – F-33400 Talence (France); **Yoann Brûlé**, CEA-LETI, Univ. Grenoble Alpes, CEA Leti, F-38000 Grenoble (France); **Baptiste Fabre**, **Dominique Descamps**, **Stéphane Petit**, CELIA, Univ. Bordeaux, CNRS, CEA, UMR 5107, 43 rue Pierre Noailles – F-33400 Talence (France); **Kévin Guy**, **Thomas Jalabert**, **Pierre Noé**, CEA-LETI, Univ. Grenoble Alpes, CEA Leti, F-38000 Grenoble (France); **Jérôme Gaudin**, CELIA, Univ. Bordeaux, CNRS, CEA, UMR 5107, 43 rue Pierre Noailles – F-33400 Talence (France)

14093-4 • 16:30 - 16:45

Control of Surface Structures for PVA/AA Photopolymer Functionalization by Ultrafast Laser Processing

Author(s): **Andrés Pérez Bernabeu**, Univ de Alicante (Spain); **Pol Sopeña**, LP3, Aix-Marseille Univ. (France); **Daniel Puerto**, **José Reyna**, **Sergi Gallego**, **Jorge Francés**, **Andrés Márquez**, Univ. de Alicante (Spain); **David Grojo**, LP3, Aix-Marseille Univ. (France); **Augusto Beléndez**, Univ. de Alicante (Spain)

14093-5 • 16:45 - 17:00

Microstructural and chemical analysis of laser-textured Zr-Cu-Ag thin film metallic glass for antibacterial applications

Author(s): **Hugo Bruhier**, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France); **Noémie Lebrun**, Lab. MatéIS, Institut National des Sciences Appliquées de Lyon (France); **David Pilloud**, Institut Jean Lamour, Univ. de Lorraine (France); **Yannick Bleu**, **Yaya Lefkir**, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France); **Titouan Michon**, **Christelle Der Loughian**, **Benoît Ter-Ovanessian**, Lab. MatéIS, Institut National des Sciences Appliquées de Lyon (France); **Florent Bourquard**, **Florence Garrelie**, **Jean-Philippe Colombier**, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne (France); **Jean François Pierson**, Institut Jean Lamour, Univ. de Lorraine (France); **Philippe Steyer**, Lab. MatéIS, Institut National des Sciences Appliquées de Lyon (France)

14093-6 • 17:00 - 17:15

fabrication of micropatterns via femtosecond laser-induced selective surface modification

Author(s): **Meng Zhou**, **Wenjun Wang**, **Aifei Pan**, **Xuesong Mei**, Xi'an Jiaotong Univ. (China)

14093-7 • 17:15 - 17:30

Wide-gamut nanosecond laser colouring of titanium via oxygen-controlled oxide films and modelling

Author(s): **Chen-Wei Hu**, **Chin-Lun Chang**, **Yun-Jie Jhang**, **Chia-Hung Chou**, **Ming-Chung Lim**, **Chien-Hung Chen**, **Wisarud Yongbanjerd**, **Huang-Hsuan Hsin**, **Hung-Wen Chen**, National Tsing Hua Univ. (Taiwan)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticaean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 2: HIGH THROUGHPUT LASER STRUCTURING

13 April 2026 • 11:30 - 13:00 | Curie A (Niveau/Level 1)

Session Chair(s): **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

14093-8 • 11:30 - 12:00

Laser processing in GHz regime: from medical devices to robotic applications (*Invited Paper*)

Author(s): **Laura Gemini**, **Pierre Balage**, **Taieb Bakouche**, **Matthieu Valentin**, **Marc Faucon**, ALPhANOV (France)

14093-9 • 12:00 - 12:15

Dynamic Beam Shaping for Femtosecond Laser Multi-Pulse Structuring of Ti alloy Surfaces

Author(s): **Antony Ménard, Youssef Benserhir, Christophe Cassagne**, Lab. de Photonique d'Angers (France); **Eric Audouard**, Amplitude Laser Group (France); **Rebecca Höpfer, Manja Krüger**, Institut für Werkstoffe, Technologien und Mechanik (IWTM) (Germany); **Cyril Maclair**, Lab. de Photonique d'Angers (France)

14093-10 • 12:15 - 12:30

high speed scanning versus beam division: technical and physical challenges for high power laser femtosecond processing.

Author(s): **Eric Audouard, Marie Fleureau, Quentin Mocaer, Martin Delaigue, Vincent Rouffiange**, Amplitude (France)

14093-11 • 12:30 - 12:45

Bio-inspired surface functionalization of complex 3D industrial parts using two different laser technologies for drag reduction

Author(s): **Mikel Gomez Aranzadi, Luis Omeñaca**, Ceit (Spain); **Antanas Urbas**, Workshop of Photonics (Lithuania); **Anne Feuer**, Fusion Bionic GmbH (Germany); **Clovis Alleaume**, AIMEN Technology Centre (Spain); **Eric Gärtner, Daniel Gitzel**, Fraunhofer IWU (Germany); **Mikel Lucas Garcia de Albeniz**, Bionic Surface Technologies (Austria); **Ainara Rodriguez, Santiago Miguel Olaizola**, Ceit (Spain)

14093-89 • 12:45 - 13:00

Laser-based surface microtexturing for advanced liquid guidance

Author(s): **Marcos Soldera**, Technische Universität Dresden (Germany); **Tianhao Wu, Yangxi Fu**, TU Dresden (Germany); **Andrés Fabián Lasagni**, TU Dresden (Germany), Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany)

Lunch Break 13:00 - 14:15

SESSION 3: PROCESSING OF TRANSPARENT MATERIALS I

13 April 2026 • 14:15 - 15:30 | Curie A (Niveau/Level 1)

Session Chair(s): **Sylvain Lecler**, ICube (France)

14093-12 • 14:15 - 15:00

Designer laser beam shapes for engineering diffractive photonics in bulk and fiber glasses (Keynote Presentation)

Author(s): **Peter R. Herman, Pok-Man Chow, Gligor Djogo, Stephen Ho, Jianzhao Li, Yueqi Wang, Polina Zavyalova**, Univ. of Toronto (Canada)

14093-13 • 15:00 - 15:15

Manufacturing of 3D Glass Micro-Optics through Laser Assisted Topological Transformation

Author(s): **Martin Lentz, Yves Bellouard**, EPFL (Switzerland)

14093-17 • 15:15 - 15:30

High-throughput fabrication of biofunctional polymer surfaces via ultrafast laser structuring and injection molding

Author(s): **Günes Akin Dogan**, Laser Zentrum Hannover e.V. (Germany); **Gabriella-Paula Brunotte, Mario Ternka**, TPK-Kunststofftechnik GmbH (Germany); **Alexander Wienke, Peter Jäschke**, Laser Zentrum Hannover e.V. (Germany); **Stefan Kaierle**, Laser Zentrum Hannover e.V. (Germany), Leibniz Univ. Hannover (Germany)

Coffee Break 15:30 - 16:00

SESSION 4: PROCESSING OF TRANSPARENT MATERIALS II

13 April 2026 • 16:00 - 17:45 | Curie A (Niveau/Level 1)

Session Chair(s): **Peter R. Herman**, Univ. of Toronto (Canada)

14093-15 • 16:00 - 16:30

Ultrahigh-speed and high-aspect-ratio laser drilling of transparent materials through transient excitation (Invited Paper)

Author(s): **Yusuke Ito**, Univ of Tokyo (Japan)

14093-16 • 16:30 - 16:45

Pump-probe measurements of GHz-burst Bessel-beam single-shot modification of fused silica using femtosecond pulses

Author(s): **Théo Guilbarteau**, Ctr. Lasers Intenses et Applications (France), ALPhANOV (France); **Manon Lafargue**, Ctr. Lasers Intenses et Applications (France), Amplitude (France); **Laura Gemini**, ALPhANOV (France); **John Lopez, Inka Manek-Hönniger**, Ctr. Lasers Intenses et Applications (France)

14093-14 • 16:45 - 17:00

Fabrication of optical phase elements in bulk sapphire by UV pulses

Author(s): **Edvinas Aleksandravicius, Gabrielius Kontenis, Indre Meskelaite, Darius Gailevicius**, Vilnius Univ. (Lithuania)

14093-18 • 17:00 - 17:15

Large-scale, high-strength transparent welding of thick fused silica using femtosecond laser pulses

Author(s): **John Lopez**, Univ. de Bordeaux (France), Ctr. Lasers Intenses et Applications, CNRS (France); **Manon Lafargue**, Amplitude (France), Univ. de Bordeaux (France), Ctr. Lasers Intenses et Applications, CNRS (France); **Théo Guilbarteau**, ALPhANOV (France), Univ. de Bordeaux (France), Ctr. Lasers Intenses et Applications, CNRS (France); **Bastien Gavory**, Amplitude (France); **Inka Manek-Hönniger**, Univ. de Bordeaux (France), Ctr. Lasers Intenses et Applications, CNRS (France)

14093-19 • 17:15 - 17:30

High-pressure wave generation in fused silica using multi-spot exposure

Author(s): **Kaede Yamauchi**, EPFL (Switzerland), Utsunomiya Univ (Japan); **Lisa Ackermann**, EPFL (Switzerland); **Yoshio Hayasaki**, Utsunomiya Univ. (Japan); **Yves Bellouard**, EPFL (Switzerland)

14093-20 • 17:30 - 17:45

Femtosecond laser-generated stress waves in fused silica

Author(s): **Alexandros Mouskeftaras**, Lab. Lasers, Plasmas et Procédés Photoniques, CNRS (France), Aix-Marseille Univ. (France); **Guillaume Duchateau**, CEA-Cesta (France); **Olivier Utéza**, **Olga Koritsoglou**, Lab. Lasers, Plasmas et Procédés Photoniques, CNRS (France), Aix-Marseille Univ. (France)

Tuesday 14 April 2026

SESSION 5: ULTRAFAST LASER STRUCTURING AND JOINING

14 April 2026 • 8:50 - 10:20 | Curie A (Niveau/Level 1)

Session Chair(s): **Yusuke Ito**, The Univ. of Tokyo (Japan)

14093-21 • 8:50 - 9:05

Ultrafast Bessel Beam Enabled Glass Cutting with Ultra-Low Surface Roughness

Author(s): **Rajeev Dwivedi**, **Xxx Sedao**, **Yaya Lefkir**, Lab. Hubert Curien (France); **Guodong Zhang**, **Guanghua Cheng**, Northwestern Polytechnical Univ. (China); **Razvan Stoian**, Lab. Hubert Curien (France)

14093-22 • 9:05 - 9:20

Extremely high aspect ratio nanowires in single shot from femtosecond higher-order Bessel beams

Author(s): **Remi Meyer**, **Valeria V. Belloni**, **Mostafa Hassan**, **Remo Giust**, **François Courvoisier**, Univ. Marie et Louis Pasteur (France), FEMTO-ST, CNRS (France)

14093-23 • 9:20 - 9:35

Temporally shaped femtosecond laser pulses for micromachining applications with dielectric, semiconductor and metallic materials

Author(s): **Cristian Sarpe**, **Florian Fiedler**, **Omar Elsheikh**, **Bastian Zielinski**, **Camilo Florian**, Univ. Kassel (Germany)

14093-24 • 9:35 - 9:50

40 MHz femtosecond laser single burst to weld glass

Author(s): **Baptiste De Azevedo**, ICube (France), Institut National des Sciences Appliquées de Strasbourg (France); **Frédéric Antoni**, ICube (France); **Éric Audouard**, Amplitude (France); **Armel Bahouka**, IREPA LASER (France); **Sylvain Lecler**, ICube (France), Institut National des Sciences Appliquées de Strasbourg (France)

14093-25 • 9:50 - 10:05

Influence of scanning speed and number of passes on femtosecond laser welding of polycarbonate

Author(s): **Soheil Ale Mazreshadi**, **Mian Monib Ur Rehman**, **Sylvie Castagne**, KU Leuven (Belgium)

14093-26 • 10:05 - 10:20

Ultrafast laser microwelding for quantum technology

Author(s): **Etienne Pelletier**, **Dimitris Karnakis**, Oxford Lasers Ltd. (United Kingdom)

Coffee Break 10:20 - 11:00

SESSION 6: PROCESSING WITH SHAPED BEAMS

14 April 2026 • 11:00 - 12:30 | Curie A (Niveau/Level 1)

Session Chair(s): **Laura Gemini**, ALPhANOV (France)

14093-27 • 11:00 - 11:30

Challenges in Spatial Beam Shaping for Ultrafast Laser Surface Texturing: Role of SLM-Induced Artifacts (Invited Paper)

Author(s): **Bahia Najih**, Amplitude (France); **Antony Ménard**, Lab. de Photonique d'Angers (France); **Martin Delaigue**, Amplitude (France); **Florent Bourquard**, Lab. Hubert Curien (France); **Cyril Maclair**, Lab. de Photonique d'Angers (France)

14093-28 • 11:30 - 11:45

Single-Step Holographic Grayscale Lithography of Fabry–Perot Filter Arrays

Author(s): **Oliver Burton**, Univ of Cambridge (United Kingdom); **Marco Astarita**, Politecnico di Milano (Italy); **Ayan Rakshit**, Univ. of Cambridge (United Kingdom); **Peter Christopher**, The Univ. of Nottingham (United Kingdom); **Calum Williams**, Univ. of Exeter (United Kingdom); **Jack Alexander-Webber**, **Tim Wilkinson**, **Hannah Joyce**, Univ. of Cambridge (United Kingdom)

14093-29 • 11:45 - 12:00

High fidelity and high efficiency shaping of axially configurable Bessel beams for laser material processing

Author(s): **Pok Man Chow**, **Stephen Ho**, **Polina Zavyalova**, **Peter R. Herman**, Univ. of Toronto (Canada)

14093-30 • 12:00 - 12:15

Acoustically programmable liquid-metal mirror for high-power laser beam shaping

Author(s): **Blanca Mestre-Torà**, Univ. de Barcelona (Spain); **Martí Duocastella**, Institut de Nanociència i Nanotecnologia, Univ. de Barcelona (Spain)

14093-31 • 12:15 - 12:30

Beam shaping for multi-kW single mode lasers

Author(s): **Alexander V. Laskin**, **Vadim Laskin**, AdlOptica Optical Systems GmbH (Germany)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 7: LASER PROCESSING FOR ENERGY STORAGE

14 April 2026 • 14:00 - 16:00 | Curie A (Niveau/Level 1)

Session Chair(s): **François Courvoisier**, Univ. Marie et Louis Pasteur (France)

14093-32 • 14:00 - 14:45

Reactive laser powder bed fusion processing to create graphitic aerogels for energy applications (Keynote Presentation)

Author(s): **Craig B. Arnold**, Princeton Univ. (United States)

14093-33 • 14:45 - 15:00

Advanced architectures for 3D-structured lithium-ion battery electrodes via precession module

Author(s): **Emma Nikam**, **Jonas Hereijgers**, **Roshan Mangal Bhattarai**, Univ. Antwerpen (Belgium)

14093-34 • 15:00 - 15:15

GHz and MHz Burst enhanced femtosecond laser structuring of electrodes for improved Li-Ion battery performances

Author(s): **Aurelien Sikora**, **Girolamo Mincuzzi**, **Marc Faucon**, **Laura Gemini**, ALPhANOV (France)

14093-35 • 15:15 - 15:30

High-throughput quantitative analysis of high-energy LiFePO₄ cathode materials by laser-induced breakdown spectroscopy

Author(s): **Yuanchun Huang**, **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

14093-36 • 15:30 - 15:45

Improving lithium-ion battery performance through ultrafast laser structuring of lithium manganese iron phosphate using GHz bursts

Author(s): **Wen Li**, **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

14093-37 • 15:45 - 16:00

Evaluating the potential of LIFT processes for developing electrode architectures for lithium-ion batteries

Author(s): **Ulrich Rist**, **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 8: PROCESSING OF SEMICONDUCTORS

15 April 2026 • 8:30 - 10:15 | Curie A (Niveau/Level 1)

Session Chair(s): **Matthieu Lancry**, Institut de Chimie Moléculaire et des Matériaux d'Orsay (France)

14093-38 • 8:30 - 9:00

Spatio-temporal laser shaping for internal structuring of semiconductors (Invited Paper)

Author(s): **Niladri Ganguly**, **Qiong Xie**, **Pol Sopeña**, **M. David Grojo**, Aix-Marseille Univ. (France), Lab. Lasers, Plasmas et Procédés Photoniques, CNRS (France)

14093-39 • 9:00 - 9:15

2.1 μm holmium based ultrafast lasers for material processing

Author(s): **Celia Millon**, **Michael Müller**, RayVen Laser GmbH (Germany); **Clara Saraceno**, **Anna Suzuki**, Ruhr-Univ. Bochum (Germany)

14093-40 • 9:15 - 9:30

High-density flexible nanopatterning of silicon with scanning photonic nanojets

Author(s): **Mania Majumder**, Aix-Marseille Univ. (France); **Catalin-Daniel Constantinescu**, **David Grojo**, Lab. Lasers, Plasmas et Procédés Photoniques, Aix-Marseille Univ., CNRS (France)

14093-41 • 9:30 - 9:45

Comparative analysis of different pulse configurations in silicon laser processing with GHz bursts

Author(s): **Akhil Kuriakose**, **Maxime Fenech**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France); **Manon Lafargue**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France), Amplitude (France); **Theo Guilbarteau**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France), ALPhANOV (France); **Guilhem Vidor**, **Pierre Balage**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France); **Markus Blothe**, **Maxime Chambonneau**, Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **John Lopez**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France); **Stefan Nolte**, Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany), Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Inka Manek-Hönninger**, Ctr. Lasers Intenses et Applications, Univ. de Bordeaux, CEA, CNRS (France)

14093-42 • 9:45 - 10:00

Ring-type Shape Laser Beam Processing for Si Wafer Release by Laser Lift-Off (LLO) and Thermal Damage Characterization

Author(s): **Jungrae Park**, **Joshua Peck**, TEL Technology Ctr., America, LLC (United States); **Joshua Hooge**, Tokyo Election America, Inc. (United States); **Ilseok Son**, **Angelique Raley**, TEL Technology Ctr., America, LLC (United States); **Yoshihiro Kondo**, **Yohei Yamashita**, Tokyo Electron Kyushu Ltd. (Japan); **Ryota Arakawa**, Tokyo Electron Kyushu Ltd. (Japan); **Sitaram Arkalgud**, TEL Technology Ctr., America, LLC (United States)

14093-43 • 10:00 - 10:15

Surface defect control during femtosecond laser drilling of single crystal SiC

Author(s): **Panpan Fan**, **Wenjun Wang**, **Aifei Pan**, **Xuesong Mei**, **Chunwei Wang**, Xi'an Jiaotong Univ. (China)

Coffee Break 10:15 - 10:45

SESSION 9: PHOTONIC COMPONENT WRITING AND GLASS FUNCTIONALIZATION

15 April 2026 • 10:45 - 12:15 | Curie A (Niveau/Level 1)

Session Chair(s): **M. David Grojo**, Lab. Lasers, Plasmas et Procédés Photoniques (France)

14093-44 • 10:45 - 11:15

Functionalizing optical glasses by femtosecond laser for high temperature sensing – trends, limits and opportunities (Invited Paper)

Author(s): **Matthieu Lancry**, Univ. Paris-Saclay (France)

14093-45 • 11:15 - 11:30

Straight Directional Couplers Enabled by High Refractive Index Contrast Femtosecond Laser-Written Waveguides

Author(s): **Mohan Wang**, **Martin J. Booth**, **Patrick S. Salter**, Univ. of Oxford (United Kingdom)

14093-46 • 11:30 - 11:45

Building high-contrast 1D and 2D photonic crystals in optical fibre

Author(s): **Yueqi Wang**, The Edward S. Rogers Sr. Department of Electrical and Computer Engineering, University of Toronto (Canada); **Gligor Djogo**, Polina Zavyalova, Jianzhao Li, Peter R. Herman, Univ. of Toronto (Canada)

14093-47 • 11:45 - 12:00

Femtosecond laser processing of an integrated fiber Fabry-Perot cavity device in glass

Author(s): **Antoine Duret**, EPFL STI IEM GALATEA (Switzerland); **Yves Bellouard**, EPFL (Switzerland); **Jakob Reichel**, Romain Long, Lab. Kastler Brossel, Ecole normale supérieure - PSL, CNRS (France)

14093-48 • 12:00 - 12:15

Tailoring glass properties and microstructure with sub-100 femtosecond pulses

Author(s): **Lisa Ackermann**, **Yves Bellouard**, EPFL (Switzerland)

Lunch/Exhibition Break 12:15 - 13:30

SESSION 10: ADDITIVE MICRO-/NANO-PROCESSING

15 April 2026 • 13:30 - 15:30 | Curie A (Niveau/Level 1)

Session Chair(s): **Cyril Mauchair**, Lab. de Photonique d'Angers (France)

14093-49 • 13:30 - 14:00

Dynamic control of gold nanoparticle chains via laser irradiation (*Invited Paper*)

Author(s): **Giuseppe Compagnini**, **Vittorio Scardaci**, **Lucrezia Catanzaro**, Univ. degli Studi di Catania (Italy)

14093-50 • 14:00 - 14:15

High efficiency light engine for Holographic Tomographic Volumetric Additive Manufacturing using Phase Light Modulator (PLM)

Author(s): **Maria Isabel Alvarez Castaño**, **Riccardo Rizzo**, EPFL (Switzerland); **Viola Sgarminato**, EPFL (Switzerland), Politecnico di Torino (Italy); **Ye Pu**, **Christophe Moser**, EPFL (Switzerland)

14093-51 • 14:15 - 14:30

Laser-induced forward transfer for interconnections and bio-sensors on stretchable electronics

Author(s): **Athanasios Chrysanthopoulos**, **Kostas Andritsos**, National Technical Univ. of Athens (Greece); **Ioanna Zergioti**, National Technical Univ of Athens (Greece)

14093-52 • 14:30 - 14:45

Increase of Two Photon Polymerization throughput by using Spatial Light Modulators

Author(s): **Francisco Gontad**, **Jaime Cuartero**, **Nerea Otero**, AIMEN - Asociación de Investigación Metalúrgica del Noroeste (Spain)

14093-53 • 14:45 - 15:00

Laser Digital fabrication of 2D material-based Field Effect Transistors

Author(s): **Ilias Cheliotis**, **Filimon Zacharatos**, National Technical Univ. of Athens (Greece); **Michal Poplinger**, Bar-Ilan Univ. (Israel); **Amaia Pesquera**, **Amaia Zurutuza**, Graphenea S.A. (Spain); **Doron Naveh**, Bar-Ilan Univ. (Israel); **Ioanna Zergioti**, National Technical Univ. of Athens (Greece)

14093-54 • 15:00 - 15:15

Nonlinear nano-printing of platinum

Author(s): **Elliott Crevon**, **Rémi Meyer**, **Luca Furfaro**, **Ausrine Bartasyte**, **François Courvoisier**, FEMTO-ST (France)

14093-55 • 15:15 - 15:30

Flux-free bonding of photonic components using laser-induced forward transfer of AuSn thin films and laser soldering

Author(s): **Nektaria Protopappa**, **Marina Makrygianni**, National Technical Univ. of Athens (Greece); **Matheus Dias Sousa**, PHIX Photonics Assembly (Netherlands); **Kostas Andritsos**, National Technical Univ. of Athens (Greece); **Sohrab Kamyar**, LioniX International BV (Netherlands); **Karol Obara**, **Milan Milosevic**, PHIX Photonics Assembly (Netherlands); **Erik Schreuder**, LioniX International BV (Netherlands); **Iakovos-Fanourios Kritikos**, National Technical Univ. of Athens (Greece); **Ronald Dekker**, LioniX International BV (Netherlands); **Ioanna Zergioti**, National Technical Univ. of Athens (Greece)

Coffee Break 15:30 - 16:00

SESSION 11: HIGH-SPEED DRILLING AND CUTTING

15 April 2026 • 16:00 - 17:45 | Curie A (Niveau/Level 1)

Session Chair(s): **John Lopez**, Ctr. Lasers Intenses et Applications (France)

14093-56 • 16:00 - 16:15

Ablation Cooling and Thermal Regimes in High Repetition Rate Ultrafast Laser Processing of Commercial Polymers

Author(s): **Andrés Pérez Bernabeu**, Univ de Alicante (Spain); **Pol Sopeña**, Lab. Lasers, Plasmas et Procédés Photoniques, Aix-Marseille Univ. (France); **Daniel Puerto**, **José Reyna**, **Jorge Francés**, **Andrés Márquez**, Univ. de Alicante (Spain); **David Grojo**, Lab. Lasers, Plasmas et Procédés Photoniques, Aix-Marseille Univ. (France); **Sergi Gallego**, **Inmaculada Pascual**, Univ. de Alicante (Spain)

14093-57 • 16:15 - 16:30

High-speed drilling of glass and silicon carbide using femtosecond fibre laser

Author(s): **Bogusz D. Stępak**, **Rafał Smolin**, **Natalia Grudzień**, **Yuriy Stepanenko**, **Michał Nejbauer**, **Michał Cwikla**, Fluence Technology sp. z o.o (Poland)

14093-58 • 16:30 - 16:45

Ultrahigh-speed laser processing of alkali-free glass enabled by wide-angle Bessel TSL processing

Author(s): **Ryota Hasegawa**, Graduate School of engineering, the University of Tokyo (Japan); **Sota Kiriake**, **Guoqi Ren**, Graduate School of Engineering, The Univ. of Tokyo (Japan); **Akihiro Shibata**, AGC Inc. (Japan); **Io Hanaoka**, **Kosuke Shimakura**, **Yanming Zhang**, **Yusuke Ito**, Graduate School of Engineering, The Univ. of Tokyo (Japan)

14093-59 • 16:45 - 17:00

Pulse-resolved LIBS for real-time control of laser microvia drilling

Author(s): **Patrick Jurzinski**, Fraunhofer IPM (Germany)

14093-60 • 17:00 - 17:15

Customised through vias in glass interposer production using ultrafast lasers and chemical etching

Author(s): **Toby Barnard**, **Dimitris Karnakis**, Oxford Lasers Ltd. (United Kingdom)

14093-61 • 17:15 - 17:30

Efficient micromachining of nickel-titanium by laser ablation in liquids

Author(s): **Jan Marx**, **Marvin Schuleit**, **Philipp Maack**, **Andreas Ostendorf**, Ruhr-Univ. Bochum (Germany)

14093-62 • 17:30 - 17:45

Femtosecond laser square-hole drilling of metal with a fourfold rotationally symmetrical polarized laser beam

Author(s): **Kousuke Yoshina**, Ritsumeikan Univ. (Japan); **Hisao Kikuta**, Osaka Metropolitan Univ. (Japan); **Wataru Watanabe**, Ritsumeikan Univ (Japan)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14093-75 • 17:45 - 19:30

Beam shaping optical systems for high pulse energy lasers

Author(s): **Alexander V. Laskin**, **Vadim V. Laskin**, AdlOptica Optical Systems GmbH (Germany)

14093-76 • 17:45 - 19:30

High-NA aberration-free ultrafast laser processing in depth of glass

Author(s): **Alexander V. Laskin**, AdlOptica Optical Systems GmbH (Germany)

14093-77 • 17:45 - 19:30

3D microfabrication of transparent thremoset polymer using a conventional nanosecond laser-induced bubble

Author(s): **Takuya Habara**, **Yasutaka Hanada**, Hirotsaki Univ. (Japan)

14093-78 • 17:45 - 19:30

Optical monitoring for distinct defect detection in laser micro-welding via signal signatures and machine learning

Author(s): **Evangelos Skoulas**, **Nicola Nesa**, EMPA (Switzerland); **Steven Ammann**, ANDRITZ Soutec AG (Switzerland); **Elia Iseli**, **Patrik Hoffmann**, **Sergey Shevchik**, EMPA (Switzerland)

14093-79 • 17:45 - 19:30

Superhydrophilic soda-lime glass with a two-dimensional periodic surface fabricated by femtosecond laser processing

Author(s): **Kento Moriura**, Ritsumeikan Univ. (Japan); **Wataru Watanabe**, Ritsumeikan Univ (Japan)

14093-80 • 17:45 - 19:30

Coherent nanoengineering of laser-induced periodic surface structures using single-pulse femtosecond laser writing

Author(s): **Md Abu Taher, Sandip Paul, Debabrata Goswami**, Indian Institute of Technology Kanpur (India)

14093-81 • 17:45 - 19:30

Investigation of GHz burst and single-pulse femtosecond laser ablation on metallic materials

Author(s): **Ecem Nur Duman**, Lumos Laser Inc. (Turkey); **Gizem Alpakut**, Bogaziçi Üniv. (Turkey); **Hamit Kalaycioglu, Ibrahim Atespare, Alptekin Tanatar**, Lumos Laser A.S. (Turkey); **Seydi Yavas**, Lumos Laser A.S. (Turkey), Bogaziçi Üniv. (Turkey), Ozyegin Univ. (Turkey)

14093-82 • 17:45 - 19:30

Femtosecond Laser Welding of BK7 Glass to Aluminium Alloy

Author(s): **Aviran Halstuch, Amiel A. Ishaaya**, Ben-Gurion Univ. of the Negev (Israel)

14093-83 • 17:45 - 19:30

Femtosecond laser fabrication of WS₂-doped whispering gallery mode microresonators via two-photon polymerization

Author(s): **Gabriel de Oliveira Campos**, Universidade de São Paulo (Brazil); **Vinícius Pereira Pinto, Kelly Tasso de Paula, Cleber Renato Mendonça**, Univ. de São Paulo (Brazil)

14093-84 • 17:45 - 19:30

Real-time focal spot and M² measurement module for precision laser micro-machining applications

Author(s): **Alexandre Miazek, Emeric Biver**, Multitel A.S.B.L. (Belgium); **Julien Dupuy**, Multitel ASBL (Belgium); **Yves Hernandez**, Multitel A.S.B.L. (Belgium)

14093-85 • 17:45 - 19:30

Comparison of laser ablation in sub-ps and ns regime at 515nm in the MHz regime and application to graphite

Author(s): **Victor Sanchez, Carlos-Esteban Cifuentes Quintal**, Institut Fresnel (France); **Thomas Doualle, Yves Pontillon**, CEA (France), Institut de Recherche sur l'Energie Nucléaire (France); **Laurent Gallais**, Institut Fresnel (France)

14093-86 • 17:45 - 19:30

Laser-Induced Forward Transfer of graphene and hBN layers for digital photonic fabrication of 2D optoelectronic devices

Author(s): **Katerina Magoula, Filimon Zacharatos**, National Technical University of Athens (Greece); **Amaia Zurutuza, Alba Centeno**, Graphenea SA, Paseo Mikeletegi 83, 20009- San Sebastian, Spain (Spain); **Tarusisko Hirvenoja, Olli-Pekka Kilpi**, VTT Technical Research Centre of Finland, Tekniikantie 17, 02150 Espoo, Finland (Finland); **Nektaria Protopappa, Ioanna Zergioti**, National Technical University of Athens (Greece)

14093-87 • 17:45 - 19:30

Design of a compact and efficient direct laser interference patterning configuration based on a Köster prism and galvoscaner

Author(s): **Marcos Soldara**, Technische Universität Dresden (Germany); **Paul Herbert Engel, Andrés Fabián Lasagni**, TU Dresden (Germany)

14093-88 • 17:45 - 19:30

High-speed machining of sapphire using transient and selective laser (TSL) processing

Author(s): **Kosuke Shimakura**, The University of Tokyo (Japan); **Ryota Hasegawa, Io Hanaoka, Sota Kiriake, Guoqi Ren, Yanming Zhang, Yusuke Ito**, The Univ. of Tokyo (Japan)

14093-90 • 17:45 - 19:30

A superhydrophobic surface of groove-bump:rapid droplet-depositing and directional transport

Author(s): **Hu Lei**, Xi'an Jiaotong Univ. (China)

14093-91 • 17:45 - 19:30

Dual beam laser sintering: new approach to waste-free 3D printing

Author(s): **Aleksander Kubeczek**, Wrocław University of Science and Technology (Poland); **Piotr Gruber, Michał Olejarczyk, Arkadiusz Antonczak**, Wrocław Univ. of Science and Technology (Poland)

14093-92 • 17:45 - 19:30

Laser-induced graphene for environmental sensing

Author(s): **Abolfazl A. Kohestani, Gerd Grau, Cuiying Jian**, York Univ. (Canada)

14093-93 • 17:45 - 19:30

Functional glass surface by femtosecond laser texturing

Author(s): **Michał Cwikła, Bogusz D. Stępak, Natalia Grudzień, Rafał Smolin**, Fluence Technology sp. z o.o (Poland); **Piotr Nyga**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Yuriy Stepanenko, Michał Nejbauer**, Fluence Technology sp. z o.o (Poland)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 12: MACHINE LEARNING AND MONITORING IN LASER PROCESSING I

16 April 2026 • 11:00 - 12:30 | Curie A (Niveau/Level 1)

Session Chair(s): **Markus Kogel-Hollacher**, Precitec GmbH & Co. KG (Germany)

14093-63 • 11:00 - 11:30

AI-driven innovation in laser-based manufacturing – trends and perspectives (*Invited Paper*)

Author(s): **Carlo Holly**, RWTH Aachen Univ. (Germany), Fraunhofer-Institut für Lasertechnik ILT (Germany)

14093-64 • 11:30 - 11:45

Extrapolating laser weld penetration with machine learning, trading accuracy for generalisation

Author(s): **Victor Hayot**, **Rabih Amhaz**, Icam, site de Strasbourg-Europe (France), ICube (France); **Sylvain Lecler**, Institut National des Sciences Appliquées de Strasbourg (France), ICube (France); **Andre Alves Ferreira**, IREPA LASER (France); **Grégoire Chabrol**, Icam, site de Strasbourg-Europe (France), ICube (France)

14093-65 • 11:45 - 12:00

Enabling in-situ monitoring of ultrashort pulse Laser Surface Texturing

Author(s): **Loïc Mosser**, **François Geiskopf**, **Laurent Barbé**, ICube (France); **Jean-Michel Romano**, **Frédéric Mermet**, IREPA LASER (France); **Pierre Renaud**, **Sylvain Lecler**, ICube (France)

14093-66 • 12:00 - 12:15

Smart laser microhole drilling: data-driven compensation and predictive process optimisation

Author(s): **Toby Barnard**, **Dimitris Karnakis**, Oxford Lasers Ltd. (United Kingdom)

14093-67 • 12:15 - 12:30

Learning the Right Shapes: Dataset's Influence on AI-Assisted Computer-Generated Holography

Author(s): **Chaymae Rajaa**, ICube, Univ. de Strasbourg (France), QiOVA (France); **Sylvain Lecler**, **Manuel Flury**, ICube, Univ. de Strasbourg (France); **Sébastien Landon**, QiOVA (France)

Lunch Break 12:30 - 13:45

SESSION 13: MACHINE LEARNING AND MONITORING IN LASER PROCESSING II

16 April 2026 • 13:45 - 15:15 | Curie A (Niveau/Level 1)

Session Chair(s): **Carlo Holly**, RWTH Aachen Univ. (Germany)

14093-68 • 13:45 - 14:00

Holographic laser microfabrication with interferometric measurement of the processed structure

Author(s): **Satoshi Hasegawa**, **Hiromu Fujiki**, **Yoshio Hayasaki**, Utsunomiya Univ. (Japan)

14093-69 • 14:00 - 14:15

Dynamic monitoring of femtosecond-laser in-volume processing of glass substrates

Author(s): **Matthew Singleton**, EMPA (Switzerland)

14093-70 • 14:15 - 14:30

Femtosecond laser-induced breakdown spectroscopy for film analysis of Cu-coated polymer textiles

Author(s): **Omar Elsheikh**, Universität Kassel (Germany); **Bastian Zielinski**, Univ. Kassel (Germany); **Noemí Aguiló-Aguayo**, Univ. Innsbruck (Austria); **Elena Ramela Ciobotea**, **Cristian Sarpe**, **Camilo Florian**, Univ. Kassel (Germany)

14093-71 • 14:30 - 14:45

Acoustic measurement for the determination of ultrashort pulse duration

Author(s): **Indre Meskelaite**, Vilnius Univ. (Lithuania); **Hsin-Hui Huang**, **Haoran Mu**, **Nguyen Hoai An Le**, **Tomas Katkus**, Swinburne Univ. of Technology (Australia); **Edvinas Aleksandravicius**, **Gabrielius Kontenis**, **Domas Paipulas**, Vilnius Univ. (Lithuania); **Saulius Juodkazis**, Swinburne Univ. of Technology (Australia); **Darius Gailevicius**, Vilnius Univ. (Lithuania)

14093-72 • 14:45 - 15:00

Real-time layer detection and closed-loop control using femtosecond laser-induced breakdown spectroscopy (LIBS) and machine learning

Author(s): **Aitor Larrañaga Jaio**, CEIT (Spain), University of Navarra (Spain); **Iñigo Ramon-Conde**, **Ainara Rodriguez**, **Oihane Beldarrain**, **Gemma García Mandayo**, **Santiago Miguel Olaizola**, CEIT (Spain)

14093-73 • 15:00 - 15:15

Surface processing with ultra short pulsed lasers – ideas for measuring ablation rate and quality control

Author(s): **Markus Kogel-Hollacher**, **Oliver Schulz**, **Simon Mieth**, Precitec Optronik GmbH (Germany); **Daniel Holder**, ARENA2036 e.V. (Germany); **Rainer Kraft**, Precitec GmbH & Co. KG (Germany); **Wilhelm Pfleging**, Karlsruher Institut für Technologie (Germany)

CONFERENCE 14094

Biomedical Spectroscopy, Microscopy, and Imaging IV

12 - 16 April 2026 | Etoile A (Niveau/Level 1)

Conference Chair(s): **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Csilla Gergely**, Lab. Charles Coulomb (France)

Program Committee: **Peter E. Andersen**, Technical Univ. of Denmark (Denmark); **James M. Brewer**, Univ. of Glasgow (United Kingdom); **Arthur E. T. Chiou**, National Yang-Ming Univ. (Taiwan); **Jürgen W. Czarke**, TU Dresden (Germany); **Johannes F. de Boer**, Vrije Univ. Amsterdam (Netherlands); **Kishan Dholakia**, Univ. of St. Andrews (United Kingdom); **Dror Fixler**, Bar-Ilan Univ. (Israel); **Sylvain Gioux**, Univ. de Strasbourg (France); **Kirill V. Larin**, Univ. of Houston (United States); **Qingming Luo**, Hainan Univ. (China); **Thomas G. Mayerhöfer**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Vasilis Ntziachristos**, Helmholtz Zentrum München GmbH (Germany); **David D. Sampson**, The Univ. of Western Australia (Australia); **Ernst H. K. Stelzer**, Johann Wolfgang Goethe-Univ. Frankfurt am Main (Germany); **Hugo Thienpont**, Vrije Univ. Brussel (Belgium); **Siva Umamathy**, Indian Institute of Science (India); **I. Alex Vitkin**, Ontario Cancer Institute (Canada)

Sunday 12 April 2026

SESSION 1: ADVANCED IMAGING AND SPECTROSCOPY I

12 April 2026 • 13:00 - 15:10 | Etoile B (Niveau/Level 1)

Session Chair(s): **Francesco Saverio Pavone**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy)

14094-1 • 13:00 - 13:30

Advances in Nonlinear Multimodal Imaging for Precision-Guided Tumor Surgery (*Invited Paper*)

Author(s): **Michael Schmitt**, **Jürgen Popp**, Friedrich-Schiller-Univ. Jena (Germany)

14094-2 • 13:30 - 13:50

Multimodal Computational Scattered Light Microscopy for Collagen-Specific Whole-Slide Fiber Mapping

Author(s): **Hamed Abbasi**, TU Delft (Netherlands), Erasmus MC (Netherlands); **Loes Ettema**, **Rens van Elk**, Technische Univ. Delft (Netherlands); **Stijn Keereweer**, Erasmus MC (Netherlands); **Miriam Menzel**, Technische Univ. Delft (Netherlands)

14094-3 • 13:50 - 14:10

Non-invasive cerebral blood flow monitoring via structure similarity diffuse correlation spectroscopy

Author(s): **Tianrui Zhao**, **Yingqi Jiang**, King's College London (United Kingdom)

14094-4 • 14:10 - 14:30

Programmable Multimodality Microscope for Label-Free Cellular Imaging and Characterization in Cell Culturing Production

Author(s): **I Jan Chen**, Triad Light Innovation Co., Ltd. (Taiwan), National Yang Ming Chiao Tung Univ. (Taiwan); **Yu-Yang Lee**, **Jia-Yeh Wang**, Triad Light Innovation Co., Ltd. (Taiwan); **Huang-Ming Chen**, National Yang Ming Chiao Tung Univ. (Taiwan)

14094-5 • 14:30 - 14:50

Breast Thermogram Analysis via Convolutional Neural Networks with Attention Mechanisms

Author(s): **Raúl Castro-Ortega**, Universidad Politécnica de Tulancingo (Mexico); **Kenia Vázquez-Romero**, **Carina Toxqui-Quitl**, **Alfonso Padilla-Vivanco**, Univ. Politécnica de Tulancingo (Mexico); **María Angélica Espejel-Rivera**, Instituto Tecnológico de Pachuca (Mexico)

14094-6 • 14:50 - 15:10

Label-free 3D projection tomography of live mouse embryos

Author(s): **Bin Yang**, Laboratory of Measurement and Sensor System Technique (MST), TU Dresden (Germany), Competence Center for Biomedical Computational Laser Systems (BIOLAS), TU Dresden (Germany); **Jiawei Sun**, Suzhou Institute of Biomedical Engineering and Technology (China), Laboratory of Measurement and Sensor System Technique (MST), TU Dresden (Germany), Competence Center for Biomedical Computational Laser Systems (BIOLAS), TU Dresden (Germany); **Pallavi Jha**, CIC nanoGUNE BRTA (Spain); **Mariana Medina Sánchez**, CIC nanoGUNE BRTA (Spain), Ikerbasque, Basque Foundation for Science (Spain), Chair of Micro- NanoSystems, Center for Molecular Bioengineering (B CUBE) (Germany); **Nektarios Koukourakis1**, Laboratory of Measurement and Sensor System Technique (MST), TU Dresden (Germany), Competence Center for Biomedical Computational Laser Systems (BIOLAS) (Germany); **Juergen Czarke**, Laboratory of Measurement and Sensor System Technique (MST), TU Dresden (Germany), Competence Center for Biomedical Computational Laser Systems (BIOLAS), TU Dresden (Germany), Cluster of Excellence Physics of Life, TU Dresden (Germany)

Coffee Break 15:10 - 15:30

SESSION 2: ADVANCED IMAGING AND SPECTROSCOPY II

12 April 2026 • 15:30 - 17:20 | Etoile B (Niveau/Level 1)

Session Chair(s): **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany)

14094-7 • 15:30 - 16:00

Multimodal Tumor Morphochemical Characterization (Invited Paper)

Author(s): **Francesco Saverio Pavone**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy)

14094-8 • 16:00 - 16:20

Monitoring Adenine–Thymine Pairing in Solution by Second Harmonic Scattering

Author(s): **Arthur FRANCOIS**, University of Montpellier (France); **Estelle Salmon**, Univ. de Montpellier (France); **François Morvan**, **Michael Smietana**, Institut des Biomolécules Max Mousseron, Univ. de Montpellier (France); **Csilla Gergely**, **Christian Jonin**, Univ. de Montpellier (France)

14094-9 • 16:20 - 16:40

Interactive interface for automated adjustment and calibration of wide-field mueller polarimeter for real-time imaging of biological tissues

Author(s): **Théotim Lucas**, École Polytechnique (France); **Omar Rodríguez-Núñez**, Inselspital (Switzerland); **Atif Iqbal**, Univ. Jean Monnet Saint-Etienne (France); **Sooyong Chae**, École Polytechnique (France); **Elea Gros**, Institute of Tissue Medicine and Pathology, Univ. Bern (Switzerland); **Christopher Hahne**, Univ. Bern (Switzerland); **Theoni Maragkou**, Institute of Tissue Medicine and Pathology, Univ. Bern (Switzerland); **Richard McKinley**, Support Ctr. for Advanced Neuroimaging, Univ. Institute of Diagnostic and Interventional Neuroradiology, Univ. Bern (Switzerland), Inselspital (Switzerland); **Philippe Schucht**, Inselspital (Switzerland); **Tatiana Novikova**, École Polytechnique (France), Florida International Univ. (United States)

14094-10 • 16:40 - 17:00

Deep learning–assisted quantitative analysis of collagen type I and II in regenerating tissue using polarization-resolved second-harmonic generation imaging

Author(s): **Van-Tung Nguyen**, National Yang Ming Chiao Tung Univ. (Taiwan); **Chun-Yu Lin**, National United Univ. (Taiwan); **Shu-Chun Chuang**, **Yi-Shan Lin**, **Chung-Hwan Chen**, Orthopaedic Research Ctr., Regenerative Medicine and Cell Therapy Research Ctr., Kaohsiung Medical Univ. (Taiwan); **Chi-Hsiang Lien**, National United Univ. (Taiwan); **Shean-Jen Chen**, College of Photonics, National Yang Ming Chiao Tung University (Taiwan)

14094-12 • 17:00 - 17:20

Sensor-less Adaptive Optics System with Enhanced Performance

Author(s): **Devesh Sharma**, **Biswajit Pathak**, Indian Institute of Space Science and Technology (India)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:20

SESSION 3: OPTICAL COHERENCE TOMOGRAPHY I

13 April 2026 • 11:20 - 12:30 | Etoile B (Niveau/Level 1)

Session Chair(s): **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14094-20 • 11:20 - 11:50

Detecting Corneal Stiffness Remodeling in Glaucoma with Optical Coherence Elastography (Invited Paper)

Author(s): **Kirill V. Larin**, **Amandeep Singh**, **Achuth Nair**, **Zhihui She**, **Mohammad Dehshiri**, **Manmohan Singh**, **Salavat Aglyamov**,

Nimesh Patel, Univ. of Houston (United States)

14094-21 • 11:50 - 12:10

Deep learning prediction of the autocorrelation decay constant in FDML-OCT: experimental validation and comparison with VISTA

Author(s): **Yahya Idham**, University of Sheffield (United Kingdom), Ninevah University (Iraq); **Rui Yuan**, Shenzhen Institute of Advanced Technology (China); **Stephen J. Matcher**, The Univ. of Sheffield (United Kingdom)

14094-35 • 12:10 - 12:30

A programmable FPGA Platform with deterministic synchronization for real-time computational laser-scanning microscopy

Author(s): **I Jan Chen**, Triad Light Innovation Co., Ltd. (Taiwan), National Yang Ming Chiao Tung Univ. (Taiwan); **Yu-Yang Lee**, **Jia-Yeh Wang**, Triad Light Innovation Co., Ltd. (Taiwan); **Huang-Ming Chen**, National Yang Ming Chiao Tung Univ. (Taiwan)

Lunch Break 12:30 - 13:40

SESSION 4: OPTICAL COHERENCE TOMOGRAPHY II

13 April 2026 • 13:40 - 15:00 | Etoile B (Niveau/Level 1)

Session Chair(s): **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14094-23 • 13:40 - 14:00

1300 nm and 1600 nm dual-band optical coherence tomography system for dermatology

Author(s): **Dmitry G. Revin**, Univ of Sheffield (United Kingdom); **Junaid Ahmad, Niraj K. Soni, Robert Byers**, The Univ. of Sheffield (United Kingdom); **Stephen J. Matcher**, The Univ. of Sheffield (United Kingdom), INSIGNEO Institute (United Kingdom)

14094-24 • 14:00 - 14:20

Single-Shot Off-Axis Full-Field OCT for In Vivo Cellular Dynamics Imaging

Author(s): **Julie Blon, Emmanuel Martins Seromenho, Maud Legrand, Jesse Schiffler, Hamideh Salehi, Vincent Maioli, Sybille Facca, Nadia Bahlouli, Amir Nahas**, ICube (France)

14094-25 • 14:20 - 14:40

Optical Determination of Bone Hydration via Coherence Tomography and Diffuse Reflectance Spectroscopy

Author(s): **Aikaterina Grava, David Rothen, Arsham Hamidi, Ferda Canbaz**, Univ. Basel (Switzerland)

14094-26 • 14:40 - 15:00

Quantification of stress-induced remodeling in the adipose tissues of mice using label-free nanosensitive optical coherence tomography

Author(s): **Pauline John, Yana Al-Hebri, Dipesh Chaudhury**, New York Univ. Abu Dhabi (United Arab Emirates); **Azhar Zam**, New York Univ. Abu Dhabi (United Arab Emirates), New York Univ. (United States)

Coffee Break 15:00 - 15:30

SESSION 5: OPTICAL COHERENCE TOMOGRAPHY III

13 April 2026 • 15:30 - 17:50 | Etoile B (Niveau/Level 1)

Session Chair(s): **Kirill V. Larin**, Univ. of Houston (United States)

14094-13 • 15:30 - 15:50

Superficial dermal OCT detects subclinical alteration in lymphedema

Author(s): **Hwayeong Cheon**, Asan Medical Ctr (Korea, Republic of); **Geunyoung Kim, Jaemin Yoo**, Asan Medical Ctr. (Korea, Republic of); **Gyuhyun Lee, Ryungkee Chang**, WINUS Technology Co., Ltd. (Korea, Republic of); **Jae Yong Jeon**, Asan Medical Ctr. (Korea, Republic of)

14094-14 • 15:50 - 16:10

Virtual confocal imaging using oblique illumination holographic OCT

Author(s): **Pepijn Klooster, Dierck Hillmann, Sarvesh Thakur, Ulysse Najjar, Jory R. Hagen**, Vrije Univ. Amsterdam (Netherlands)

14094-15 • 16:10 - 16:30

Pisum Sativum seeds' response to Oligochitosan priming using dynamic Optical Coherence Tomography

Author(s): **Violeta Dimitrova Madjarova**, Institute of Optical Materials and Technologies - Bulgarian Academy of Sciences (Bulgaria), National Centre of Excellence "Mechatronics and Clean Technologies", Kliment Ohridski Blvd., Block 8, 1700, Sofia, Bulgaria (Bulgaria); **Elena Stoykova**, Institute of Optical Materials and Technologies (Bulgaria), National Centre of Excellence "Mechatronics and Clean Technologies", Kliment Ohridski Blvd., Block 8, 1700, Sofia, Bulgaria (Bulgaria); **Maryam Viqar**, Institute of Optical Materials and Technologies (Bulgaria); **Sashka Krumova**, Institute of Biophysics and Biomedical Engineering (Bulgaria); **Violeta Velikova**, Institute of Plant Physiology and Genetics (Bulgaria); **Svetozar Stoichev**, Institute of Biophysics and Biomedical Engineering (Bulgaria); **Daniel Ilkov**, Institute of Plant Physiology and Genetics (Bulgaria); **Dimana Nazarova**, Institute of Optical Materials and Technologies (Bulgaria)

14094-16 • 16:30 - 16:50

Exploring spectral gaps in high-resolution Full-Field Fourier-Domain OCT for in-vivo retinal imaging

Author(s): **Sarvesh Anil Thakur, Pepijn Klooster, Jory R. Hagen, Ulysse Najjar, Dierck Hillmann**, Vrije Univ. Amsterdam (Netherlands)

14094-17 • 16:50 - 17:10

A Quantitative Detection Threshold for Speckle-Variance OCTA

Author(s): **Miriam Weiß**, Karlsruhe Institute of Technology (Germany); **Jesco Malz, Werner Nahm**, Karlsruher Institut für Technologie (Germany)

14094-18 • 17:10 - 17:30

Imaging System Combining Optical Coherence Tomography and Autofluorescence Imaging for Biomedical Applications

Author(s): **Annegret Umann, Alexander Gümbel, Christian Krüger, Calvin Kreft**, Ernst-Abbe-Hochschule Jena (Germany); **Sven Möbius-Winkler**, Universitätsklinikum Jena (Germany); **Iwan W. Schie**, Ernst-Abbe-Hochschule Jena (Germany)

14094-19 • 17:30 - 17:50

Angular-compounding optical coherence tomography for speckle-reduced imaging of precision-cut lung slices

Author(s): **Jonas Golde**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Stephan Becker**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Christina Hesse**, Fraunhofer-Institut für Toxikologie und Experimentelle Medizin (Germany); **Antonia J. Starcke**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Katherina Sewald**, Fraunhofer-Institut für Toxikologie und Experimentelle Medizin (Germany); **Frank Sonntag**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany)

Tuesday 14 April 2026

SESSION 6: MICROSCOPY I

14 April 2026 • 9:00 - 10:30 | Etoile B (Niveau/Level 1)

Session Chair(s): **Marie Louise Groot**, Vrije Univ. Amsterdam (Netherlands)

14094-27 • 9:00 - 9:30

Label-Free Multimodal Optical Imaging for Brain Metastasis Characterization and Primary Tumor Discrimination *(Invited Paper)*

Author(s): **Cécile Rimbault**, **Hussein Mehidine**, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); **Bertrand Devaux**, Univ. Paris Cité /IJCLab (France), Service de Neurochirurgie, Hôpital Lariboisière, Paris 75010, France. (France); **Darine Abi Haidar**, Université Paris Saclay, CNRS/IN2P3, IJCLab, 91405 Orsay, France ; 2 Université Paris Cité, IJCLab, F-9140, Orsay, France (France)

14094-29 • 9:30 - 9:50

Label-Free Digital Holographic Phase Imaging for Live-Cell Nuclear Diagnostics at Sub-Wavelength Resolution

Author(s): **Peter J. Bryanston-Cross**, Univ of Warwick (United Kingdom); **Thomas Judge**, Video and Imaging Research Ltd (China); **Zuobin Wang**, Changchun University of Science and Technology (China)

14094-30 • 9:50 - 10:10

Eight-channel micro-optical microscope array for three-color image-assisted cell sorting

Author(s): **Norbert Danz**, **Peter Dannberg**, **Johanna K. Karl**, **Thomas Rätthe**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Christin Gassner**, Fraunhofer IOF (Germany); **Thomas Schönfelder**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Thomas Dietrich**, Fraunhofer IOF (Germany); **Falk Kemper**, **Robert Leitel**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Neus Godino**, **Felix Pfisterer**, **Michael Kirschbaum**, Fraunhofer-Institut für Zelltherapie und Immunologie, Institutsteil Bioanalytik und Bioprozesse IZI-BB (Germany); **Erik Beckert**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14094-31 • 10:10 - 10:30

Concurrent Optical and Spectral Encoding Enables Scanless Confocal Light Sheet Microscopy

Author(s): **Soheila Akbari**, York Univ. (Canada)

Coffee Break 10:30 - 11:00

SESSION 7: MICROSCOPY II

14 April 2026 • 11:00 - 12:10 | Etoile B (Niveau/Level 1)

Session Chair(s): **Darine Abi Haidar**, Univ. Paris Cité (France)

14094-32 • 11:00 - 11:30

Translating higher harmonic generation microscopy into clinical applications: from instant pathology to dynamic therapy prediction *(Invited Paper)*

Author(s): **Marloes Groot**, Vrije Univ. Amsterdam (Netherlands)

14094-34 • 11:30 - 11:50

Lateral Shearing Digital Holographic Microscope as a Tool for Cell Classification

Author(s): **Chetna M. Patel**, V.P. & R.P.T.P. Science College (India); **Arun Anand**, Sardar Patel Univ. (India); **Subhash Utadiya**, The Maharaja Sayajirao Univ. of Baroda (India); **Nishant Chhillar**, National Institute of Technology, Delhi (India)

14094-36 • 11:50 - 12:10

Nonlinear optical microscopy integrates metabolic and myelin mapping with single-cell precision

Author(s): **Bahar Asadipour**, **Josephine Morizet**, École Polytechnique (France); **Remi Ronzano**, Institut du Cerveau et de la Moelle Épineière (France); **Xingjian Zhang**, École Polytechnique (France); **Marie-Stephane Aigrot**, Institut du Cerveau et de la Moelle Épineière (France); **Pierre Mahou**, **Xavier Solinas**, **Minh Son Phan**, **Anatole Chessel**, École Polytechnique (France); **Bruno Stankoff**, **Anne Desmazieres**, Institut du Cerveau et de la Moelle Épineière (France); **Emmanuel Beaurepaire**, **Chiara Stringari**, École Polytechnique (France)

Lunch/Exhibition Break 12:10 - 13:40

SESSION 8: MICROSCOPY III

14 April 2026 • 13:40 - 16:00 | Etoile B (Niveau/Level 1)

Session Chair(s): **Csilla Gergely**, Lab. Charles Coulomb (France)

14094-37 • 13:40 - 14:00

Open-source tube lens design and applications to oblique plane microscopy

Author(s): **Quentin Becar, Vincent Maioli, Amir Nahas, Paul Montgomery**, ICube (France)

14094-38 • 14:00 - 14:20

2P, 3P multimodal microscopy applied to biological tissues

Author(s): **Nasim Akhtar, Stéphane Bancelin, Laurent Cognet**, Lab. Photonique, Numérique et Nanosciences (France), Institut d'Optique (France)

14094-39 • 14:20 - 14:40

Application of zeroth ordered bessel beams in second harmonic generation microscopy for extended volumetric imaging in biological applications

Author(s): **BHAWNA BB BHAWNA**, INSTITUT NATIONALE DE LA RECHERCHE SCIENTIFIQUE (INRS)-EMT (Canada); **Fariborz Ehteshami, Jysiane Cardott, Isabelle Plante, Arash Aghigh, François Légaré**, Institut National de la Recherche Scientifique (Canada)

14094-40 • 14:40 - 15:00

How nonlinear photodamage arises in multiphoton light-sheet microscopy: insights from numerical simulation and live imaging

Author(s): **Xue Bing, Lei Zhu, Pierre Mahou, Nicolas Olivier, Emmanuel Beaurepaire**, École Polytechnique (France); **Willy Supatto**, Ecole Polytechnique (France)

14094-41 • 15:00 - 15:20

Bridging micro- and nanoscale insights in tooth enamel using correlative SEM-EDS and AFM techniques

Author(s): **Irma Dumbryte, Robertas Virketis**, Vilnius Univ. (Lithuania); **Arturas Ulcinas**, Center for Physical Sciences and Technology (Lithuania); **Artur Harnik, Greta Merkininkaite, Donatas Narbutis, Mangirdas Malinauskas**, Vilnius Univ. (Lithuania)

14094-42 • 15:20 - 15:40

Low-cost portable lensless digital in-line holographic microscopy for cellular and subcellular imaging

Author(s): **Hilal Döğler**, Izmir Institute of Technology (Turkey)

14094-43 • 15:40 - 16:00

Comparative Visual Evaluation of Iteratively and GAN-Reconstructed Lensless Digital In-Line Holographic Images for Classifying Canine-Allergenic Pollen Types

Author(s): **Blaž Cugmas, Eva Štruc**, Vetamplify SIA (Latvia); **Mirpeyman Seyyedmohammadidizaj, Miran Bürmen**, Univ. of Ljubljana (Slovenia); **Peter Naglič**, Institut für Lasertechnologien in der Medizin und Meßtechnik an der Univ. Ulm (Germany); **Maksims Ivanovs**, Univ. of Latvia (Latvia)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14094-22 • 18:10 - 20:00

Photothermal optical lock-in using FF-OCT

Author(s): **Julie Blon, Emmanuel Martins Seromenho, Jesse Schiffler, Vincent Maioli, Hamideh Salehi, Amir Nahas**, ICube (France)

14094-81 • 18:10 - 20:00

Label-free optical coherence tomography for morphological characterization of Alzheimer's disease brain organoids

Author(s): **Pauline John, Saba Mamoun Hammad**, New York Univ. Abu Dhabi (United Arab Emirates); **Ken-ichiro Kamei, Azhar Zam**, New York Univ. Abu Dhabi (United Arab Emirates), New York Univ. (United States)

14094-82 • 18:10 - 20:00

Polarization-Based Weak Measurement Differential Microscopy

Author(s): **Ritwik Dhara, Nirmalya Ghosh, Sujit Rajak, Arani Maiti, Dheeraj Yadav**, Indian Institute of Science Education and Research Kolkata (India)

14094-83 • 18:10 - 20:00

Photoacoustic-guided wavefront shaping for light focusing through scattering media

Author(s): **Tianrui Zhao, Xuan Liu, Sébastien Ourselin**, King's College London (United Kingdom)

14094-84 • 18:10 - 20:00

Investigating spin hall effects and spin-dependent dispersion in plasmonic crystal using Mueller matrix

Author(s): **Sujit Rajak**, Indian Institute of Science Education and Research Kolkata (India); **Nishkarsh Kumar**, Indian Institute of Technology Kanpur (India); **Dheeraj Yadav, Suman Mandal**, Indian Institute of Science Education and Research Kolkata (India); **Jeeban K. Nayak**, EPFL (Switzerland); **Ayan Banerjee**, Indian Institute of Science Education and Research Kolkata (India); **Subhasish Dutta Gupta**, Tata Ctr. for Interdisciplinary Sciences (India); **Olivier Martin**, EPFL (Switzerland); **Nirmalya Ghosh**, Indian Institute of Science Education and Research Kolkata (India)

14094-85 • 18:10 - 20:00

Colocalized multimodal M-CARS hyperspectral analysis for the investigation of healthy human muscle tissues

Author(s): **Ugo Arles Bottega**, XLIM, CNRS (France); **Aurore Danigo**, UR20218—NEURIT (France), Service de Neurologie—CHU Limoges (France); **Mathilde Duchesne**, UR20218—NEURIT (France), Université de Limoges (France), Service de Neurologie—CHU Limoges (France); **Simon Frachet**, UR20218—NEURIT (France), Université de Limoges (France); **Claire Lefort**, XLIM, CNRS (France)

14094-86 • 18:10 - 20:00

Visualization of laser-induced collagen alteration using two-photon microscopy

Author(s): **Christian van Oterendorp, Jeannine Mißbach-Güntner**, Universitätsmedizin Göttingen (Germany); **Christoph Russmann**, Hochschule für angewandte Wissenschaften und Künste (Germany)

14094-87 • 18:10 - 20:00

Bioorthogonal confocal Raman microscopy for mitochondrial imaging in live tumor cells

Author(s): **Maria Vieira da Silva**, CNC-UC - Center for Neurosciences and Cell Biology (CNC), Center for Innovative Biomedicine and Biotechnology (CIBB), University of Coimbra (Portugal); **Timur Nikitin**, Coimbra Chemistry Center, Department of Chemistry, Faculty of Sciences and Technology, University of Coimbra (Portugal); **Hugo Lopes Cardoso, João M. Soares-Gonçalves, Anastasiya Voronovska, Filipe Duarte Azevedo, António Marques**, Ctr. de Neurociências e Biologia Celular, Ctr. de Biomedicina e Biotecnologia Inovadoras, Univ. de Coimbra (Portugal); **Pedro Guimarães**, Coimbra Institute for Biomedical Imaging and Translational Research, Instituto de Ciências Nucleares Aplicadas à Saúde, Univ. de Coimbra (Portugal); **Telma Costa**, Univ. de Coimbra (Portugal); **João Panão Costa, Ana Teresa Amaral, João Nuno Moreira, Ana Batista**, Ctr. de Neurociências e Biologia Celular, Ctr. de Biomedicina e Biotecnologia Inovadoras, Univ. de Coimbra (Portugal)

14094-88 • 18:10 - 20:00

Simulations and reconstruction algorithms for coherent interferometric imaging with unknown structured illumination

Author(s): **Jory R. Hagen, Ulysse Najar, Sarvesh Thakur, Pepijn Klooster, Dierck Hillmann**, Vrije Univ. Amsterdam (Netherlands)

14094-89 • 18:10 - 20:00

Oblique plane microscopy (OPM) with metagrating

Author(s): **Yijun Wang**, Karlsruhe Institute of Technology (Germany); **Akash Ibnun Nur**, University of Asia Pacific (Bangladesh); **Maïke Katharina Kreutz**, Martijn Moorlag, Harvard University (United States); **Chih Yao Hsu**, Yu-Chuan Chang, National Yang Ming Chiao Tung Univ. (Taiwan); **Rose Mary Jose**, Proficiency Munsaka, Karlsruhe Institute of Technology (Germany); **Yao-Wei Huang**, National Yang Ming Chiao Tung University (Taiwan); **Reto Fiolka**, UT Southwestern Medical Center (United States); **Fabian Friedrich Voigt**, Harvard University (United States); **Maryna Leonidivna Meretska**, Karlsruhe Institute of Technology (Germany)

14094-90 • 18:10 - 20:00

MEMS-based multiphoton microscopy for high-speed volumetric imaging

Author(s): **Vidyalakshmi Anilkumar**, Photonic Systems (PHOS), Silicon Austria Labs. GmbH (Austria); **Marie Louise Groot**, LaserLab Amsterdam, Vrije Univ. Amsterdam (Netherlands); **Cristina Consani**, Photonic Systems (PHOS), Silicon Austria Labs. GmbH (Austria)

14094-91 • 18:10 - 20:00

Photoacoustic detection of cancer cells in paper-based 3D culture substrate for advanced cytological imaging

Author(s): **Rajendran Soundararajan**, Pavithra Sukumar, New York Univ. Abu Dhabi (United Arab Emirates); **Mohammad A. Qasaimeh**, Azhar Zam, New York Univ. Abu Dhabi (United Arab Emirates), New York Univ. (United States)

14094-92 • 18:10 - 20:00

Development and fabrication of nanofiber-based high-frequency photoacoustic transducer and its applications

Author(s): **Shivam Rakhoulia**, IISER Mohali (India); **Nagendra Singh**, Neelkamal Das, Aman Aman, Samir Kumar Biswas, Indian Institute of Science Education and Research Mohali (India)

14094-93 • 18:10 - 20:00

Smart laser ablation in dentistry: integrated OCT and fluorescence spectroscopy as feedback system

Author(s): **Ozgur Eroglu**, Univ Basel (Switzerland); **Thomas Connert**, University Center for Dental Medicine Basel (UZB) (Switzerland); **Ferda Canbaz**, Arsham Hamidi, Univ Basel (Switzerland)

14094-94 • 18:10 - 20:00

Monitoring chemotherapeutic response of HeLa cells seeded in paper-based scaffolds using label-free optical coherence tomography

Author(s): **Pauline John**, Pavithra Sukumar, New York Univ. Abu Dhabi (United Arab Emirates); **Mohammad A. Qasaimeh**, Azhar Zam, New York Univ. Abu Dhabi (United Arab Emirates), New York Univ. (United States)

14094-95 • 18:10 - 20:00

Multimodal Imaging for Cutaneous Microcirculation Assessment Using Active Thermography and remote Photoplethysmography

Author(s): **Zbignevs Marcinkevics**, Megija Nordena, Uldis Rubins, Andris Grabovskis, Univ. of Latvia (Latvia)

14094-96 • 18:10 - 20:00

Automated Optical Determination of Capillary Refill Time Dynamics During Static Exercise

Author(s): **Una Undine Zelca**, Zbignevs Marcinkevics, Uldis Rubins, Univ. of Latvia (Latvia)

14094-97 • 18:10 - 20:00

Cross-correlation dynamic microscopy for particle characterization

Author(s): **Jaka Godec**, Ema Pilih, Andrej Petelin, Univ. of Ljubljana (Slovenia)

14094-98 • 18:10 - 20:00

Fiber endoscopic probe for minimally invasive spectroscopic characterization of biological tissue using directly integrated, low-cost multimode supercontinuum sources

Author(s): **Tobias Baselt**, Fraunhofer-IWS (Germany); **Daniel Ruf**, Robin Reichelt, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **David Gessner**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Peter Hartmann**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany)

14094-99 • 18:10 - 20:00

Polarization based Autofluorescence microscopy : a method to diagnose oral cancer.

Author(s): **Gaurav Pant**, Himanshu Joshi, Vaibhav Burathoki, Dalip Singh Mehta, Indian Institute of Technology Delhi (India)

14094-100 • 18:10 - 20:00

Segmentation spectral tools for stained and unstained cells from cavity serous fluids

Author(s): **Mihaela Andreea Ilisanu**, Univ. Politehnica din Bucuresti (Romania); **Mona Mihailescu**, Fundamental Sciences Applied in Engineering Research Centre, Politehnica Bucharest (Romania); **Ana Maria Pleava**, Andrei Ungureanu, Cristea Darius-Mihail, Fechete Vlad, Vladu Ion Gabriel, Univ. Politehnica din Bucuresti (Romania); **Ghioca Alina**, Tianu Elena, Popescu Valentin, Imunomedica Provita (Romania); **Mihaela Moisesescu**, Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania); **Violeta L. Calin**, Univ. de Medicina si Farmacie "Carol Davila" din Bucuresti (Romania), Univ. Politehnica din Bucuresti (Romania)

14094-101 • 18:10 - 20:00

Shadow artifacts mitigation in lightsheet fluorescence microscopy (LSFM)

Author(s): **Akshay Kumar, Manish Kumar**, Indian Institute of Technology Delhi (India)

14094-102 • 18:10 - 20:00

Using artificial neuronal networks and hyperspectral imaging technology to analyze colorectal cancer tissue in histopathological slides

Author(s): **Marianne Maktabi**, Hochschule Anhalt (Germany), University Leipzig, Innovation Center Computer Assisted Surgery (Germany); **Paul Pöhlitz**, Hochschule Anhalt (Germany); **René Thieme**, Universitätsklinikum Leipzig (Germany); **Boris Jansen-Winkel**, Klinikum St. Georg (Germany)

14094-103 • 18:10 - 20:00

Dataset-free microscopy deconvolution via positional-encoded implicit neural networks.

Author(s): **Sahil Sharma**, IIT Delhi (India); **Dushan Wadduwage**, Old Dominion Univ. (United States); **Joby Joseph**, Indian Institute of Technology Delhi (India); **Balpreet Ahluwalia**, UiT The Arctic Univ. of Norway (Norway)

14094-105 • 18:10 - 20:00

Multispectral device for skin neoplasms diagnostics

Author(s): **Boris S. Gurevich**, Institute for analytical instrumentation, RAS (Russian Federation); **Fedor L. Vladimirov, Darya A. Gribova**, Institute for Analytical Instrumentation (Russian Federation)

14094-106 • 18:10 - 20:00

Indication of the formation of megamolecular complexes of uromodulin using the shadow method of phase heterogeneity visualization

Author(s): **Boris S. Gurevich**, Institute for analytical instrumentation, RAS (Russian Federation); **Valentin V. Shapovalov**, Intelligent Software Systems Co. (Russian Federation); **Vladimir L. Emanuel**, Pavlov First Saint Petersburg State Medical Univ. (Russian Federation)

14094-108 • 18:10 - 20:00

Optical characterization of miniaturized plasma emission spectroscopy devices for applications in medical diagnostics

Author(s): **Elizaveta Vereshchagina, Enrique Escobedo-Cousin, Karolina Milenko, Leny Nazareno, Do Chi Huong Hoang, Michael Getz, Aina Kristin Herbjørnød, Lars Breivik, Anand Summanwar**, SINTEF (Norway)

Wednesday 15 April 2026

SESSION 9: FLUORESCENCE IMAGING I

15 April 2026 • 8:40 - 10:00 | Etoile B (Niveau/Level 1)

Session Chair(s): **Dario Polli**, Politecnico di Milano (Italy)

14094-44 • 8:40 - 9:00

Fluorescence lifetime micro-endoscopy (FLIMME) via single multimode fiber: a high-resolution tool for identifying head and neck cancer margins

Author(s): **Victoria Fay, Ye Pu**, EPFL (Switzerland); **Omer Tzang, Antonio Caravaca**, Modendo Inc. (United States); **Rafael Piestun**, Univ. of Colorado Boulder (United States); **Genrich Tolstonog, Christian Simon**, Ctr. Hospitalier Univ. Vaudois (Switzerland), AGORA Cancer Research Ctr. (Switzerland); **Demetri Psaltis, Christophe Moser**, EPFL (Switzerland)

14094-45 • 9:00 - 9:20

Light sheet fluorescence microscopy with an engineered point spread function for nanoscale volumetric single emitter localisation

Author(s): **Ramsés E. Bautista González, Ralf Mouthaan, Avinash Upadhyay, Darren Chow, Kylie Dunning**, The Univ. of Adelaide (Australia); **Kishan Dholakia**, The Univ. of Adelaide (Australia), Univ. of St. Andrews (United Kingdom)

14094-46 • 9:20 - 9:40

Silicon Nitride Optical Phased Array for Compact Light-Sheet Fluorescence Microscopy

Author(s): **Alireza Tabatabaei Mashayekh**, RWTH Aachen Univ (Germany); **Yuntian Ding, Jeremy Witzens**, RWTH Aachen Univ. (Germany)

14094-107 • 9:40 - 10:00

Robust discriminatory optical parameters for brain tumor analysis: comparing visible one-photon and near-infrared two-photon excitation

Author(s): **Rose-Nimol Zacharewicz**, Université Paris-Saclay, CNRS/IN2P3, IJCLab (France); **Cécile Rimbault**, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); **Bertrand Devaux**, Ctr. Hospitalier Sainte-Anne (France); **Darine Abi Haidar**, Univ. Paris Cité (France)

Coffee Break 10:00 - 10:30

SESSION 10: FLUORESCENCE IMAGING II

15 April 2026 • 10:30 - 11:50 | Etoile B (Niveau/Level 1)

Session Chair(s): **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany)

14094-48 • 10:30 - 10:50

Infrared lymphangio-dynamics as a quantitative optical modality for lymphatic disease assessment

Author(s): **Hwayeong Cheon**, Asan Medical Ctr (Korea, Republic of); **Jae Yong Jeon**, Asan Medical Ctr. (Korea, Republic of)

14094-49 • 10:50 - 11:10

Quantitative correlation between MRS and fluorescence from NADH phantoms to cellular systems

Author(s): **Giorgi Asatiani**, INSA-Lyon, Université Claude Bernard Lyon 1, CNRS, Inserm, CREATIS UMR 5220, U1294, F-69621 (France); **Arthur Gautheron**, INSA-Lyon, Université Claude Bernard Lyon 1, CNRS, Inserm, CREATIS UMR 5220, U1294, F-69621, CPE (France); **Antoine Uzel**, CREATIS, INSERM, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, CNRS (France); **Laurent Mahieu-Williams**, **Hélène Ratiney**, **Bruno Montcel**, INSA-Lyon, Université Claude Bernard Lyon 1, CNRS, Inserm, CREATIS UMR 5220, U1294, F-69621 (France)

14094-50 • 11:10 - 11:30

Autofluorescence signatures of Laser-ablated versus mechanically cut cartilage: toward laser-assisted cartilage surgery guidance

Author(s): **Vinamrata Vinamrata**, **Mihaela Dakova**, **Diana Mock**, Univ. Basel (Switzerland); **Florian Imhoff**, Univ. Hospital Basel (Switzerland); **Arsham Hamidi**, **Andrea Barbero**, **Georg Rauter**, **Ferda Canbaz**, Univ. Basel (Switzerland)

14094-51 • 11:30 - 11:50

Quantitative polarimetric wavefront imaging for single-molecule orientation and localization microscopy

Author(s): **Grégoire Lelu**, **Baptiste Blochet**, Saints-Pères Paris Institute for the Neurosciences, Univ. Paris Cité, CNRS (France); **Marc Guillon**, Saints-Pères Paris Institute for the Neurosciences, Univ. Paris Cité, CNRS (France), Institut Langevin, Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris, Univ. PSL, CNRS (France)

Lunch/Exhibition Break 11:50 - 13:00

SESSION 11: VIBRATIONAL SPECTROSCOPY AND IMAGING I

15 April 2026 • 13:00 - 16:30 | Etoile B (Niveau/Level 1)

Session Chair(s): **Siva Umapathy**, Indian Institute of Science, Bengaluru (India)

14094-52 • 13:00 - 13:30

Cross-modal vibrational analysis using NIR, MIR and Raman spectroscopy supported by chemometrics and 2D-COS (Invited Paper)

Author(s): **Christian W. Huck**, Univ. Innsbruck (Austria)

14094-53 • 13:30 - 13:50

Raman spectroscopic profiling of Nipah–host interactions in human and bat cells

Author(s): **Phu Duong Le**, **Julie Blon**, ICube (France); **Richard Younes**, **Frédéric Cuisinier**, Univ. de Montpellier (France); **Claudia Gonzalez**, **Olivier Reynard**, **Branka Horvat**, **Amir Nahas**, Institut National de la Santé et de la Recherche Médicale (France); **Hamideh Salehi**, ICube (France)

14094-54 • 13:50 - 14:10

Advancing Ultrafast Spectral Histopathology with Broadband Coherent Raman Scattering

Author(s): **Carl Messerschmidt**, **Matteo Calvarese**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Mohammadsadegh Vafaeinezhad**, **Oleg Ryabchikov**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Anna Mühlig**, Universitätsklinikum Jena (Germany); **Tobias Meyer-Zedler**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Michael Schmitt**, Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany); **Orlando Guntinas-Lichius**, Universitätsklinikum Jena (Germany); **Thomas Bocklitz**, **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany)

14094-55 • 14:10 - 14:30

Quantum Cascade Lasers and machine learning for age and species identification of two important malaria vector mosquitoes.

Author(s): **Mauro Pazmino Betancourth**, Univ. of Glasgow (United Kingdom); **Adam Polak**, Fraunhofer Ctr. for Applied Photonics (United Kingdom); **Francesco Baldini**, Univ. of Glasgow (United Kingdom), Ifakara Health Institute (Tanzania, United Republic of)

14094-56 • 14:30 - 14:50

Seeing without labels: Multimodal and non-linear Raman microspectroscopy for intracellular API Localization.

Author(s): **Julian Plitzko**, Friedrich-Schiller-Univ. Jena (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Natalja Redinger**, Research Ctr. Borstel, Leibniz Lungenzentrum (Germany); **Tobias Meyer-Zedler**, Friedrich-Schiller-Univ. Jena (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Matthias Hauptmann**, Research Ctr. Borstel, Leibniz Lungenzentrum (Germany); **Claus Feldmann**, Karlsruher Institut für Technologie (Germany); **Klea Mehmetaj**, Universitätsklinikum Jena (Germany); **Franziska Adermann**, **Thorben Köhler**, **Stephanie Schubert**, Friedrich-Schiller-Univ. Jena (Germany); **Adrian T. Press**, Friedrich-Schiller-Univ. Jena (Germany), Universitätsklinikum Jena (Germany); **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany); **Ulrich E. Schaible**, Research Ctr. Borstel, Leibniz Lungenzentrum (Germany), Deutsches Zentrum für Infektionsforschung (Germany), Univ. zu Lübeck (Germany); **Michael Bauer**, Universitätsklinikum Jena (Germany); **Jürgen Popp**, Friedrich-Schiller-Univ. Jena (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany)

14094-57 • 14:50 - 15:10

Exploring AutoML Framework for Molecular-level Tissue Classification in Laser Osteotomy using Raman Spectroscopy

Author(s): **Leya Pauly**, **Carlo Seppi**, Univ. Basel (Switzerland); **Aurélien S. Guzzetti**, ITI HealthTech, Télécom Physique Strasbourg, Univ. de Strasbourg (France); **Arsham Hamidi**, **Philippe C. Cattin**, **Ferda Canbaz**, Univ. Basel (Switzerland)

Coffee Break • 15:10 - 15:40

14094-58 • 15:40 - 16:00

Ultrafast coherent Raman with time/spectral compression

Author(s): **Eoghan Collins**, **Charlie O'Mahony**, **Muqian Wen**, **Aengus McGill**, Department of Physics and Bernal Institute, University of Limerick (Ireland); **Jean Bernard Lecourt**, **Yves Hernandez**, Multitel Innovation Center, rue Pierre et Marie Curie, 2, MONS, 7000, Belgium (Belgium); **Syed A.M. Tofail**, **Ning Liu**, **Christophe Silien**, Department of Physics and Bernal Institute, University of Limerick (Ireland)

14094-59 • 16:00 - 16:30

Coherent Raman and Multimodal Non-linear Optical Microscopy for Biological Applications (*Invited Paper*)

Author(s): **Dario Polli**, Politecnico di Milano (Italy)

SESSION 12: PHOTOACOUSTICS

15 April 2026 • 16:30 - 18:00 | Etoile B (Niveau/Level 1)

Session Chair(s): **Christian Huck**, Univ. Innsbruck (Austria)

14094-60 • 16:30 - 16:50

Quartz-Enhanced Photoacoustic Spectroscopy-Based Breath Analyzer for Real-Time, In-Line Detection of Exhaled Breath

Author(s): **Nicoletta Ardito**, PolySense Lab, Dipartimento Interateneo di Fisica, University and Polytechnic of Bari (Italy), Polytechnic University of Bari (Italy); **Arianna Elefante**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Andrea Zifarelli**, **Pietro Patimisco**, **Marilena Giglio**, **Vincenzo Spagnolo**, **Angelo Sampaolo**, PolySense Lab, Politecnico di Bari (Italy)

14094-61 • 16:50 - 17:10

Fundamental-frequency photoacoustic tomography (Fun-PAT): bulk tissue hyperspectral imaging beyond the edges

Author(s): **Ivan Kosik**, Univ. Health Network (Canada); **Robert Weersink**, Univ. Health Network (Canada), Univ. of Toronto (Canada); **Margarete K. Akens**, Univ. of Toronto (Canada), Univ. Health Network (Canada); **Fumi Yokote**, **Nahyun Kwon**, Univ. Health Network (Canada); **Brian C. Wilson**, Univ. Health Network (Canada), Univ. of Toronto (Canada)

14094-62 • 17:10 - 17:30

A novel approach to visualizing immune cell death: Photoacoustic imaging of two distinct immune cell types in response to heat-mediated killing

Author(s): **Özgür Özdemir**, **Elif Yaprak Saraç**, **Zülal Çelik**, **Recepçan Isik**, Istanbul Technical Univ. (Turkey); **Sueda Tepe**, Istanbul Technical Univ (Turkey); **Ceren Ciraci**, Istanbul Technical Univ. (Turkey)

14094-63 • 17:30 - 18:00

Raman spectroscopy for microbial analysis and clinical insight (*Invited Paper*)

Author(s): **Siva Umamathy**, Indian Institute of Science, Bengaluru (India)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 13: VIBRATIONAL SPECTROSCOPY AND IMAGING II

16 April 2026 • 10:50 - 12:40 | Etoile B (Niveau/Level 1)

Session Chair(s): **Iwan W. Schie**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14094-64 • 10:50 - 11:20

Coherent Stokes Raman scattering microscopy (CSRS) (Invited Paper)

Author(s): **Sandro Heuke**, **Jitendra Acharyya**, **Gina Benni**, **Hervé Rigneault**, Institut Fresnel (France)

14094-65 • 11:20 - 11:40

Revolutionising biophotonics: fast and accurate Monte Carlo modelling of Raman scattering in realistic tissues on next-gen processors

Author(s): **Ilya Vlado**, **Alexander Doronin**, Victoria Univ. of Wellington (New Zealand); **Vladislav V. Yakovlev**, Texas A&M Univ. (United States)

14094-66 • 11:40 - 12:00

Hyperspectral Coherent Anti-Stokes Raman Scattering (CARS) for Label-Free Widefield Imaging using Speckled Illumination.

Author(s): **Lilian Magermans**, **Federico Vernuccio**, **Assia Benachir**, **Sandro Heuke**, **Anne Sentenac**, **Hervé Rigneault**, Institut Fresnel, Centrale Méditerranée, Aix-Marseille Univ., CNRS (France)

14094-67 • 12:00 - 12:20

Linear SPAD array for protein sequencing through Surface-Enhanced Raman Spectroscopy

Author(s): **Veronica Storari**, **Clarissa Terragni**, Politecnico di Milano (Italy); **Francesco Difato**, **Francesco Tantussi**, Istituto Italiano di Tecnologia (Italy); **Jannis Weinacker**, **Martin Wegener**, Karlsruhe Institute of Technology (Germany); **Francesco De Angelis**, Istituto Italiano di Tecnologia (Italy); **Federica A. Villa**, Politecnico di Milano (Italy)

Lunch Break 12:40 - 13:40

SESSION 14: VIBRATIONAL SPECTROSCOPY & IMAGING III

16 April 2026 • 13:40 - 15:30 | Etoile B (Niveau/Level 1)

Session Chair(s): **Sandro Heuke**, Institut Fresnel (France)

14094-69 • 13:40 - 14:10

Vibrational imaging of biological tissues via Broadband coherent anti-Stokes Raman scattering (BCARS) imaging (Invited Paper)

Author(s): **Csilla Gergely**, Lab Charles Coulomb (France); **Thierry Cloitre**, Lab. Charles Coulomb (France)

14094-70 • 14:10 - 14:30

Raman-Based Detection of Dengue Virus: Parameter Optimization and Spectral Characterization

Author(s): **Phoebe Nicole G. Perez**, Department of Science and Technology - Industrial Technology Development Institute (Philippines), Department of Science and Technology - Philippine Council for Health Research and Development (Philippines), Department of Science and Technology - S&T Fellows Program (Philippines); **Viktor Joshua L. Belizario**, **Yovia R. Ogasawara**, **Jairrus B. Publico**, Department of Science and Technology - Industrial Technology Development Institute (Philippines); **Noel C. Salvoza**, **Karell Jo Angelique C. Calpito**, **Sarah Jane A. Jimenez**, Department of Science and Technology - Industrial Technology Development Institute (Philippines), Department of Science and Technology - Philippine Council for Health Research and Development (Philippines), Department of Science and Technology - S&T Fellows Program (Philippines); **Maria Terrese Alonzo-Dimamay**, Department of Science and Technology - Industrial Technology Development Institute (Philippines)

14094-71 • 14:30 - 14:50

Low-noise parametric amplifier source for stimulated Raman scattering imaging

Author(s): **Youssef Ahmad**, Aix-Marseille Univ. (France), Institut Fresnel, Centrale Méditerranée, CNRS (France); **Ines Martin**, Aix-Marseille Univ. (France), Institut Fresnel, Centrale Méditerranée, CNRS (France), Fastlite (France); **Luca Genchi**, Aix-Marseille Univ. (France), Institut Fresnel, Centrale Méditerranée, CNRS (France); **Simone Bux**, Fastlite (France); **Nicolas Forget**, Institut de Physique de Nice, Univ. Côte d'Azur, CNRS (France); **Yoann Pertot**, Fastlite (France); **Hervé Rigneault**, Institut Fresnel, Centrale Méditerranée, CNRS (France)

14094-72 • 14:50 - 15:10

Clinical Translation of the InvaScope Raman Endoscopy System Across Multiple Oncological Applications

Author(s): **Iwan W. Schie**, **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14094-73 • 15:10 - 15:30

Rethinking the assignment of peaks in the carbon-hydrogen region of the Raman spectrum

Author(s): **Bryce Manifold**, **Aaron Streets**, Univ. of California, Berkeley (United States)

Coffee Break 15:30 - 15:50

SESSION 15: VIBRATIONAL SPECTROSCOPY & IMAGING IV

16 April 2026 • 15:50 - 17:40 | Etoile B (Niveau/Level 1)

Session Chair(s): **Csilla Gergely**, Lab. Charles Coulomb (France)

14094-74 • 15:50 - 16:10

Alkyne-tagged Raman spectroscopy for the detection of DNA duplex formation

Author(s): **Miklós Veres**, HUN-REN Wigner Research Ctr. for Physics (Hungary); **Huy Van Nguyen**, **John Fossey**, **James Tucker**, Univ. of Birmingham (United Kingdom); **Roman Holomb**, HUN-REN Wigner Research Ctr. for Physics (Hungary)

14094-75 • 16:10 - 16:30

Depth resolved fibre-optic based Raman spectroscopy

Author(s): **Vishal Kumar**, **Steven Vanuytsel**, King's College London (United Kingdom); **Dev Mehrotra**, **Erik Ersland**, Boston Univ. (United States); **Brian D. Snyder**, Boston Children's Hospital (United States); **Richard J. Cook**, King's College London (United Kingdom); **Michael Albro**, Boston Univ. (United States); **Mads S. Bergholt**, King's College London (United Kingdom)

14094-76 • 16:30 - 16:50

Spectral-Spatial Sparsity Engineering for Super-Resolution Coherent Anti-Stokes Raman Scattering via Image Scanning Microscopy

Author(s): **Charlie O'Mahony**, University of Limerick (Ireland); **Xavier Theillier**, **Aengus McGill**, **James Lillis**, **Sivasubramanian Murugappan**, **David O'Brien**, **Nanasaheb Thorat**, **Syed Tofail**, **Ning Liu**, **Christophe Silien**, Univ. of Limerick (Ireland)

14094-78 • 16:50 - 17:10

Development of a fast autofocus hand-held closed-looped fiber-optic Raman probe

Author(s): **Weizhi Yang**, Leibniz Institute of Photonic Technology (Germany); **David Vasquez**, **Ines Latka**, Leibniz-Institut für Photonische Technologien (Germany); **Jürgen Popp**, Leibniz-Institut für Photonische Technologien (Germany), Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics (Germany); **Iwan W. Schie**, Leibniz-Institut für Photonische Technologien (Germany), Ernst-Abbe-Hochschule Jena (Germany)

14094-80 • 17:10 - 17:40

Advances in high-throughput Raman spectroscopy: from system design to diverse biomedical and environmental applications (Invited Paper)

Author(s): **Iwan W. Schie**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Ernst-Abbe-Hochschule Jena (Germany); **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Institut für Physikalische Chemie, Abbe Ctr. of Photonics, Friedrich-Schiller-Univ. Jena (Germany)

SESSION 16: JOINT SESSION: MEDICAL IMAGE PROCESSING

16 April 2026 • 15:40 - 17:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Gian Domenico Licciardo**, Univ. degli Studi di Salerno (Italy)

Joint Session between Conference 14087, Real-time Processing of Image, Depth and Video Information and Conference 14094, Biomedical Spectroscopy, Microscopy, and Imaging.

NOTE: This session runs concurrently with Session 15, Conference 14094.

14087-15 • 15:40 - 16:20

Improving endoscopy by passing from complex video-sequences to 2D and 3D mosaics (Keynote Presentation)

Author(s): **Christian Daul**, CRAN UMR 7039, Université de Lorraine, CNRS (France); **Tan-Binh Phan, Dinh-Hoan Trinh**, Ctr. de recherche en automatique de Nancy, Univ. de Lorraine, CNRS (France)

14087-16 • 16:20 - 16:40

Enforcing scale consistency in monocular depth estimation for multi-view 3D reconstruction

Author(s): **The-Nam Le**, Univ. de Lorraine (France), Univ. of Science and Technology of Hanoi (Vietnam); **Meryem Amaouche**, Univ. de Lorraine (France), Univ. Internationale de Rabat (Morocco); **Hoang-Ha Nguyen**, Univ. of Science and Technology of Hanoi (Vietnam); **Dinh-Hoan Trinh**, Vietnam National Univ. (Vietnam); **Ouassim Karrakchou**, Univ. Internationale de Rabat (Morocco); **Christian Daul**, CRAN UMR 7039, Université de Lorraine, CNRS (France)

14094-77 • 16:40 - 17:00

Comparing algorithms for dynamic contrast on full-field, swept-source, and spectral-domain OCT

Author(s): **Noah Heldt**, Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Tual Monfort**, Sorbonne Univ., INSERM, CNRS, Institut de la Vision (France); **Rion Morishita**, Univ. of Tsukuba (Japan); **Felix Hilge**, Cutaneous Biology Research Ctr., Massachusetts General Hospital, Harvard Medical School (United States), Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany); **Robert Schönherr**, Institut für Anatomie, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Olivier Thouvenin**, Institut Langevin, ESPCI Paris, Université PSL, CNRS (France); **Ibrahim El-Sadek**, Univ. of Tsukuba (Japan); **Peter König**, Institut für Anatomie, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Gereon Hüttmann**, Institut für Biomedizinische Optik, Univ. zu Lübeck (Germany), Deutsches Zentrum für Lungenforschung e. V. (Germany); **Kate Grieve**, Sorbonne Univ., INSERM, CNRS, Institut de la Vision (France); **Yoshiaki Yasuno**, Univ. of Tsukuba (Japan)

14094-79 • 17:00 - 17:20

AI-enhanced FLIM identifies macrophages in human precision-cut lung slices

Author(s): **Stella Greiner, Jhonatan Contreras**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Franziska Hornung**, Universitätsklinikum Jena (Germany); **Marko Rodewald**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tobias Meyer-Zedler**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany); **Stefanie Deinhardt-Emmer**, Universitätsklinikum Jena (Germany); **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany)

CONFERENCE 14095

Neurophotronics III

12 - 13 April 2026 | Adenauer (Niveau/Level 1)

Conference Chair(s): **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tommaso Fellin**, Istituto Italiano di Tecnologia (Italy)

Program Committee: **Laurent Bourdieu**, Ecole Normale Supérieure (France); **Laurent Cognet**, Univ. de Bordeaux (France); **Martin Fuhrmann**, Univ. of Bonn (Germany); **Sebastian Haesler**, KU Leuven (Belgium); **Nisan Ozana**, Athinoula A. Martinos Ctr. for Biomedical Imaging (Israel); **Janelle M. P. Pakan**, Otto-von-Guericke-Univ. Magdeburg (Germany); **Eirini I. Papagiakoumou**, Institut de la Vision (France); **Nicolas C. Pégard**, The Univ. of North Carolina at Chapel Hill (United States); **Robert Prevedel**, EMBL Heidelberg (Germany); **Hana Uhlirova**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic)

Sunday 12 April 2026

SESSION 1: NEUROPHOTONIC APPLICATIONS

12 April 2026 • 13:10 - 15:20 | Adenauer (Niveau/Level 1)

Session Chair(s): **Tommaso Fellin**, Istituto Italiano di Tecnologia (Italy)

14095-1 • 13:10 - 13:40

The role of membrane phase transitions in neuronal action potentials (*Invited Paper*)

Author(s): **Wolfgang W. Langbein**, **David Regan**, **Holly Tyroll**, **Adrian Harwood**, **Wynand van der Goes Van Naters**, **Paola Borri**, Cardiff Univ. (United Kingdom)

14095-2 • 13:40 - 14:00

Imaging Indigenous Microvascular Dynamics in the Mouse Cortex – Impact of Sex, Anaesthesia and Alzheimer's Disease.

Author(s): **Mia Viuf Skøtt**, **Eugenio Gutierrez**, **Vladimir Matchkov**, **Leif Østergaard**, **Dmitry D. Postnov**, Aarhus Univ. (Denmark)

14095-3 • 14:00 - 14:20

Directional light transport in human brain white matter axon bundles

Author(s): **Ernesto Pini**, Istituto Nazionale di Ricerca Metrologica (Italy); **Danila Di Meo**, **Irene Costantini**, **Michele Sorelli**, **Samuel Bradley**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy); **Diederik Sybolt Wiersma**, Istituto Nazionale di Ricerca Metrologica (Italy); **Francesco Saverio Pavone**, LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy); **Lorenzo Pattelli**, Istituto Nazionale di Ricerca Metrologica (Italy)

14095-4 • 14:20 - 14:40

Patient-specific intraoperative resting-state RGB parcellation framework for contextualising direct cortical stimulation

Author(s): **Adithip Kawinkij**, Université de Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, F69100 Lyon, France (France); **Charly Caredda**, Univ. de Lyon, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France); **Fabien C. Schneider**, Ctr. Hospitalier Univ. de Saint-Étienne, Univ. Jean Monnet Saint-Etienne (France); **Jacques Guyotat**, Hospices Civils de Lyon (France); **Thiébaud Picart**, Hospices Civils de Lyon, Univ. Claude Bernard Lyon 1 (France); **Bruno Montcel**, Univ. de Lyon, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France)

14095-5 • 14:40 - 15:00

Polarization sensitive Single Nanoparticle Tracking in the near-infrared in the brain extracellular space

Author(s): **Limeng Ruan**, **Hanna Manko**, **Quentin Gresil**, Lab. Photonique, Numérique et Nanosciences, Institut d'Optique Graduate School, Univ. de Bordeaux (France); **Luis Arturo Alemán-Castañeda**, Centrale Méditerranée, Institut Fresnel, Aix-Marseille Univ., CNRS (France); **Morgane Meras**, **Laurent Groc**, Institut Interdisciplinaire de Neurosciences, Univ. de Bordeaux (France); **Sophie Brasselet**, Centrale Méditerranée, Institut Fresnel, Aix-Marseille Univ., CNRS (France); **Marc Tondusson**, **Laurent Cognet**, Lab. Photonique, Numérique et Nanosciences, Institut d'Optique Graduate School, Univ. de Bordeaux (France)

14095-6 • 15:00 - 15:20

Hyperspectral Characterization of Hemodynamic and Metabolic Responses in the Mouse Brain During Oxygenation Alterations

Author(s): **Pietro Ricci**, Università degli Studi di Firenze (Italy), European Laboratory for Non-Linear Spectroscopy (Italy); **Emilia Conti**, European Laboratory for Non-Linear Spectroscopy (Italy), National Research Council (Italy); **Charly Caredda**, University of Lyon (France); **Ivan Ezhov**, Technischen Universität München (Germany); **Luca Giannoni**, University College London (United Kingdom); **Dorotea Nardini**, **Anam Toaha**, **Jessica Lucchesi**, European Laboratory for Non-Linear Spectroscopy (Italy); **Ilias Tachtsidis**, University College London (United Kingdom); **Bruno Montcel**, University of Lyon (France); **Daniel Rueckert**, Technische Univ. München (Germany); **Francesco Pavone**, Università degli Studi di Firenze (Italy), European Laboratory for Non-Linear Spectroscopy (Italy), National Institute of Optics (Italy)

Coffee Break 15:20 - 15:50

SESSION 2: DEEP-BRAIN IMAGING

12 April 2026 • 15:50 - 17:40 | Adanauer (Niveau/Level 1)

Session Chair(s): **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14095-7 • 15:50 - 16:20

Chronic deep-brain imaging through a hair-thin holographic endomicroscope (*Invited Paper*)

Author(s): **Miroslav M. Stibůrek**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tomáš Pikálek**, **Kristína Herzánová**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Adrian Lorenz**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Bhargavi Murthy**, **Hongbo Jia**, Leibniz-Institut für Neurobiologie Magdeburg (Germany); **Hana Uhlířová**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Alessio Attardo**, Leibniz-Institut für Neurobiologie Magdeburg (Germany); **Tomáš Čížmár**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic), Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany)

14095-8 • 16:20 - 16:40

Fast 2-color line-scanning confocal imaging of neuronal activity in freely behaving mice.

Author(s): **Ombeline Hoa**, **Clara Dussaux**, Ecole Normale Supérieure (France); **Vladimir Sotskov**, Collège de France (France); **Yan Chastagnier**, Institut de Génomique Fonctionnelle (France); **Théo Mathevet**, **Jozsua Fodor**, Ecole Normale Supérieure (France); **Yves Dupraz**, Collège de France (France); **Laurent Bourdieu**, **Vincent Villette**, Ecole Normale Supérieure (France); **Michaël Zugaro**, Collège de France (France); **Vivien Szabo**, Institut de Génomique Fonctionnelle (France); **Cathie Ventalon**, Ecole Normale Supérieure (France)

14095-9 • 16:40 - 17:00

A novel endoscope designed for recording neuronal activity in deep brain regions of freely-behaving animals with reduced invasiveness.

Author(s): **Caio Vaz Rimoli**, **Claudio Moretti**, Ecole Normale Supérieure (France); **Stefano Zucca**, Univ. degli Studi di Torino (Italy); **Fernando Soldevila**, **Enora Brémont**, Ecole Normale Supérieure (France); **Serena Bovetti**, Univ. degli Studi di Torino (Italy); **Sylvain Gigan**, **Cathie Ventalon**, Ecole Normale Supérieure (France)

14095-10 • 17:00 - 17:20

In-vivo demonstration of STED microscopy at the tip of a holographic multimode fibre endoscope

Author(s): **André D. Gomes**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tomáš Pikálek**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Miroslav M. Stibůrek**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Hana Uhlířová**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic), Friedrich-Schiller-Univ. Jena (Germany)

14095-11 • 17:20 - 17:40

Nanostructuration of optical fiber probes using atmospheric plasma jet synthesis of plasmonic enhancers towards label free spectroscopy of neurochemicals in deep brain regions

Author(s): **Anna Roccaforte**, Padova Neuroscience Center, University of Padua (Italy), Department of Physics and Astronomy "G. Galilei", University of Padua (Italy); **Ehsan Shakerinasab**, **Chiara Guidolin**, **Boris Kalinic**, **Riccardo Fiorotto**, Department of Physics and Astronomy "G. Galilei", University of Padua (Italy); **Claudia Longo**, Department of Chemical Sciences, University of Padua (Italy); **Alessandro Patelli**, Department of Physics and Astronomy "G. Galilei", University of Padua (Italy); **Filippo Pisano**, Department of Physics and Astronomy "G. Galilei", University of Padua (Italy), Padova Neuroscience Center, University of Padua (Italy)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: KEYNOTE

13 April 2026 • 11:30 - 12:10 | Adanauer (Niveau/Level 1)

Session Chair(s): **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tommaso Fellin**, Istituto Italiano di Tecnologia (Italy)

14095-13 • 11:30 - 12:10

Intravital three-photon microscopy reveals glioblastoma immune cell interactions (Keynote Presentation)

Author(s): **Felix C. Nebeling**, **Falko Fuhrmann**, **Manuel Mittag**, **Fabrizio Musacchio**, **Henrike Antony**, **Nala Gockel**, German Ctr. for Neurodegenerative Diseases e.V. (Germany); **Lea Friker**, Institut für Neuropathologie, Universitätsklinikum Bonn, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); **Sonia Leonardelli**, Institut für Experimentelle Onkologie, Universitätsklinikum Bonn, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); **Severin Filser**, **A. Deli**, **Miriam Stork**, **Daniele Bano**, German Ctr. for Neurodegenerative Diseases e.V. (Germany); **Thorsten Pietsch**, Institut für Neuropathologie, Universitätsklinikum Bonn, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); **Frank A. Giordano**, Universitätsmedizin Mannheim (Germany); **Qihui Zhou**, German Ctr. for Neurodegenerative Diseases e.V. (Germany); **Simona Parrinello**, UCL Cancer Institute (United Kingdom); **Michael Hölzel**, Institut für Experimentelle Onkologie, Universitätsklinikum Bonn, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); **Ulrich Herrlinger**, Universitätsklinikum Bonn (Germany); **Paolo Salomoni**, **Martin Fuhrmann**, German Ctr. for Neurodegenerative Diseases e.V. (Germany)

SESSION 4: NONLINEAR APPROACHES I

13 April 2026 • 12:10 - 13:00 | Adanauer (Niveau/Level 1)

Session Chair(s): **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14095-14 • 12:10 - 12:40

In vivo two-photon imaging of the mouse brain with intraparenchymal light collection through a thin tapered optical fiber (*Invited Paper*)

Author(s): **Marco Pisanello**, OptogeniX S.r.l. (Italy); **Andrea Sattin**, Optical Approaches to Brain Function Laboratory, Istituto Italiano di Tecnologia, Genova, Italy (Italy); **Filippo Pisano**, Dept. of Physics and Astronomy 'G. Galilei', University of Padua, Padua, Italy (Italy), Padova Neuroscience Center, University of Padua, Padua, Italy (Italy), Center for Biomolecular Nanotechnologies, Istituto Italiano di Tecnologia, Arnesano, Italy (Italy); **Marco Bianco**, Center for Biomolecular Nanotechnologies, Istituto Italiano di Tecnologia, Arnesano, Italy (Italy); **Chiara Guidolin**, Dept. of Physics and Astronomy 'G. Galilei', University of Padua, Padua, Italy (Italy); **Massimo De Vittorio**, Center for Biomolecular Nanotechnologies, Istituto Italiano di Tecnologia, Arnesano, Italy (Italy), Department of Health Technology, IDUN section, Technical University of Denmark, Kgs. Lyngby, Denmark (Denmark); **Tommaso Fellin**, Optical Approaches to Brain Function Laboratory, Istituto Italiano di Tecnologia, Genova, Italy (Italy); **Ferruccio Pisanello**, Center for Biomolecular Nanotechnologies, Istituto Italiano di Tecnologia, Arnesano, Italy (Italy)

14095-15 • 12:40 - 13:00

All-optical manipulation of retinal circuits in non-human primate explants

Author(s): **Tom Maslianitsyna**, **Remi Fournel**, **Marie-Louise Contreras**, **Valerie Fradot**, **Clemence Bradic**, **Valeria Zampini**, **Emiliano Ronzitti**, **Valentina Emiliani**, Institut de la Vision (France)

Lunch Break 13:00 - 14:20

SESSION 5: NONLINEAR APPROACHES II

13 April 2026 • 14:20 - 15:20 | Adanauer (Niveau/Level 1)

Session Chair(s): **Tomáš Čížmár**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14095-16 • 14:20 - 14:40

Serial third harmonic generation microscopy for label-free brain-wide mapping of myelin

Author(s): **Solène Prudhomme**, **Hugo Blanc**, Lab. d'Optique et Biosciences (France); **Gwenael Le Dréau**, **Chloé Le Yannou**, **Jean Livet**, Institut de la Vision (France); **Bruno Stankoff**, **Anne Desmazières**, Institut du Cerveau et de la Moelle Épineuse (France); **Chiara Stringari**, **Pierre Mahou**, **Emmanuel Beaurepaire**, Lab. d'Optique et Biosciences (France)

14095-17 • 14:40 - 15:00

Adaptive optics in two-photon fluorescence microscopy using near-infrared quantum dots for in depth neuroimaging in mice

Author(s): **Alice Guillaume-Manca**, Ecole Normale Supérieure (France), Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris (France), Univ. Paris-Saclay (France); **Jan Pytel**, Ecole Normale Supérieure (France), Univ. Paris-Saclay (France); **Beatrice Jeffries**, **Thomas Pons**, **Celine Roux-Byl**, Ecole Supérieure de Physique et de Chimie Industrielles de la Ville de Paris (France); **Pauline Treimany**, **Fabrice Harms**, Imagine Optic SA (France); **Laurent Bourdieu**, Ecole Normale Supérieure (France); **Alexandra Fragola**, Univ. Paris-Saclay (France)

14095-18 • 15:00 - 15:20

Ultrafast Local Volume Excitation (ULoVE) boosts activation speed and efficiency of single cell resolution optogenetics

Author(s): **Matteo Pisoni**, **Yannick Goulam Houssen**, **Anthony Lourdiane**, Institut Pasteur (France); **Benjamin Mathieu**, **Stéphane Dieudonné**, Ecole Normale Supérieure (France), Karthala System (France); **Brice Bathellier**, Institut Pasteur (France)

Coffee Break 15:20 - 15:50

SESSION 6: OPTOGENETICS

13 April 2026 • 15:50 - 17:40 | Adanauer (Niveau/Level 1)

Session Chair(s): **Tommaso Fellin**, Istituto Italiano di Tecnologia (Italy)

14095-19 • 15:50 - 16:10

A quantitative framework for visible-light uncaging of neurotransmitters: linking optical control of glutamate release to neuronal spiking

Author(s): **Nakyung Lee**, UNIST (Korea, Republic of); **Hyunmo Yang**, **Cheol-Min Ghim**, **Woonggyu Jung**, Ulsan National Institute of Science and Technology (Korea, Republic of)

14095-20 • 16:10 - 16:40

OLED-based neuroprobes for cellular-resolution optogenetic stimulation and wireless operation (*Invited Paper*)

Author(s): **Sumit Mohapatra**, Univ. zu Köln (Germany); **Falko Fuhrmann**, German Ctr. for Neurodegenerative Diseases e.V. (Germany); **Julian F. Butscher**, **Sabina Hillebrandt**, Univ. zu Köln (Germany), Univ. of St. Andrews (United Kingdom); **Martin Fuhrmann**, German Ctr. for Neurodegenerative Diseases e.V. (Germany); **Malte C. Gather**, Univ. zu Köln (Germany), Univ. of St. Andrews (United Kingdom), Exzellenzcluster CECAD (Germany)

14095-21 • 16:40 - 17:00

Implementation of temporal focusing on 3D-CASH microscope to improve optical sectioning and signal specificity

Author(s): **Josephine Morizet, Walther Akemann, Laurent Bourdieu**, Institut de biologie de l'Ecole Normale Supérieure (France)

14095-22 • 17:00 - 17:20

Low-loss hybrid polymer waveguide neural probes for visible-wavelength optical neuromodulation

Author(s): **Federico Pazzaglia**, Ghent University (Belgium); **Wouter Van Lysebettens, Jeroen Missinne, Sandra Van Vlierberghe, Axel Parys, Anastasiia Babych, Robrecht Raedt**, Univ. Gent (Belgium)

14095-23 • 17:20 - 17:40

Organic optoelectronics for optogenetic stimulation and fluorescence imaging of neuronal activity

Author(s): **Siddhartha Saggar, Rabiul Islam**, TU Dresden (Germany), Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. (Germany); **Giuseppe Ciccone**, TU Dresden (Germany); **Jens P. Weber, Ajisha C., Caroline Murawski**, TU Dresden (Germany), Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. (Germany)

Tuesday 14 April 2026

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14095-24 • 18:10 - 20:00

Confocal microscopy through a multimode optical fibre

Author(s): **Tomáš Pikálek, Miroslav M. Stibůrek, Tereza Tučková, Petra Kolbábková**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Sergey Turtaev**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Jana Krejčí**, Institute of Biophysics of the CAS, v.v.i. (Czech Republic); **Hana Uhlířová**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Tomáš Čížmár**, Institute of Scientific Instruments of the CAS v.v.i. (Czech Republic)

14095-25 • 18:10 - 20:00

3D imaging through tapered multimode fibers

Author(s): **Bára Krbková, Tomáš Pikálek, Miroslav M. Stibůrek, Hana Uhlířová**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic); **Tomáš Čížmár**, Institute of Scientific Instruments of the CAS, v.v.i. (Czech Republic), Leibniz-Institut für Photonische Technologien e.V. (Germany), Institut für Angewandte Physik, Friedrich-Schiller-Univ. Jena (Germany); **Ferruccio Pisanello**, Istituto Italiano di Tecnologia (Italy); **Massimo De Vittorio**, Istituto Italiano di Tecnologia (Italy), Univ. del Salento (Italy), Technical Univ. of Denmark (Denmark); **Marco Bianco, Elisa Scarpa**, Istituto Italiano di Tecnologia (Italy)

14095-26 • 18:10 - 20:00

Combined 3D holographic patterning, two-photon optogenetics, and light-sheet microscopy to unravel larval zebrafish brain dynamics

Author(s): **Clémence Eluère**, IBENS (France)

CONFERENCE 14096

Biophotonics in Point-of-Care IV

15 - 16 April 2026 | Stuttgart/Salon 15 (Niveau/Level 1) Wed, Churchill
(Niveau/Level 1) Thu

Conference Chair(s): **Michael T. Canva**, CNRS (France); **Ambra Giannetti**, Istituto di Fisica Applicata "Nello Carrara"-CNR (Italy); **Hatice Altug**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Julien Moreau**, Institut d'Optique Graduate School (France)

Program Committee: **Jakub Dostálek**, AIT Austrian Institute of Technology GmbH (Austria); **Thierry Livache**, Aryballe Technologies (France); **Boris Mizaikoff**, Univ. Ulm (Germany); **Giuseppe Spoto**, Univ. degli Studi di Catania (Italy); **Genni Testa**, IREA-CNR (Italy); **Bruno Wacogne**, Femto-st (France); **Shuwen Zeng**, Institut de l'Information Scientifique et Technique (France)

Wednesday 15 April 2026

SESSION 1: MOBILE BIOSENSING FOR DIAGNOSTIC

15 April 2026 • 9:00 - 10:40 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Michael T. Canva**, Univ. de Sherbrooke (Canada)

14096-1 • 9:00 - 9:40

Next-Generation Diagnostics: Biospectroscopic Fingerprinting of Exhaled Breath, Liquid Biopsies & Extracellular Vesicles (*Invited Paper*)

Author(s): **Lorena Diaz de Leon Martinez**, Universität Ulm (Germany); **Boris Mizaikoff**, **Rüdiger Groß**, Univ. Ulm (Germany); **Emine Billur Sevinis Ozbulut**, Toray Industries Europe GmbH (Germany); **Yuki Yoshida**, Toray Research Ctr., Inc. (Japan); **Yoshitomo Furushima**, Toray Industries Europe GmbH (Germany); **Kenta Hoshino**, **Takashi Yamamoto**, Toray Research Ctr., Inc. (Japan); **Luz Eugenia Alcantara Quintana**, Univ. Autónoma de San Luis Potosí (Mexico)

14096-2 • 9:40 - 10:20

Bioinspired bioluminescent biosensors for portable and wearable diagnostics (*Invited Paper*)

Author(s): **Elisa Michelini**, Univ. degli Studi di Bologna (Italy)

14096-3 • 10:20 - 10:40

Polymer waveguide based low-cost photonic biosensors for quantitative tear fluid diagnostics at the point of care

Author(s): **Nikolay Tesmer**, Universität zu Lübeck (Germany); **Shehabeldin Ahmed**, Technische Hochschule Lübeck (Germany); **Max Rogge**, **Alexander Altmann**, **Julian Lennard Voelter**, **Awanish Singh**, Universität zu Lübeck (Germany); **Ramtin Rahmanzadeh**, Medizinisches Laserzentrum Lübeck GmbH (Germany); **Maik Rahlves**, Universität zu Lübeck (Germany)

Coffee Break 10:40 - 11:10

SESSION 2: MOBILE BIOSENSING SYSTEMS

15 April 2026 • 11:10 - 12:50 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Julien Moreau**, Institut d'Optique Graduate School (France)

14096-4 • 11:10 - 11:50

Antifouling Polymer Brush Nano-Coatings for High-Performance Label-Free Optical and Piezoelectric Biosensors in Complex Media (*Invited Paper*)

Author(s): **Hana Vaisocherová-Lísalová**, Institute of Physics of the CAS, v.v.i. (Czech Republic)

14096-5 • 11:50 - 12:10

Raman spectroscopy at the point of care: Inflammation monitoring during home hemodialysis using a portable confocal Raman spectrometer

Author(s): **Izabella J. Jahn**, **Shuxia Guo**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Leibniz Gesundheits-Technologien (Germany), Leibniz-Zentrum für Photonik in der Infektionsforschung (Germany); **Ditte Rask Tornby**, Odense Univ. Hospital (Denmark), Univ. of Southern Denmark (Denmark); **Henry John**, **Sebastian Bierwirth**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Leibniz Gesundheits-Technologien (Germany), Leibniz-Zentrum für Photonik in der Infektionsforschung (Germany); **Thomas Emil Andersen**, Odense

Univ. Hospital (Denmark), Univ. of Southern Denmark (Denmark); **Thomas W. Bocklitz, Jürgen Popp, Walter Hauswald**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Leibniz Gesundheits-Technologien (Germany), Leibniz-Zentrum für Photonik in der Infektionsforschung (Germany)

14096-6 • 12:10 - 12:30

Raman-spectroscopy-based Point-of-Care assay development for rapid UTI diagnosis

Author(s): **Andreea Winterfeld, Simon Tätzner**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Susanne Pahlow, Anja Silge, Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Institute für Physikalische Chemie, Friedrich-Schiller-Univ. Jena (Germany), Abbe Ctr. of Photonics (Germany)

14096-7 • 12:30 - 12:50

Power spectral density of fNIRS signals to separate stroke patients and controls

Author(s): **Hany Ferdinando, Sadegh Moradi**, Univ. of Oulu (Finland); **Mikael von und zu Fraunberg**, Oulu Univ. Hospital (Finland); **Pekka Jäkälä**, Kuopio Univ. Hospital (Finland), Univ. of Eastern Finland (Finland); **Vesa Kiviniemi**, Univ. of Oulu (Finland), Oulu Univ. Hospital (Finland); **Teemu Myllylä**, Univ. of Oulu (Finland)

Lunch/Exhibition Break 12:50 - 14:00

SESSION 3: CELL CHARACTERIZATION-BASED SYSTEMS

15 April 2026 • 14:00 - 15:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Ambra Giannetti**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14096-11 • 14:00 - 14:40

Revisiting biosensing with digital holography and hyperspectral imaging (Invited Paper)

Author(s): **Romain Quidant**, ETH Zurich (Switzerland)

14096-9 • 14:40 - 15:00

High-Throughput Multispectral Skin Sensing for Non-Invasive Detection of Psychological Stress

Author(s): **Victoria V. Barygina**, Univ. degli Studi di Firenze (Italy)

14096-10 • 15:00 - 15:20

Enhanced surface plasmon resonance imaging biosensing via electrokinetic mass transport for rapid and sensitive pathogen detection in irrigation systems

Author(s): **Pauline Zimmer**, Lab. Ampère (France), Institut des Nanotechnologies de Lyon (France); **Coline Beltrami**, Institut d'Optique Graduate School (France); **Marie Frénéa-Robin**, Lab. Ampère (France); **Emmanuelle Laurenceau**, Institut des Nanotechnologies de Lyon (France); **Julien Moreau**, Institut d'Optique Graduate School (France); **Guy Condemine**, Microbiologie, Adaptation et Pathogénie (France); **Jean-Pierre Cloarec**, Institut des Nanotechnologies de Lyon (France); **Julien Marchalot**, Lab. Ampère (France); **Michael Canva**, Lab. Nanotechnologies Nanosystemes (Canada), Institut Interdisciplinaire d'Innovation Technologique, Univ. de Sherbrooke (Canada)

Coffee Break 15:20 - 15:50

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

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Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14096-20 • 17:45 - 19:30

Fiber-integrated dual-gene detection platform based on enzymatic recombinase amplification and tapered microfiber sensing

Author(s): **Minglu Yan, Xue Zhou, Yanan Zhang, Yong Zhao**, Northeastern University (China); **Stephen Warren-Smith, Viet Linh Nguyen**, Adelaide University (Australia); **Xuegang Li**, Northeastern University (China), Leibniz Institute of Photonic Technology (IPHT) (Germany)

14096-21 • 17:45 - 19:30

Unveiling dialysis effects on carbon dots via FTIR spectroscopy

Author(s): **Piero Alaimo**, University of Palermo (Italy); **Mauro Mosca**, Univ. degli Studi di Palermo (Italy); **Marcello Cabibbo**, Università Politecnica delle Marche (Italy); **Roberto Macaluso, Isodiana Crupi, Filippo Saiano, Dominique Persano Adorno**, Univ. degli Studi di Palermo (Italy)

14096-22 • 17:45 - 19:30

Visual detection of total viral RNA with catalytic DNA-nanomachine

Author(s): **Ulyana Kononova, Daria Iurasova, Daria Gorbenko**, ITMO (Russian Federation); **Boris Yavkin**, LuMIn (France)

14096-23 • 17:45 - 19:30

Development of portable Polychromatic Pupillometer for screening Retinal and Optic nerve disorders

Author(s): **Amitvikram Pujar, Rashmi Achla Minz**, National Institute of Technology, Rourkela (India)

14096-24 • 17:45 - 19:30

smartPCF: Smartphone integrated optofluidic photonic crystal fiber biosensor for point-of-care applications

Author(s): **Iftak Hussain**, Agency for Science Technology and Research (A*STAR) (Singapore); **Baptiste Moeglen-Paget**, XLIM (France); **Ho Kwun Hei Willis**, A*STAR Agency for Science, Technology and Research (Singapore); **Amine Benazza**, XLIM (France); **Malini Olivo**, A*STAR Agency for Science, Technology and Research (Singapore); **Georges Humbert**, XLIM (France); **Dinish U. S.**, A*STAR Agency for Science, Technology and Research (Singapore)

14096-26 • 17:45 - 19:30

Surface-Enhanced Raman Spectroscopy for Selective Exosome Detection Using Plasmonic Circular Nanostructure Biosensors

Author(s): **Nan-Fu Chiu, I-Ju Chen**, National Taiwan Normal Univ (Taiwan); **Yong-Ai Wu**, National Taiwan Normal Univ. (Taiwan)

14096-27 • 17:45 - 19:30

High-span multichannel biosensor based on SU-8 PIC technology

Author(s): **Eduardo Serra, João Costa**, Instituto Superior de Engenharia de Lisboa (Portugal); **Paolo Di Giamberardino**, Sapienza Univ. di Roma (Italy); **Alessandro Fantoni**, Instituto Superior de Engenharia de Lisboa (Portugal)

14096-28 • 17:45 - 19:30

Gold nanoflowers for colorimetric detection of NGAL antibodies

Author(s): **Caterina Serafinelli**, Univ. Nova de Lisboa (Portugal); **Elisabete Alegria, Rita Pacheco, Manuela Vieira, Alessandro Fantoni**, Instituto Superior de Engenharia de Lisboa (Portugal)

14096-29 • 17:45 - 19:30

Advanced SPR biosensor with antifouling surface decorated with DNA origami for enhanced detection of miRNA in crude human blood plasma

Author(s): **Eva Vogelova, Hana Vaisocherová-Lísalová**, Institute of Physics of the CAS, v.v.i. (Czech Republic)

14096-31 • 17:45 - 19:30

Quantum Dot Enhanced SPR for Real-Time Detection of Two Lung Cancer Biomarkers in Spiked Saliva Samples

Author(s): **Nan-Fu Chiu**, National Taiwan Normal Univ (Taiwan); **Yong-Ai Wu**, National Taiwan Normal Univ. (Taiwan); **I-Ju Chen**, National Taiwan Normal Univ (Taiwan); **Yu-Wei Chang**, National Taiwan Normal Univ. (Taiwan); **Hsiao-Yu Ko**, National Taiwan Normal Univ (Taiwan)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxixus (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 4: INTEGRATED PHOTONICS

16 April 2026 • 11:00 - 12:20 | Churchill (Niveau/Level 1)

Session Chair(s): **Ambra Giannetti**, Istituto di Fisica Applicata "Nello Carrara" (Italy)

14096-8 • 11:00 - 11:40

A new approach to continuous, non-invasive monitoring of cell cultures using fiber-optic sensors (*Invited Paper*)

Author(s): **Monika Janik**, Warsaw Univ. of Technology (Poland)

14096-12 • 11:40 - 12:00

SiN integrated MZI for high sensitivity biosensing

Author(s): **Rachele Favaretto**, Università di Trento (Italy), Fondazione Bruno Kessler (Italy), FTH s.r.l. (Italy); **Niccolò Ardoino**, FTH s.r.l. (Italy); **Georg Pucker**, Fondazione Bruno Kessler (Italy); **Nicola Bellotto**, **Erica Venuti**, **Nicole Srocka**, FTH s.r.l. (Italy); **Martino Bernard**, Fondazione Bruno Kessler (Italy); **Leonardo Limongi**, Fondazione Bruno Kessler (Italy), Università di Trento (Italy); **Ali Nawaz**, Fondazione Bruno Kessler (Italy); **Carlo Guardiani**, FTH s.r.l. (Italy)

14096-13 • 12:00 - 12:20

End-of-fiber optomechanical cantilevers for label-free biomimetic mass sensing

Author(s): **Cédric Ayela**, Laboratoire de l'Intégration du Matériau au Système, Université de Bordeaux, CNRS (France); **Karsten Haupt**, Université de Technologie de Compiègne (France)

Lunch Break 12:20 - 13:40

SESSION 5: NANOPHOTONICS AND SERS

16 April 2026 • 13:40 - 15:00 | Churchill (Niveau/Level 1)

Session Chair(s): **Michael T. Canva**, Univ. de Sherbrooke (Canada)

14096-14 • 13:40 - 14:20

Engineering surface lattice resonances in periodic plasmonic nanostructures: from sensing performance to regioselective surface functionalization (*Invited Paper*)

Author(s): **Nordin Felidj**, **Mathias Dolci**, **Claire Mangeney**, **Kartikey Pandey**, Univ. Paris Cité (France)

14096-15 • 14:20 - 14:40

Rapid Analysis of Pathogens and Proteins in Liquid Using SERS Biosensors and Machine Learning

Author(s): **Domna G. Kotsifaki**, Duke Kunshan Univ. (China)

14096-16 • 14:40 - 15:00

Fabrication and characterization of plasmonic biosensor chips for SERS-based detection of prostate cancer markers

Author(s): **Merbin John**, **Debashree Kar**, **Umang Chaturvedi**, **Kamal Kumar**, **Vaibhav Chaturvedi**, **Prashant Mishra**, **Anuj Dhawan**, Indian Institute of Technology Delhi (India)

Coffee Break 15:00 - 15:30

SESSION 6: LABEL-FREE SPR SENSING INSTRUMENTATION

16 April 2026 • 15:30 - 16:50 | Churchill (Niveau/Level 1)

Session Chair(s): **Julien Moreau**, Institut d'Optique Graduate School (France)

14096-17 • 15:30 - 16:10

Atto-molar level label-free detection of nucleic acids with phase-singularity enhanced beam shift (*Invited Paper*)

Author(s): **Ho-Pui Ho**, **Shaodi Zhu**, The Chinese Univ. of Hong Kong (Hong Kong, China); **Feng Yan**, **Xiaorui Liu**, **Yuzhi Chen**, **Yonghong Shao**, **Xuejing Li**, Shenzhen Univ. (China); **Shuwen Zeng**, Univ. de Technologie Troyes (France); **Wu Yuan**, The Chinese Univ. of Hong Kong (Hong Kong, China)

14096-18 • 16:10 - 16:30

Integration of multilayer QLED source on portable prism-based SPR sensors for water pollutant detection.

Author(s): **Margot Ballini**, **Laurent Oyhenart**, Lab. d'Intégration du Matériau au Système (France); **Pauline Girault**, Institut de Chimie de la Matière Condensée de Bordeaux (France); **Emilie Hubert**, **Isabelle Bord Majek**, Lab. d'Intégration du Matériau au Système (France)

14096-19 • 16:30 - 16:50

SPR imaging in microfluidic flow for individual microplastic particle analysis

Author(s): **Natalia A. Gutiérrez Andrade**, Brussels Photonics B-PHOT (Belgium); **Yunfeng Nie**, **Wendy Meulebroeck**, **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium)

CONFERENCE 14097

Clinical Biophotonics IV

12 - 14 April 2026 | Amsterdam/Salon 6 (Niveau/Level 0)

Conference Chair(s): **Daniel S. Elson**, Imperial College London (United Kingdom); **Sylvain Gioux**, Lab. des sciences de l'Ingénieur, de l'Informatique et de l'Imagerie (France); **Brian W. Pogue**, Univ. of Wisconsin-Madison (United States)

Program Committee: **Arjen Amelink**, TNO (Netherlands); **Albert Claude Boccara**, Institut Langevin Ondes et Images (France); **Irving J. Bigio**, Boston Univ. (United States); **Olga M. Conde**, Univ. de Cantabria (Spain); **Gooitzen M. van Dam**, Univ. Medical Ctr. Groningen (Netherlands); **Hamid Dehghani**, The Univ. of Birmingham (United Kingdom); **Michele Diana**, L'Institut hospitalo-universitaire de Strasbourg (France); **Turgut Durduran**, ICFO - Institut de Ciències Fotòniques (Spain); **Michalina J. Gora**, Lab. des sciences de l'Ingénieur, de l'Informatique et de l'Imagerie (France); **Frédéric Leblond**, Polytechnique Montréal (Canada); **Vasilis Ntziachristos**, Technische Univ. München (Germany); **Antonio Pifferi**, Politecnico di Milano (Italy); **David D. Sampson**, Univ. of Surrey (United Kingdom); **Paola Taroni**, Politecnico di Milano (Italy); **Ton G. van Leeuwen**, Amsterdam UMC (Netherlands); **Alexander L. Vahrmeijer**, Leiden Univ. Medical Ctr. (Netherlands); **I. Alex Vitkin**, Princess Margaret Cancer Ctr. (Canada)

Sunday 12 April 2026

SESSION 1: HEAD AND NECK

12 April 2026 • 13:30 - 15:20 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Daniel S. Elson**, Imperial College London (United Kingdom)

14097-1 • 13:30 - 14:00

Meta-fibres: hair-thin devices for deep-body imaging enabled by optical fibres, metasurfaces and AI (*Invited Paper*)

Author(s): **George S. D. Gordon**, The Univ. of Nottingham (United Kingdom)

14097-2 • 14:00 - 14:20

Integration of in vivo Raman spectroscopy into the clinical workflow for head and neck cancer surgery using the Raman InvaScope system

Author(s): **Anna Mühlig**, Universitätsklinikum Jena (Germany), Mitteldeutsches Krebszentrum (Germany); **Ayman Bali**, Universitätsklinikum Jena (Germany); **David L. Vasquez-Pinzon**, **Ines Latka**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Tammam Alamatouri**, Universitätsklinikum Jena (Germany); **Iwan W. Schie**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Orlando Guntinas-Lichius**, Universitätsklinikum Jena (Germany), Mitteldeutsches Krebszentrum (Germany)

14097-3 • 14:20 - 14:40

Label-free raman imaging of tumor biopsy slice cultures: a versatile model for head and neck cancer research

Author(s): **Nadja Ziller**, Universitätsklinikum Jena (Germany); **Chiara Agrimi**, Politecnico di Milano (Italy); **Ulrike Weyer**, Universitätsklinikum Jena (Germany); **Victor Alcolea-Rodriguez**, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Renzo Vanna**, CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Dario Polli**, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); **Orlando Guntinas-Lichius**, **Anna Mühlig**, Universitätsklinikum Jena (Germany)

14097-4 • 14:40 - 15:00

Near-infrared LED-based otoscope for the diagnosis of tympanic effusions

Author(s): **Hannes Koehler**, **Annekatri Pfahl**, **Denis Gholami Bajestani**, **Michael Unger**, Innovation Center Computer Assisted Surgery (ICCAS), Faculty of Medicine, Leipzig University (Germany), Comprehensive Cancer Center Central Germany, Partner Site Leipzig (Germany); **Andreas Dietz**, **Markus Pirlich**, Dept. of Otorhinolaryngology, Head and Neck Surgery, University Hospital of Leipzig (Germany), Comprehensive Cancer Center Central Germany, Partner Site Leipzig (Germany); **Andreas Melzer**, Innovation Center Computer Assisted Surgery (ICCAS), Faculty of Medicine, Leipzig University (Germany), Institute for Medical Science and Technology (IMSaT), School of Medicine, University of Dundee (United Kingdom); **Maximilian Gaenzle**, Dept. of Otorhinolaryngology, Head and Neck Surgery, University Hospital of Leipzig (Germany), Comprehensive Cancer Center Central Germany, Partner Site Leipzig (Germany)

14097-5 • 15:00 - 15:20

Preclinical comparison of a video-rate multispectral imaging system with a clinical hyperspectral reference for quantitative tissue oxygenation assessment

Author(s): **Denis Gholami Bajestani**, Leipzig University, Faculty of Medicine, Innovation Center Computer Assisted Surgery (Germany); **Annekatrin Pfahl**, **Hannes Köhler**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany); **Andreas Melzer**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany), Institute for Medical Science and Technology, Univ. of Dundee (United Kingdom)

Coffee Break 15:20 - 15:50

SESSION 2: GASTROINTESTINAL TRACK

12 April 2026 • 15:50 - 17:20 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Hamid Dehghani**, Univ. of Birmingham (United Kingdom)

14097-6 • 15:50 - 16:20

Enhancing optical navigation with Nanobody-based contrast agents and fluorescence lifetime imaging (*Invited Paper*)

Author(s): **Sophie Hernot**, Vrije Univ. Brussel (Belgium)

14097-9 • 16:20 - 16:40

HySE: hyperspectral endoscopy clinical trial for in vivo imaging of Barrett's oesophagus

Author(s): **Isabelle Racicot**, Univ. of Cambridge (United Kingdom); **Massi di Pietro**, Early Cancer Institute, Univ. of Cambridge (United Kingdom); **Sarah E. Bohndiek**, **Catherine-Louise White**, Univ. of Cambridge (United Kingdom)

14097-10 • 16:40 - 17:00

Diffuse reflectance spectroscopy for lymph node assessment in oesophagogastrectomy: ex vivo characterisation and Monte Carlo modelling

Author(s): **Naim Slim**, **Maxime Giot**, **Vadzim N. Chalau**, **Sara Sousi**, **Ria Ranjitkar**, **Ioannis Gkouzionis**, **Josephine Lloyd**, **Priscilla Anketell**, **Robert Goldin**, **Ara Darzi**, **Christopher J. Peters**, **Daniel S. Elson**, Imperial College London (United Kingdom)

14097-11 • 17:00 - 17:20

Soft steerable fibre-optic diffuse reflectance probe for endoscopic and minimally invasive robotic surgical applications

Author(s): **Vadzim Chalau**, **Libaihe Tian**, **Jinshi Zhao**, **Jialei Shi**, **Burak Temelkuran**, **Daniel Elson**, Imperial College London (United Kingdom)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: MUSCULOSKELETAL AND OCT

13 April 2026 • 11:30 - 12:40 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Daniel S. Elson**, Imperial College London (United Kingdom)

14097-12 • 11:30 - 12:00

TBA (Invited Paper)

Author(s): **Daniel Martijn de Bruin**, Amsterdam UMC (Netherlands)

14097-13 • 12:00 - 12:20

OCT-Guided Laser Bone Ablation for Spinal Surgery: An In-line Deep Learning Approach for Residual Bone Thickness Monitoring

Author(s): **David Jänsch**, **Milena Zuric**, **Christina Giesen**, **Fabian Wendt**, **Lazar Bochvarov**, **Georg Meineke**, **Achim Lenenbach**, Fraunhofer Institute for Laser Technology ILT (Germany)

14097-14 • 12:20 - 12:40

Development of an OCT-guided laser arthroscope for cartilage surgery

Author(s): **Arsham Hamidi**, **Vinamrata Vinamrata**, **Ferda Canbaz**, Univ. Basel (Switzerland)

Lunch Break 12:40 - 13:50

SESSION 4: LUNG

13 April 2026 • 13:50 - 15:20 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Olga M. Conde**, Univ. de Cantabria (Spain)

14097-15 • 13:50 - 14:20

Ultrafast laser fabrication of fibre optic components for biomedical applications (Invited Paper)

Author(s): **Robert R. Thomson**, Heriot-Watt Univ. (United Kingdom)

14097-16 • 14:20 - 14:40

Light-in-the-lungs: A hyaluronic acid aerosol platform for low-level laser therapy

Author(s): **Wendy Meulebroeck**, Vrije Universiteit Brussel (Belgium); **Jo Van den Wijngaerde**, **Guillaume Coigniez**, Allei spol sro (Czech Republic); **Hugo Thienpont**, Vrije Univ. Brussel (Belgium); **Peter Coigniez**, Allei spol sro (Czech Republic)

14097-17 • 14:40 - 15:00

Rapid assessment of lung tumor biopsies and resections using higher harmonic generation microscopy

Author(s): **Sylvia Spies**, Vrije Univ. Amsterdam (Netherlands); **Martijn van Dorp**, **David J. Heineman**, **Chris Dickhoff**, **Peter I. Bonta**, **Johannes M. A. Daniels**, **Jouke T. Annema**, Amsterdam UMC (Netherlands); **Marie Louise Groot**, Vrije Univ. Amsterdam (Netherlands)

14097-18 • 15:00 - 15:20

Label-free 4D Visualization of Cell and Tissue Dynamics in Human Lung Tissue Using Higher Harmonic Generation Microscopy

Author(s): **Naomi E. Duits**, Vrije Univ. Amsterdam (Netherlands); **Annemiek Dijkhuis**, Amsterdam UMC (Netherlands); **Yuanyuan Ma**, Vrije Univ. Amsterdam (Netherlands); **Martijn van Dorp**, **Chris Dickhoff**, **Jouke T. Annema**, **Jan Willem Duitman**, Amsterdam UMC (Netherlands); **Marie Louise Groot**, Vrije Univ. Amsterdam (Netherlands)

Coffee Break 15:20 - 15:50

SESSION 5: NOVEL TECHNIQUES AND DATA PROCESSING

13 April 2026 • 15:50 - 18:10 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Ton G. van Leeuwen**, Amsterdam UMC (Netherlands)

14097-57 • 15:50 - 16:20

Advanced imaging for surgical vision (Invited Paper)

Author(s): **Sylvain Gioux**, Intuitive Surgical (Switzerland)

14097-20 • 16:20 - 16:50

TBA (*Invited Paper*)

Author(s): **Hamid Dehghani**, Univ. of Birmingham (United Kingdom)

14097-21 • 16:50 - 17:10

Clinical polarimetry: identifying minimal Mueller subsets to increase imaging speed

Author(s): **Adam Tlemsani**, Imperial College London (United Kingdom); **Yingdian Li**, Imperial College London (United Kingdom), Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences (China), University of Chinese Academy of Sciences (China);

Abhijeet Ghosh, Daniel S. Elson, Imperial College London (United Kingdom)

14097-22 • 17:10 - 17:30

Fourier-Based Image Reconstruction for Improved Contrast in Structured-Light and Single-Pixel Camera Diffuse Optical Tomography

Author(s): **Giovanna Tramontin Carneiro**, Politecnico di Milano (Italy); **Jarjish Rahaman, Meghdoot Mozumder, Tanja Tarvainen**, Univ. of Eastern Finland (Finland); **Andrea Farina**, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

14097-23 • 17:30 - 17:50

Physics-based polarimetric indices for real-time imaging of biological tissues

Author(s): **Jean Dellinger, Jean Rehinder, Briséis Contemori, Christian Heinrich, Yoshitake Takakura, Jihad Zallat**, ICube (France)

14097-24 • 17:50 - 18:10

Estimated oxygen saturation mapping based on non-contact photoplethysmography

Author(s): **Nancy Gomez**, Centro de Investigaciones en Óptica AC (Mexico); **Gonzalo Pérez Padilla**, Centro de Investigaciones en Óptica, A.C. (Mexico)

Tuesday 14 April 2026

SESSION 6: BRAIN AND NERVOUS SYSTEM I

14 April 2026 • 8:30 - 10:00 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Michalina J. Gora**, Wyss Ctr. for Bio and Neuro Engineering (Switzerland)

14097-25 • 8:30 - 9:00

AI-defined hyperspectral surgical imaging: From spectral data to surgical insight (*Invited Paper*)

Author(s): **Tom Vercauteren**, King's College London (United Kingdom)

14097-26 • 9:00 - 9:20

Development of a hyperspectral time-resolved compressive sensing near-infrared spectrometer for in-vivo adult neuromonitoring

Author(s): **Natalie C. Li**, Western Univ. (Canada); **Luke Neal**, Univ. of Waterloo (Canada); **Saeed Samaei, Leena N. Shoemaker, Rasa Eskandari, Daniel Milej, Keith St. Lawrence**, Western Univ. (Canada); **Duncan England**, National Research Council Canada (Canada); **Thomas Jennewein**, Univ. of Waterloo (Canada), Simon Fraser Univ. (Canada); **Mamadou Diop**, Western Univ. (Canada)

14097-27 • 9:20 - 9:40

Intracranial tumor classification with hyperspectral imaging: rapid prediction from tissue parameters versus machine learning

Author(s): **Annekatriin Pfahl**, Innovation Center Computer Assisted Surgery (ICCAS), Faculty of Medicine, Leipzig University (Germany); **Hannes Köhler**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany); **Ferdinand Weber, Erdem Güresir**, Universitätsklinikum Leipzig (Germany), Mitteldeutsches Krebszentrum (Germany); **Andreas Melzer**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany), Institute for Medical Science & Technology, Univ. of Dundee (United Kingdom); **Johannes Wach**, Universitätsklinikum Leipzig (Germany), Mitteldeutsches Krebszentrum (Germany), Innovation Center Computer Assisted Surgery (ICCAS), Faculty of Medicine, Leipzig University (Germany)

14097-28 • 9:40 - 10:00

A site-by-site comparison of intraoperative functional imaging with direct electrical brain stimulation

Author(s): **Charly Caredda**, CREATIS, Univ. Claude Bernard Lyon 1 (France); **Thiébaud Picart, Jacques Guyotat**, Hospices Civils de Lyon (France); **Bruno Montcel**, CREATIS, Univ. Claude Bernard Lyon 1 (France)

Coffee Break 10:00 - 10:30

SESSION 7: BRAIN AND NERVOUS SYSTEM II

14 April 2026 • 10:30 - 12:20 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Alex Vitkin**, Princess Margaret Cancer Ctr. (Canada)

14097-30 • 10:30 - 11:00

Macroscopic Raman and fluorescence imaging in the shortwave infrared (SWIR) for surgical applications (*Invited Paper*)

Author(s): **Oliver Thomas Bruns**, Nationales Centrum für Tumorerkrankungen Dresden (Germany)

14097-31 • 11:00 - 11:20

Personalized surgery improved by real-time machine learning classification of low-grade gliomas subtypes using reflectance spectroscopy and 5-ALA-induced fluorescence spectroscopy

Author(s): **Hermine Quardon**, Université de Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, F69100 Lyon, France (France); **Arthur Gautheron**, Univ. de Lyon, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France), Ecole Supérieure de Chimie Physique Électronique de Lyon (France); **David Meyronet**, Hospices Civils de Lyon (France), Univ. Claude Bernard Lyon I (France), Ctr. de Recherche en Cancérologie de Lyon, Institut National de la Santé et de la Recherche Médicale (France); **Bruno Montcel**, Univ. de Lyon, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France); **Thiébaud Picart**, Univ. Claude Bernard Lyon I (France), Ctr. de Recherche en Cancérologie de Lyon, Institut National de la Santé et de la Recherche Médicale (France), Hospices Civils de Lyon (France); **Cédric Ray**, Univ. de Lyon, Institut National des Sciences Appliquées de Lyon, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France)

14097-32 • 11:20 - 11:40

Towards in vivo tissue classification during neurosurgery using wide-field imaging polarimetry: preliminary full workflow in the operating room with real time performance

Author(s): **Omar Rodríguez-Núñez**, Inselspital (Switzerland); **Éléa Romy Gros**, Institute of Pathology, Univ. Bern (Switzerland); **Theotim Lucas**, Lab. de Physique des Interfaces et des Couches Minces, École Polytechnique, Institut Polytechnique de Paris, CNRS (France); **Christopher Hahne**, Univ. Bern (Switzerland); **David Hasler**, Inselspital (Switzerland); **Richard McKinley**, Inselspital, Universitätsspital Bern, Univ. Bern (Switzerland); **Theoni Maragkou**, Pathologisches Institut, Univ. Bern (Switzerland); **Sooyong Chae**, Lab. de Physique des Interfaces et des Couches Minces, École Polytechnique, Institut Polytechnique de Paris, CNRS (France); **Gianmarco Albano**, ETH Zurich (Switzerland); **Tatiana Novikova**, Lab. de Physique des Interfaces et des Couches Minces, École Polytechnique, Institut Polytechnique de Paris, CNRS (France); **Philippe Schucht**, Inselspital (Switzerland)

14097-33 • 11:40 - 12:00

Three-dimensional intraoperative light field fluorescence imaging system for PpIX-guided tumour resection

Author(s): **Yucheng Bian**, **Sébastien Ourselin**, **Yijing Xie**, King's College London (United Kingdom)

14097-34 • 12:00 - 12:20

Non-Invasive Visual Prosthesis through Spatially Encoded Pulse Width Modulation-Based Phosphene Stimulation

Author(s): **Alexandre Douplik**, Toronto Metropolitan Univ. (Canada), Keenan Research Ctr. of the LKS Knowledge Institute, St. Michael's Hospital (Canada); **Veronica Kurkjian**, **Faraz Sadrzadeh-Afsharazar**, Toronto Metropolitan Univ. (Canada)

Lunch/Exhibition Break 12:20 - 13:40

SESSION 8: NOVEL DEVICES AND TECHNIQUES

14 April 2026 • 13:40 - 16:00 | Amsterdam/Salon 6 (Niveau/Level 0)

Session Chair(s): **Sylvain Gioux**, Intuitive Surgical (Switzerland)

14097-35 • 13:40 - 14:10

Fluorescent materials for biosensing and image-guided surgery (Invited Paper)

Author(s): **Andrey S. Klymchenko**, Univ. de Strasbourg (France)

14097-36 • 14:10 - 14:40

Explainable AI approaches for optical imaging in tissue characterization (Invited Paper)

Author(s): **Olga M. Conde**, Univ. de Cantabria (Spain)

14097-37 • 14:40 - 15:00

Laser isolation of circulating tumor cells in liquid biopsy

Author(s): **Carlos Molpeceres**, **Sara Lauzurica**, Univ. Politécnica de Madrid (Spain); **Andres Muñoz**, Hospital General Universitario Gregorio Marañón (Spain)

14097-38 • 15:00 - 15:20

Multispectral sensor system for miniaturized endoscopic tissue discrimination in oncology

Author(s): **Andrea Rüdinger**, Institut für Technische Optik, Universität Stuttgart (Germany); **Kira Holstein**, **Tobias Haist**, **Stephan Reichelt**, Institut für Technische Optik, Univ. Stuttgart (Germany)

14097-39 • 15:20 - 15:40

Optical properties corrected fluorescence spectroscopy for liver graft viability assessment

Author(s): **Antoine Uzel**, CREATIS, Univ. Claude Bernard Lyon 1 (France); **Olivier Lopez**, Aix-Marseille Univ. (France); **Arthur Gautheron**, CREATIS, Univ. Claude Bernard Lyon 1 (France); **Guillaume Rossignol**, **Xavier Muller**, **Natacha Boulanger**, Ctr. Hospitalier Univ. de Lyon (France); **Michaël Sdika**, **Bruno Montcel**, CREATIS, Univ. Claude Bernard Lyon 1 (France)

14097-40 • 15:40 - 16:00

Light focusing through dynamic scattering media via real-valued intensity transmission matrix

Author(s): **Xuan Liu, Sébastien Ourselin, Tianrui Zhao**, King's College London (United Kingdom)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14097-41 • 18:10 - 20:00

Translational fNIRS for real-time monitoring of brain responses to radiotherapy

Author(s): **Heli Miettinen**, Oulu University Hospital (Finland), University of Oulu (Finland); **Tea Häikiö**, University of Oulu (Finland); **Kalle Inget, Jesse Lohela**, Oulu University Hospital (Finland), University of Oulu (Finland); **Mika Kaakinen**, University of Oulu (Finland); **Lauri Eklund**, Univ. of Oulu (Finland); **Teemu Myllylä**, University of Oulu (Finland); **Sakari S. Karhula, Juha Nikkinen, Vesa Korhonen**, Oulu University Hospital (Finland), University of Oulu (Finland)

14097-42 • 18:10 - 20:00

Hybrid P3-ballistic photon analytical framework for modeling short-distance light transport in tissue for broadband near-infrared spectroscopy

Author(s): **Mohammad Hossein Namazi, Rasa Eskandari, Mamadou Diop, Lauren Flynn**, Western Univ. (Canada); **Connor Gillis**, Western univ. (Canada)

14097-43 • 18:10 - 20:00

Monitoring of embryonic development and sex determination in eggs through time-domain diffuse optical spectroscopy

Author(s): **Lennard van den Tweel**, Research Department, HatchTech B.V. (Netherlands), Adaptation Physiology Group, Wageningen University & Research (Netherlands), LaserLaB, Department of Physics and Astronomy, Vrije Universiteit Amsterdam (Netherlands); **Vamshi Damagatla**, Dipartimento di Fisica, Politecnico di Milano (Italy); **Ilaria Bargigia**, Dipartimento di Fisica, Politecnico di Milano (Italy), Center for Nano Science and Technology@PoliMi, Istituto Italiano di Tecnologia (Italy); **Carla van der Pol**, Research Department, HatchTech B.V. (Netherlands); **Henry van den Brand**, Adaptation Physiology Group, Wageningen University & Research (Netherlands); **Antonio Pifferi**, Dipartimento di Fisica, Politecnico di Milano (Italy), Istituto di Fotonica e Nanotecnologie, Consiglio Nazionale delle Ricerche (Italy); **Freek Arieze**, LaserLaB, Department of Physics and Astronomy, Vrije Universiteit Amsterdam (Netherlands)

14097-44 • 18:10 - 20:00

Towards a standard minimum spectral resolution for broadband continuous-wave near-infrared spectroscopy

Author(s): **Ann Ping**, Univ. of Toronto (Canada); **Redwan Haque, Natalie C. Li, Rasa Eskandari, Mamadou Diop**, Western Univ. (Canada)

14097-45 • 18:10 - 20:00

Application of two-layer photon diffusion model to three-layered digital phantom for chromophore estimation in broadband time-resolved NIR spectroscopy

Author(s): **Aria Riahi, Mamadou Diop**, Western Univ. (Canada)

14097-46 • 18:10 - 20:00

A-priori Free Spectral Unmixing based on Tensor Low-rank Decomposition for Intraoperative Hyperspectral Functional maging

Author(s): **Charly Caredda, J  r  my Cohen, Micha  l Sdika**, CREATIS, Univ. Claude Bernard Lyon 1 (France); **Jacques Guyotat, Thi  baud Picart**, Hospices Civils de Lyon (France); **Bruno Montcel**, CREATIS, Univ. Claude Bernard Lyon 1 (France)

14097-47 • 18:10 - 20:00

Light-absorbing cytochrome species in yeast-based tissue-mimicking phantoms

Author(s): **Rasa Eskandari, Natalie C. Li, Saeed Samaei, Daniel Milej, Keith St. Lawrence, Mamadou Diop**, Western Univ. (Canada)

14097-48 • 18:10 - 20:00

Hemodynamic and metabolic response to elevated intracranial pressure: a piglet study

Author(s): **Sule Karagulleoglu-Kunduraci, Farah Kamar, Rasa Eskandari, Saeed Samaei, Mamadou Diop**, Western Univ. (Canada)

14097-50 • 18:10 - 20:00

Enhanced detection of dental microfractures using Bessel-like beam OCT

Author(s): **Mehmet Ilker Uyg  n, Ozgur Eroglu**, Univ Basel (Switzerland); **Thomas Connert**, University Center for Dental Medicine Basel UZB (Switzerland); **Arsham Hamidi, Ferda Canbaz**, Univ Basel (Switzerland)

14097-51 • 18:10 - 20:00

Development of 3D brain phantoms for multimodal optical imaging validation

Author(s): **Yucheng Bian**, King's College London (United Kingdom); **Yinuo Wang**, King's College London (United Kingdom); **Thanis Murugathas, Nandika Ramamurthy, Jihad Saoud, Aili Xiong, Shanshan Wu, Poppy Spiers, George Gaid, Johnny Tang, Matthew Elliot, Jonathan Shapey, Sebastien Ourselin, Yijing Xie**, King's College London (United Kingdom)

14097-52 • 18:10 - 20:00

Rapid multispectral Mueller matrix polarimetric imaging for clinical cancer assessment

Author(s): **Yingdian Li**, Xi'an Institute of Optics and Precision Mechanics (China), Imperial College London (United Kingdom), Univ. of Chinese Academy of Sciences (China); **Adam Tlemsani, Maxime Giot, Ahmad Nabeel**, Imperial College London (United Kingdom); **Ji Qi**, Zhejiang Lab. (China); **Veronica Mieites**, ARTORG Ctr., Univ. Bern (Switzerland); **Olga M. Conde**, Univ. de Cantabria (Spain), Valdecilla Health Research Institute (Spain), Bioengineering, Biomaterials and Nanomedicine Research Network (CIBER-BBN) (Spain); **Wei Hao, Zongxi Song**, Xi'an Institute of Optics and Precision Mechanics (China); **Christopher J. Peters, Daniel S. Elson**, Imperial College London (United Kingdom)

14097-53 • 18:10 - 20:00

Multispectral imaging: demonstration of application for positive margin detection in breast surgery

Author(s): **Vadzim N. Chalau, Maria Leiloglou, Dhurka Shanthakumar, Daniel R. Leff, Daniel S. Elson**, Imperial College London (United Kingdom)

14097-54 • 18:10 - 20:00

Assessment of premalignant and benign keratotic dermatological manifestations with combined autofluorescence intensity and photobleaching imaging

Author(s): **Emilija V. Plorina, Alexey Lihachev**, Univ. of Latvia (Latvia); **Norbert Kiss**, Semmelweis Univ. (Hungary); **Dmitrijs Bliznuks**, Riga Technical Univ. (Latvia); **Ilze Lihacova**, Univ. of Latvia (Latvia)

14097-56 • 18:10 - 20:00

Multimodal Optical Evaluation for Reproducibility of TMPyP-CMC Coatings on Microneedle Arrays for Photodynamic Therapy Applications

Author(s): **Neha Khatri**, CSIR - Central Scientific Instruments Organisation (India); **Komal Bansal**, Goswami Ganesh Dutta S. D. College (India); **Bharpoor Singh, Mukesh Kumar, Preetismita Borah**, CSIR - Central Scientific Instruments Organisation (India)

CONFERENCE 14098

Tissue Optics and Photonics IV

12 - 16 April 2026 | Rome/Salon 5 (Niveau/Level 0)

Conference Chair(s): **Walter C. P. M. Blondel**, Ctr. de recherche en automatique de Nancy (France); **Zeev Zalevsky**, Bar-Ilan Univ. (Israel); **Valery V. Tuchin**, Saratov State Univ. (Russian Federation)

Program Committee: **Marine Amouroux**, Univ. de Lorraine (France); **Stefan Andersson-Engels**, Irish Photonic Integration Ctr. (IPIC) (Ireland); **Olga M. Conde**, Univ. de Cantabria (Spain); **Anabela Da Silva**, Institut Fresnel (France); **Viktor V. Dremin**, Aston Univ. (United Kingdom); **Elina A. Genina**, Saratov State Univ. (Russian Federation); **Martin Hohmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Steven L. Jacques**, Univ. of Washington (United States); **Malgorzata Jedrzejewska-Szczerska**, Gdansk Univ. of Technology (Poland); **Alwin Kienle**, Institut für Lasertechnologien in der Medizin und Messtechnik (Germany); **Kirill V. Larin**, Univ. of Houston (United States); **Irina V. Larina**, Baylor College of Medicine (United States); **Hui Ma**, Tsinghua Univ. (China); **Bruno Montcel**, CREATIS (France); **Teemu S. Myllylä**, Univ. of Oulu (Finland); **Tatiana Novikova**, Lab. de Physique des Interfaces et des Couches Minces (France); **Luís Oliveira**, Instituto Superior de Engenharia do Porto (Portugal); **Nisan Ozana**, Athinoula A. Martinos Ctr. for Biomedical Imaging (Israel); **Alexander V. Priezhev**, M.V. Lomonosov Moscow State Univ. (Russian Federation); **Natan T. Shaked**, Tel Aviv Univ. (Israel); **Evgeny A. Shirshin**, M. V. Lomonosov Moscow State Univ. (Russian Federation); **Jian Ye**, Shanghai Jiao Tong Univ. (China); **Kirill I. Zaytsev**, A. M. Prokhorov General Physics Institute of the RAS (Russian Federation); **Haishan Zeng**, BC Cancer Research Ctr. (Canada); **Dan Zhu**, Huazhong Univ. of Science and Technology (China)

Sunday 12 April 2026

SESSION 1: BRAIN SENSING AND IMAGING

12 April 2026 • 13:30 - 15:10 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Marine Amouroux**, Univ. de Lorraine (France)

14098-1 • 13:30 - 14:00

Light- tissue interaction and pathways for non-invasive neurostimulation (*Invited Paper*)

Author(s): **Diana I. Galiakhmetova**, Aston Univ (United Kingdom); **Viktor V. Dremin**, **Aleksandr Koviarov**, **Dmitrii Stoliarov**, Aston Univ. (United Kingdom); **Daria M. Shcherbakova**, **Mikhail Baloban**, **Vladislav V. Verkhusha**, Albert Einstein College of Medicine (United States); **Sergei Sokolovski**, **Edik Rafailov**, Aston Univ. (United Kingdom)

14098-2 • 14:00 - 14:30

Sensing brain motions by combining ultrasound and optics (*Invited Paper*)

Author(s): **Teemu S. Myllylä**, Univ of Oulu (Finland); **Martti Ilvesmäki**, **Triana Rahayu**, **Tea Häikiö**, **Omid Arani**, **Mohammadreza Omidali**, **Sadegh Moradi**, Univ. of Oulu (Finland)

14098-3 • 14:30 - 14:50

Dual-excitation 5-ALA fluorescence spectroscopy and machine learning for optical guidance in glioma surgery

Author(s): **Hermine Quardon**, Université de Lyon, INSA-Lyon, Université Claude Bernard Lyon 1, UJM-Saint Etienne, CNRS, Inserm, CREATIS UMR 5220, U1206, F69100 Lyon, France (France); **Arthur Gautheron**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France), Ecole Supérieure de Chimie Physique Électronique de Lyon (France); **David Meyronet**, Hospices Civils de Lyon (France), Univ. Claude Bernard Lyon 1 (France), Ctr. de Recherche en Cancérologie de Lyon, Institut National de la Santé et de la Recherche Médicale (France); **Bruno Montcel**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France); **Thiébaud Picart**, Univ. Claude Bernard Lyon I (France), Ctr. de Recherche en Cancérologie de Lyon, Institut National de la Santé et de la Recherche Médicale (France), Hospices Civils de Lyon (France); **Cédric Ray**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France)

14098-4 • 14:50 - 15:10

Physics-Inspired Neural Networks for Quantitative Tissue Chromophore and Fluorophore Estimation from Reflectance and Fluorescence Spectra

Author(s): **Stefania Colombo**, **Yijing Xie**, King's College London (United Kingdom)

Coffee Break 15:10 - 15:40

SESSION 2: SKIN IMAGING

12 April 2026 • 15:40 - 17:40 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Walter C.P.M. Blondel**, Univ. de Lorraine (France)

14098-5 • 15:40 - 16:00

Colour-Normalization Techniques for Skin Imaging

Author(s): **Alexandre Douplik**, Toronto Metropolitan Univ. (Canada), Keenan Research Ctr. of the LKS Knowledge Institute, St. Michael's Hospital (Canada); **Gennadi Saiko**, **Leah DeVos**, Toronto Metropolitan Univ. (Canada)

14098-6 • 16:00 - 16:20

Oxygen saturation evaluation using hyperspectral imaging and optical spectroscopy: a study on optical phantoms

Author(s): **Julien AZZI**, Université de Lorraine, INSERM, DCAC (France), Université de Lorraine, CHRU-Nancy, Geriatric Department (France); **Jérémy Kany**, Université de Lorraine, Faculté de Médecine Faculté de Médecine, Maïeutique et métiers de la Santé, Département Sciences et Ingénierie Pour la Santé, Master Ingénierie de la Santé (France); **Ebawak K. Wodajo**, **Amir Nahas**, Université de Strasbourg, CNRS, ICube, UMR 7357, 67000 Strasbourg (France); **Marie Camonin**, **Clarice Perrin-Mozet**, Université de Lorraine, CNRS, CRAN UMR 7039 (France); **Athanasios Benetos**, Université de Lorraine, INSERM, DCAC (France), Université de Lorraine, CHRU-Nancy, Geriatric Department (France); **Walter Blondel**, **Marine Amouroux**, Université de Lorraine, CNRS, CRAN UMR 7039 (France)

14098-7 • 16:20 - 16:40

The role of reference skin in melanoma and non-melanoma skin cancer classification with hyperspectral imaging

Author(s): **Annekatri Pfahl**, Innovation Center Computer Assisted Surgery (ICCAS), Faculty of Medicine, Leipzig University (Germany); **Michalina Rucinska-Simon**, Universitätsklinikum Leipzig (Germany); **Hannes Köhler**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany); **Till Mittank-Weidner**, **Conrad Hempel**, **Anna-Theresa Seitz**, **Jan-Christoph Simon**, **Sonja Grunewald**, Universitätsklinikum Leipzig (Germany); **Andreas Melzer**, ICCAS Innovation Ctr. Computer Assisted Surgery, Univ. Leipzig (Germany), Institute for Medical Science and Technology, Univ. of Dundee (United Kingdom); **Viktor Schnabel**, Universitätsklinikum Leipzig (Germany)

14098-8 • 16:40 - 17:00

Rotation-based specular reflection removal for enhanced medical hyperspectral imaging

Author(s): **Matteo Savazzi**, **Emma Lacagnina**, **Paola Saccomandi**, Politecnico di Milano (Italy)

14098-9 • 17:00 - 17:20

Quantification of skin tone using a miniature spectrometer for biomedical optical measurements

Author(s): **Lee D. Sikstrom**, Western Univ (Canada); **Kato Wabbi**, **Maria Drangova**, **David W. Holdsworth**, Western Univ. (Canada)

14098-10 • 17:20 - 17:40

Multilayer silicone phantom for skin tissue optical representation in hyperspectral applications

Author(s): **Emma Lacagnina**, **Alessandro Bossi**, **Andrea Liliana Pacheco Tobo**, **Marianna Locatelli**, **Giulia Nieri**, **Laura Oggionni**, **Malak Ouaiem**, **Antonio Pifferi**, **Paola Saccomandi**, Politecnico di Milano (Italy)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: LIGHT-TISSUE INTERACTION MODELLING AND AI/ML-BASED DATA ANALYSIS I

13 April 2026 • 11:30 - 12:40 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Martin Hohmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14098-11 • 11:30 - 12:00

Hamiltonian optics based Monte Carlo ray tracing in scattering media with ultrasound induced refractive index profiles (*Invited Paper*)

Author(s): **Carsten Brenner**, Ruhr-Univ Bochum (Germany); **Maxim Cherkashin**, **Volodymyr Rohovets**, **Georg Schmitz**, **Martin R.**

Hofmann, Ruhr-Univ. Bochum (Germany)

14098-12 • 12:00 - 12:20

Anisotropic diffusion modeling in the presence of scattering asymmetry

Author(s): **Ernesto Pini**, Istituto Nazionale di Ricerca Metrologica (Italy); **Michele Giusfredi**, Univ. degli Studi di Firenze (Italy); **Lorenzo**

Pattelli, Istituto Nazionale di Ricerca Metrologica (Italy)

14098-13 • 12:20 - 12:40

Modelling optical beam spread in the transition to the diffusion regime in scattering media

Author(s): **Maxim N. Cherkashin**, **Tresa Shaju**, **Volodymyr Rohovets**, **Carsten Brenner**, **Martin R. Hofmann**, Ruhr-Univ. Bochum (Germany)

Lunch Break 12:40 - 14:00

SESSION 4: LIGHT-TISSUE INTERACTION MODELLING AND AI/ML-BASED DATA ANALYSIS II

13 April 2026 • 14:00 - 15:10 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Walter C.P.M. Blondel**, Univ. de Lorraine (France)

14098-14 • 14:00 - 14:30

Monte Carlo analysis of diffuse reflectance spectroscopy using integrating spheres with an internal light source *(Invited Paper)*

Author(s): **Boris Majaron**, Jozef Stefan Institute (Slovenia), Faculty of Mathematics and Physics, University of Ljubljana (Slovenia); **Tilen Žel**, Univ. of Ljubljana (Slovenia)

14098-15 • 14:30 - 14:50

Symbolic monte carlo for quantifying 5-ALA-induced PpIX concentration using fluorescence spectroscopy in neurosurgical intraoperative imaging

Author(s): **Luis A. Martinez-Ceseña**, CREATIS (France), Ctr. d'Énergétique et de Thermique de Lyon (France); **Arthur Gautheron**, CREATIS (France); **Maxime Roger**, Ctr. d'Énergétique et de Thermique de Lyon (France); **Doriane Arzur**, CREATIS (France), Ctr. d'Énergétique et de Thermique de Lyon (France); **Mathieu Galtier**, **Agnès Delmas**, Ctr. d'Énergétique et de Thermique de Lyon (France); **Bruno Montcel**, CREATIS (France)

14098-16 • 14:50 - 15:10

Monte Carlo modeling of age-dependent skin appearance with subsurface inclusions

Author(s): **Ilze Irbe**, University of Latvia (Latvia); **Boris Majaron**, Jozef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); **Uldis Rubins**, University of Latvia (Latvia)

Coffee Break 15:10 - 15:40

SESSION 5: LIGHT-TISSUE INTERACTION MODELLING AND AI/ML-BASED DATA ANALYSIS I

13 April 2026 • 15:40 - 17:20 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Boris Majaron**, Jozef Stefan Institute (Slovenia)

14098-18 • 15:40 - 16:00

Coupled Parameter Reconstruction in Tissue Optics: Quantifying Anisotropy-Dependent Errors in High-Absorption Regimes

Author(s): **Martin Hohmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14098-19 • 16:00 - 16:20

Machine learning-enhanced hyperspectral imaging for intraoperative assessment of intestinal viability

Author(s): **Valery Shupletsov**, **Ilya Goryunov**, Orel State Univ. named after I.S. Turgenev (Russian Federation); **Nikita Adamenkov**, Orel State Univ. named after I.S. Turgenev (Russian Federation), Orel Regional Clinical Hospital (Russian Federation); **Andrian Mamoshin**, The National Medical Research Ctr. of Surgery named after A. Vishnevsky (Russian Federation); **Elena Potapova**, **Andrey Dunaev**, Orel State Univ. named after I.S. Turgenev (Russian Federation); **Viktor V. Dremin**, Aston Univ. (United Kingdom), Orel State Univ. named after I.S. Turgenev (Russian Federation)

14098-20 • 16:20 - 16:40

Optical Estimation of Applied Pressure on Vascularized Tissue using Machine Learning

Author(s): **Lee D. Sikstrom**, Western Univ (Canada); **David W. Holdsworth**, Western Univ. (Canada)

14098-21 • 16:40 - 17:00

Mapping of gas gradients in porous multi-layer phantoms with CT-GASMAS

Author(s): **Farshid Koohi Kamali Dehkordi**, **Manju Joseph**, **Wouter Saeys**, KU Leuven (Belgium)

14098-22 • 17:00 - 17:20

Near-Infrared spectroscopy for quantification of hepatic micro and macrovesicular steatosis

Author(s): **Antoine Uzel**, CREATIS (France); **Olivier Lopez**, **Sophie Chopinet**, **Pauline Brige**, Aix-Marseille Univ. (France); **Michaël Sdika**, **Bruno Montcel**, CREATIS (France)

Tuesday 14 April 2026

SESSION 6: MICROSCOPY METHODS AND APPLICATIONS I

14 April 2026 • 8:30 - 10:40 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Sergei G. Sokolovsky**, Aston Univ. (United Kingdom)

14098-23 • 8:30 - 9:00

Ballistic and Snake Photon Imaging (BSPI) in Biotissue *(Invited Paper)*

Author(s): **Alexandre Douplik**, Toronto Metropolitan Univ. (Canada), Keenan Research Ctr. of the LKS Knowledge Institute, St. Michael's Hospital (Canada); **Aditya Pandya**, **Fiona Zerai**, **Kiana Daliri**, Toronto Metropolitan Univ. (Canada)

14098-24 • 9:00 - 9:30

Microscopy Methods for Measuring the Uptake and Location of Inorganic-Organic Hybrid Nanoparticles within Cancer Cells (*Invited Paper*)

Author(s): **Herbert Schneckenburger**, Aalen University (Germany); **Steven Eckstein, Louisa Herbsleb, Andreas Walter**, Hochschule Aalen - Technik und Wirtschaft (Germany)

14098-25 • 9:30 - 10:00

Label-free Tissue Imaging with Fourier Ptychographic Microscopy (FPM): Review, Perspectives, and Multimodal Applications in Digital Histopathology (*Invited Paper*)

Author(s): **Pietro Ferraro**, Istituto di Scienze Applicate e Sistemi Intelligenti "Eduardo Caianiello" (Italy), TomoFlow srl (Italy)

14098-26 • 10:00 - 10:20

Superfine Needle Trimodal Optical Microendoscope for Small-Invasive Cancer Diagnostics

Author(s): **Alexandre Douplik**, Toronto Metropolitan Univ. (Canada), Keenan Research Ctr. of the LKS Knowledge Institute, St. Michael's Hospital (Canada); **Alexandra Easson**, Univ. Health Network (Canada); **Alex D'Ippolito, Kate Dingle**, Toronto Metropolitan Univ. (Canada); **Vivianne Freitas, Susan J. Done, Harsh Batra**, Univ. Health Network (Canada)

14098-27 • 10:20 - 10:40

Terahertz assisted optical constant based classification of urinary stones

Author(s): **Soumyajyoti Mallick**, Universite de Lorraine (France), Georgia Tech-CNRS IRL (France), Georgia Institute of Technology (United States); **Haolian Shi**, Georgia Tech-CNRS IRL (France), Georgia Institute of Technology (United States); **Hugo Cherid**, Georgia Tech-CNRS IRL (France), Georgia Institute of Technology (United States); **David Citrin**, Georgia Institute of Technology (United States), Georgia Tech-CNRS IRL (France); **Clarice Mozet**, Universite de Lorraine (France); **Arnaud Marotel**, Ecole Nationale Supérieure de Géologie (France); **Ma'atem Béatrice Caillierez, Jacques Hubert**, Centre Hospitalier Régional et Universitaire de Nancy, CHRU (France); **Walter Blondel, Marine Amouroux**, Universite de Lorraine (France); **Alexandre Locquet**, Georgia Tech-CNRS IRL (France), Georgia Institute of Technology (United States)

Coffee Break 10:40 - 11:10

SESSION 7: MICROSCOPY METHODS AND APPLICATIONS II

14 April 2026 • 11:10 - 12:30 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Herbert Schneckenburger**, Hochschule Aalen - Technik und Wirtschaft (Germany)

14098-28 • 11:10 - 11:40

Photoprinting 3D human tissue models: emerging techniques and trends in systems molecular biology (*Invited Paper*)

Author(s): **Sergei G. Sokolovsky, Edik Rafailov**, Aston Univ. (United Kingdom)

14098-29 • 11:40 - 12:10

A Multimodal Blueprint for Predicting Cancer Aggressiveness (*Invited Paper*)

Author(s): **Liubov E. Shimolina**, Privozhsky Research Medical Univ. (Russian Federation)

14098-31 • 12:10 - 12:30

Quantitative 3D-orientation mapping of biological fibers in computational scattered light imaging enabled through 3D-nanoprinted phantoms

Author(s): **Mark Vermeulen**, Delft University of Technology, Faculty of Applied Sciences, Department of Imaging Physics (Netherlands); **Pieter van Altena, Angelo Accardo, Miriam Menzel**, Technische Univ. Delft (Netherlands)

Lunch/Exhibition Break 12:30 - 14:00

SESSION 8: PHOTOTHERMAL INTERACTIONS AND LASER THERAPIES

14 April 2026 • 14:00 - 15:40 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Zeev Zalevsky**, Bar-Ilan Univ. (Israel); **Alexandre Douplik**, Toronto Metropolitan Univ. (Canada)

14098-32 • 14:00 - 14:20

Optical and thermal characterization of ex vivo porcine pancreatic tissue under controlled temperature variation

Author(s): **Alessandro Bossi, Leonardo Bianchi, Antonio Pifferi, Paola Saccomandi**, Politecnico di Milano (Italy)

14098-33 • 14:20 - 14:40

Melatonin as a phototherapy synergist for enhanced photothermal treatment of glioblastoma using injectable biopolymeric hydrogels

Author(s): **Ali Rahmatpanahi, Ali Bavali**, Amirkabir Univ. of Technology (Iran, Islamic Republic of)

14098-34 • 14:40 - 15:00

Protocol to reproduce thermal damage in ex-vivo tissue enabling optical and thermal characterization of ablation zones

Author(s): **Andrea Liliana Pacheco Tobo, Leonardo Maggioni, Isabella Redondi, Alessandro Bossi, Leonardo Bianchi**, Politecnico di Milan (Italy); **Antonio Pifferi**, Politecnico di Milano (Italy); **Paola Saccomandi**, Politecnico di Milan (Italy)

14098-35 • 15:00 - 15:20

Thermal property characterization of CNT-palladium composites for Photothermal-therapy

Author(s): **Milad Parhizkari**, Imam Khomeini International Univ. (Iran, Islamic Republic of)

14098-36 • 15:20 - 15:40

OCT morphology assessment of 3D-printed skin melanoma and its Direct Laser Treatment

Author(s): **Arooj Khalid**, Aston Univ (United Kingdom); **Sergei Sokolovsky, Edik Rafailov**, Aston Univ. (United Kingdom)

Coffee Break 15:40 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 9: SOURCES AND SENSOR TECHNOLOGIES AND APPLICATIONS I

15 April 2026 • 8:30 - 10:20 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Grigori S. Sokolovskii**, Ioffe Institute (Russian Federation)

14098-37 • 8:30 - 9:00

From Scattering to Sensing: Random Lasers as Quantitative Tools for Biomedical Optics (Invited Paper)

Author(s): **Dongqin Ni, Martin Hohmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14098-38 • 9:00 - 9:20

Characterization and evaluation of a compact laser diode stack for full-aperture line illumination towards a handheld photoacoustic probe

Author(s): **Sebastian Kindorf**, Fraunhofer IPM (Germany); **Mahmoud El-Safoury, Benedikt Bierer, Jürgen Wöllenstein**, Fraunhofer-Institut für Physikalische Messtechnik IPM (Germany)

14098-39 • 9:20 - 9:40

Harnessing the potential of conical refraction-based structured light for the next-generation cancer diagnosis

Author(s): **Diana Galiakhmetova**, Aston University (United Kingdom); **Nawal Mohamed, Fatima Khanom, Shakti Singh**, Aston Univ. (United Kingdom); **Anton Sdobnov, Ivan Lopushenko, Alexander Bykov**, Univ. of Oulu (Finland); **Edik Rafailov, Igor Meglinski**, Aston Univ. (United Kingdom)

14098-40 • 9:40 - 10:00

Modelling and performance assessment of wavefront shaping in time-varying media

Author(s): **Tianrui Zhao**, King's College London (United Kingdom); **Mengjiao Zhang**, Shanghai Univ. of Medicine and Health Sciences (China); **Xuan Liu, Sebastien Ourselin**, King's College London (United Kingdom)

14098-41 • 10:00 - 10:20

Wavefront engineering and polarization dynamics in biological glass fibers

Author(s): **Kian Goeloe**, Advanced Research Center for Nanolithography (ARCNL) (Netherlands), Vrije universiteit Amsterdam (Netherlands); **Igor Zlotnikov**, TU Dresden (Germany); **Lyuba Amitonova**, Advanced Research Ctr. for Nanolithography (Netherlands), Vrije Univ. Amsterdam (Netherlands)

Coffee Break 10:20 - 10:50

SESSION 10: SOURCES AND SENSOR TECHNOLOGIES AND APPLICATIONS I

15 April 2026 • 10:50 - 12:20 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Martin Hohmann**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14098-42 • 10:50 - 11:20

Mid-infrared quantum-cascade lasers for gas detection (*Invited Paper*)

Author(s): **Grigori S. Sokolovskii**, Saint Petersburg Electrotechnical Univ. "LETI" (Russian Federation)

14098-43 • 11:20 - 11:40

Understanding light-matter interaction in complex food products to improve the robustness of near-infrared spectroscopic measurements

Author(s): **Vilde Vraalstad**, **Marion O'Farrell**, **Jon Tschudi**, SINTEF (Norway); **Jens Petter Wold**, Nofima (Norway)

14098-44 • 11:40 - 12:00

Epicuticular wax as a natural photonic crystal: implications for modeling light transport in biological tissues

Author(s): **Eugene Bukhanov**, FRC KSC SB RAS (Russian Federation)

14098-45 • 12:00 - 12:20

Angular and positional filtering of WGMs in deformed droplet microcavities for 3D stress and strain sensing

Author(s): **Gregor Pirnat**, **Matevž Marinčič**, Jožef Stefan Institute (Slovenia); **Simon Čopar**, Univ. of Ljubljana (Slovenia); **Matjaž Humar**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), CENN Nanocenter (Slovenia)

Lunch/Exhibition Break 12:20 - 13:30

SESSION 11: SPECKLE IMAGING AND OCT APPLICATIONS I

15 April 2026 • 13:30 - 14:40 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Nisan Ozana**, Bar-Ilan Univ. (Israel)

14098-46 • 13:30 - 14:00

Optical non-contact speckle-based tissue probing: skin hydration and multi-spectral lesions detection (*Invited Paper*)

Author(s): **Yarden Zabari**, **Nisan Ozana**, **Zeev Zalevsky**, Bar-Ilan Univ. (Israel)

14098-47 • 14:00 - 14:20

Real-time elastography for commercial endoscopic applications using speckle imaging

Author(s): **Maud Legrand**, **Nina Dufour**, **Emmanuel Martins Seromenho**, **Nadia Bahlouli**, **Amir Nahas**, ICube (France)

14098-48 • 14:20 - 14:40

Comparison of OCT and LDV for surface vibration measurements and implications for surface wave elastography in multilayered tissues such as skin

Author(s): **Nasser Ghaderi**, Industrial Vision Lab (InViLab), Faculty of Applied Engineering, Campus Groenenborger, University of Antwerp (Belgium); **Nicolas Detrez**, Medical Laser Center Lübeck, Universität zu Lübeck (Germany); **Madita Göb**, **Wolfgang Draxinger**, **Robert Huber**, Institute of Biomedical Optics, Universität zu Lübeck (Germany); **Julien Camard**, Industrial Vision Lab (InViLab), Faculty of Applied Engineering, Campus Groenenborger, University of Antwerp (United Kingdom); **Sam Van der Jeught**, Industrial Vision Lab (InViLab), Faculty of Applied Engineering, Campus Groenenborger, University of Antwerp (Belgium); **Joris Dirckx**, Laboratory of Biomedical Physics (BIMEF), University of Antwerp (Belgium); **Steve Vanlanduit**, Industrial Vision Lab (InViLab), Faculty of Applied Engineering, Campus Groenenborger, University of Antwerp (Belgium)

SESSION 12: POLARIZATION TECHNIQUES I

15 April 2026 • 14:40 - 15:30 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Tatiana Novikova**, École Polytechnique (France)

14098-49 • 14:40 - 15:10

Twisted-Light Phase Memory in Scattering Tissue: From Fundamental Optical Correlations to Non-Invasive Glucose Sensing (*Invited Paper*)

Author(s): **Igor V. Meglinski**, Aston Univ. (United Kingdom); **Anton Sdobnov**, **Ivan Lopushenko**, Univ. of Oulu (Finland); **Alexander Doronin**, Victoria Univ. of Wellington (New Zealand); **Alexander Bykov**, Univ. of Oulu (Finland)

14098-50 • 15:10 - 15:30

Gestational Stage Prediction from Cervical Tissue Analysis Using Imaging Mueller Polarimetry Data

Author(s): **Sooyong Chae**, École Polytechnique (France); **Andres J. Rodriguez**, **Tananant Boonya-Ananta**, **Ajmal Ajmal**, **JunZhu Pei**, **Amanda N. Sanchez**, **Jessica Ramella-Roman**, Florida International Univ. (United States); **Tatiana Novikova**, École Polytechnique (France), Florida International Univ. (United States)

Coffee Break 15:30 - 16:00

SESSION 13: POLARIZATION TECHNIQUES II

15 April 2026 • 16:00 - 18:00 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Igor V. Meglinski**, Aston Univ. (United Kingdom)

14098-51 • 16:00 - 16:30

Imaging Mueller polarimetry for biomedical diagnostics: opportunities and perspectives (*Invited Paper*)

Author(s): **Tatiana Novikova**, École Polytechnique (France), Florida International Univ. (United States)

14098-52 • 16:30 - 17:00

Phantom-driven validation for polarimetric hyperspectral imaging (*Invited Paper*)

Author(s): **Alexander Bykov**, **Oleksii Sieryi**, **Ivan Lopushenko**, **Anton Sdobnov**, Univ. of Oulu (Finland); **Igor Meglinski**, Aston Univ. (United Kingdom)

14098-53 • 17:00 - 17:20

Collagen Mapping from Imaging Mueller Polarimetry Data Using SHG-guided Machine Learning Models

Author(s): **Sooyong Chae**, École Polytechnique (France); **Ajmal Ajmal**, **Andres Rodriguez**, **Tananant Boonya-Ananta**, **Junzhu Pei**, **Amanda Sanchez**, **Jessica Ramella-Roman**, Florida International University (United States); **Tatiana Novikova**, École Polytechnique (France), Florida International Univ. (United States)

14098-54 • 17:20 - 17:40

Assessing the impact of various fixation protocols on bovine brain tissue polarimetric properties via Mueller polarimetry imaging

Author(s): **Nathan Oberti**, **Omar Rodríguez-Núñez**, **David Hasler**, **Philippe Schucht**, **Richard McKinley**, Inselspital, Univ. Bern Hospital, Univ. Bern (Switzerland); **Tatiana Novikova**, École Polytechnique, Institut Polytechnique de Paris, Lab. de Physique des Interfaces et des Couches Minces, CNRS (France); **Theoni Maragkou**, **Éléa Gros**, Institut für Gewebemedizin und Pathologie, Univ. Bern (Switzerland)

14098-55 • 17:40 - 18:00

Development of a backscattering Mueller polarimetric scanning system for subsurface structural characterization

Author(s): **Bhanu Pratap Singh**, Institute of Applied Physics, Univ Bern (Switzerland); **Vladislav Stefanov**, **André Stefanov**, Institut für Angewandte Physik, Univ. Bern (Switzerland)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14098-30 • 17:45 - 19:30

Optimization of experimental parameters for confocal Raman microspectroscopy of formalin-fixed and paraffin-embedded human skin cancer tissue sections.

Author(s): **Marie Camonin**, Univ. de Lorraine (France); **Hervé Rinnert**, **Sébastien Hupont**, Institut Jean Lamour, Univ. de Lorraine, CNRS (France); **Grégoire Khairallah**, **Nathalie Marcon**, Ctr. Hospitalier Régional Metz-Thionville (France); **Marine Amouroux**, **Walter Blondel**, Univ. de Lorraine, CNRS (France)

14098-65 • 17:45 - 19:30

Metrological characterization of a double integrating-sphere optical bench for the measurement of optical properties of scattering and absorbing media

Author(s): **Clarice Perrin-Mozet**, CNRS, Univ. de Lorraine (France); **Victor Colas**, Univ. de Lorraine, CNRS (France), Univ. de Lorraine (France); **Marie Camonin**, Univ. de Lorraine, CNRS (France), Institut Jean Lamour (France); **Hervé Rinnert**, Institut Jean Lamour (France); **Walter Blondel**, **Marine Amouroux**, Univ. de Lorraine, CNRS (France)

14098-66 • 17:45 - 19:30

Optimized illumination for wide field laser speckle contrast imaging

Author(s): **Christophe Hecquet**, **Narrais Soufiane**, **Frédéric Pain**, Lab. Charles Fabry, Institut d'Optique Graduate School, Univ. Paris-Saclay, CNRS (France)

14098-67 • 17:45 - 19:30

Quantifying the impact of chromophore variation on simulated skin color

Author(s): **Murilo Sanches Sampaio**, **Luismar Barbosa da Cruz Junior**, **Kaio Bernardo de Barros**, **Luciano Bachmann**, University of São Paulo (Brazil)

14098-68 • 17:45 - 19:30

A photobiomodulation approach at 660 nm for ischemic stroke: in silico and in vitro analysis

Author(s): **Hye-ryung Park**, Keimyung University (Korea, Republic of); **Sitara Afzal**, **Jong-Ha Lee**, Keimyung Univ. (Korea, Republic of)

14098-69 • 17:45 - 19:30

Systemic assessment of venous-lymphatic cross-talk using dual-optical modalities

Author(s): **Yumi Hwang**, Department of Rehabilitation Medicine, Asan Medical Center, University of Ulsan College of Medicine, Korea (Korea, Republic of), Rehabilitation Research Center, Biomedical Engineering Research Center, Asan Institute for Life Sciences, Korea (Korea, Republic of); **Jeongeui Kim**, **Woonha Yeo**, **Jae Yong Jeon**, **Jaemin Yoo**, Department of Rehabilitation Medicine, Asan Medical Center, University of Ulsan College of Medicine (Korea, Republic of), Rehabilitation Research Center, Biomedical Engineering Research Center, Asan Institute for Life Sciences (Korea, Republic of); **Hwayeong Cheon**, Asan Medical Ctr (Korea, Republic of); **Geunyoung Kim**, Rehabilitation Research Center, Biomedical Engineering Research Center, Asan Institute for Life Sciences, Korea (Korea, Republic of), Department of Rehabilitation Medicine, Asan Medical Center, University of Ulsan College of Medicine, Korea (Korea, Republic of)

14098-71 • 17:45 - 19:30

Photobiomodulation with 660 nm Improves in lymphedema animal models

Author(s): **Jaemin Yoo**, **Jeongeui Kim**, **Geunyoung Kim**, **Yumi Hwang**, **Woonha Yeo**, Asan Institute for Life Sciences, Asan Medical Ctr. (Korea, Republic of), Univ. of Ulsan College of Medicine (Korea, Republic of); **Hwayeong Cheon**, Asan Institute for Life Sciences, Asan Medical Ctr. (Korea, Republic of), Univ. of Ulsan College of Medicine (Korea, Republic of); **Jaeyong Jeon**, Asan Institute for Life Sciences, Asan Medical Ctr. (Korea, Republic of), Univ. of Ulsan College of Medicine (Korea, Republic of)

14098-72 • 17:45 - 19:30

Colorimetric differences between ICU patients and healthy subjects explained by chromophore variation via simulated skin reflectance

Author(s): **Kaio B. Barros**, **Murilo S. Sampaio**, **Jocassia S. Pinheiro**, **Raíssa Q. Lobão**, **Julia Cristina S. Oliveira**, **Luismar B. Cruz**, **Anibal Basile-Filho**, **Rinaldo Roberto J. Guirro**, **Luciano Bachmann**, University of Sao Paulo (Brazil)

14098-73 • 17:45 - 19:30

Concentration and thickness dependent optical transparency in biological tissues via refractive index modulation

Author(s): **Paz M. Toledano**, **Yaakov R. Tischler**, Bar-Ilan Univ. (Israel)

14098-74 • 17:45 - 19:30

Correlation between fluorescence spectroscopy and mass spectrometry results on porphyrins phantoms and yeast models

Author(s): **Angèle Denis**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France), Univ. Lille, Inserm, CHU Lille, U1192 - Protéomique Réponse Inflammatoire Spectrométrie de Masse – PRISM, F-59000 Lille, France (France); **Arthur Gautheron**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France), Ecole Supérieure de Chimie Physique Électronique de Lyon (France); **Pierre-Aurélien Beuriat**, Hospices Civils de Lyon (France), Univ. Claude Bernard Lyon 1 (France), Institut des Sciences Cognitives Marc Jeannerod (France); **Isabelle Fournier**, Univ. Lille, Inserm, CHU Lille, U1192 - Protéomique Réponse Inflammatoire Spectrométrie de Masse – PRISM, F-59000 Lille, France (France), Institut Univ. de France (France); **Bruno Montcel**, Univ. Claude Bernard Lyon 1, Univ. Jean Monnet Saint-Etienne, Institut National des Sciences Appliquées de Lyon, Institut National de la Santé et de la Recherche Médicale, CREATIS, CNRS (France)

14098-75 • 17:45 - 19:30

Tumor thermal damage assessment in nanoparticle-mediated photothermal therapy with hyperspectral imaging: preliminary in vivo results in a syngeneic 4T1 mouse model

Author(s): **Leonardo Bianchi**, Politecnico di Milano (Italy); **Martina Bruna Violatto**, **Maria Monica Barzago**, Istituto di Ricerche Farmacologiche Mario Negri IRCCS (Italy); **Carolina Iadanza**, Politecnico di Milano (Italy); **Annalisa Morelli**, **Gabriela Paroni**, Istituto di Ricerche Farmacologiche Mario Negri IRCCS (Italy); **Nicola Giulietti**, Univ. degli Studi di Pavia (Italy); **Paolo Chiariotti**, Politecnico di Milano (Italy); **Paolo Bigini**, Istituto di Ricerche Farmacologiche Mario Negri IRCCS (Italy); **Paola Saccomandi**, Politecnico di Milano (Italy)

14098-76 • 17:45 - 19:30

Imaging polarization effects of light scattered in tissue samples – a systematic investigation

Author(s): **Paul Thrane**, SINTEF (Norway); **Daniel A. Mittli**, Univ. of Oslo (Norway); **Christopher A. Dirdal**, SINTEF (Norway); **Chao Meng**, Univ. of Southern Denmark (Denmark); **Alexander Bykov**, Univ. of Oulu (Finland); **Igor Meglinski**, Aston Univ. (United Kingdom); **Sergey Bozhevolnyi**, Univ. of Southern Denmark (Denmark); **Jens Pahnke**, Univ. of Oslo (Norway)

14098-77 • 17:45 - 19:30

Simulating light-tissue interaction with phantom-based validation

Author(s): **Tomi Jaakola**, University of Turku (Finland); **Inka Mustajoki**, Univ. of Turku (Finland); **Sucheta Sharma**, **Tuukka Panula**, **Matti Kaisti**, University of Turku (Finland)

14098-78 • 17:45 - 19:30

Development of optical skin phantom for investigating the effect of pigmentation on Asian skin using diffuse reflectance spectroscopy

Author(s): **Iftak Hussain**, A*STAR Skin Research Labs (Singapore); **Ryu NG Zhi Xiong**, Nanyang Technological Univ. (Singapore); **Wang Chenlu**, **Randall Ang Jie**, **Mark Teo Ju Teng**, **Malini Olivo**, **Dinish Us**, A*STAR Skin Research Labs (Singapore)

14098-79 • 17:45 - 19:30

Wearable photoacoustic LED array based on frequency-modulated excitation and 3D-printed microlenses

Author(s): **Meiqi Shao**, Karlsruher Institut für Technologie (Germany); **Zewei Lu**, karlsruhe institute of technology (Germany); **Sijia Liu**, **Nicole Ruiter**, **Christoph Klahn**, Karlsruher Institut für Technologie (Germany)

14098-80 • 17:45 - 19:30

Improved therapeutic outcomes of sono-photodynamic therapy via IR-783 sensitization in papillary thyroid carcinoma

Author(s): **İlknur Gürtaş**, İzmir Katip Çelebi University (Turkey); **Mustafa Kemal Ruhi**, Bogaziçi Üniv. (Turkey); **Nermin Topaloğlu**, İzmir Katip Celebi Univ. (Turkey)

14098-81 • 17:45 - 19:30

Efficacy of IR783-mediated photodynamic therapy in 3D ovarian cancer microtissues

Author(s): **Ekin Ceren Yurtseven**, İzmir Katip Celebi University (Turkey); **Mustafa Şen**, **Nermin Topaloğlu**, İzmir Katip Celebi Univ. (Turkey)

14098-82 • 17:45 - 19:30

Toward numerical skin twin

Author(s): **Jean Marin**, **Yannick Benezeth**, **Franck Marzani**, Univ. Bourgogne Europe (France)

14098-83 • 17:45 - 19:30

Unsupervised analysis of in vivo skin spectra using optimal transport-based distances

Author(s): **Adja Dieng**, Univ. de Lorraine (France); **Paul Catala**, CRAN, Université de Lorraine (France); **Walter Blondel**, **Clarice Perrin-Mozet**, **Valentin Kupriyanov**, **Matthieu Renard**, **Marine Amouroux**, Univ. de Lorraine (France)

14098-84 • 17:45 - 19:30

Trolox-loaded liposomal formulation enhances photodynamic therapeutic performance of protoporphyrin IX in PC3 prostate cancer cells

Author(s): **Aytan Taskara**, University of Bonn (Germany), İzmir Katip Celebi University (Turkey); **Cennet Özyay**, **Merve Karpuz**, **Nermin Topaloğlu**, İzmir Katip Celebi Univ. (Turkey)

14098-85 • 17:45 - 19:30

Refractive index and thickness decoupling using hyperspectral quantitative phase microscopy

Author(s): **Himanshu Joshi**, **Dalip Singh Mehta**, **Shubham Tiwari**, Indian Institute of Technology Delhi (India)

14098-86 • 17:45 - 19:30

Photothermal-driven anticancer efficiency of indocyanine green J-aggregates and nanocarrier in 3D cocultures of head and neck cancer

Author(s): **Mélina Meyer**, CRAN UMR 7039 CNRS, Université de Lorraine (France), Institut de Cancérologie de Lorraine (France); **Aixa Aguilera-Garrido**, L2CM, Univ. de Lorraine, CNRS (France), CRAN, Univ. de Lorraine, CNRS (France), Institut de Cancérologie de Lorraine (France); **Aurélien François**, **Laureline Lamy**, Institut de Cancérologie de Lorraine (France); **Yann Bernhard**, **Andréa Pasc**, L2CM, Univ. de Lorraine, CNRS (France); **Claire Egloff-Juras**, **Henri-Pierre Lassalle**, CRAN, Univ. de Lorraine, CNRS (France), Institut de Cancérologie de Lorraine (France)

14098-87 • 17:45 - 19:30

Analytical model of light radiance in a scattering slab with inner plane-wave source in the P3 approximation

Author(s): **Julien Fade, Aurélien Roux**, Institut Fresnel (France); **Alberto Breton Vicente, Béatrice Sorrente**, ONERA (France); **Anabela Da Silva**, Institut Fresnel (France)

14098-88 • 17:45 - 19:30

Effect of spatial coherence on needle beams generated from conically refracted light

Author(s): **Sausan Abdulrazak, Valentin Mylnikov, Vladislav Dudelev, Nickolay Deryagin, Grigori Sokolovskii**, Ioffe Institute (Russian Federation)

14098-89 • 17:45 - 19:30

High-resolution 3D photoacoustic imaging using lateral shift invariance inverse reconstruction

Author(s): **Laure Bigot**, Univ. Grenoble Alpes, CNRS, LIPhy (France), ID4US (France); **Charlotte Constans**, ID4us (France); **Bastien Arnal**, Lab. Interdisciplinaire de Physique, Univ. Grenoble Alpes, CNRS (France)

14098-90 • 17:45 - 19:30

Screening and determination of the efficacy of first- and second-generation photosensitizers in a system with tryptophan

Author(s): **Grigor V. Gyulkhandanyan, Ani Babajanyan, Vladimir Hovhannisyan, Nina Alchujyan, Margarita Gasparyan, Sona Mardanyan**, H. Buniatian Institute of Biochemistry NAS RA (Armenia); **Dmitri Krysko**, Univ. Gent (Belgium); **Valery Tuchin**, Saratov State Univ. (Russian Federation)

14098-91 • 17:45 - 19:30

Pressure-induced alterations in PPG pulse morphology demonstrated with a dynamic tissue-mimicking phantom

Author(s): **Martti Ilvesmäki**, University of Oulu (Finland); **Hany Ferdinando, Erkki Vihriälä, Oleksii Sieryi, Lukasz Surazynski, Alexander Bykov, Teemu S. Myllylä**, Univ. of Oulu (Finland)

14098-92 • 17:45 - 19:30

Acousto-optic signal detection methodology during focused ultrasound induced blood-brain barrier opening in mice

Author(s): **Mohammadreza Omidali**, Univ of Oulu (Finland); **Tea Häikiö, Triana Rahayu, Vesa Kiviniemi, Mika Kaakinen, Lauri Eklund, Teemu S. Myllylä**, Univ. of Oulu (Finland)

14098-93 • 17:45 - 19:30

Apoptosis development induced by 1265 nm laser irradiation in melanoma cell cultures

Author(s): **Anna Khokhlova**, Ulyanovsk State Univ (Russian Federation); **Aigul Gilmutdinova, Yury Saenko, Dmitry Korobko, Pavel Itrin, Maxim Pribylov, Aleksei Abanin**, S.P. Kapitsa Scientific Technological Research Institute, Ulyanovsk State Univ. (Russian Federation); **Sergei Sokolovski, Edik Rafailov**, Aston Univ. (United Kingdom); **Andrei Fotiadi**, S.P. Kapitsa Scientific Technological Research Institute, Ulyanovsk State Univ. (Russian Federation), Univ. de Mons (Belgium)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 14: SPECKLE IMAGING AND OCT APPLICATIONS II

16 April 2026 • 10:55 - 12:15 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Zeev Zalevsky**, Bar-Ilan Univ. (Israel)

14098-56 • 10:55 - 11:25

SPAD gated and rolling shutter tissue perfusion sensing (*Invited Paper*)

Author(s): **Marina Vasileva, Shira Tziony, Vika Tarle, Nisan Ozana**, Bar-Ilan Univ. (Israel)

14098-57 • 11:25 - 11:55

Real-time monitoring of gastropod mucus deposition with optical coherence tomography (*Invited Paper*)

Author(s): **Lauren R. Eggleton**, The Univ. of Sheffield (United Kingdom); **Dmitry G. Revin**, School of Electrical and Electronic Engineering, Univ of Sheffield (United Kingdom); **Stephen J. Matcher**, The Univ. of Sheffield (United Kingdom), INSIGNEO Institute, The University of Sheffield (United Kingdom); **Christopher A. Holland**, The Univ. of Sheffield (United Kingdom)

14098-58 • 11:55 - 12:15

Optimized speckle size calibration approach for laser speckle contrast imaging for intraoperative vascular monitoring

Author(s): **Arthur Dareau, Jérôme Pham, Anabela Da Silva, Nicolas Bertaux, Sébastien Mailfert, Frédéric Galland**, Institut Fresnel (France); **Fares Benmiloud**, Hôpital Européen à Marseille (France); **Julien Fade**, Institut Fresnel (France)

Lunch Break 12:15 - 13:20

SESSION 15: HEALTH MONITORING

16 April 2026 • 13:20 - 15:30 | Rome/Salon 5 (Niveau/Level 0)

Session Chair(s): **Marine Amouroux**, Univ. de Lorraine (France); **Viktor V. Dremin**, Aston Univ. (United Kingdom)

14098-59 • 13:20 - 13:50

Multimodal wearable device integrating laser Doppler flowmetry and fluorescence spectroscopy for comprehensive physiological monitoring (*Invited Paper*)

Author(s): **Viktor V. Dremin, Minh Ngoc Nguyen**, Aston Univ. (United Kingdom); **Ilya Rafailov**, Aston Medical Technology Ltd. (United Kingdom); **Sergei Sokolovsky, Edik Rafailov**, Aston Univ. (United Kingdom)

14098-60 • 13:50 - 14:10

Evaluation of the benefits of a multipoint, multi-wavelength PPG sensor for the estimation of physiological parameters on healthy volunteers

Author(s): **Milena Sofra**, CEA-Leti (France); **Guillaume Blanquer, Mathieu Perriolat, Robinson Prada-Meija, Augustin Vernay, Romain Anciant**, CEA-LETI (France); **Daniel Anglade**, Ctr. Hospitalier Univ. Grenoble Alpes (France); **Emma Villeneuve, Rémi Gerbelot, Pierre Blandin**, CEA-LETI (France)

14098-61 • 14:10 - 14:30

Active pressure-controlled microvascular hyperspectral imaging

Author(s): **Nico Lindström, Tuukka Panula, Sucheta Sharma, Matti Kaisti**, University of Turku (Finland); **Yannis Papadopoulos**, School of Applied Mathematical and Physical Sciences National Technical University of Athens (Greece)

14098-62 • 14:30 - 14:50

Development of a Sensor Array System for Measurement of Arterial Oxygen and Tissue Oxygen for Local Perfusion Monitoring

Author(s): **David Löwen, Anja Marckwardt, Maja Eichler, Dirk Oberschmidt**, Technische Universität Berlin (Germany)

14098-63 • 14:50 - 15:10

Laser-induced Breakdown Spectroscopy (LIBS): Detecting Unexpected Elements in Human Fingernails

Author(s): **Edith Böhmer, Belana Hillmann, Florian Klämpfl, Martin Hohmann, Michael Schmidt**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14098-64 • 15:10 - 15:30

A Targeted Snapshot Multispectral Sensor for Enhanced Surgical Vision

Author(s): **Catherine-Louise White**, Univ. of Cambridge (United Kingdom); **Calum Williams**, Univ. of Exeter (United Kingdom); **Sarah E. Bohndiek**, Univ. of Cambridge (United Kingdom)

CONFERENCE 14099

Data Science for Photonics and Biophotonics II

12 - 13 April 2026 | Stuttgart/Salon 15 (Niveau/Level 1)

Conference Chair(s): Thomas Bocklitz, Friedrich-Schiller-Univ. Jena (Germany)

Program Committee: **Rekha Gautam**, Tyndall National Institute (Ireland); **Shuxia Guo**, Leibniz-IPHT (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Peter B. Harrington**, Ohio Univ. (United States); **Martin A. B. Hedegaard**, Univ. of Southern Denmark (Denmark); **Tamiki Komatsuzaki**, Hokkaido Univ. (Japan); **Oleg Ryabchykov**, Leibniz-Institut für Photonische Technologien e.V. (Germany); **Cyril Ruckebusch**, Lab. de Spectrochimie Infrarouge et Raman (France); **Lei Wang**, Xiamen Univ. (China); **Tomasz P. Wrobel**, Jagiellonian Univ. (Poland)

Sunday 12 April 2026

SESSION 1: GENERATIVE MODELLING

12 April 2026 • 13:30 - 15:00 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): Tamiki Komatsuzaki, Hokkaido Univ. (Japan)

14099-1 • 13:30 - 14:00

Sparse reconstruction algorithm for rapid raman imaging (*Invited Paper*)

Author(s): Jean-Emmanuel Clément, Univ. de Lille (France); Shunsuke Ono, Institute of Science Tokyo (Japan); Katsumasa Fujita, The Univ. of Osaka (Japan); Tamiki Komatsuzaki, Hokkaido Univ. (Japan)

14099-2 • 14:00 - 14:20

Studying human networks with coupled-lasers model

Author(s): Ron Shalev, Moti Fridman, Hamootal Duadi, Yuval Tamir, Bar-Ilan Univ. (Israel)

14099-4 • 14:20 - 14:40

Multimodal nonlinear optical microscopy image denoising with physics-inspired deep learning

Author(s): Yogita Yogita, Elena Corbetta, Friedrich-Schiller-Univ. Jena (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany); Tobias Meyer-Zedler, Leibniz-Institut für Photonische Technologien e.V. (Germany); Michael Schmitt, Friedrich-Schiller-Univ. Jena (Germany); Orlando Guntinas-Lichius, Universitätsklinikum Jena (Germany); Jürgen Popp, Thomas Bocklitz, Friedrich-Schiller-Univ. Jena (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany)

14099-5 • 14:40 - 15:00

On-the-fly Raman Microscopy Balancing Measurement Speed and Analytical Precision

Author(s): Koji Tabata, Hokkaido Univ (Japan)

Coffee Break 15:00 - 15:30

SESSION 2: TAILORING ANALYSIS TO VARIOUS DATA TYPES

12 April 2026 • 15:30 - 17:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): Jean-Emmanuel Clement, Institute for Chemical Reaction Design and Discovery (Japan)

14099-6 • 15:30 - 16:00

Tuning the loss function of deep learning convolutional networks for optimisation of classification performance with chemical imaging datasets (*Invited Paper*)

Author(s): Rahul Suresh, Mohd Rifqi Rafsanjani, Technological Univ. Dublin (Ireland); Karin Jirstrom, Lund Univ. (Sweden); Arman Rahman, William Gallagher, Univ. College Dublin (Ireland); Aidan D. Meade, Technological Univ. Dublin (Ireland)

14099-7 • 16:00 - 16:20

Tailoring image analysis and machine learning for the analysis of vibrational spectroscopic imaging data

Author(s): Thomas Bocklitz, Friedrich-Schiller-Univ. Jena (Germany)

14099-8 • 16:20 - 16:40

Single molecule SERS detection of phosphorylation in serine and tyrosine using deep learning-assisted plasmonic nanopore

Author(s): **Mulusew Yaltaye**, Univ. of Oulu (Finland)

14099-9 • 16:40 - 17:00

How high dimensionality enables perfect accuracy in machine learning applied to spectroscopy

Author(s): **Umberto Michelucci**, Lucerne Univ. of Applied Sciences and Arts (Switzerland); **Francesca Venturini**, Zürcher Hochschule für Angewandte Wissenschaften (Switzerland)

14099-11 • 17:00 - 17:20

An open-source framework for advanced IVOCT analysis using deep neural networks

Author(s): **Calvin Kreft**, **Richard Klein**, Ernst-Abbe-Hochschule Jena (Germany); **P. Christian Schulze**, Universitätsklinikum Jena (Germany); **Dirk Schmalzried**, Ernst-Abbe-Hochschule Jena (Germany); **Sven Möbius-Winkler**, Universitätsklinikum Jena (Germany); **Iwan W. Schie**, Ernst-Abbe-Hochschule Jena (Germany)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**

to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 3: DEEP NEURAL NETWORKS IN BIOPHOTONIC DATA

13 April 2026 • 11:30 - 12:40 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Aidan D. Meade**, Technological Univ. Dublin (Ireland)

14099-17 • 11:30 - 12:00

Beyond the nucleus: cytoplasmic dominance in follicular thyroid carcinoma detection using single-cell Raman imaging across multiple devices (Invited Paper)

Author(s): **Tamiki Komatsuzaki**, Hokkaido Univ. (Japan)

14099-13 • 12:00 - 12:20

Deep learning for IBD histopathology: comparative evaluation of transfer learning model architectures on multimodal microscopy images

Author(s): **Jawad Kamran**, Leibniz Institute of Photonic Technology (IPHT) (Germany), Friedrich-Schiller-Universität Jena (Germany); **Tobias Meyer-Zedler**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Michael Schmitt**, Friedrich-Schiller-Univ. Jena (Germany); **Maximilian Waldner**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany), Universitätsklinikum Erlangen (Germany); **Michael Vieth**, Klinikum Bayreuth GmbH (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Jürgen Popp**, **Thomas Bocklitz**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany)

14099-10 • 12:20 - 12:40

Enhancing label-free to fluorescence image to image translation with Pix2PixHD and SwinIR

Author(s): **Larbi Touijer**, **Nicolò Incardona**, **Michele Oneto**, **Paolo Bianchini**, **Alberto Diaspro**, Istituto Italiano di Tecnologia (Italy)

Lunch Break 12:40 - 13:50

SESSION 4: BIOPHOTONIC DATA PREPROCESSING AND STANDARDIZATION

13 April 2026 • 13:50 - 15:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Shuxia Guo**, Friedrich-Schiller-Univ. Jena (Germany)

14099-14 • 13:50 - 14:20

Hybrid modeling and data-driven approaches for addressing scattering challenges in mid-infrared spectroscopy (Invited Paper)

Author(s): **Achim Kohler**, Norwegian Univ of Life Sciences (Norway); **Uladzislau Blazhko**, **Eirik Magnussen**, Norwegian Univ. of Life Sciences (Norway)

14099-15 • 14:20 - 14:40

Employing augmentation and batch normalisation with chemical imaging data for classification of cancer subtype within a deep learning approach

Author(s): **Rahul Suresh**, **Mohd Rifqi Rafsanjani**, Technological Univ. Dublin (Ireland); **Karin Jirstrom**, Lund Univ. (Sweden); **Arman Rahman**, **William Gallagher**, Univ. College Dublin (Ireland); **Aidan D. Meade**, Technological Univ. Dublin (Ireland)

14099-16 • 14:40 - 15:00

Multivariate Gaussian modeling of blood-based FTIR spectroscopy: framework and applications

Author(s): **Niklas Leopold-Kerschbaumer**, Ctr. for Molecular Fingerprinting (Hungary), Ludwig-Maximilians-Univ. München (Germany), Max-Planck-Institut für Quantenoptik (Germany); **Flora B. Nemeth**, Ctr. for Molecular Fingerprinting (Hungary), John von Neumann Institute for Data Science, Semmelweis Univ. (Hungary), Ludwig-Maximilians-Univ. München (Germany); **Nico Feiler**, **Kosmas V. Kepesidis**, Ctr. for Molecular Fingerprinting (Hungary), Ludwig-Maximilians-Univ. München (Germany), Max-Planck-Institut für Quantenoptik (Germany)

14099-3 • 15:00 - 15:20

Generalized predictive pipeline for low-cost multispectral adulteration detection

Author(s): **Mihael Španović**, **Filip Novoselnik**, **Mihaela Orić**, **Ivica Skokić**, **Marko Sprem**, Protostar Labs (Croatia)

Coffee Break 15:20 - 15:50

SESSION 5: COMBINING VARIOUS DATA SOURCES

13 April 2026 • 15:50 - 18:00 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Achim Kohler**, Norwegian Univ. of Life Sciences (Norway)

14099-12 • 15:50 - 16:20

On the transferable modelling in Raman spectral analysis (Invited Paper)

Author(s): **Shuxia Guo**, **Thomas Bocklitz**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14099-18 • 16:20 - 16:40

UMDSF: Unified Medical Dataset Format for Interoperable, Scalable, and Privacy-Aware Medical Imaging

Author(s): **Jitindra Fartiyal**, Aston University (United Kingdom); **Pedro Freire**, **Sergei G. Sokolovski**, Aston Univ. (United Kingdom)

14099-19 • 16:40 - 17:00

Harnessing optical scattering for learned latent spaces in generative modeling

Author(s): **Eunji Ko**, **Wolfgang Losert**, Univ. of Maryland, College Park (United States)

14099-20 • 17:00 - 17:20

Lightweight CycleGAN models for cross-modality image transformation and experimental quality assessment in fluorescence microscopy

Author(s): **Mohammad Soltaninezhad**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14099-21 • 17:20 - 17:40

Domain-adversarial neural networks for cross-instrument harmonization in blood-based infrared spectroscopy

Author(s): **Flora B. Nemeth**, Ctr. for Molecular Fingerprinting (Hungary), John von Neumann Institute for Data Science, Semmelweis Univ. (Hungary), Ludwig-Maximilians-Univ. München (Germany); **Kosmas Kepesidis**, Ctr. for Molecular Fingerprinting (Hungary)

14099-22 • 17:40 - 18:00

Comparative evaluation of chemometric and machine learning approaches for Raman-based wine analysis

Author(s): **Michael Wüest**, Zürcher Hochschule für Angewandte Wissenschaften (Switzerland); **Umberto Michelucci**, Lucerne Univ. of Applied Sciences and Arts (Switzerland); **Francesca Venturini**, Zürcher Hochschule für Angewandte Wissenschaften (Switzerland)

Tuesday 14 April 2026

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14099-23 • 18:10 - 20:00

Examination of the effect of choice of performance metric for hyperparameter tuning and model performance in deep learning classification approaches with chemical imaging data

Author(s): **Rahul Suresh, Mohd Rifqi Rafsanjani**, Technological Univ. Dublin (Ireland); **Karin Jirstrom**, Lund Univ. (Sweden); **Arman Rahman, William Gallagher**, Univ. College Dublin (Ireland); **Aidan D. Meade**, Technological Univ. Dublin (Ireland)

14099-24 • 18:10 - 20:00

A cloud computing system for real-time measurements in long-range DAS using Apache Flink

Author(s): **Abdusomad Nur, Almaz Demise, Yonas Seifu Muanenda**, Scuola Superiore Sant'Anna (Italy)

14099-25 • 18:10 - 20:00

A transfer learning approach to inverse modelling: correction procedure for etaloning artifact in Raman spectroscopy

Author(s): **Ravi Teja Vulchi**, FSU Jena (Germany); **Volodymyr Morgunov**, Friedrich-Schiller-Univ. Jena (Germany); **Thomas Bocklitz**, Leibniz-Institut für Photonische Technologien e.V. (Germany)

14099-26 • 18:10 - 20:00

Reducing modality mismatch using color transformations for multimodal image registration

Author(s): **Fatemehzahra Darzi, Rodrigo Escobar Díaz Guerrero, Thomas Bocklitz**, Friedrich-Schiller-Univ. Jena (Germany)

14099-27 • 18:10 - 20:00

USDA UV-B monitoring and research program

Author(s): **Wei Gao**, Colorado State University (United States); **George Janson, Maosi Chen, Rita Deike**, Colorado State Univ. (United States)

CONFERENCE 14100

Integrated Photonics Platforms IV

13 - 16 April 2026 | Boston/Salon 11 (Niveau/Level 1)

Conference Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland); **Delphine Marris-Morini**, Ctr. de Nanosciences et de Nanotechnologies (France); **Dries Van Thourhout**, Univ. Gent (Belgium)

Program Committee: **Frédéric Boeuf**, STMicroelectronics (France); **José Capmany Franco**, Univ. Politécnica de Valencia (Spain); **Frederic Y. Gardes**, Univ. of Southampton (United Kingdom); **Jin Guo**, CUMEC (China); **Martijn J. R. Heck**, Technische Univ. Eindhoven (Netherlands); **Takaaki Ishigure**, Keio Univ. (Japan); **Robert E. Mallard**, Canadian Microelectronics Corp. (Canada); **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy); **Stefan F. Preble**, Rochester Institute of Technology (United States); **Pol Van Dorpe**, IMEC (Belgium); **Laurent Vivien**, Ctr. de Nanosciences et de Nanotechnologies (France), CNRS, Univ. Paris Saclay (France); **Kevin A. Williams**, Technische Univ. Eindhoven (Netherlands); **Elisabeth Wintersteller**, Tyndall National Institute (Ireland); **Jeremy Witzens**, RWTH Aachen Univ. (Germany); **Dan-Xia Xu**, National Research Council Canada (Canada); **Koji Yamada**, National Institute of Advanced Industrial Science and Technology (Japan); **Zhiping Zhou**, Peking Univ. (China)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:30

SESSION 1: PACKAGING AND HETEROGENEOUS INTEGRATION

13 April 2026 • 11:30 - 13:00 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Dries Van Thourhout**, Univ. Gent (Belgium)

14100-1 • 11:30 - 12:00

Photonic wire bonds and facet-attached micro-lenses: enabling scalable integration of lasers and PICs *(Invited Paper)*

Author(s): **Sebastian Skacel, Laura Horan**, Vanguard Automation GmbH (Germany)

14100-2 • 12:00 - 12:20

Modular expanded beam interface for cross-platform optical integration enabled by 3D-printed micro-optics

Author(s): **Nele De Moerlooze**, Ghent University (Belgium), Imec (Belgium), TNO (Netherlands); **Alexander Dorrestein**, TNO (Netherlands); **Jeroen Missinne, Geert Van Steenberge**, Univ. Gent (Belgium), imec (Belgium)

14100-3 • 12:20 - 12:40

Polymer photonics for heterogeneous integration of highly nonlinear host-guest systems for third-order nonlinear applications

Author(s): **Arturs Bundulis, Anete Sapne, Ksenija Bobrovnika, Aivars Vembris**, Institute of Solid State Physics, Univ. of Latvia (Latvia)

14100-4 • 12:40 - 13:00

Hybrid Integration of Blue Laser Diodes on SiN Photonic Integrated Circuits by Flip-Chip Bonding

Author(s): **Han Wang**, imec (Belgium); **Harindra K. Kannoja**, Center for Microsystem Technology (CMST), Ghent University - imec (Belgium); **Pieter Neutens**, imec (Belgium); **Konstantinos Akritidis**, Photonics Research Group, INTEC, Ghent University - imec (Belgium); **Mateusz Hajdel, Krzysztof Krzysztof**, Institute of High Pressure Physics (Poland); **Henryk Turski**, Institute of High Pressure Physics, Polish Academy of Sciences (Poland); **Geert Van Steenberge**, Center for Microsystem Technology (CMST), Ghent University - imec (Belgium); **Bart Kuyken**, Photonics Research Group, INTEC, Ghent University - imec (Belgium); **Pol Van Dorpe**, imec (Belgium)

Lunch Break 13:00 - 14:10

SESSION 2: HETEROGENEOUS INTEGRATION

13 April 2026 • 14:10 - 15:40 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Dries Van Thourhout**, Univ. Gent (Belgium)

14100-5 • 14:10 - 14:40

Micro Transfer printing - The new printing press for heterogeneous integration *(Invited Paper)*

Author(s): **James R. O'Callaghan**, Tyndall National Institute (Ireland)

14100-6 • 14:40 - 15:00

Micro transfer printing integration of GaSb optoelectronic devices on SiGe.

Author(s): **Yannis Billiet**, Univ. de Montpellier (France); **Huiru Ren, Céline Chevalier**, Institut des Nanotechnologies de Lyon (France); **Xavier Letartre, Jean-Louis Leclercq, Pierre Crémillieu, Radosław Mazurczyk, Marko Perestjuk, Lamine Ferhat, Christian Grillet**, Ecole Centrale de Lyon (France); **Maëva Fagot, Julie Goutorbe, Eric Tournié**, Univ. de Montpellier (France); **Maxime LePage, Badhise Ben Bakir, Nicolas Bresson, Rémi Armand, Vincent Reboud**, CEA-LETI (France); **Laurent Cerutti**, Univ. de Montpellier (France); **Christian Seassal**, Ecole Centrale de Lyon (France)

14100-7 • 15:00 - 15:20

Multi-wavelength heterogeneously integrated lithium niobate on silicon nitride tunable filters and switches.

Author(s): **Lisa De Jaeger**, Ghent University - IMEC (Belgium); **Tom Vandekerckhove, Jasper De Witte, Dries Van Thourhout**, Univ. Gent (Belgium), imec (Belgium); **Stéphane Clemmen**, Univ. Libre de Bruxelles (Belgium), Univ. Gent (Belgium), imec (Belgium); **Bart Kuyken**, Univ. Gent (Belgium), imec (Belgium)

14100-8 • 15:20 - 15:40

Low-defect InAs/InGaAs quantum dot lasers directly grown on silicon: scalable fabrication and high-temperature performance

Author(s): **Konstantinos Papatryfonos**, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); **Mingchu Tang, Huiwen Deng, Alwyn J. Seeds, Huiyun Liu, David R. Selviah**, Univ. College London (United Kingdom)

Coffee Break 15:40 - 16:10

SESSION 3: PHOTONICS PLATFORMS I

13 April 2026 • 16:10 - 17:40 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Dries Van Thourhout**, Univ. Gent (Belgium)

14100-9 • 16:10 - 16:40

Al₂O₃ as a multifunctional platform for rare-earth-doped integrated waveguide amplifiers *(Invited Paper)*

Author(s): **Kai Wang, Bjorn Jongbloed**, Univ. Twente (Netherlands); **Carlos E. Osornio Martínez**, Univ. Twente (Netherlands), Aluvia Photonics B.V. (Netherlands); **Dawson Bonneville, Meindert Dijkstra**, Univ. Twente (Netherlands); **Sonia M. García Blanco**, Univ. Twente (Netherlands), Aluvia Photonics B.V. (Netherlands)

14100-10 • 16:40 - 17:00

electrically tunable optical notch filter based on Barium Strontium Titanate for telecom range

Author(s): **Mojdeh Vakili Tabatabaei, Yating Ruan, Philipp Komissinskiy, Lambert Alff, Sascha Preu**, Technische Univ. Darmstadt (Germany)

14100-11 • 17:00 - 17:20

Leveraging Thin Film Lithium Niobate on Insulator (LNOI) to enhance Silicon Nitride Platform, the LOLIPOP project.

Author(s): **Charalampos Zervos, Adamantia M. Grammatikaki, Giorgos Brestas, Panagiotis Toumasis, Georgios Syriopoulos, Ioannis Pouloupoulos, Thenia Prousalidi**, National Technical Univ. of Athens (Greece); **Philip Schrinner**, LioniX International BV (Netherlands); **Karol Obara, Milan Milosevic**, PHIX Photonics Assembly (Netherlands); **Padraic Morrissey, How Yuan Hwang**, Univ. College Cork (Ireland); **Homa Zarebidaki, Davide Grassani, Sanghoon Chin**, CSEM SA (Switzerland); **Alexander Chamorovski**, Superlum Diodes Ltd. (Ireland); **Dimitrios Apostolopoulos, Hercules Avramopoulos, Constantinos Haliotis**, National Technical Univ. of Athens (Greece)

14100-12 • 17:20 - 17:40

Low-Loss, Low-Background Aluminium Oxide Waveguide Platform for UV-Visible Applications

Author(s): **Firehun Tsige Dullo**, SINTEF (Norway); **Nikhil Jayakumar**, UiT The Arctic Univ. of Norway (Norway); **Christopher A. Dirdal**, SINTEF (Norway); **Balpreet S. Ahluwalia**, UiT The Arctic Univ. of Norway (Norway); **Michael Getz**, SINTEF (Norway)

Tuesday 14 April 2026

SESSION 4: PHOTONICS PLATFORMS II

14 April 2026 • 8:50 - 10:20 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Dries Van Thourhout**, Univ. Gent (Belgium)

14100-13 • 8:50 - 9:20

Integration of thin-film lithium niobate modulators on a SiN photonics platform (*Invited Paper*)

Author(s): **Forrest Valdez**, LIGENEC SA (Switzerland); **Arif Rahman**, Univ. of California, San Diego (United States); **Camiel Op de Beeck, Vipretuo Mere, Boris Zabelich, Radha Krishnan, Pragati Aashna**, LIGENEC SA (Switzerland); **Shayan Mookherjee**, Univ. of California, San Diego (United States); **Pieter Wuytens**, LIGENEC SA (Switzerland)

14100-14 • 9:20 - 9:40

Integration of periodically poled thin-film lithium niobate and electro-optic modulators for on-chip photonic neural networks

Author(s): **Jan Brandes, Gunho Jason Gabriel Jun, Philipp Lohmann, Erik Jung, Rasmus Bankwitz, Xinyu Ma, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-15 • 9:40 - 10:00

Fast and efficient piezoelectric actuation of self-injection locked photonic integrated lasers

Author(s): **Simone Bianconi, Mikael Reichler, Anat Siddharth, Marco Liffredo, Tobias J. Kippenberg**, EPFL (Switzerland)

14100-16 • 10:00 - 10:20

Nanoimprinted electro-optic modulator with sol-gel barium titanate

Author(s): **Virginia Falcone, Eleni Prountzou, Jost Kellner, Ülle-Linda Talts, Rachel Grange**, ETH Zurich (Switzerland)

Coffee Break 10:20 - 10:50

SESSION 5: PHOTONICS PLATFORMS III

14 April 2026 • 10:50 - 11:50 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Delphine Marris-Morini**, Ctr. de Nanosciences et de Nanotechnologies (France)

14100-17 • 10:50 - 11:20

Integrated silicon nitride photonics for light shaping in the life sciences (*Invited Paper*)

Author(s): **Jeremy Witzens**, RWTH Aachen Univ. (Germany)

14100-19 • 11:20 - 11:50

A backside-emission packaging architecture for multibeam laser Doppler vibrometer PICs (*Invited Paper*)

Author(s): **Yanlu Li**, Univ. Gent (Belgium); **Kevin Shortiss**, Tyndall National Institute (Ireland); **Hasan Salmanian**, Univ. Gent (Belgium); **Sharon Butler, Peter O'Brien**, Tyndall National Institute (Ireland)

Lunch/Exhibition Break 11:50 - 13:10

SESSION 6: THZ AND MID-IR PHOTONICS

14 April 2026 • 13:10 - 16:00 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Delphine Marris-Morini**, Ctr. de Nanosciences et de Nanotechnologies (France)

14100-20 • 13:10 - 13:40

Generation and detection of terahertz pulses in thin-film lithium niobate photonic circuits (*Invited Paper*)

Author(s): **Alessandro Tomasino**, EPFL (Switzerland); **Amirhassan Shams-Ansari**, Harvard John A. Paulson School of Engineering and Applied Sciences (United States); **Yazan Lampert**, **Jiawen Liu**, EPFL (Switzerland); **Marko Lončar**, Harvard John A. Paulson School of Engineering and Applied Sciences (United States); **Ileana-Cristina Benea-Chelmus**, EPFL (Switzerland)

14100-21 • 13:40 - 14:00

Regenerative amplification in feedback-controlled multi-wavelength lasers for a photonic-based THz filter

Author(s): **Pablo Marin-Palomo**, Vrije Universiteit Brussel (Belgium); **Garzan Arda Akin**, Vrije Univ. Brussel (Belgium); **Luis González-Guerrero**, Univ. Carlos III de Madrid (Spain)

14100-22 • 14:00 - 14:20

Low loss mid-infrared integrated photonics in III-V platform

Author(s): **Luca Lucia**, **Gia-long Ngo**, **Mathilde Urbain**, **Grégoire Beaudoin**, **Isabelle Sagnes**, **Jean-Michel Manceau**, **Raffaele Colombelli**, **Adel Bousseksou**, Ctr. de Nanosciences et de Nanotechnologies (France)

14100-23 • 14:20 - 14:40

High-efficiency suspended silicon edge coupler operating at 3.3 um for methane detection

Author(s): **Lingshuang Zhang**, University of Southampton (United Kingdom); **Siyu Chen**, **James Fernando**, **Aneesh V. Veluthandath**, **Glenn Churchill**, **Weilin Jin**, **Georgia Mourkioti**, **Goran Z. Mashanovich**, **Milos Nedeljkovic**, Univ. of Southampton (United Kingdom)

14100-24 • 14:40 - 15:00

Hybrid integration of rare earth-doped chalcogenides with silicon photonics for mid-IR emission

Author(s): **Loïc Bodiou**, Fonctions Optiques pour les Technologies de l'information (France); **Taghrid Ghanawi**, Institut des Sciences Chimiques de Rennes (France); **Sara-Maria Toxqui Rodríguez**, Ctr. de Nanosciences et de Nanotechnologies (France); **Abdelali Hammouti**, Fonctions Optiques pour les Technologies de l'information (France); **Mélanie Joubaud**, Institut des Sciences Chimiques de Rennes (France); **Jonathan Lemaître**, **Parastesh Pirasteh**, Fonctions Optiques pour les Technologies de l'information (France); **Samson Edmond**, Ctr. de Nanosciences et de Nanotechnologies (France); **Albane Benardais**, **Radwan Chahal**, Institut des Sciences Chimiques de Rennes (France); **Petr Nemec**, Univ. of Pardubice (Czech Republic); **Yannick Dumeige**, Fonctions Optiques pour les Technologies de l'information (France); **Delphine Marris-Morini**, **Laurent Vivien**, **Carlos Alonso Ramos**, Ctr. de Nanosciences et de Nanotechnologies (France); **Virginie Nazabal**, Institut des Sciences Chimiques de Rennes (France); **Joël Charrier**, Fonctions Optiques pour les Technologies de l'information (France)

14100-25 • 15:00 - 15:20

Anti-reflection subwavelength gratings for waveguide facets in the mid-infrared

Author(s): **Nooman El Bouchikhi**, **Annabelle Bricout**, **Victor Turpaud**, Ctr. de Nanosciences et de Nanotechnologies (France); **Stefano Calcaterra**, **Davide Impelluso**, Politecnico di Milano (Italy); **Adel Bousseksou**, **David Bouville**, **Jean-René Coudeville**, **Etienne Herth**, **Samson Edmond**, **Carlos Alonso Ramos**, **Laurent Vivien**, **Daniele Melati**, **Jacopo Frigerio**, **Giovanni Isella**, **Delphine Marris-Morini**, Ctr. de Nanosciences et de Nanotechnologies (France)

14100-26 • 15:20 - 15:40

Unlocking the Mid-Infrared - Toward Scalable Photonic Integration for Sensing and Communication

Author(s): **Ryszard Piramidowicz**, **Stanislaw Stopiński**, **Krzysztof Anders**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Anna Jusza**, Warsaw Univ. of Technology (Poland), LightHouse sp. z o.o. (Poland); **Marcin Lelit**, Warsaw Univ. of Technology (Poland); **Andrzej Polatynski**, Warsaw Univ. of Technology (Poland), VPI Photonics GmbH (Germany); **Piotr Wisniewski**, **Mateusz Słowikowski**, **Marcin Juchniewicz**, Warsaw Univ. of Technology (Poland); **Jarosław Jureńczyk**, **Jacek Olszewski**, VIGO Photonics S.A. (Poland); **Kamil Pierściński**, **Dorota Pierścińska**, Lukaszewicz Research Network - Institute of Microelectronics and Photonics (Poland)

14100-27 • 15:40 - 16:00

Low-Loss amorphous silicon (a-Si) Cladded Germanium-on-Silicon Waveguides for On-Chip Mid-Infrared Spectroscopy

Author(s): **Aneesh V. Veluthandath**, **Siyu Chen**, **Hamza Rouabah**, **Glenn Churchill**, **Milos Nedeljkovic**, **Goran Mashanovich**, **Ganapathy Senthil Murugan**, Univ. of Southampton (United Kingdom)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14100-59 • 18:10 - 20:00

Edge coupling of a thin film lithium niobate device using a double-layer metasurface attached to an optical fiber

Author(s): **Jin Tae Kim**, Electronics and Telecommunications Research Institute (Korea, Republic of); **Xie Zou**, Kwangwoon Univ. (Korea, Republic of); **Duk-Yong Choi**, The Australian National Univ. (Australia); **Sang-Shin Lee**, Kwangwoon Univ. (Korea, Republic of)

14100-60 • 18:10 - 20:00

AI/ML-based process design for cavity etch in Silicon Photonics

Author(s): **Jiayu Sun**, Lam Research Corp (China); **Caigan Chen**, **Yanlong Guo**, **Pengfei Lyu**, **Yushan Chi**, Lam Research Corp. (China)

14100-61 • 18:10 - 20:00

Two-step lithography process for passive and active polymer structure combination based on host-guest systems

Author(s): **Ksenija Bobrovnika**, **Anete Sapne**, **Arturs Bundulis**, **Ralfs Lukins**, Institute of Solid State Physics, Univ. of Latvia (Latvia)

14100-62 • 18:10 - 20:00

Ceramic fiber combiner platform for single-mode coupling of multiple high-power lasers of different wavelengths into a polarization-maintaining endlessly single-mode large-mode-area fiber

Author(s): **Tobias Baselt**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); **Daniel Ruf**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany); **Madlen Schaarschmidt**, Westsächsische Hochschule Zwickau (Germany); **Stefanie Hildebrandt**, Fraunhofer Institute for Ceramic Technologies and Systems IKTS (Germany); **Torsten Otto**, SFK Schulz GmbH (Germany); **Kay Schaarschmidt**, Westsächsische Hochschule Zwickau (Germany), Leibniz-Institut für Photonische Technologien e.V. (Germany); **Carsten Schramm**, SFK Schulz GmbH (Germany); **Peter Hartmann**, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany), Westsächsische Hochschule Zwickau (Germany)

14100-63 • 18:10 - 20:00

MIRPIC PDK – bridging design and fabrication of mid-IR photonic integrated circuits

Author(s): **Stanisław Stopiński**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Andrzej Polatynski**, Warsaw Univ. of Technology (Poland), VPIphotonics GmbH (Germany); **Marcin Lelit**, Warsaw Univ. of Technology (Poland); **Krzysztof Anders**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Jacek Olszewski**, VIGO Photonics S.A. (Poland), Wrocław Univ. of Science and Technology (Poland); **Adrian Ślipek**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland); **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland)

14100-64 • 18:10 - 20:00

Slow-Light Enhanced Acousto-Optic Modulator on AlScN-SiO₂-SOI Hybrid Integrated Platform

Author(s): **Aoxue Zhang**, **Weixiong Huang**, **Lipeng Xia**, **Yuhan Sun**, ShanghaiTech Univ. (China), Shanghai Institute of Microsystem and Information Technology (China), Univ. of Chinese Academy of Sciences (China); **Yi Zou**, ShanghaiTech Univ. (China)

14100-65 • 18:10 - 20:00

Epitaxial design trade-offs and lateral mode profiles in hybrid III–V/Si quantum dot DBR lasers without III–V tapering

Author(s): **Konstantinos Papatryfonos**, Institut d'Electronique de Microélectronique et de Nanotechnologie (France); **Peter Raymond Smith**, **David R. Selviah**, Univ. College London (United Kingdom)

14100-66 • 18:10 - 20:00

Orientation-engineered strained BaTiO₃ thin films with giant Pockels coefficient

Author(s): **Young-Uk Jeon**, **Geunpil Kim**, Korea Institute of Science and Technology (Korea, Republic of), Korea Univ. (Korea, Republic of); **Ilhoon Song**, **Soo Jin Kim**, Korea Univ. (Korea, Republic of); **JoonHyun Kang**, **Kwanil Lee**, **Jongbum Kim**, Korea Institute of Science and Technology (Korea, Republic of)

14100-67 • 18:10 - 20:00

Measurement and simulation-based design centering for yield optimization in photonic integrated circuits

Author(s): **Bowen Wang**, University of Bristol (United Kingdom); **Yutian Zhang**, **Martin Cryan**, Univ. of Bristol (United Kingdom)

14100-68 • 18:10 - 20:00

Towards Scalable, Stable Neutral-Atom Qubit Control based on Full Photonic Integration

Author(s): **Florian Pausewang**, **Rasmus Bankwitz**, **Chenxi Xia**, **Xinyu Ma**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-69 • 18:10 - 20:00

Efficient on-chip Brillouin scattering on a tellurite-based photonic platform

Author(s): **Deepanshu Yadav**, **Melikhhan Bekir**, **Jyoti Bej**, **Thomas Schneider**, Technische Univ. Braunschweig (Germany)

14100-70 • 18:10 - 20:00

Waveguide-adapted Periodic Poling in Lithium Niobate for On-chip Photonic Neural Networks

Author(s): **Gunho Jason Gabriel Jun**, Kirchhoff-Institut für Physik (Germany); **Jan Brandes**, **Philipp Lohmann**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-71 • 18:10 - 20:00

Grating coupler strategies for integrated non-linear waveguides based on thin film lithium niobate

Author(s): **Sai Pranav Chokkara**, **Anagha K.V.**, **Jasleen Lugani**, Indian Institute of Technology Delhi (India)

14100-72 • 18:10 - 20:00

Micro transfer printing SNSPDs towards a fully integrated quantum photonic platform

Author(s): **Linus Krämer**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Roland Jaha**, Univ. Münster (Germany); **Isaac Luntadila Lufungula**, Univ. Gent, imec (Belgium); **Lin Jin**, Technische Univ. Delft (Netherlands); **Simone Ferrari**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-73 • 18:10 - 20:00

Plasmonic-enhanced ring resonators for high-sensitivity refractive index sensing.

Author(s): **Lukasz Kozlowski**, **Mateusz Slowikowski**, **Michal Jarosik**, **Dagmara Drecka**, **Piotr Lesiak**, **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland)

14100-74 • 18:10 - 20:00

Integrated Multichannel Transceivers for Free-Space Optical Communication

Author(s): **Aleksandra Paśnikowska**, **Aleksandra Bieniek-Kaczorek**, **Paweł Bortnowski**, **Mariusz Rojewski**, **Łukasz Kustos**, Warsaw Univ. of Technology (Poland); **Konrad Sochacki**, **Adrian Ślipek**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland); **Stanisław Stopiński**, **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), Lighthouse Ltd. (Poland)

14100-75 • 18:10 - 20:00

Photonic Integrated Circuits for Free-Space Optical Communication Systems

Author(s): **Krzysztof Anders**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Aleksandra Paśnikowska**, **Łukasz Kustos**, **Mariusz Rojewski**, Warsaw Univ. of Technology (Poland); **Stanisław Stopiński**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland); **Anna Jusza**, Warsaw Univ. of Technology (Poland), LightHouse sp. z o.o. (Poland); **Adrian Ślipek**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland); **Jacek Olszewski**, **Jerzy Kalwas**, **Rafał Ciechanski**, **Krzysztof Machalowski**, **Michał Abramowicz**, **Jarosław Jurencyk**, VIGO Photonics S.A. (Poland); **Dorota Pierścińska**, **Kamil Pierściński**, Lukaszewicz Research Network - Institute of Microelectronics and Photonics (Poland); **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland), VIGO Photonics S.A. (Poland), LightHouse sp. z o.o. (Poland)

14100-76 • 18:10 - 20:00

Passive Directional Couplers in Si and a-Si:H: A Comparative Study of Conventional and Shallow-Rib Strip Configurations for 0.5 × 0.22 μm Waveguides

Author(s): **Ernesto Velasquez**, **Paulo Lourenço**, **Alessandro Fantoni**, Instituto Superior de Engenharia de Lisboa (Portugal)

14100-77 • 18:10 - 20:00

Integrated silicon carbide photonics for color center-based quantum technology and classical applications

Author(s): **Martin Hofmann**, Patrick Berwian, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany); **Toby Bi**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany), Max-Planck-Institut für die Physik des Lichts (Germany); **Fabian Magerl**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Julietta Förthner**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Marina Scharin-Mehlmann**, **Christian Gobert**, **Michael Seidel**, **Christophe Pixius**, **Eberhard Bär**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany); **Pascal Del'Haye**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Jörg Schulze**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

14100-78 • 18:10 - 20:00

Non-invasive trimming of photonic integrated circuits via FIB deposition

Author(s): **Rongyang Xu**, **Shabnam Taheriniya**, **Zhongyu Tang**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-79 • 18:10 - 20:00

Applying atomic layer etching for enhanced SiC based photonic devices

Author(s): **Martin Siebert**, Fraunhofer IISB (Germany); **Toby Bi**, Max Planck Institute for the Science of Light (Germany), Department of Physics, Friedrich Alexander University Erlangen-Nuremberg (Germany); **Christian Miersch**, Fraunhofer Institute of Integrated Systems and Device Technology IISB (Germany); **Oleg Rusch**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany); **Jannik Schwarberg**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Martin Hofmann**, Fraunhofer Institute of Integrated Systems and Device Technology IISB (Germany); **Sarah Seidel**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany); **Pascal Del'Haye**, Max Planck Institute for the Science of Light (Germany), Department of Physics, Friedrich Alexander University Erlangen-Nuremberg (Germany); **Johannes Heitmann**, Fraunhofer Institute of Integrated Systems and Device Technology IISB (Germany), Institute of Applied Physics, TU Bergakademie Freiberg (Germany); **Franziska C. Beyer**, Fraunhofer Institute of Integrated Systems and Device Technology IISB (Germany)

14100-80 • 18:10 - 20:00

Integrated weighting and demultiplexing photonic circuits on SOI for optical CNNs

Author(s): **Terese Buchta**, **Lennart Meyer**, **Liam McRae**, **Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-81 • 18:10 - 20:00

Integrated plasmonic chemical and biological sensors based on optical waveguides and plasmonic nanostructures on silicon and silicon nitride platforms

Author(s): **Wridheeman Bhattacharya**, **Merbin John**, **Umang Chaturvedi**, **Anuj Dhawan**, Indian Institute of Technology Delhi (India)

14100-82 • 18:10 - 20:00

Optimization techniques for probe card alignment in wafer-level photonic integrated circuit testing

Author(s): **Mehdi Bejani**, Politecnico di Milano (Italy), Technoprobe (Italy); **Alessia Galli**, **Riccardo Vettori**, **Marco Mauri**, Technoprobe S.p.A. (Italy); **Stefano Mariani**, Politecnico di Milano (Italy)

14100-83 • 18:10 - 20:00

Hybrid diamond photonic platforms

Author(s): **Claudio Jaramillo Concha**, EPFL (Switzerland)

Wednesday 15 April 2026

SESSION 7: NONLINEAR OPTICS

15 April 2026 • 8:30 - 10:00 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Delphine Marris-Morini**, Ctr. de Nanosciences et de Nanotechnologies (France)

14100-29 • 8:30 - 9:00

Bandwidth-restricted microcombs in photonic crystal ring resonators (*Invited Paper*)

Author(s): **Erwan Lucas**, **Van Doan Le**, **Julien Fatome**, Lab. Interdisciplinaire Carnot de Bourgogne (France); **Alexander Ulanov**, Deutsches Elektronen-Synchrotron (Germany); **Tobias Herr**, Deutsche Elektronen-Synchrotron (Germany)

14100-30 • 9:00 - 9:20

Nonlinear integrated waveguide characterization by generalized heterodyne interferometry

Author(s): **Benoît Cluzel**, **Aurélien Coillet**, **Arnaud Rogemont**, **Gaya Benane**, **Rajath Sawant**, Univ. Bourgogne Europe (France)

14100-31 • 9:20 - 9:40

Waveguide loss model and geometry optimization for linear and nonlinear applications

Author(s): **Clément Selva**, **Kumar Kinjalk**, **Antoine Monmayrant**, **olivier gauthier-lafaye**, **Stéphane Calvez**, Lab d'Analyse et d'Architecture des Systèmes (France)

14100-32 • 9:40 - 10:00

Stimulated four-wave mixing in a low footprint Q-InP channel waveguide

Author(s): **Muneeb Farooq**, MBRYONICS Ltd. (Ireland); **Tanmay Mondal**, mBryonics Ltd. (Ireland); **Leidy Rodriguez**, Dublin City Univ. (Ireland); **Francisco Soares**, Univ. de Vigo (Spain); **Liam Barry**, Dublin City Univ. (Ireland); **Francisco Diaz**, Univ. de Vigo (Spain)

Coffee Break 10:00 - 10:30

SESSION 8: PILOT LINES

15 April 2026 • 10:30 - 11:50 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-33 • 10:30 - 11:00

Monolithic PIC platforms developed in the PIXEurope pilot line for open access services *(Invited Paper)*

Author(s): **Timo Aalto**, VTT Technical Research Ctr. of Finland Ltd. (Finland); **Boudewijn Docter**, TNO (Netherlands); **Gioele Piccoli**, Fondazione Bruno Kessler (Italy); **Joaquin Faneca**, Instituto de Microelectrónica de Barcelona (Spain); **Quentin Wilmart**, Univ. Grenoble Alpes (France), CEA-LETI (France); **Ryszard Piramidowicz**, Warsaw Univ. of Technology (Poland); **Victor Dolores-Calzadilla**, Technische Univ. Eindhoven (Netherlands), Photonic Integration Technology Ctr. (Netherlands); **Pascual Muñoz**, Univ. Politècnica de València (Spain); **Peter Ossieur**, imec (Belgium), Univ. Gent (Belgium)

14100-34 • 11:00 - 11:20

From Lab to Fab, design essentials for photonics manufacturing facilities

Author(s): **Eric Stuiver**, Deerns Nederland B.V. (Netherlands)

14100-35 • 11:20 - 11:50

TBA: Pilot lines *(Invited Paper)*

Author(s): **Stefano Signorini**, ICFO - Institut de Ciències Fotòniques (Spain)

SESSION 9: PACKAGING

15 April 2026 • 11:50 - 13:00 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-36 • 11:50 - 12:20

Integrated Micro-Optics: an enabler for integrated photonics *(Invited Paper)*

Author(s): **Guillaume Basset**, Frédéric Zanella, Christian Schneider, Noémie Morales, Luka Ciric, Mohamed Asbahi, Ton Offermans, CSEM SA (Switzerland); **Bruno Sfez**, Zoharay Ltd (Israel)

14100-37 • 12:20 - 12:40

Optimization of a metalens-based fiber-to-chip coupler for efficient and broadband coupling

Author(s): **Maori Cabanes**, CEA-LETI (France); **Christophe Sauvan**, Marc Roullay, Univ. Paris-Saclay (France), Lab. Charles Fabry, CNRS (France); **Laurent Mendizabal**, CEA-LETI (France); **Yvan Sortais**, Univ. Paris-Saclay (France), Lab. Charles Fabry, CNRS (France)

14100-38 • 12:40 - 13:00

Solder-reflow compatible, injection-molded thermoplastic micro lens arrays for co-packaged optics

Author(s): **Young Joon Choi**, SABIC (Netherlands); **Vamsy Godthi**, SABIC (India); **Gabrie Hoogland**, Jos van Gisbergen, SABIC (Netherlands); **Kamil Gradkowski**, Peter O'Brien, Tyndall National Institute (Ireland)

Lunch/Exhibition Break 13:00 - 14:10

SESSION 10: APPLICATIONS BEYOND TELECOMMUNICATIONS I

15 April 2026 • 14:10 - 15:40 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-39 • 14:10 - 14:40

TBA: Applications beyond Communications *(Invited Paper)*

Author(s): **Ségolène Olivier**, CEA-LETI-DOPT (France)

14100-40 • 14:40 - 15:00

Probabilistic photonic computing

Author(s): **Frank Brücknerhoff-Plückelmann**, Hendrik Borrás, Holger Fröning, Wolfram Pernice, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-41 • 15:00 - 15:20

Photon statistics Transducer

Author(s): **Julian Rasmus Bankwitz, Ravi Pradip, Julius Römer, Frank Brücknerhoff-Plückelmann, Falk Ebert, Lennart Meyer, Liam McRae, Jan Brandes**, Ruprecht-Karls-Univ. Heidelberg (Germany); **Akhil Varri**, Univ. Münster (Germany); **Xinyu Ma, Wolfram Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14100-42 • 15:20 - 15:40

TFLN platform for QKD and telecom applications

Author(s): **José Carlos Guerra Copete**, University Carlos III of Madrid (Spain), Arquimea Research Center (Spain); **Cristina de Dios Fernández, Eduardo Gordo Quiroga, Diego Moreno Ramos**, Univ. Carlos III de Madrid (Spain); **Borja Jerez González**, Arquimea Research Center (Spain)

Coffee Break 15:40 - 16:10

SESSION 11: APPLICATIONS BEYOND TELECOMMUNICATIONS II

15 April 2026 • 16:10 - 17:40 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-43 • 16:10 - 16:40

Quantum Correlations in Integrated Photonic Frequency Combs *(Invited Paper)*

Author(s): **Laurent Labonté**, Institut de Physique de Nice (France)

14100-44 • 16:40 - 17:00

Mitigating atmospheric turbulence in chaos-based free-space optical links using a programmable optical processor

Author(s): **Sara Zaminga**, Institute Polytechnic de Paris (France); **Andres Martinez**, Politecnico di Milano (Italy); **Heming Huang**, Institut Polytechnique de Paris (France); **Francesco Morichetti, Andrea Melloni**, Politecnico di Milano (Italy); **Frederic Grillot**, Institut Polytechnique de Paris (France), Univ. Laval (Canada)

14100-45 • 17:00 - 17:20

Characterization of an integrated multi-path interferometer on a CubeSat in space

Author(s): **Josefine Krause**, Technische Universität München (Germany), Friedrich-Schiller-Universität Jena (Germany); **Giulio Gualandi**, Politecnico di Milano (Italy), Institute for Photonics and Nanotechnologies (IFN), CNR (Italy); **Kabilan Sripathy**, Technische Universität München (Germany); **Giacomo Corielli**, Institute for Photonics and Nanotechnologies (IFN), CNR (Italy); **Philipp Werner, Lukas Wiese, Julian Bartholomäus, Mario Starke**, Technische Universität Berlin (Germany); **Sven Schwertfeger**, Ferdinand-Braun-Institut (Germany); **Elisa Da Ros**, Humboldt-Universität zu Berlin (Germany); **Joseph Lester**, Technische Universität Berlin (Germany); **Tjorben Matthes**, Technische Universität München (Germany); **Alexander Ling**, National University of Singapore (Singapore); **Markus Krutzik**, Ferdinand-Braun-Institut (Germany), Humboldt-Universität zu Berlin (Germany); **Tobias Vogl**, Technische Universität München (Germany)

14100-46 • 17:20 - 17:40

RF beam steering using a 5-bit, 4-channel reconfigurable optical true time delay chip on a 3 µm SOI platform

Author(s): **Somnath Paul, Jussi Saily, Markus Schroder, Timo Aalto**, VTT Technical Research Ctr of Finland Ltd (Finland)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing *(Plenary Presentation)*

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology *(Plenary Presentation)*

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 12: PIC TRAINING FOR CAREER DEVELOPMENT

16 April 2026 • 11:00 - 12:40 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Elisabeth Wintersteller**, Tyndall National Institute (Ireland)

14100-47 • 11:00 - 11:25

Skilling up within an integrated photonics ecosystem: just-in-time workforce training for More Moore (Invited Paper)

Author(s): **Sajan Saini, Anuradha M. Agarwal**, Massachusetts Institute of Technology (United States); **Samuel Serna**, Bridgewater State University (United States); **Jurgen Michel, Ryan Chadwick, Trevor Morrissey, Jaymie Krambeck, Ira Fay, Ajay Gupta**, Massachusetts Institute of Technology (United States); **Christopher Striemer, Robert Geer**, AIM Photonics Institute (United States); **Alan R. Kost**, The University of Arizona (United States); **E. J. Vardaman**, TechSearch International, Inc. (United States); **Matthew Hall, Kamil Gradkowski, Elisabeth Wintersteller, Peter O'Brien**, Tyndall National Institute (Ireland); **Thomas G. Brown**, University of Rochester (United States); **Juejun Hu, Lionel C. Kimerling**, Massachusetts Institute of Technology (United States)

14100-48 • 11:25 - 11:50

TBA1: PIC training-career development II (Invited Paper)

Author(s): **Elisabeth Wintersteller**, Tyndall National Institute (Ireland)

14100-49 • 11:50 - 12:15

TBA2: PIC training-career development III (Invited Paper)

Author(s): **Yi Wang**, Technische Univ. Eindhoven (Netherlands)

14100-50 • 12:15 - 12:40

PIC Bootcamp: Hands-On, Industry-Relevant Training Courses for PICs (Invited Paper)

Author(s): **Emre Kaplan**, Univ. of Southampton (United Kingdom); **Anke Lohmann**, Anchored In (United Kingdom); **Khaled Mohammed**, Univ. of Southampton (United Kingdom); **Friederike Jöhlinger**, Wave Photonics (United Kingdom); **Craig Godbold**, Luceda Photonics (Belgium); **Eleni Tsanidou, Martin Ebert, Weilin Jin, Ramsey Selim, Tom Carnay**, Univ. of Southampton (United Kingdom); **Philip Mitchell**, Bay Photonics (United Kingdom); **Callum Littlejohns**, Univ. of Southampton (United Kingdom)

Lunch Break 12:40 - 13:40

SESSION 13: DEVICES

16 April 2026 • 13:40 - 15:10 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-51 • 13:40 - 14:10

Self-illuminated Plasmonic Biosensor Enabled by Inelastic Tunneling Luminescence (Invited Paper)

Author(s): **Jihye Lee**, EPFL (Switzerland); **Yina Wu**, ICFO - Institut de Ciències Fotòniques (Spain); **Ivan Sinev, Mikhail Masharin**, EPFL (Switzerland); **Eduardo J. C. Dias, Javier García de Abajo**, ICFO - Institut de Ciències Fotòniques (Spain); **Hatice Altug**, EPFL (Switzerland)

14100-52 • 14:10 - 14:30

Resonator Detuning Monitoring using Frequency-Swept Phase Modulation

Author(s): **Weizhong Zhang, Abdou Shetewy, Kambiz Jamshidi**, TU Dresden (Germany)

14100-53 • 14:30 - 14:50

Phase-controlled on-chip interferometric excitation of an infinity-loop microresonator

Author(s): **Davide Olivieri, Bulent Aslan, Stefano Biasi**, Univ. degli Studi di Trento (Italy); **Riccardo Franchi**, Boston Univ. (United States), Univ. degli Studi di Trento (Italy); **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy)

14100-54 • 14:50 - 15:10

Dynamic diffraction-efficiency control of grating couplers in dielectric microcavities

Author(s): **Jakob Georg Lindenthal, Frithjof Pietsch, Markas Sudzius, Johannes Benduhn, Karl Leo**, TU Dresden (Germany)

Coffee Break 15:10 - 15:30

SESSION 14: TESTING AND DEVICES

16 April 2026 • 15:30 - 17:00 | Boston/Salon 11 (Niveau/Level 1)

Session Chair(s): **Peter O'Brien**, Tyndall National Institute (Ireland)

14100-55 • 15:30 - 16:00

TBA: Testing and devices (Invited Paper)

Author(s): **Sylwester Latkowski**, Technische Univ. Eindhoven (Netherlands)

14100-56 • 16:00 - 16:20

Electrical Control of Multilevel Optical Reflectivity in Phase-Change Materials

Author(s): **Chirine Saadi**, CNRS, Ecole Centrale de Lyon, INSA Lyon, Université Claude Bernard Lyon 1, CPE Lyon, INL, UMR5270, 69130 Ecully, France (France); **Capucine Laprais**, **Guillaume Saint-Girons**, **Lotfi Berguiga**, **Nicolas Baboux**, **Sébastien Cueff**, Institut des Nanotechnologies de Lyon (France)

14100-57 • 16:20 - 16:40

Ultra broadband polarization splitter for advanced photonics applications

Author(s): **Dura Shahwar**, VTT technical research centre of Finland (Finland); **Srivathsa Bhat**, **Päivi Heimala**, **Timo Aalto**, VTT Technical Research Ctr. of Finland Ltd. (Finland)

14100-58 • 16:40 - 17:00

Narrow bandwidth thermally tunable optical filters with higher order coupled resonator optical waveguides (CROWs) in a post-CMOS compatible silicon nitride platform

Author(s): **Muluaem Wale Balkie**, Fraunhofer institute for microelectronic circuits and systems IMS (Germany); **Marcus Westhues**, Fraunhofer-Institut für Mikroelektronische Schaltungen und Systeme IMS (Germany); **Roman Burkard**, Univ. Duisburg-Essen (Germany); **Julia Hauser**, **Thomas Geruschke**, **Aleksandar Nesic**, Fraunhofer-Institut für Mikroelektronische Schaltungen und Systeme IMS (Germany); **Anna Lena Schall-Giesecke**, Fraunhofer-Institut für Mikroelektronische Schaltungen und Systeme IMS (Germany), Univ. Duisburg-Essen (Germany), Center for Nanointegration Duisburg-Essen (CENIDE) (Germany)

CONFERENCE 14101

Organic Electronics and Photonics: Fundamentals and Devices V

14 - 15 April 2026 | Adenauer (Niveau/Level 1)

Conference Chair(s): Koen Vandewal, Wouter Maes, Univ. Hasselt (Belgium); Sebastian Schellhammer, TU Dresden (Germany)

Program Committee: Natalie Banerji, Univ. Bern (Switzerland); Malte C. Gather, Univ. zu Köln (Germany); Frank Ortmann, Technische Univ. München (Germany); Sebastian Reineke, TU Dresden (Germany); Natalie Stingelin, Georgia Institute of Technology (United States); Eli Zysman-Colman, Univ. of St. Andrews (United Kingdom)

Tuesday 14 April 2026

SESSION 1: ORGANIC BULK HETEROJUNCTIONS: NANOPARTICLES AND DEVICES

14 April 2026 • 8:30 - 10:30 | Adenauer (Niveau/Level 1)

Session Chair(s): Koen Vandewal, Univ. Hasselt (Belgium)

14101-1 • 8:30 - 9:00

Ternary Organic Photovoltaics for High-Efficiency Energy Harvesting Under Urban Illumination (*Invited Paper*)

Author(s): Sergi Riera-Galindo, Institut de Ciència de Materials de Barcelona (Spain)

14101-2 • 9:00 - 9:20

Inhibition of photon emission to reduce open circuit voltage losses in organic solar cells.

Author(s): Francisco Bernal, Chiara Cortese, ICFO - Institut de Ciències Fotòniques (Spain); Jordi Martorell, ICFO - Institut de Ciències Fotòniques (Spain), Univ. Politècnica de Catalunya (Spain)

14101-3 • 9:20 - 9:40

Water-based inks for designing vertical composition gradients in organic solar cells

Author(s): Alejandro Salinas Villaseñor, Christine Lartigau-Dagron, Antoine Bousquet, Univ. de Pau et des Pays de l'Adour (France); Sylvain Chambon, Lab. d'Intégration du Matériau au Système (France)

14101-4 • 9:40 - 10:00

The power of the pull: electron-withdrawing group effects in conjugated polymer nanoparticles for solar hydrogen production

Author(s): Adrian Lathouwers, Hasselt University (Belgium); Alexandre Holmes, Chalmers Univ. of Technology (Sweden); Thomas Leendertse, Univ. Hasselt (Belgium); Ergang Wang, Chalmers Univ. of Technology (Sweden); Anitha Ethirajan, Koen Vandewal, Laurence Lutsen, Wouter Maes, Univ. Hasselt (Belgium)

14101-5 • 10:00 - 10:30

Benchmarking organic photodiodes near the noise floor (*Invited Paper*)

Author(s): Siddhartha Sagar, Caroline Murawski, TU Dresden (Germany)

Coffee Break 10:30 - 11:00

SESSION 2: ORGANIC LUMINESCENCE I

14 April 2026 • 11:00 - 12:50 | Adenauer (Niveau/Level 1)

Session Chair(s): Malte C. Gather, Univ. zu Köln (Germany)

14101-6 • 11:00 - 11:30

Photonic technologies with minimalistic footprint based on room-temperature phosphorescence (*Invited Paper*)

Author(s): Sebastian Reineke, TU Dresden (Germany)

14101-7 • 11:30 - 11:50

Adjusting emission distribution and efficiency of tandem organic light emitting diodes via transport layers and emission layer sequence modulation

Author(s): **Fuh-Shyang Juang**, National Formosa Univ (Taiwan); **Jun-Lin Huang, Hung-Lun Lin, Min-Chieh Lin, Shys-Jer Huang, Yu-chen Zheng**, National Formosa Univ. (Taiwan)

14101-8 • 11:50 - 12:10

Near infrared OLEDs for neuroimplants

Author(s): **Sabina Hillebrandt, Sumite Mohapatra**, Univ. zu Köln (Germany); **Ahmed G. Abdelmagid, Konstantinos S. Daskalakis**, Univ. of Turku (Finland); **Andreas Mischok**, Univ. zu Köln (Germany); **Malte C. Gather**, Univ. zu Köln (Germany), Univ. of St. Andrews (United Kingdom)

14101-9 • 12:10 - 12:30

Rational design of purely organic phosphorescent emitters for photonic applications

Author(s): **Uliana Tsiko, Sebastian Kaiser, Sebastian Reineke, Sebastian Schellhammer**, TU Dresden (Germany)

14101-10 • 12:30 - 12:50

Singe-emitter white OLEDs via microcavity spectral engineering

Author(s): **Michael Papachatzakis**, Univ. of Turku (Finland)

Lunch/Exhibition Break 12:50 - 13:50

SESSION 3: ADVANCED ORGANIC SEMICONDUCTING MATERIALS: SYNTHESIS AND CHARACTERIZATION

14 April 2026 • 13:50 - 16:10 | Adanauer (Niveau/Level 1)

Session Chair(s): **Wouter Maes**, Univ. Hasselt (Belgium)

14101-11 • 13:50 - 14:20

Defect-property relationships of n-type conjugated polymers (*Invited Paper*)

Author(s): **Michael Sommer, Diego Ropero Hinojosa**, Technische Univ. Chemnitz (Germany)

14101-12 • 14:20 - 14:40

Biosourced divanillin-thiazolothiazole polymers for organic electronics: toward sustainable technological solutions

Author(s): **Josée Labrecque, Louis-Philippe Boivin**, Kemitek (Canada); **David Gendron**, Kemitek (Canada), Université Laval (Canada)

14101-13 • 14:40 - 15:00

Molecular-level characterisation of conjugated polymers using ESD-STM

Author(s): **Matus Stredansky, Paola Mantegazza, Giovanni Costantini**, Univ. of Birmingham (United Kingdom); **Wouter Maes, Daan Coenen**, Institute for Materials Research (imo-imomec), Univ. Hasselt (Belgium)

14101-14 • 15:00 - 15:20

A Reliable Methodology for the Preparation and Accurate Characterization of Semiconducting Donor-Acceptor Block Copolymers

Author(s): **Antoine Curé, Pierre-Alain Bayle, Lucie Rivet, Yann Kervella, Renaud Demadrille, Cyril Aumaitre**, CEA-DRF (France)

14101-15 • 15:20 - 15:40

Multiphoton polymerization of organic semiconductors

Author(s): **Georgii Gvindziliia, Manuel Jahn**, Institut für Angewandte Physik, Johannes Kepler Univ. Linz (Austria); **Christian Angerer**, Institut für Polymerwissenschaften, Johannes Kepler Univ. Linz (Austria); **Clemens Schwaiger**, Institut für Angewandte Physik, Johannes Kepler Univ. Linz (Austria); **Dmitry Sivun, Jaroslav Jacak**, FH Oberösterreich (Austria); **Sabine Hild**, Institut für Polymerwissenschaften, Johannes Kepler Univ. Linz (Austria); **Thomas A. Klar**, Institut für Angewandte Physik, Johannes Kepler Univ. Linz (Austria)

14101-27 • 15:40 - 16:10

Conductivity and transport in highly doped conjugated polymers (*Invited Paper*)

Author(s): **Natalie Banerji**, Univ. Bern (Switzerland)

Coffee Break 16:10 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 4: CHIRAL ORGANIC (OPTO)ELECTRONICS: THEORY

15 April 2026 • 8:30 - 10:30 | Adanauer (Niveau/Level 1)

Session Chair(s): **Frank Ortmann**, Technische Univ. München (Germany)

14101-22 • 8:30 - 9:00

Chirality: a few concepts from supramolecular chirality to CISS (Invited Paper)

Author(s): **Anna Painelli**, **Matteo Bedogni**, **Francesco Bertocchi**, **Davide Giavazzi**, **D. K. Andrea Phan Huu**, **Lorenzo Savi**, **Cristina Sissa**, Univ. degli Studi di Parma (Italy)

14101-23 • 9:00 - 9:20

Hierarchical modelling of chiral cyanine aggregates

Author(s): **Francesco Bertocchi**, **Shahana Nizar**, **Cristina Sissa**, Univ. degli Studi di Parma (Italy); **Minghao Li**, Univ. Basel (Switzerland); **Thomas W. Ebbesen**, **Cyriaque Genet**, Institut de Science et d'Ingénierie Supramoléculaires (France); **Anna Painelli**, Univ. degli Studi di Parma (Italy)

14101-24 • 9:20 - 9:40

Large scale frontier orbital energy determination of disordered small-molecule organic semiconductors using exciplex emission spectra

Author(s): **Christian B. McDonald**, **Reinder Coehoorn**, **Hiroki Tomita**, **Louka L. Brull**, **Nanno G. de Rooij**, **Lucas R. L. Norg**, **Milo Clément**, Technische Univ. Eindhoven (Netherlands)

14101-25 • 9:40 - 10:00

Finding materials for suppressed triplet exciton quenching in phosphorescent OLEDs

Author(s): **Peter A. Bobbert**, **Clint van Hoesel**, **Hiroki Tomita**, **Reinder Coehoorn**, Technische Univ. Eindhoven (Netherlands)

14101-26 • 10:00 - 10:30

Molecular ordering and transformation dynamics in ultrastable organic semiconductor glasses (Invited Paper)

Author(s): **Javier Rodriguez-Vlejo**, **Marta Ruiz**, **Xavier Casí**, **Cristian Rodriguez-Tinoco**, **Marta Gonzalez-Silveira**, Univ. Autònoma de Barcelona (Spain); **Jordi Fraxedas**, Institut Català de Nanociència i Nanotecnologia (ICN2) (Spain)

Coffee Break 10:30 - 11:00

SESSION 5: ORGANIC MIXED ELECTRONIC-IONIC CONDUCTION

15 April 2026 • 11:00 - 12:00 | Adanauer (Niveau/Level 1)

Session Chair(s): **Michael Sommer**, Technische Univ. Chemnitz (Germany)

14101-28 • 11:00 - 11:20

Side- Chain Engineering and Anisotropic Alignment films for High-Performance Organic Electrochemical Transistors

Author(s): **Wissal Errafi**, Institut de Chimie et Procédés pour l'Energie, l'Environnement et la Santé (France)

14101-29 • 11:20 - 11:40

Hyperspectral imaging of Organic Electro-Chemical Transistor

Author(s): **Julien Réhault**, **Natalie Banerji**, **Christian Franz**, **Alan Eduardo Avila Ramirez**, Univ. Bern (Switzerland)

14101-30 • 11:40 - 12:00

Reconfigurable THz Metasurfaces enabled by Organic Electrochemical Modulation

Author(s): **Jonathan Scott**, **Atsutse Kludze**, **Yasaman Ghasempour**, **Barry P. Rand**, Princeton Univ. (United States)

Lunch/Exhibition Break 12:00 - 13:20

SESSION 6: ORGANIC LUMINESCENCE II

15 April 2026 • 13:20 - 15:10 | Adanauer (Niveau/Level 1)
Session Chair(s): **Sebastian Schellhammer**, TU Dresden (Germany)

14101-31 • 13:20 - 13:50

Electrochemically induced hyperfluorescence based on the formation of charge-transfer excimers (*Invited Paper*)

Author(s): **Malte C. Gather**, Univ. zu Köln (Germany); **Chang-Ki Moon**, Univ. zu Köln (Germany); **Yuka Yasuda**, **Yu Kusakabe**, Kyoto Univ. (Japan); **Anna Popczyk**, Univ. zu Köln (Germany); **Shohei Fukushima**, Kyoto Univ. (Japan); **Julian F. Butscher**, **Matthias König**, **Ranjini Sircar**, **Nachiket Pathak**, Univ. zu Köln (Germany); **Stefan Pulver**, Univ. of St. Andrews (United Kingdom); **Hironori Kaji**, Kyoto Univ. (Japan)

14101-32 • 13:50 - 14:10

Photophysics of organic dyes: from solution to amorphous matrices

Author(s): **Brunella Bardi**, **Davide Giavazzi**, **Anna Painelli**, Univ. degli Studi di Parma (Italy); **Andrea Lapini**, Univ. degli Studi di Parma (Italy), LENS - Lab. Europeo di Spettroscopia Non-Lineari (Italy)

14101-33 • 14:10 - 14:30

Optical properties and amplified spontaneous emission in red and near infra-red region of pyraniliden molecular glasses

Author(s): **Aivars Vembris**, **Marta Liedskalniņa**, **Patricija Paulsone**, Institute of Solid State Physics, Univ. of Latvia (Latvia); **Elmars Zarins**, **Valdis Kokars**, Riga Technical Univ. (Latvia)

14101-34 • 14:30 - 14:50

High-efficiency blue OLEDs incorporating Europium-based emitter

Author(s): **Mahmoud Soleimani**, TU Dresden (Germany), beeOLED GmbH (Germany); **Toni Bärschneider**, beeOLED GmbH (Germany); **Sebastian Schellhammer**, TU Dresden (Germany); **Carsten Rothe**, beeOLED GmbH (Germany); **Sebastian Reineke**, TU Dresden (Germany)

14101-35 • 14:50 - 15:10

Optical characterization of solution processable Alq₃ derivatives for organic solid-state lasers

Author(s): **Patricija Paulsone**, Institute of Solid State Physics, Univ. of Latvia (Latvia); **Elmars Zarins**, **Lauma Laipniece**, **Mara Plotniece**, **Valdis Kokars**, Riga Technical Univ. (Latvia); **Aivars Vembris**, Institute of Solid State Physics, Univ. of Latvia (Latvia)

Coffee Break 15:10 - 15:40

SESSION 7: EXCITONICS AND POLARITONICS

15 April 2026 • 15:40 - 17:40 | Adanauer (Niveau/Level 1)
Session Chair(s): **Sebastian Reineke**, TU Dresden (Germany)

14101-17 • 15:40 - 16:10

Using weak and strong interactions to control energetics and excited state relaxation pathways in molecular based systems (*Invited Paper*)

Author(s): **Karl Börjesson**, Göteborgs Univ. (Sweden)

14101-18 • 16:10 - 16:30

Ultra-Strong Coupling for Angle-Independent Emission and Filtering in Organic Optoelectronics

Author(s): **Andreas Mischok**, Univ. zu Köln (Germany); **Ahmed G. Abdelmagid**, Univ. zu Köln (Germany), Univ. of Turku (Finland); **Simon Lennartz**, **Soyoung Boo**, **Sabina Hillebrandt**, **Julia Witt**, Univ. zu Köln (Germany); **Konstantinos S. Daskalakis**, Univ. of Turku (Finland); **Malte C. Gather**, Univ. zu Köln (Germany)

14101-19 • 16:30 - 16:50

Polaritons as a Photonic Testbed for Advancing Organic Optoelectronics

Author(s): **Konstantinos S. Daskalakis**, Univ. of Turku (Finland)

14101-20 • 16:50 - 17:10

All-solution-processed organic DFB lasers for efficient light generation and optical sensing

Author(s): **Álex Farrando-Pérez**, **Pablo Pasqués-Gramaje**, **José M. Villalvilla**, **José A. Quintana**, **Pedro G. Boj**, **María A. Díaz-García**, Univ. de Alicante (Spain)

14101-21 • 17:10 - 17:40

Optical response and exciton transport in organic semiconductors (*Invited Paper*)

Author(s): **Frank Ortmann**, Technische Univ. München (Germany)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14101-36 • 17:45 - 19:30

In situ molecular passivation for high-efficiency and spectrally stable pure-blue vacuum-evaporated perovskite light emitting diodes

Author(s): **Jiyoung Kwon**, Korea Advanced Institute of Science and Technology (KAIST) (Korea, Republic of); **Byungha Shin**, KAIST (Korea, Republic of)

14101-37 • 17:45 - 19:30

Fabrication and characterization of organic metasurfaces for photonic devices

Author(s): **Sinan Baran Akdemir**, **Angelo Angelini**, Istituto Nazionale di Ricerca Metrologica (Italy); **Mateo Rosero-Realpe**, Politecnico di Torino (Italy); **Eleonora Cara**, Istituto Nazionale di Ricerca Metrologica (Italy); **Katia Sparnacci**, **Francesco Bisio**, Univ. degli Studi del Piemonte Orientale Amedeo Avogadro (Italy)

14101-38 • 17:45 - 19:30

Two-fold increase in blue MR-TADF OLED stability via perdeuteration of the emitters

Author(s): **Clément Wasiela**, CEA-LETI-DOPT (France), LPL, CNRS UMR 7538, Univ. Sorbonne Paris Nord (France); **Maxime Jay**, CEA-JOLIOT-DMTS (France); **Maxime Remond**, Institut des Sciences Chimiques de Rennes, Univ. de Rennes 1, CNRS (France); **Christelle Laugier**, CEA-LETI-DOPT (France); **Grégory Pieters**, CEA-JOLIOT-DMTS (France); **Ludovic Favereau**, ISCR, CNRS UMR 6226, Univ. Rennes (France); **Alexis PA Fischer**, LPL, CNRS UMR 7538, Univ. Sorbonne Paris Nord (France); **Benoît Racine**, CEA-LETI-DOPT (France); **Mahmoud Chakaroun**, LPL, CNRS UMR 7538, Univ. Sorbonne Paris Nord (France)

14101-39 • 17:45 - 19:30

Bipolar DPQ-derived acceptors enabling ultra-low-voltage and high-luminance red PhOLEDs

Author(s): **Kuan-Yu Su**, **Hai-Ching Su**, National Yang Ming Chiao Tung University (Taiwan); **Yu-Ru Yang**, **Pei-Yu Lai**, **Ting-Hsuan Chuang**, Providence Univ. (Taiwan); **Chin-Wei Lu**, Providence University (Taiwan); **Yi-Jhan Huang**, **Chih-Hao Chang**, Yuan Ze University (Taiwan)

14101-40 • 17:45 - 19:30

Exciton binding energy of phosphorescent emitter molecules in OLEDs

Author(s): **Hiroki Tomita**, **Lucas R. L. Norg**, **Patrick Diederer**, **Clint van Hoesel**, **Christ H. L. Weijtens**, **Peter A. Bobbert**, **Reinder Coehoorn**, Technische Univ. Eindhoven (Netherlands)

14101-41 • 17:45 - 19:30

Activated phosphorescence for organic photonic devices from oxygen-free solution processing

Author(s): **Lucy Winkler**, **Sebastian Schellhammer**, **Sebastian Reineke**, TU Dresden (Germany)

14101-42 • 17:45 - 19:30

Stability of the superradiant state in exciton-phonon interactions and the fundamental soliton in quasi-2D hybrid perovskites

Author(s): **Boris D. Fainberg**, Holon Institute of Technology (Israel); **Andrey Gladkij**, **Nikolay Veretenov**, **Nikolay Rosanov**, Ioffe Institute (Russian Federation); **Boris Malomed**, Tel Aviv Univ. (Israel), Instituto de Alta Investigacion, Univ. de Tarapacá (Chile); **Vladimir Osipov**, Institute for Advanced Study in Mathematics, Harbin Institute of Technology (China), Suzhou Research Institute, Harbin Institute of Technology (China)

14101-43 • 17:45 - 19:30

Phase- and orientation-dependent fluorescence of DAST crystals for photonic sensor applications

Author(s): **Iuliia Riabenko**, Carleton University (Canada); **Ronald E. Miller**, Carleton Univ. (Canada); **Galina Babenko**, State Scientific Institution "Institute for Single Crystals" of National Academy of Sciences of Ukraine (Ukraine); **Alexander Roshal**, **Mariana Barannyk**, V. N. Karazin Kharkiv National Univ. (Ukraine); **Oleksii Kolomoitsev**, V.N. Karazin Kharkiv National University (Ukraine); **Konstantin Beloshenko**, V. N. Karazin Kharkiv National Univ. (Ukraine)

14101-44 • 17:45 - 19:30

Multiscale modelling of ultrafast organic optoelectronics

Author(s): **Pugazharasu Anancia Devaneyan**, Technical University of Eindhoven (Netherlands); **Reinder Coehoorn**, **Daan Lenstra**, **Peter A. Bobbert**, Technische Univ. Eindhoven (Netherlands)

14101-45 • 17:45 - 19:30

Enhancing the efficiency of ultra-thin EML OLEDs by a dual EML approach

Author(s): **Edoardo Stanzani**, FLUXiM AG (Switzerland); **Michele Forzatti**, Univ. de València (Spain); **Simon Zeder**, **Sandra Jenatsch**, FLUXiM AG (Switzerland); **Daniel Tordera**, **Henk Bolink**, Univ. de València (Spain); **Vasilis Georgakopoulos**, **Balthasar Blülle**, **Beat Ruhstaller**, FLUXiM AG (Switzerland)

14101-46 • 17:45 - 19:30

Analysis of charge carrier recombination in organic polymer nanoparticles for photocatalytic hydrogen generation using time-resolved photoluminescence spectroscopy

Author(s): **Ferdinando Muraca**, **Thomas Leendertse**, **Anitha Ethirajan**, **Koen Vandewal**, Univ. Hasselt (Belgium)

14101-47 • 17:45 - 19:30

Photocatalytic H₂-generating nanoparticles and their potential use in cancer therapy

Author(s): **Thomas Leendertse**, **Ferdinando Muraca**, Institute for Materials Research (IMO-IMOMEC) / Hasselt University (Belgium), IMEC (Belgium); **Adrian Lathouwers**, Univ. Hasselt (Belgium), imec (Belgium); **Alessia Pancaro**, Institute for Materials Research (IMO-IMOMEC) / Hasselt University (Belgium), Vlaamse Instelling voor Technologisch Onderzoek (VITO) (Belgium), IMEC (Belgium); **Wouter Maes**, Univ. Hasselt (Belgium), imec (Belgium); **Koen Vandewal**, **Anitha Ethirajan**, Institute for Materials Research (IMO-IMOMEC) / Hasselt University (Belgium), IMEC (Belgium)

14101-48 • 17:45 - 19:30

High-Efficiency Lead-Free CH₃NH₃SnBr₃ Perovskite Solar Cells: A Multiphysics Simulation Approach

Author(s): **Virender Singh**, **Rahul Runthala**, **Nitika Grover**, **Pankaj Arora**, Birla Institute of Technology and Science, Pilani (India)

14101-49 • 17:45 - 19:30

Electronically Tuned Dipyromethene and BODIPY Platforms for Selective Fluoride and Cyanide Detection

Author(s): **Harshita Saroj**, **Nitika Grover**, **Dalip Kumar**, **Pankaj Arora**, **Rahul Runthala**, Birla Institute of Technology and Science, Pilani (India)

14101-50 • 17:45 - 19:30

Fast-switching, high-efficiency AC/DC perovskite nanocrystal LEDs for modulation beyond 100 kHz

Author(s): **Gerrit Stemmler**, **Sudhir Kumar**, **Chih-Jen Shih**, ETH Zurich (Switzerland)

14101-51 • 17:45 - 19:30

Luminescent organic nanoaggregates for pollution detection in water

Author(s): **Sagarika Mishra**, Univ. of St. Andrews (United Kingdom)

14101-52 • 17:45 - 19:30

Fabrication and performance evaluation of a collagen-integrated IGZO TFT pressure biosensor with an extended piezoelectric sensing range

Author(s): **Denice Feria**, National Taiwan Ocean University (Taiwan); **Jun-Hong Lin**, **Jan-Tian Lian**, **Tai-Yuan Lin**, National Taiwan Ocean Univ. (Taiwan)

14101-53 • 17:45 - 19:30

Whispering-Gallery-Mode Optical Interferometer using Organic Crystal Microring Resonators

Author(s): **Melchi Chosenyah**, Univ of Hyderabad (India); **Rajaram Swaraj**, **Ankur Khapre**, **Rajadurai Chandrasekar**, Univ. of Hyderabad (India)

14101-54 • 17:45 - 19:30

Interfacial Charge Transfer Acceleration and Thermal Stress Release for High-Performance Perovskite/Silicon Tandem Solar Cells

Author(s): **Shengjie Du**, Key Lab. of Artificial Micro- and Nano-Structures of Ministry of Education of China (China), Wuhan Univ. (China)

14101-55 • 17:45 - 19:30

Resolving overlapping intra- and intermolecular vibrational signatures by microcavity-enhanced Raman spectroscopy

Author(s): **Arianna Quesada Ramirez**, Institut de Ciència de Materials de Barcelona (Spain), Hasselt Univ. (Belgium); **Alex Perevedentsev**, **Agustin Mihi**, Institut de Ciència de Materials de Barcelona (Spain); **Koen Vandewal**, Univ. Hasselt (Belgium); **Mariano Campoy-Quiles**, Institut de Ciència de Materials de Barcelona (Spain)

14101-56 • 17:45 - 19:30

Chiral polyfluorene-TADF polymers for circularly polarized OLEDs

Author(s): **Louis Jackers**, Univ. Hasselt (Belgium); **Rishi Shivhare**, University of Sydney (Australia); **Laurence Lutsen**, Univ. Hasselt (Belgium); **Wouter Herrebout**, University of Antwerp (Belgium); **Koen Vandewal**, **Wouter Maes**, **Gijs Verschaeve**, **Giel Swennen**, Univ. Hasselt (Belgium)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

CONFERENCE 14102

Photosensitive Materials and their Applications IV

14 - 15 April 2026 | Stuttgart/Salon 15 (Niveau/Level 1) Tue, Etoile A
(Niveau/Level 1) Wed

Conference Chair(s): Robert R. McLeod, Univ. of Colorado Boulder (United States); Inmaculada Pascual Villalobos, Univ. de Alicante (Spain); Yasuo Tomita, Univ. of Electro-Communications (Japan)

Program Committee: Andrea Bianco, Istituto Nazionale di Astrofisica (Italy); Augusto Beléndez, Univ. de Alicante (Spain); Hans I. Bjelkhagen, Glyndwr Univ. (United Kingdom); Friedrich-Karl Bruder, Covestro AG (Germany); Ivan B. Divliansky, CREOL, The College of Optics and Photonics, Univ. of Central Florida (United States); Antonio Fimia Gil, Univ. Miguel Hernández (Spain); Martin Fally, Univ. Wien (Austria); Sergi Gallego Rico, Univ. de Alicante (Spain); Jinxin Guo, Beijing Univ. of Technology (China); Yuan Luo, National Taiwan Univ. (Taiwan); Christian Ley, Univ. de Haute Alsace (France); Izabela Naydenova, Dublin Institute of Technology (Ireland); Nikolay V. Nikonorov, ITMO Univ. (Russian Federation); Sergey B. Odínokov, Bauman Moscow State Technical Univ. (Russian Federation); Tina Sabel, Technische Univ. Berlin (Germany); Oksana V. Sakhno, Fraunhofer-Institut für Angewandte Polymerforschung IAP (Germany); Takeo Sasaki, Tokyo Univ. of Science (Japan); Kalaichelvi Saravanamuttu, McMaster Univ. (Canada); Amy C. Sullivan, Univ. of Colorado Boulder (United States); Xiaodi Tan, Fujian Normal Univ. (China)

Tuesday 14 April 2026

SESSION 1: PHOTOPOLYMER MATERIALS AND APPLICATIONS

14 April 2026 • 8:50 - 10:20 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): Yasuo Tomita, The Univ. of Electro-Communications (Japan)

14102-1 • 8:50 - 9:20

Nyxene, a Photochromic-Photopolymer System for Reconfigurable DOEs (*Invited Paper*)

Author(s): Davide Giughello, INAF - Osservatorio Astronomico di Brera (Italy), Politecnico di Milano (Italy); Andrea Bianco, Michele Frangiamore, INAF - Osservatorio Astronomico di Brera (Italy); Matilde Danielli, Politecnico di Milano (Italy); Dhiraj Gupta, INAF - Osservatorio Astronomico di Brera (Italy); Marek Cigán, Peter Magdolen, Comenius Univ. in Bratislava (Slovakia)

14102-2 • 9:20 - 9:40

Development of MPC-Functionalized Photohydrogels as Advanced Holographic Biosensors

Author(s): Belén Nieto-Rodríguez, Universidad de Alicante (Spain); Manuel G. Ramírez, Tomás Lloret López, Manuel Ortuño, Augusto Beléndez, Inmaculada Pascual, Univ. de Alicante (Spain)

14102-3 • 9:40 - 10:00

Designing Spectrally Tuned Holograms via Photoresponsive Material Modelling

Author(s): Mitchell Broad, Trulife Optics (United Kingdom); Sophie Viaene, Joeri Lenaerts, Andrey Volkov, TruLife Optics Ltd. (United Kingdom)

14102-4 • 10:00 - 10:20

Simultaneous RGB multiplexing in Bayfol HX200 photopolymer for augmented reality eyewear

Author(s): Tomás Lloret, Univ de Alicante (Spain); José Carlos García-Vázquez, Juan Carlos Bravo, Jorge Francés, Cristian Neipp, Sergi Gallego, Manuel Ortuño, Manuel G. Ramírez, Inmaculada Pascual, Augusto Beléndez, Andrés Márquez, Univ. de Alicante (Spain)

Coffee Break 10:20 - 10:50

SESSION 2: PHOTOPOLYMERIZABLE NANOCOMPOSITE/GLASS MATERIALS AND APPLICATIONS

14 April 2026 • 10:50 - 12:30 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): Augusto Beléndez Vázquez, Univ. de Alicante (Spain)

14102-6 • 10:50 - 11:10

Red-sensitive photopolymerisable glass for holographic patterning

Author(s): **Jamshed Aftab, Izabela Naydenova, Tatsiana Mikulchyk**, Technological Univ. Dublin (Ireland)

14102-7 • 11:10 - 11:30

Commissioning test of a very cold neutron interferometer based on nanodiamond-polymer composite gratings

Author(s): **Martin Fally, Roxana H. Ackermann, Sonja Falmbigl**, Univ. Wien (Austria); **Elhoucine Hadden**, Univ. Wien (Austria), Institut Laue-Langevin (France), Uppsala Univ. (Sweden); **Alexia Dubois-Leprout**, Grenoble INP (France), Univ. Grenoble Alpes (France); **Hanno Filter-Pieler, Tobias Jenke**, Institut Laue-Langevin (France); **Jürgen Klepp**, Univ. Wien (Austria); **Christian Pruner**, Univ. Salzburg (Austria); **Yasuo Tomita**, The Univ. of Electro-Communications (Japan)

14102-8 • 11:30 - 11:50

Photoinitiating systems based on BODIPY sensitizers: Comparative study of holographic photopolymerisable glass and cellulose-based photopolymer

Author(s): **Tatsiana Mikulchyk, Aimee Sheehan, Metodej Dvoracek**, Technological Univ. Dublin (Ireland); **Masaya Sugihara**, Technological Univ. Dublin (Ireland), KU Leuven (Belgium); **Izabela Naydenova, Mikhail Filatov**, Technological Univ. Dublin (Ireland)

14102-9 • 11:50 - 12:10

Dielectric hollow nanospheres dispersed photopolymer for holographic applications

Author(s): **Yasuo Tomita**, Univ of Electro-Communications (Japan); **Ayumu Kiyokawa, Yuko Iso**, The Univ. of Electro-Communications (Japan)

14102-10 • 12:10 - 12:30

Platinum nanoparticles effects in hologram's formation processes in a low-toxicity photopolymer material

Author(s): **Joan Josep Sirvent-Verdú**, Univ de Alicante (Spain); **José Carlos García-Vázquez, Juan Carlos Bravo, Roberto Fernández, Cristian Neipp, Sergi Gallego, Augusto Beléndez**, Univ. de Alicante (Spain)

Lunch/Exhibition Break 12:30 - 13:50

SESSION 3: MATERIAL CHARACTERIZATION AND MODELING

14 April 2026 • 13:50 - 16:00 | Stuttgart/Salon 15 (Niveau/Level 1)

Session Chair(s): **Yasuo Tomita**, The Univ. of Electro-Communications (Japan)

14102-11 • 13:50 - 14:20

Wavefront-based optical power model in holographic lenses stored in a green photopolymer (Invited Paper)

Author(s): **Tomás Lloret López**, Univ de Alicante (Spain); **Manuel G. Ramírez, Adrián Moya, Emilio José Mena Ortiz, Víctor Navarro-Fuster, Inmaculada Pascual**, Univ. de Alicante (Spain)

14102-12 • 14:20 - 14:40

Comparative study of continuous and pulsed exposure in transmission hologram gratings

Author(s): **Emilio José Mena Ortiz**, Universidad de Alicante (Spain); **Andrés P. Bernabeu, Guillem Nájjar, Adrián Moya, Sergi Gallego, Andrés Márquez, Augusto Beléndez**, Univ. de Alicante (Spain)

14102-13 • 14:40 - 15:00

Optimization of optical diffuser using Bayfol HX photopolymer

Author(s): **Dhiraj Gupta**, Univ. degli Studi di Padova (Italy), INAF - Osservatorio Astronomico di Brera (Italy); **Andrea Bianco, Michele Frangiamore**, INAF - Osservatorio Astronomico di Brera (Italy); **Davide Giughello**, INAF - Osservatorio Astronomico di Brera (Italy), Politecnico di Milano (Italy)

14102-14 • 15:00 - 15:20

Optimization of inhomogeneous beam distribution for self-written holographic mode converter in photopolymer material

Author(s): **Christophe Martinez, Sylvia Meunier-Della-Gatta**, CEA-LETI (France)

14102-15 • 15:20 - 15:40

Machine Learning - Assisted Calibration of a Perovskite-Silicon Tandem Solar Cell 2D-Model via TRPL analysis

Author(s): **Pierre Lottigier, Renaud Varache**, Univ. Grenoble Alpes, Institut National de l'Energie Solaire, CEA-LITEN (France)

14102-16 • 15:40 - 16:00

High-Efficiency Holographic Sensors for Water Detection in Organic Media

Author(s): **José Carlos García-Vázquez**, University of Alicante (Spain); **Manuel G. Ramírez, Joan Josep Sirvent-Verdú, Belén Nieto-Rodríguez, Juan Carlos Bravo, Eva M. Calzado, Inmaculada Pascual**, Univ. de Alicante (Spain)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14102-5 • 18:10 - 20:00

Development of a tailored cellulose-derived binder for sustainable hydrogel photopolymers

Author(s): **Adrian E. Romo**, University of Alicante (Spain); **Manuel Ortuño**, **Mariela L. Álvarez**, **Augusto Beléndez**, **Inmaculada Pascual**, Univ. de Alicante (Spain)

14102-20 • 18:10 - 20:00

Side-chain engineered photocurable polyimides for high-resolution DLP 3D printing of optical components

Author(s): **Hyunseung Yang**, **Subin Jo**, Korea Electronics Technology Institute (Korea, Republic of)

14102-26 • 18:10 - 20:00

Tracking solar optimization by using multiplexed holograms in Bayfol® photopolymers

Author(s): **Pedro Mas-Abellán**, **Pablo Beléndez**, **Jesús Gea-Caselles**, The Singular Theory (Spain); **Belén Nieto-Rodríguez**, **José Carlos García-Vázquez**, Univ. de Alicante (Spain); **Tomás Lloret López**, Univ de Alicante (Spain); **Inmaculada Pascual**, Univ. de Alicante (Spain)

14102-27 • 18:10 - 20:00

Metal-organic frameworks as a crystalline optical media for data storage and encryption

Author(s): **Nikolaj Zhestkij**, **Elena Petrova**, **Sergei Shipilovskikh**, **Dmitry Zuev**, ITMO Univ. (Russian Federation); **Valentin Milichko**, New Uzbekistan Univ. (Uzbekistan)

14102-28 • 18:10 - 20:00

Broadband, high-efficiency transmissive phase-change optical modulator

Author(s): **Atchyut Phalgun M.**, **Srinivasan Krishnamurthy**, **Anbarasu Manivannan**, Indian Institute of Technology Madras (India)

14102-30 • 18:10 - 20:00

Holographic optical elements for spectroscopic applications

Author(s): **Jakob Schwanke**, **Ingo B. Ramsteiner**, **Reinhold Fiess**, Robert Bosch GmbH (Germany)

Wednesday 15 April 2026

SESSION 4: PHOTSENSITIVE LIQUID CRYSTAL AND POLYMERIC MATERIALS

15 April 2026 • 8:50 - 10:00 | Etoile A (Niveau/Level 1)

Session Chair(s): **Maria Inmaculada Pascual Villalobos**, Univ. de Alicante (Spain)

14102-17 • 8:50 - 9:20

Geometric phase elements fabricated via polarization holography on photoalignable liquid crystal polymers and their applications

(Invited Paper)

Author(s): **Moritsugu Sakamoto**, Nagaoka Univ of Technology (Japan); **Nobuhiro Kawatsuki**, Univ. of Hyogo (Japan); **Hiroshi Ono**, Nagaoka Univ. of Technology (Japan)

14102-18 • 9:20 - 9:40

All-optical surface morphing of azomaterials with multiple light degrees of freedom

Author(s): **Francesco Reda**, **I Komang Januariyasa**, **Salvatore Formato**, **Miriam Alberico**, **Marcella Salvatore**, **Fabio Borbone**, **Stefano Luigi Oscurato**, Univ. degli Studi di Napoli Federico II (Italy)

14102-19 • 9:40 - 10:00

Photorefractive effects and thermal properties of photoconductive flexoelectric smectic liquid crystals

Author(s): **Takeo Sasaki**, **Kengo Ishihara**, **Kana Maeda**, **Kana Tsuchida**, **Khoa V. Le**, **Yumiko Naka**, Tokyo Univ. of Science (Japan)

Coffee Break 10:00 - 10:30

SESSION 5: MATERIALS FOR NANOLITHOGRAPHIC AND MEDICAL APPLICATIONS

15 April 2026 • 10:30 - 12:00 | Etoile A (Niveau/Level 1)

Session Chair(s): **Tomás Lloret López**, Univ. de Alicante (Spain)

14102-21 • 10:30 - 11:00

Metasurface based High Resolution Confocal Fluorescence Microscopy *(Invited Paper)*

Author(s): **Sunil Vyas**, **Surag Athippillil Suresh**, National Taiwan Univ. (Taiwan); **J. Andrew Yeh**, National Tsing Hua Univ. (Taiwan); **Yuan Luo**, National Taiwan Univ. (Taiwan)

14102-22 • 11:00 - 11:20

Intermolecular interactions governing the performance of SZ2080 sensitised with different photoinitiators

Author(s): **Marius Navickas**, Vilnius University (Lithuania); **Dimitra Ladika**, Vilnius Univ. (Lithuania); **Edvinas Orentas**, **Martynas Talaikis**, **Gediminas Niaura**, Ctr. for Physical Sciences and Technology (Lithuania); **Mantas Gaidys**, Vilnius Univ. (Lithuania); **Ricardo J. Fernández-Terán**, Univ. de Genève (Switzerland); **Mangirdas Malinauskas**, **Mikas Vengris**, Vilnius Univ. (Lithuania)

14102-23 • 11:20 - 11:40

Photodynamic potential of rosemary-derived carbon quantum dots combined with ruta chalepensis in prostate cancer cells

Author(s): **Melis PINARBAŞI**, İzmir Katip Çelebi University (Turkey); **Cennet Özey**, **Ahmet Aykac**, **Nermin Topaloglu**, İzmir Katip Çelebi Univ. (Turkey)

14102-24 • 11:40 - 12:00

Docetaxel and taxus baccata extract: comparative toxicity analysis and extract-mediated photodynamic therapy in breast cancer

Author(s): **Büşra Sirek**, İzmir Katip Çelebi University (Turkey); **Derya Sema Yaman Kalender**, **Mehmet Eren Kalender**, **Cennet Özey**, **Nermin Topaloglu**, İzmir Katip Çelebi Univ. (Turkey)

CONFERENCE 14103

Liquid Crystals Optics and Photonic Devices II

13 - 16 April 2026 | Londres 1/Salon 8 (Niveau/Level 0)

Conference Chair(s): Ibrahim Abdulhalim, Ben-Gurion Univ. of the Negev (Israel); María Del Mar Sánchez-López, Univ. Miguel Hernández de Elche (Spain)

Program Committee: Antonio d'Alessandro, Sapienza Univ. di Roma (Italy); Alberta Ferrarini, Univ. degli Studi di Padova (Italy); Tigran Galstian, Univ. Laval (Canada); Helen F. Gleeson, Univ. of Leeds (United Kingdom); Maria Helena Godinho, CENIMAT-Ctr. de Investigacao em Materials (Portugal); Malgosia Kaczmarek, Univ. of Southampton (United Kingdom); Heinz S. Kitzerow, Univ. Paderborn (Germany); S. Krishna Prasad, Ctr. for Nano and Soft Matter Sciences (India); Satyendra Kumar, Univ. at Albany (United States); Michel Mitov, Univ. Côte d'Azur, CNRS (France); Wei Lee, National Yang Ming Chiao Tung Univ. (Taiwan); Danqing Liu, Technische Univ. Eindhoven (Netherlands); Kristiaan Neyts, Hong Kong Univ. of Science and Technology (Hong Kong, China); Janusz Parka, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland); Camilla Parmeggiani, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); Viktor Yu. Reshetnyak, Taras Shevchenko National Univ. of Kyiv (Ukraine); Stefania Residori, HOASYS SAS (France); Alok Sinha, Indian Institute of Technology Bombay (India); Yanlei Yu, Fudan Univ. (China)

INFORMATION

Best Paper Award

SPIE Photonics Europe conference on Liquid Crystals Optics and Photonic Devices will offer a Best Paper Award. Eligibility is extended to all speakers who are present to deliver their research work in person at the conference. Papers will be judged based on clarity of presentation, scientific merit, and potential innovative impact. The Best Paper Award will include a cash reward and an award certificate.

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Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to Dan Curticapean, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): Chris A. Van Hoof, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

WELCOME AND OPENING REMARKS

13 April 2026 • 13:20 - 13:25 | Londres 1/Salon 8 (Niveau/Level 0)

Ibrahim Abdulhalim, Ben-Gurion Univ. of the Negev (Israel)

María Del Mar Sánchez-López, Univ. Miguel Hernández de Elche (Spain)

Conference Chairs

SESSION 1: LIGHT PROPAGATION AND INTERACTION WITH LIQUID CRYSTALS I

13 April 2026 • 13:25 - 15:10 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **María del Mar Sánchez-López**, Univ. Miguel Hernández (Spain)

14103-24 • 13:25 - 14:00

Polar nematic materials - the molecular insight into revolutionary materials (Keynote Presentation)

Author(s): **Przemysław Kula**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland)

14103-2 • 14:00 - 14:30

Flexible Cellulose Acetate/Cholesteric Photonic Films with Thermally and Electrically Tuneable Selective Reflection (Invited Paper)

Author(s): **Maria Helena Godinho**, **Joana Nascimento**, **Luis Pinto**, CENIMAT (Portugal); **Vasco Ludovice**, **Andreia Santos**, **Joana Pinto**, NOVA University Lisbon (Portugal); **João Canejo**, NOVA University Lisbon (Portugal), Instituto Politécnico de Portalegre (Portugal)

14103-10 • 14:30 - 14:50

Polarimetric Characterization Methodology for fabrication and Study of Dye-Doped Liquid Crystal Cells

Author(s): **Adrián Moya Aliaga**, Univ de Alicante (Spain); **Adriana R. Sánchez-Montes**, **Emilio J. Mena**, **Manuel Ortuño**, **Mariela L. Álvarez**, **Eva M. Calzado**, **Andrés Márquez**, Univ. de Alicante (Spain)

14103-5 • 14:50 - 15:10

Innovative Liquid-Crystal-Assisted Route for One-Step Nano-Device Fabrication

Author(s): **Nisrin Alnaim**, King Faisal University (Saudi Arabia)

Coffee Break 15:10 - 15:40

SESSION 2: TUNABLE LC LENSES, SPECTRAL FILTERS, RESONANT DEVICES AND APPLICATIONS I

13 April 2026 • 15:40 - 18:00 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Michel Mitov**, Institut de Physique de Nice (France)

14103-6 • 15:40 - 16:10

Spectral Imaging Using Liquid Crystal Modulators – Advantages, Limitations, and Engineering Challenges (Invited Paper)

Author(s): **Doron Pasha**, **Ibrahim Abdulhalim**, Ben-Gurion Univ. of the Negev (Israel); **Isaac Y. August**, Sami Shamoon College of Engineering (Israel)

14103-7 • 16:10 - 16:40

Spectral Tuning and Spatial Resolution Engineering in Photovoltaic Light Modulators (Invited Paper)

Author(s): **Thomas Ducatel**, **Jean T. Dellinger**, **Yoshitake Takakura**, **Jihad Zallat**, Lab. des sciences de l'Ingénieur, de l'Informatique et de l'Imagerie, ICube (France); **Yuhan Zhong**, Lab. des sciences de l'Ingénieur, de l'Informatique et de l'Imagerie, ICube (France), Institut Charles Sadron (France); **Sadiara Fall**, P-Layer (France); **Martin Brinkmann**, Institut Charles Sadron (France); **Yaochen Lin**, **Thomas Heiser**, Lab. des sciences de l'Ingénieur, de l'Informatique et de l'Imagerie, ICube (France)

14103-8 • 16:40 - 17:10

Color-contrast and haze-driven quantitative biosensing with cholesteric liquid crystals (Invited Paper)

Author(s): **Tien-Hung Peng**, **Chia-Tung Chang**, National Yang Ming Chiao Tung Univ. (Taiwan); **Mon-Juan Lee**, National Sun Yat-sen Univ. (Taiwan); **Wei Lee**, National Yang Ming Chiao Tung University (Taiwan)

14103-9 • 17:10 - 17:30

Optimized complete snapshot multi-wavelength polarimeter based on a Liquid Crystal microstructure

Author(s): **Yuxuan Mao**, **Irene Estévez**, Univ. Autònoma de Barcelona (Spain); **Adriana R. Sánchez-Montes**, Univ. de Alicante (Spain); **Guillem Maluenda-Arrufat**, Univ. Autònoma de Barcelona (Spain); **Quanquan Mu**, Changchun Institute of Optics, Fine Mechanics and Physics (China); **Ángel Lizana Tutusaus**, Univ. Autònoma de Barcelona (Spain); **Andrés Márquez**, Univ. de Alicante (Spain); **Juan Campos**, Univ. Autònoma de Barcelona (Spain)

14103-3 • 17:30 - 18:00

Optical Poling of Ferroelectric Liquids (*Invited Paper*)

Author(s): **Liana Lucchetti**, Univ. Politecnica delle Marche (Italy); **Stefano Marni**, Univ. degli Studi di Milano (Italy); **Raouf Barboza**, Univ. Politecnica delle Marche (Italy); **Noel A. Clark**, Univ. of Colorado Boulder (United States); **Tommaso Bellini**, Univ. degli Studi di Milano (Italy)

Tuesday 14 April 2026

SESSION 3: LIGHT PROPAGATION AND INTERACTION WITH LIQUID CRYSTALS II

14 April 2026 • 8:30 - 10:35 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Maria Helena Godinho**, Univ. Nova de Lisboa (Portugal)

14103-11 • 8:30 - 9:05

Chiral liquid crystals and photoalignment for photonic components (*Keynote Presentation*)

Author(s): **Kristiaan Neyts**, Hong Kong Univ. of Science and Technology (Hong Kong, China)

14103-12 • 9:05 - 9:35

Three-dimensional planar alignment of nematic liquid crystal by direct laser writing of nanogratings (*Invited Paper*)

Author(s): **Uroš Jagodič**, Jožef Stefan Institute (Slovenia); **Jaka Pišljarič**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); **Andreja Jelen**, Jožef Stefan Institute (Slovenia); **Miha Škarabot**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); **Igor Muševič**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia)

14103-13 • 9:35 - 10:05

Unusual physical properties of liquid crystals and their significance in optical applications (*Invited Paper*)

Author(s): **Rowan Morris**, **Kieran Fagg**, **Sandra Sanni**, **Mamatha Nagaraj**, Univ. of Leeds (United Kingdom)

14103-14 • 10:05 - 10:35

Pushing the limits of optical tagging functionalities with cholesteric liquid crystals (*Invited Paper*)

Author(s): **Michel Mitov**, **Shallu Dhingra**, Institut de Physique de Nice (France)

Coffee Break 10:35 - 11:00

SESSION 4: TUNABLE LC LENSES, SPECTRAL FILTERS, RESONANT DEVICES AND APPLICATIONS II

14 April 2026 • 11:00 - 12:20 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Tamas Kosa**, AlphaMicron, Inc. (United States)

14103-15 • 11:00 - 11:30

Investigation of liquid crystals for beam steering in the terahertz range (*Invited Paper*)

Author(s): **Janusz Parka**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Aleksandra Gridyakina**, **Adrianna Nieradka**, Warsaw Univ. of Technology (Poland); **Urszula Chodorow**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Agnieszka Siemion**, Warsaw Univ. of Technology (Poland); **Bartosz Bartosewicz**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Tomasz R. Woliński**, Warsaw Univ. of Technology (Poland); **Bartłomiej Jankiewicz**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland)

14103-16 • 11:30 - 12:00

Transmission electrode technique for large-aperture Liquid-Crystal phase elements (*Invited Paper*)

Author(s): **Noureddine Bennis**, **Tomasz Jankowski**, **Przemysław Morawiak**, Military University of Technology (Poland); **José Francisco Algorri**, Universidad de Cantabria (Spain); **Aleksandra Walewska**, **Anna Spadlo**, Military University of Technology (Poland)

14103-17 • 12:00 - 12:20

Cylindrically-polarized vector beams with tunable topological charge generated by an adaptive liquid-crystal device

Author(s): **María del Mar Sánchez-López**, Univ. Miguel Hernández (Spain); **Aleksandra Walewska**, **Noureddine Bennis**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **José Francisco Algorri**, Univ. de Cantabria (Spain); **Ignacio Moreno**, Univ. Miguel Hernández (Spain)

Lunch/Exhibition Break 12:20 - 13:50

SESSION 5: NOVEL APPLICATIONS OF LIQUID CRYSTALS

14 April 2026 • 13:50 - 15:30 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Liana Lucchetti**, Univ. Politecnica delle Marche (Italy)

14103-19 • 13:50 - 14:20

Free-space photonic circuits with liquid-crystal technology (*Invited Paper*)

Author(s): **Filippo Cardano**, Univ degli Studi di Napoli Federico II (Italy); **Maria G. Ammendola**, **Francesco Di Colandrea**, Univ. degli Studi di Napoli Federico II (Italy)

14103-20 • 14:20 - 14:50

Ultrabroadband and Chirality-Invertible Geometric Phase Planar Optics Enabled by Nanomotor-Driven Heliconical Superstructures (*Invited Paper*)

Author(s): **Anup K. Sahoo**, **Ya-Han Zheng**, **Ching-Han Yang**, **Yi Chen Shen**, **Zhi-Qun Wang**, **Chia-Rong Lee**, National Cheng Kung Univ. (Taiwan)

14103-21 • 14:50 - 15:10

Exploiting the dynamic scattering state to generate speckle illumination for random illumination microscopy (RIM)

Author(s): **Lilian Magermans**, **Assia Benachir**, Institut Fresnel, Aix-Marseille Univ., CNRS, Centrale Méditerranée (France); **Nathan P. Spiller**, **Tianxin Wang**, Univ. of Oxford (United Kingdom); **Federico Vernuccio**, Institut Fresnel, Aix-Marseille Univ., CNRS, Centrale Méditerranée (France); **Randy Bartels**, Morgridge Institute for Research (United States); **Stephen M. Morris**, **Steve J. Elston**, **Martin J. Booth**, Univ. of Oxford (United Kingdom); **Hervé Rigneault**, Institut Fresnel, Aix-Marseille Univ., CNRS, Centrale Méditerranée (France)

14103-22 • 15:10 - 15:30

Light-induced molecular dynamics in azopolymers for brain-inspired data processing

Author(s): **Mateo Rosero-Realpe**, Politecnico di Torino (Italy); **Federico Ferrarese Lupi**, **Angelo Angelini**, Istituto Nazionale di Ricerca Metrologica (Italy); **Francesca Frascella**, Politecnico di Torino (Italy); **Gianluca Milano**, Istituto Nazionale di Ricerca Metrologica (Italy)

Coffee Break 15:50 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 6: LIQUID CRYSTAL SMART WINDOWS, ENERGY DEVICES AND LC METAMATERIALS

15 April 2026 • 8:30 - 10:25 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Mamatha Nagaraj**, Univ. of Leeds (United Kingdom)

14103-1 • 8:30 - 9:05

Electro-optics of ferroelectric nematics (Keynote Presentation)

Author(s): **Oleg D. Lavrentovich**, Kent State Univ. (United States)

14103-25 • 9:05 - 9:35

Using liquid crystals to tune spoof plasmons in gigahertz and terahertz (*Invited Paper*)

Author(s): **Victor Yu. Reshetnyak**, Taras Shevchenko National University of Kyiv (Ukraine); **Ivan I. Yakovkin**, The National Academy of Sciences of Ukraine (Ukraine); **Dean R. Evans**, Zone 5 Technologies (United States)

14103-26 • 9:35 - 10:05

Liquid crystal materials with differentiated chirality for enhanced DHFLC electro-optic response (*Invited Paper*)

Author(s): **Michał Czerwiński**, **Dorota Węglowska**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland); **Yinng Chen**, **Francois Ladouceur**, **Leonardo Silvestri**, The Univ. of New South Wales (Australia); **Mateusz Filipow**, **Przemysław Kula**, Wojskowa Akademia Techniczna im. Jarosława Dąbrowskiego (Poland)

14103-27 • 10:05 - 10:25

Ultra-long term bistability observed with ultra-short helical pitch cholesteric liquid crystals, functioning as energy saving normally bright smart windows

Author(s): **Niveen Huseen**, Ben-Gurion Univ of the Negev (Israel); **Ibrahim Abdulhalim**, Ben-Gurion Univ. of the Negev (Israel)

Coffee Break 10:25 - 10:50

SESSION 7: POLARIZATION CONTROL DEVICES AND INTEGRATION WITH SYSTEMS

15 April 2026 • 10:50 - 12:30 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Wiktor Piecek**, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

14103-28 • 10:50 - 11:20

Liquid crystal technology for polarimetric imaging: biomedical-oriented developments *(Invited Paper)*

Author(s): **Ángel Lizana Tutusaus**, Yuxuan Mao, Ivan Montes Gonzalez, Mónica Canabal-Carbia, Manal Altaweel, Judit Bisbal Amat, Univ. Autònoma de Barcelona (Spain); **Albert Van Eeckhout**, ALBA Synchrotron (Spain); **Andrés Márquez**, Univ. de Alicante (Spain); **Juan Campos**, Irene Estévez, Univ. Autònoma de Barcelona (Spain)

14103-29 • 11:20 - 11:50

Enabling Advanced Aerospace Optical Instrumentation Through Liquid Crystal Technology *(Invited Paper)*

Author(s): **Alberto Álvarez-Herrero**, INTA Instituto Nacional de Técnica Aeroespacial (Spain)

14103-30 • 11:50 - 12:10

Complete Stokes polarimetry based on a ferroelectric liquid crystal panel and a polarimetric camera: application to biological samples

Author(s): **Manal Altaweel**, Judit Bisbal Amat, Universitat Autònoma de Barcelona (Spain); **Emilio González Arnay**, Universidad de la Laguna (Spain); **Andrés Márquez**, Universidad de Alicante (Spain); **Ángel Lizana**, Juan Campos, Irene Estévez, Universitat Autònoma de Barcelona (Spain)

14103-31 • 12:10 - 12:30

Iterative In-situ Calibration Method for Liquid Crystal-based Mueller Polarimeters

Author(s): **Jean Rehbindler**, Jean T. Dellinger, Yacine Zemali, Jihad Zallat, ICube (France)

Lunch/Exhibition Break 12:30 - 13:40

SESSION 8: LIQUID CRYSTAL SPATIAL LIGHT MODULATORS AND APPLICATIONS

15 April 2026 • 13:40 - 15:30 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Stefania Residori**, HOASYS SAS (France)

14103-32 • 13:40 - 14:10

Large-area thermo-optical liquid-crystal spatial light modulator for amplitude and phase shaping in ultrafast and high-power laser systems *(Invited Paper)*

Author(s): **Aurélien Jullien**, Natan Monvoisin, Nicolas Forget, Cyrille Claudet, Gilles Cheriaux, Institut de Physique de Nice (France); **Sébastien Montant**, Gilles Rouzaud, Laurent Lamaignère, CEA-Cesta (France)

14103-33 • 14:10 - 14:40

Recent applications of Liquid Crystals in wearable visual optics *(Invited Paper)*

Author(s): **Alba Maria Paniagua-Díaz**, Univ. de Castilla-La Mancha (Spain); **Pablo Artal**, Univ. de Murcia (Spain)

14103-34 • 14:40 - 15:10

Engineering Responsive Cholesteric Liquid Crystal Networks for Multiplexed and Wearable Photonic Biosensors *(Invited Paper)*

Author(s): **Mohammed M. Zourob**, Alfaisal Univ. (Saudi Arabia)

14103-35 • 15:10 - 15:30

Improving the Sensitivity of Optically Addressed Liquid Crystal Spatial Light Modulators Towards SWIR Single Pixel Camera

Author(s): **Tariq Abu Hussein**, Ben-Gurion Univ. of the Negev (Israel)

Coffee Break 15:30 - 16:00

SESSION 9: LIQUID CRYSTAL LASERS

15 April 2026 • 16:00 - 18:10 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Victor Yu. Reshetnyak**, Taras Shevchenko National Univ. of Kyiv (Ukraine)

14103-36 • 16:00 - 16:30

Optical effects at the band edge of dye doped cholesteric liquid crystals *(Invited Paper)*

Author(s): **Bahman Taheri, Tamas Kosa**, AlphaMicron, Inc. (United States)

14103-37 • 16:30 - 17:00

Liquid crystal tunable microcavities – from Bose-Einstein condensate to supersolidity *(Invited Paper)*

Author(s): **Wiktor Piecek**, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

14103-38 • 17:00 - 17:30

Microscale generation and control of nanosecond light by light in a liquid crystal *(Invited Paper)*

Author(s): **Igor Mušević, Mahendran Vellaichamy, Uroš Jagodič, Jaka Pišljar**, Jožef Stefan Institute (Slovenia); **Jaka Zaplotnik, Urban Mur**, Univ. of Ljubljana (Slovenia); **Andreja Jelen**, Jožef Stefan Institute (Slovenia); **Andriy Nych**, Institute of Physics, NASU (Ukraine); **Deepshika Malkar, Anna V. Ryzhkova, Miha Škarabot**, Jožef Stefan Institute (Slovenia); **Miha Ravnik**, Univ. of Ljubljana (Slovenia)

14103-39 • 17:30 - 17:50

Low threshold, efficient, and gain-interchangeable defect-mode laser for integrated microphotonic applications

Author(s): **Mahendran Vellaichamy, Jaka Pišljar, Uroš Jagodič, Miha Škarabot, Igor Mušević**, Jožef Stefan Institute (Slovenia)

14103-40 • 17:50 - 18:10

Active polarization control in VCSELs using an orthogonal switching liquid crystal layer

Author(s): **Baolu Guan, Ling Shan, Huihui Wang**, Beijing Univ. of Technology (China)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14103-18 • 17:45 - 19:30

A Wearable Microneedle-Integrated Photonic Aptasensor for Real-Time, Multiplexed Detection of Illicit Drugs in Interstitial Fluid

Author(s): **Manal Bashir**, Alfaisal Univ. (Saudi Arabia)

14103-49 • 17:45 - 19:30

CNN-based sub-pixel signal optimization to improve LCOS-SLM phase accuracy

Author(s): **Yuanhao Jiang, Tomohiro Maeda, Hideyuki Sotobayashi**, Aoyama Gakuin Univ. (Japan)

14103-50 • 17:45 - 19:30

Geometrical deformation correction in full-field characterization of liquid crystal devices

Author(s): **Tomasz Jankowski**, Military University of Technology (Poland); **Michał Józwik, Anna Pakuła**, Warsaw Univ. of Technology (Poland); **Przemysław Morawiak, Nouredine Bennis**, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

14103-51 • 17:45 - 19:30

Remotely controlled inching millibot integrated with an optical source

Author(s): **Nikita Choudhary**, INDIAN INSTITUTE OF TECHNOLOGY ROORKEE (India); **Diksha Sharma, Jyoti Mandal, Anjani K. Tiwari**, Indian Institute of Technology Roorkee (India)

14103-52 • 17:45 - 19:30

Liquid-crystal geometric-phase lenses: symmetry properties and application to achromatic optical Fourier transform

Author(s): **Santiago Ríos-Álvarez**, Universidad Miguel Hernández (Spain); **Ignacio Moreno**, Univ. Miguel Hernández (Spain); **Pascuala García-Martínez**, Univ. de València (Spain); **David Marco**, Univ. de Salamanca (Spain); **María del Mar Sánchez-López**, Univ. Miguel Hernández (Spain)

14103-53 • 17:45 - 19:30

Tunable optical skyrmions from nematic topological defects

Author(s): **Mufeeduzaman Chavilkadan, Etienne Brasselet**, Univ. de Bordeaux (France)

14103-54 • 17:45 - 19:30

Effect of TiO₂ and Si nanostructures on the director orientation of liquid crystal molecules

Author(s): **Yayan Tan, Mike Pivnenko**, Univ. of Cambridge (United Kingdom); **Daping Chu**, University of Cambridge (United Kingdom)

14103-55 • 17:45 - 19:30

HyperColor: hyperspectral imaging using liquid crystal modulator coupled with color camera and deep learning algorithm

Author(s): **Doron Pasha**, Ben-Gurion University of the Negev (Israel); **Ibrahim Abdulhalim**, Ben-Gurion Univ. of the Negev (Israel); **Isaac Y. August**, Sami Shamoon College of Engineering (Israel)

14103-56 • 17:45 - 19:30

Entanglement tuning and quantum imaging in liquid crystal structures

Author(s): **Sara Klopčič**, Jožef Stefan Institute (Slovenia), Faculty of Mathematics and Physics, University of Ljubljana (Slovenia); **Aljaž Kavčič**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia); **Nerea Sebastián**, Jožef Stefan Institute (Slovenia); **Matjaž Humar**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), Nanocenter (Slovenia)

14103-57 • 17:45 - 19:30

Optical characterisation of the ferroelectric nematic liquid crystal phase in curved confinement

Author(s): **Ema Pilih**, **Luka Cmok**, University of Ljubljana (Slovenia); **Richard Mandle**, **Callum J. Gibb**, University of Leeds (United Kingdom); **Irena Drevenšek Olenik**, University of Ljubljana (Slovenia)

14103-59 • 17:45 - 19:30

Application of machine learning on refractive index determination of liquid crystal from optical Vernier spectrum

Author(s): **Debasish Bag**, **Aloka Sinha**, Indian Institute of Technology Delhi (India)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 10: NONLINEAR OPTICS OF LIQUID CRYSTALS

16 April 2026 • 11:00 - 12:50 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Oleg D. Lavrentovich**, Kent State Univ. (United States)

14103-41 • 11:00 - 11:30

Optically Addressed Spatial Light Modulators for interferometric applications (Invited Paper)

Author(s): **Stefania Residori**, **Umberto Bortolozzo**, HOASYS SAS (France)

14103-42 • 11:30 - 12:00

Tunable quantum light from ferroelectric nematic liquid crystals (Invited Paper)

Author(s): **Matjaž Humar**, Jožef Stefan Institute (Slovenia), Univ. of Ljubljana (Slovenia), Nanocenter (Slovenia)

14103-43 • 12:00 - 12:30

Light-driven recording of polar localized structures in frustrated cholesterics (Invited Paper)

Author(s): **Delphine Coursault**, **Nicolas Bruni**, **Samlan Chandran Thodika**, **Etienne Brasselet**, Univ. de Bordeaux (France), CNRS (France)

14103-44 • 12:30 - 12:50

Efficient nonlinear optical response in room-temperature ferroelectric nematic liquid crystals

Author(s): **Rajalaxmi Sahoo**, Univ. of Leeds (United Kingdom); **Ishika Das**, The Univ. of Manchester (United Kingdom); **Mamatha Nagaraj**, **Helen F. Gleeson**, Univ. of Leeds (United Kingdom); **Charles Smith**, **Patrick Parkinson**, The Univ. of Manchester (United Kingdom); **Diana Nikolova**,

Lunch Break 12:50 - 14:00

SESSION 11: LIQUID CRYSTAL ELASTOMERIC DEVICES

16 April 2026 • 14:00 - 15:55 | Londres 1/Salon 8 (Niveau/Level 0)

Session Chair(s): **Ibrahim Abdulhalim**, Ben-Gurion Univ. of the Negev (Israel)

14103-45 • 14:00 - 14:35

Micropatterned liquid crystalline polymeric photonic structures for information encoding and all-optical modulation (Keynote Presentation)

Author(s): **Simone Donato**, Istituto Nazionale di Ricerca Metrologica (Italy); **Mohammad Mehkoom**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Giuseppe Leonetti**, Istituto Nazionale di Ricerca Metrologica (Italy); **Daniele Martella**, **Camilla Parmeggiani**, **Diederik S. Wiersma**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Sara Nocentini**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy), Istituto Nazionale di Ricerca Metrologica (Italy)

14103-46 • 14:35 - 15:05

Reconfigurable polymer dispersed liquid crystals for cryptographic applications (Invited Paper)

Author(s): **Francesco Riboli**, Consiglio Nazionale delle Ricerche (Italy), LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Sara Nocentini**, Istituto Nazionale di Ricerca Metrologica (Italy); **Federico Maestri**, LENS - Lab. Europeo di Spettroscopie Non-Lineari (Italy); **Serena Salvestrini**, Consiglio Nazionale delle Ricerche (Italy); **Diederik S. Wiersma**, Univ. degli Studi di Firenze (Italy)

14103-47 • 15:05 - 15:35

Secreting Artificial Polymer Skin for Liquid Transfer and Chemical Communication (Invited Paper)

Author(s): **Dongyu Zhang**, Eindhoven University of Technology (Netherlands); **Dirk J. Broer**, **Danqing Liu**, Technische Univ. Eindhoven (Netherlands)

14103-48 • 15:35 - 15:55

Portable Multiplex Aptameric Biosensor Based on Cholesteric Liquid Crystal Networks for Toxin Detection in Water

Author(s): **Ziyad Abu Mustafa**, Alfaisal University (Saudi Arabia); **Saddam Hussain**, Alfaisal Univ. (Saudi Arabia); **Dana Cialla-May**, **Jürgen Popp**, Leibniz-Institut für Photonische Technologien e.V. (Germany), Friedrich-Schiller-Univ. Jena (Germany); **Mohammed M. Zourob**, Alfaisal Univ. (Saudi Arabia)

ADJOURN AND CLOSING REMARKS

16 April 2026 • 15:55 - 16:05 | Londres 1/Salon 8 (Niveau/Level 0)

Ibrahim Abdulhalim, Ben-Gurion Univ. of the Negev (Israel)

María Del Mar Sánchez-López, Univ. Miguel Hernández de Elche (Spain)

Conference Chairs

CONFERENCE 14104

Machine Learning in Photonics II

13 - 16 April 2026 | Etoile A ((Niveau/Level 1)

Conference Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Belgium); **Mehdi Keshavarz Hedayati**, Durham Univ. (United Kingdom); **Andrea Fratalocchi**, King Abdullah Univ. of Science and Technology (Saudi Arabia)

Program Committee: **Alexandra Boltasseva**, Purdue Univ. (United States); **Francesco Da Ros**, DTU Electro (Denmark); **Jonathan A. Fan**, Stanford Univ. (United States); **Ryan Hamerly**, MIT (United States); **Antonio Hurtado**, Univ. of Strathclyde (United Kingdom); **Douglas Kelly**, Microsoft Research Cambridge (United Kingdom); **Wei Ma**, Zhejiang Univ. (China); **Otto L. Muskens**, Univ. of Southampton (United Kingdom); **Tatsuhiko Onodera**, Cornell Univ. (United States); **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy); **Junsuk Rho**, Pohang Univ. of Science and Technology (Korea, Republic of); **Bhavin J. Shastri**, Queen's Univ. (Canada); **Peter R. Wiecha**, LAAS-CNRS (France)

Monday 13 April 2026

HOT TOPICS I

13 April 2026 • 8:45 - 11:00 | Auditorium Erasme (Niveau/Level 0)

Session Moderators:

Paul Montgomery, Univ. of Strasbourg (France)

2026 Symposium Chair

and

Michel de Mathelin, Univ. of Strasbourg (France)

Vice President for Strategy and Innovation

8:45 hrs: **Welcome and Opening Remarks**

8:55 hrs: **Extra/Ordinary Light: Invitation to Art Exhibition**

9:05 hrs: **City of Strasbourg Welcome**

9:10 hrs: **Presentation of the 2025 SPIE María J. Yzuel Educator Award**
to **Dan Curticapean**, Offenburg Univ. (Germany)

SPIE New Fellows Announcement

9:15 hrs: **Introduction of Plenary Speakers**

14086-500 • 9:20 - 10:05

Photonics and A(G)I innovations will enable Industry 5.0 & 6.0 in the agrifood sector (Plenary Presentation)

Author(s): **Chris A. Van Hoof**, imec (Belgium)

14083-501 • 10:10 - 10:55

Failing forward in deep spectral imaging (Plenary Presentation)

Author(s): **Lena Maier-Hein**, Deutsches Krebsforschungszentrum (Germany)

Coffee Break 11:00 - 11:20

SESSION 1: NEUROMORPHIC COMPUTING I

13 April 2026 • 11:20 - 12:40 | Etoile A (Niveau/Level 1)

Session Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Sweden)

14104-1 • 11:20 - 12:00

Insect-Brain inspired Neuromorphic Nanophotonics: Efficient, small and fast (Keynote Presentation)

Author(s): **Anders Mikkelsen**, Lund Univ. (Sweden)

14104-2 • 12:00 - 12:20

All optical machine learning for noise-robust information processing

Author(s): **Manon P. Bart**, University of Namur (Belgium), Tulane University (United States); **Ryan Glasser**, Tulane Univ. (United States)

14104-3 • 12:20 - 12:40

Hybrid photonic synapse for on-chip neuromorphic hardware

Author(s): **Anna P. Ovvyan**, Kirchhoff-Institut für Physik, Ruprecht-Karls-Univ. Heidelberg (Germany), CeNTech GmbH, Univ. Münster (Germany); **Niklas Vollmar**, **Sebastian Walfort**, Institut für Materialphysik, Univ. Münster (Germany); **Zhongyu Tang**, Kirchhoff-Institut für Physik, Ruprecht-Karls-Univ. Heidelberg (Germany), CeNTech GmbH, Univ. Münster (Germany); **Leon Badke**, Institut für Materialphysik, Univ. Münster (Germany); **Seongmin Jo**, Kirchhoff-Institut für Physik, Ruprecht-Karls-Univ. Heidelberg (Germany), CeNTech GmbH, Univ. Münster (Germany); **Frank Brücknerhoff-Plückelmann**, Kirchhoff-Institut für Physik, Ruprecht-Karls-Univ. Heidelberg (Germany); **Martin Salinga**, Institut für Materialphysik, Univ. Münster (Germany); **Wolfram H. P. Pernice**, Kirchhoff-Institut für Physik, Ruprecht-Karls-Univ. Heidelberg (Germany), CeNTech GmbH, Univ. Münster (Germany)

Lunch Break 12:40 - 13:40

SESSION 2: NEUROMORPHIC COMPUTING II

13 April 2026 • 13:40 - 14:50 | Etoile A (Niveau/Level 1)

Session Chair(s): **Douglas Kelly**, Microsoft Research Cambridge (United Kingdom)

14104-5 • 13:40 - 14:10

Exploring Bioplausible Neuromorphic Hardware with Silicon Microresonators (Invited Paper)

Author(s): **Stefano Biasi**, **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy)

14104-6 • 14:10 - 14:30

Photonic lanterns: a novel fiber component for neuromorphic computing

Author(s): **Siddharth Sivankutty**, **Nolan Desnos**, **Stefano Negrini**, **Géraud Bouwmans**, **Arnaud Mussot**, **Esben Andresen**, Lab. de Physique des Lasers, Atomes et Molécules (France)

14104-7 • 14:30 - 14:50

Neuromorphic infrared fibre-optic event-based sensing with fast and efficient photonic-electronic spiking neurons

Author(s): **Dylan Black**, **Joshua Robertson**, Univ. of Strathclyde (United Kingdom); **Qusay Raghib Ali Al-taai**, Univ. of Glasgow (United Kingdom); **José Figueiredo**, Univ. de Lisboa (Portugal); **Edward Wasige**, Univ. of Glasgow (United Kingdom); **Bruno Romeira**, INL - International Iberian Nanotechnology Lab. (Portugal); **Giovanni Donati**, **Antonio Hurtado**, Univ. of Strathclyde (United Kingdom)

Coffee Break 14:50 - 15:10

SESSION 3: PHOTONIC COMPUTING I

13 April 2026 • 15:10 - 18:10 | Etoile A (Niveau/Level 1)

Session Chair(s): **Miguel Cornelles Soriano**, Instituto de Física Interdisciplinar y Sistemas Complejos (Spain)

14104-8 • 15:10 - 15:50

Unconventional computing using telecom technologies (Keynote Presentation)

Author(s): **Sergei K. Turitsyn**, Aston Univ. (United Kingdom)

14104-67 • 15:50 - 16:30

Optical neural networks in the quantum domain (Keynote Presentation)

Author(s): **Alexander I. Lvovsky**, Univ. of Oxford (United Kingdom)

14104-9 • 16:30 - 17:00

Integrated circuits and random nonlinear media for machine learning (Invited Paper)

Author(s): **Rachel Grange**, ETH Zurich (Switzerland)

14104-10 • 17:00 - 17:30

Non-deterministic photonic computing (Invited Paper)

Author(s): **Wolfram H. P. Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14104-11 • 17:30 - 17:50

Integrated, reconfigurable photonic tensor processor for DNN inference

Author(s): **Simon Tebeck**, **Lennart Meyer**, **Jelle Dijkstra**, **Wolfram H. P. Pernice**, **Frank Brücknerhoff-Plückelmann**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14104-50 • 17:50 - 18:10

Integrated electro-optic interferometers for attention nonlinearities in transformers

Author(s): **Luis Mickeler, Kai Lion**, ETH Zurich (Switzerland); **Alfonso Nardi**, Politecnico di Milan (Italy); **Jost Kellner, Pierre Didier**, ETH Zurich (Switzerland); **Bhavin J. Shastri**, Queen's University (Canada); **Niao He, Rachel Grange**, ETH Zurich (Switzerland)

Tuesday 14 April 2026

SESSION 4: INVERSE DESIGN I

14 April 2026 • 8:40 - 10:00 | Etoile A (Niveau/Level 1)

Session Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Sweden)

14104-14 • 8:40 - 9:00

Inverse Design Method for Large-Scale Metalenses in Reflection Employing Innovative Deep Neural Networks Envisioning Future Virtual Reality Applications

Author(s): **Arthur Clini de Souza**, Université Côte d'Azur, Inria, CNRS, LJAD (France), Solnil (France); **Paloma Elias da Silva Pellegrini, Silvia Vaz Guerra Nista**, UNICAMP (Brazil); **Stéphane Lanteri**, Ctr. Inria d'Univ. Côte d'Azur, CNRS (France); **Hugo Enrique Hernandez-Figueroa**, Univ. of Campinas (Brazil); **Marco Abbarchi**, Solnil (France), Univ. de Toulon, Aix-Marseille Univ., Institut Matériaux Microélectronique Nanosciences de Provence, CNRS (France); **Badre Kerzabi**, Solnil (France); **Mahmoud Elsaywy**, Ctr. Inria d'Univ. Côte d'Azur, CNRS (France)

14104-15 • 9:00 - 9:20

Metasurface Inverse Design via Latent Space Optimization

Author(s): **Sergei Rodionov**, King Abdullah University of Science and Technology (Saudi Arabia); **Arturo Burguete-Lopez, Maksim Makarenko, Qizhou Wang, Fedor Getman, Andrea Fratolocchi**, King Abdullah Univ. of Science and Technology (Saudi Arabia)

14104-16 • 9:20 - 9:40

Generative-model inverse design of plasmonic chiral metasurfaces

Author(s): **Jaime Bueno, Sol Carretero**, Instituto de Ciencia de Materiales de Madrid (Spain); **Miguel Anaya**, Univ. de Sevilla (Spain); **Martin Eriksen**, Port d'Informació Científica, Univ. Autònoma de Barcelona (Spain)

14104-17 • 9:40 - 10:00

Deep learning non-linear dimensionality reduction for photovoltaic device design augmentation

Author(s): **Robert F. H. Hunter**, Univ. of Ottawa (Canada); **Yuri Grinberg**, National Research Council Canada (Canada); **Jacob J. Krich, D. Paige Wilson**, Univ. of Ottawa (Canada); **Alexandre W. Walker**, National Research Council Canada (Canada); **Karin Hinzer**, Univ. of Ottawa (Canada)

Coffee Break 10:00 - 10:30

SESSION 2: INVERSE DESIGN II

14 April 2026 • 10:30 - 12:20 | Etoile A (Niveau/Level 1)

Session Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Sweden)

14104-18 • 10:30 - 11:00

Inverse design and forward modelling in nanophotonics using deep learning (Invited Paper)

Author(s): **Junsuk Rho**, Pohang Univ. of Science and Technology (Korea, Republic of)

14104-19 • 11:00 - 11:20

Transformer-based inverse-design model for artificial electromagnetic materials

Author(s): **Chia-Wei Chen**, Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB (Germany); **Ke Zou**, Karlsruher Institut für Technologie (Germany); **Johannes Meyer, Matthias Hartrumpf, Lukas Dippon, Christian Kludt, Thomas Längle**, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung IOSB (Germany)

14104-20 • 11:20 - 11:40

Heuristic-Initialized Gradient Descent for Efficient Inverse Design of Large-Scale Metasurfaces

Author(s): **Mathys Le Grand**, Institut des nanotechnologies de Lyon (France); **Pascal Urard, Denis Rideau, Loumi Tremas, Damien Maitre, Adam Fuchs, Louis-henri Fernandez-mouron**, STMicroelectronics (France); **Regis Orobitchouk**, Institut des nanotechnologies de Lyon (France)

14104-21 • 11:40 - 12:00

Learned manifold reparameterization for DRC-compatible inverse design in silicon photonics

Author(s): **Bahrem Serhat Danis**, Koç Univ (Turkey); **Aycan Deniz Vit**, Photonics Research Group, INTEC, Ghent University - imec (Belgium), Koç Univ. (Turkey); **Ahmet Onur Dasedemir, Demet Baldan Dasedemir, Enes Akcakoca, Zeynep Ipek Yanmaz, Gulzade Polat**, Koç Univ (Turkey); **Aytug Aydogan**, KU Leuven (Belgium); **Abdullah Magden**, Bursa Technical University (Turkey); **Emir Salih Magden**, Koç Univ (Turkey), KUIS AI Ctr., Koç Univ. (Turkey)

14104-22 • 12:00 - 12:20

U-Net-driven inverse design of multilayer nonlinear quantum photonic waveguides

Author(s): **Italo Pio De Simeone**, Univ. Paris Cité (France); **Giorgio Maltese**, Microsoft Azure Fiber (United Kingdom); **Florent Baboux**, **Sara Ducci**, Univ. Paris Cité (France)

Lunch/Exhibition Break 12:20 - 13:30

SESSION 6: INVERSE DESIGN III

14 April 2026 • 13:30 - 16:00 | Etoile A (Niveau/Level 1)

Session Chair(s): **Peter R. Wiecha**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France)

14104-4 • 13:30 - 14:00

Making physical machines learn (Invited Paper)

Author(s): **Florian Marquardt**, Max-Planck-Institut für die Physik des Lichts (Germany)

14104-23 • 14:00 - 14:20

Decoding shape-induced variability in bottom-up grown microring lasers through generative modelling and Bayesian optimisation

Author(s): **Mihir R. Athavale**, The Univ. of Manchester (United Kingdom), A*STAR Institute of Materials Research and Engineering (Singapore); **Stephen Church**, Univ. of Salford (United Kingdom); **Wei Wen Wong**, The Australian National Univ. (Australia); **Andre K. Y. Low**, Nanyang Technological Univ. (Singapore), A*STAR Institute of Materials Research and Engineering (Singapore); **Hark Hoe Tan**, The Australian National Univ. (Australia); **Kedar Hippalgaonkar**, Nanyang Technological Univ. (Singapore), A*STAR Institute of Materials Research and Engineering (Singapore); **Patrick Parkinson**, The Univ. of Manchester (United Kingdom)

14104-24 • 14:20 - 14:40

Gradient-Based Optimization of Core-Shell Particles with Discrete Materials for Directional Scattering

Author(s): **Dalin Soun**, **Antoine Azéma**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS, Univ. de Toulouse (France); **Lucien Roach**, **Glenna L. Drisko**, Ecole Normale Supérieure de Lyon, CNRS (France); **Peter R. Wiecha**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS, Univ. de Toulouse (France)

14104-25 • 14:40 - 15:00

modular physics aware digital twins for photonic computation engines in JAX

Author(s): **Philipp Schmidt**, **Liam McRae**, **Falk Ebert**, **Jelle Dijkstra**, **Frank Brücknerhoff-Plückelmann**, **Wolfram H. P. Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14104-26 • 15:00 - 15:20

Physics-regularized design of LWIR metalenses via end-to-end training

Author(s): **Qizhou Wang**, King Abdullah Univ of Science and Technology (Saudi Arabia); **Arturo Burguete-Lopez**, **Yushu Zhang**, **Sergei Rodionov**, **Andrea Fratolocchi**, King Abdullah Univ. of Science and Technology (Saudi Arabia)

14104-27 • 15:20 - 15:40

A policy-based approach for fabrication-tolerant integrated photonic component optimization

Author(s): **Liam McRae**, **Falk Ebert**, **Philipp Schmidt**, **Erik Jung**, **Jan Brandes**, **Philipp Lohmann**, **Rongyang Xu**, **Wolfram H. P. Pernice**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14104-28 • 15:40 - 16:00

High-accuracy partial differential equation solutions with hybrid solvers

Author(s): **Timoteo Lee**, **Frank Brücknerhoff-Plückelmann**, **Wolfram H. Pernice**, **Jelle Dijkstra**, **Liam McRae**, Ruprecht-Karls-Univ. Heidelberg (Germany)

Coffee Break 16:00 - 16:30

HOT TOPICS II

14 April 2026 • 16:30 - 18:10 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Anna Mignani, Istituto di Fisica Applicata "Nello Carrara" (Italy)

2026 Symposium Chair

16:30 to 16:40:

Welcome and Opening Remarks

SPIE Directors' Award Presentation

Introduction of Plenary Speakers

14078-600 • 16:20 - 17:05

Time-of-flight imaging using quantum technologies (Plenary Presentation)

Author(s): **Gerald S. Buller**, Heriot-Watt Univ. (United Kingdom)

14100-28 • 17:25 - 18:10

Photonic integrated circuits in PIXEurope pilot line and quantum technologies (Plenary Presentation)

Author(s): **Valerio Pruneri**, ICFO - Institut de Ciències Fotòniques (Spain)

Wednesday 15 April 2026

SESSION 7: OPTICAL NETWORKS

15 April 2026 • 13:10 - 15:00 | Etoile A (Niveau/Level 1)

Session Chair(s): **Peter R. Wiecha**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France)

14104-29 • 13:10 - 13:40

Performance and complexity tradeoffs of neural network equalizers in intensity-modulation direct-detection optical systems (Invited Paper)

Author(s): **Dan Li**, KTH Royal Institute of Technology (Sweden), RISE Research Institutes of Sweden (Sweden); **Yevhenii Osadchuk**, University of Copenhagen (Denmark); **Carlos Natalino**, Chalmers University of Technology (Sweden); **Armands Ostrovskis**, Riga Technical University (Latvia), Keysight Technologies Deutschland GmbH (Germany); **Tianyu Jiang**, KTH Royal Institute of Technology (Sweden), RISE Research Institutes of Sweden (Sweden); **Darko Zibar**, Technical University of Denmark (Denmark); **Lu Zhang**, Xianbin Yu, Zhejiang University (China); **Vjaceslavs Bobrovs**, Riga Technical University (Latvia); **Xiaodan Pang**, Zhejiang University (China), Riga Technical University (Latvia); **Francesco Da Ros**, Technical University of Denmark (Denmark); **Oskars Ozolins**, Riga Technical University (Latvia)

14104-30 • 13:40 - 14:00

Photonic structures as amplitude-modulating weights in analogue neural networks for Edge AI

Author(s): **Håvard H. Toftevaag**, University of Oxford (United Kingdom), SINTEF Digital (Norway); **Nikolaos Farmakidis**, Jonathan Dearlove, Angel Ortega-Gomez, Harish Bhaskaran, University of Oxford (United Kingdom)

14104-31 • 14:00 - 14:20

Chip-scale Mode Demultiplexer for Multimode Fibers Using an Optical Diffractive Neural Network

Author(s): **Jie Zhang**, Qian Zhang, TU Dresden (Germany); **Haoyi Yu**, Univ. of Shanghai for Science and Technology (China); **Yuedi Zhang**, Jiali Sun, Yu Miao, TU Dresden (Germany); **Qiming Zhang**, Chao Meng, Min Gu, Univ. of Shanghai for Science and Technology (China); **Jürgen W. Czarske**, TU Dresden (Germany)

14104-32 • 14:20 - 14:40

Comparative Study of Three Photonic Neural Networks for Fiber-Propagated Signal Equalization

Author(s): **Stefano Gretter**, Emiliano Staffoli, Lorenzo Pavesi, Univ. degli Studi di Trento (Italy)

14104-33 • 14:40 - 15:00

Power-scaling law for the network size and performance in a semiconductor laser neural network

Author(s): **Lucero Cardenas-Razo**, Univ. Marie et Louis Pasteur, FEMTO-ST, CNRS (France); **Magdalena Marciniak**, Lodz Univ. of Technology (Poland); **Anas Skalli**, Univ. Marie et Louis Pasteur, FEMTO-ST, CNRS (France); **Marcin Gębski**, Lodz Univ. of Technology (Poland); **Stephan Reitzenstein**, James A. Lott, Institut für Festkörperphysik, Technische Univ. Berlin (Germany); **Tomasz Czyszanowski**, Institute of Physics, Lodz Univ. of Technology (Poland); **Daniel Brunner**, Univ. Marie et Louis Pasteur, FEMTO-ST, CNRS (France)

Coffee Break 15:00 - 15:30

SESSION 8: PHOTONIC COMPUTING II

15 April 2026 • 15:30 - 18:10 | Etoile A (Niveau/Level 1)

Session Chair(s): **Stefano Biasi**, Univ. degli Studi di Trento (Italy)

14104-34 • 15:30 - 16:00

The many faces of photonic reservoir computing (Invited Paper)

Author(s): **Miguel C. Soriano**, IFISC (CSIC-UIB) (Spain)

14104-35 • 16:00 - 16:30

Offset-diagonal computing for scalable and sparsity-enabled optical processors (Invited Paper)

Author(s): **William Renninger**, The Institute of Optics, Univ. of Rochester (United States)

14104-36 • 16:30 - 16:50

Multi-frequency time-delayed reservoir computing

Author(s): **Grigori Slinkov**, **Diana Salimdzhanova**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Cyrus Young**, Max-Planck-Institut für die Physik des Lichts (Germany); **Birgit Stiller**, Max-Planck-Institut für die Physik des Lichts (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany), Institut für Photonik, Leibniz Univ. Hannover (Germany)

14104-12 • 16:50 - 17:10

Experimental characterization of memory capacity in a microring resonator network for multi-wavelength reservoir computing

Author(s): **Alessandro Foradori**, Univ. degli Studi di Trento (Italy), Univ. Gent (Belgium); **Alessio Lugnan**, **Lorenzo Pavesi**, Univ. degli Studi di Trento (Italy); **Peter Bienstman**, Univ. Gent (Belgium)

14104-38 • 17:10 - 17:30

Excited-state reservoir computing via defect-mediated opto-ionic dynamics in hybrid perovskites

Author(s): **Philipp Kollenz**, **Carina Herrle**, **Leonard Göhringer**, **Tom Wickenhäuser**, **Wolfram H. P. Pernice**, **Rüdiger Klingeler**, **Felix Deschler**, Ruprecht-Karls-Univ. Heidelberg (Germany)

14104-39 • 17:30 - 17:50

Ultrafast optical computing in dispersive few-mode fibers: an extension to nonlinear tasks

Author(s): **Adhila Nazarudeen**, **Moritz Pflüger**, **Silvia Ortín**, **Apostolos Argyris**, Instituto de Física Interdisciplinar y Sistemas Complejos - IFISC (CSIC-UIB) (Spain)

14104-40 • 17:50 - 18:10

Reconfigurable Deep Photonic Recurrent Networks for Optoelectronic Information Processing

Author(s): **Ujal Rzayev**, **Can Dimici**, Koc University (Turkey); **Aycan Deniz Vit**, Ghent University (Belgium); **Bahrem Serhat Danis**, Koc University (Turkey); **Arda Tuna Vit**, Yeditepe University (Turkey); **Enes Akcakoca**, **Zeynep Ipek Yanmaz**, **Emir Salih Magden**, Koc University (Turkey)

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Wednesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14104-51 • 17:45 - 19:30

Deep learning-enhanced magneto-optical rotation device in the Voigt geometry

Author(s): **Watheq Al-Basheer**, King Fahd Univ. of Petroleum & Minerals (Saudi Arabia); **Laith M. Albasheer**, School of Population Health, Faculty of Medical and Health Sciences, University of Auckland (New Zealand)

14104-52 • 17:45 - 19:30

Chiral metasurface optimization using a genetic algorithm and a neural-network-based approach

Author(s): **Alexandre Mayer**, Univ de Namur (Belgium); **Davide Filippozzi**, Justus-Liebig-Univ. Giessen (Germany); **Nicolas Roy**, Cenaero ASBL (Belgium); **Arash Rahimi-Iman**, Justus-Liebig-Univ. Giessen (Germany)

14104-53 • 17:45 - 19:30

Enhancing low-light videos using vision transformers in optical imaging systems

Author(s): **Yushu Zhang**, King Abdullah University of Science & Technology (Saudi Arabia); **Qizhou Wang**, **Arturo Burguete-Lopez**, **Sergei Rodionov**, **Andrea Fratalocchi**, King Abdullah Univ. of Science and Technology (Saudi Arabia)

14104-54 • 17:45 - 19:30

Inverse Designing Si Metamaterials using Tensorised Image Generator

Author(s): **Prasanna Paithankar**, **Monica Pradhan**, **Shailendra K. Varshney**, **Partha P. Chakrabarti**, Indian Institute of Technology Kharagpur (India)

14104-55 • 17:45 - 19:30

Deep learning method to reconstruct the hyperspectral time of flight of photons from compressed measurements.

Author(s): **Solaiman Ahmed**, **Natalie C. Li**, **Mamadou Diop**, Western Univ. (Canada)

14104-56 • 17:45 - 19:30

Unwrapping photonic reservoirs: enhanced expressivity via random Fourier encoding over stretched domains

Author(s): **Girish Tripathy**, Loughborough Univ. (United Kingdom); **Gerard McCaul**, Department of Physics, Loughborough University (United Kingdom); **Giulia Marcucci**, LumiAlres Ltd (United Kingdom); **Juan Sebastian Toterog Gongora**, Emergent Photonics Research Centre, Loughborough University (United Kingdom)

14104-57 • 17:45 - 19:30

Machine learning-based prediction of net transmission for bend optical waveguides in digital applications

Author(s): **Mohamed Ramadan**, German International Univ Berlin Campus (GIU) (Germany); **Amir Ali**, The German Univ. in Cairo (Egypt)

14104-58 • 17:45 - 19:30

Emergent learning: neuromorphic photonic computing with accelerated training

Author(s): **Sara Peña Gutiérrez**, IIT (Italy); **Salvatore Manfredi D'Angelo**, Univ. degli studi di Roma "La Sapienza" (Italy), Italian Institute of Technology (Italy); **Giancarlo Ruocco**, **Marco Leonetti**, IIT (Italy)

14104-59 • 17:45 - 19:30

Photonics-enhanced machine learning for intelligent urban traffic management

Author(s): **Manuel Vieira**, ISEL-IPL /UNINOVA-CTS and LASI (Portugal); **Gonçalo Galvão**, ISEL (Portugal); **Manuela Vieira**, CTS - UNINOVA (Portugal); **Mario Véstias**, ISEL (Portugal); **Paula Louro**, ISEL-IPL /UNINOVA-CTS and LASI (Portugal); **Pedro Vieira**, ISEL-IPL (Portugal)

14104-60 • 17:45 - 19:30

Integrating optimization and machine learning models for advanced forward and inverse design of surface plasmon resonance sensors

Author(s): **Rahul Runthala**, **Nitika Grover**, **Pankaj Arora**, Birla Institute of Technology and Science, Pilani (India); **Lakshmi Narayanan Venkatasubramani**, Dublin City Univ. (Ireland)

14104-61 • 17:45 - 19:30

Physics-guided world models for long horizon electromagnetic dynamics under partial observability

Author(s): **Ziheng Guo**, ZhangJiang Laboratory (China); **Maoxiong Zhao**, **Fang Wu**, **Chaoqun Fang**, **Siyuan He**, **Bu Yang**, Zhangjiang Lab. (China)

14104-62 • 17:45 - 19:30

Comparative study of deep generative models for photonics devices in small data regime

Author(s): **Vincent Létourneau**, Univ. of Ottawa (Canada); **Yuri Grinberg**, National Research Council Canada (Canada); **Dan Kushnir**, Nokia Bell Labs. (Canada); **Yanlei Zhang**, Univ. de Montréal (Canada); **Dan-Xia Xu**, National Research Council Canada (Canada); **Guy Wolf**, Univ. de Montréal (Canada)

14104-63 • 17:45 - 19:30

Predicting power conversion efficiency of luminescent solar concentrators using artificial neural networks

Author(s): **Sandra Correia**, Univ. of Aveiro (Portugal); **Ana Rita Bastos**, Instituto de Telecomunicações, Instituto Superior Técnico (Portugal); **Lília M. S. Dias**, Univ. de Aveiro (Portugal), Instituto de Telecomunicações, Instituto Superior Técnico (Portugal); **Paulo S. André**, Instituto de Telecomunicações, Instituto Superior Técnico (Portugal); **Rute A. S. Ferreira**, Univ. de Aveiro (Portugal)

14104-64 • 17:45 - 19:30

End-to-end inverse design of nonlinear waveguides with differentiable mode solver and multimode nonlinear Schrödinger equation.

Author(s): **Azka Maula Iskandar Muda**, **Uğur Teğin**, Koç Univ. (Turkey)

14104-66 • 17:45 - 19:30

Integrated photonic transceiver for delocalized deep learning

Author(s): **Bjarke A. Frederiksen**, Massachusetts Institute of Technology (United States), Technical University of Denmark (Denmark); **Alessandro Buzzi**, **Saumil Bandyopadhyay**, Massachusetts Institute of Technology (United States); **Ryan Hamerly**, Massachusetts Institute of Technology (United States), NTT Research, Inc. (United States); **Kenaish Al Qubaisi**, **Dirk R. Englund**, Massachusetts Institute of Technology (United States)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 9: IMAGING

16 April 2026 • 11:00 - 12:30 | Etoile A (Niveau/Level 1)

Session Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Sweden)

14104-41 • 11:00 - 11:30

Nonlinear-nonlocal flat optics for space-time image processing (Invited Paper)

Author(s): **Costantino De Angelis**, Univ. degli Studi di Brescia (Italy)

14104-42 • 11:30 - 11:50

A compact physics-informed deep learning framework for accurate quantitative phase imaging

Author(s): **Linpeng Lu**, **Xingyu Huang**, Nanjing Univ of Science and Technology (China); **Piotr Zdankowski**, **Maciej Trusiak**, **Malgorzata Kujawinska**, Institute of Micromechanics and Photonics, Warsaw University of Technology (Poland); **Chao Zuo**, Nanjing Univ of Science and Technology (China)

14104-43 • 11:50 - 12:10

High Resolution Hyperspectral Video Capture and Understanding Leveraging Artificial Intelligence in Metasurfaces

Author(s): **Arturo Burguete-Lopez**, **Qizhou Wang**, **Sergei Rodionov**, **Andrea Fratolocchi**, King Abdullah Univ. of Science and Technology (Saudi Arabia)

14104-44 • 12:10 - 12:30

Physics-derived synthetic training of deep-learning models for rapid characterization of perovskite solar cells via accelerated hyperspectral imaging.

Author(s): **Erell LAOT**, EDF (France), IPVF (France), UMR IPVF (France); **Jean-Baptiste Puel**, Electricité de France S.A. (France), Institut Photovoltaïque d'Ile-de-France (France); **Jean-François Guillemoles**, UMR de l'Institut Photovoltaïque d'Ile de France (France), Institut de Chimie, CNRS (France), UMR de l'Institut Photovoltaïque d'Ile de France (France); **Daniel Ory**, Electricité de France S.A. (France), Institut Photovoltaïque d'Ile-de-France (France)

Lunch Break 12:30 - 13:30

SESSION 10: MACHINE LEARNING AND PHOTONICS: ACROSS DOMAINS

16 April 2026 • 13:30 - 15:50 | Etoile A (Niveau/Level 1)

Session Chair(s): **Francesco Ferranti**, Vrije Univ. Brussel (Sweden)

14104-13 • 13:30 - 14:10

Inversely designed free-form plasmonics with machine learning (Keynote Presentation)

Author(s): **Wenshan Cai**, Georgia Institute of Technology (United States)

14104-45 • 14:10 - 14:30

Computationally Optimized Supercontinuum Generation in Programmable Liquid-Core Fibers

Author(s): **Mario Chemnitz, Johannes Hofmann, Ramona Scheibinger, Sobhi Saeed, Chunxiao Chen, Bennet Fischer, Markus Schmidt,** Leibniz-Institut für Photonische Technologien e.V. (Germany)

14104-46 • 14:30 - 14:50

Physics-Informed Neural Surrogates for Real-Time Inference of Nanostructure Evolution From Time-Resolved X-Ray Scattering

Author(s): **Özüm Emre Aşırım,** Deutsches Elektronen Synchrotron (DESY) (Germany), HAW Hamburg (Germany); **Stephan Roth,** Deutsches Elektronen-Synchrotron (Germany), KTH Royal Institute of Technology (Sweden); **Marina Tropmann-Frick,** Hochschule für Angewandte Wissenschaften Hamburg (Germany)

14104-47 • 14:50 - 15:10

Gradient-manifold alignment scheduling for physics-guided diffusion

Author(s): **Liam Chalcroft, Eduardo Camarillo Abad, Peter Christopher, Oliver Burton, Thomas Albrow-Owen,** Prospectral (United Kingdom)

14104-48 • 15:10 - 15:30

Accurate Mode Decomposition in Multimode Fibers Using Deep Learning with Real–Imaginary Modal Weights

Author(s): **Jiali Sun, Qian Zhang, Jürgen W. Czarske,** TU Dresden (Germany)

14104-49 • 15:30 - 15:50

Ultrafast pulse retrieval from partial FROG traces using implicit diffusion models

Author(s): **Abhimanyu Borthakur,** Univ. of California, Los Angeles (United States); **Jack E. Hirschman,** Stanford Univ. (United States); **Sergio Carbajo,** Univ. of California, Los Angeles (United States)

CONFERENCE 14105

Photonics in Africa

16 April 2026 | Adenauer (Niveau/Level 1)

Conference Chair(s): Zouheir Sekkat, Univ. Mohammed V, Rabat (Morocco), Univ. Mohammed VI Polytechnic (Morocco)

Conference Co-Chair(s): Malik Maaza, Univ. of South Africa (South Africa)

Program Committee: Abdelilah Benyoussef, Hassan II Academy of Science and Technology, Rabat (Morocco); Zephania Birech, Univ. of Nairobi (Kenya); Azzedine Boudrioua, Lab. de Physique des Lasers (France); Akyana Britwum, Kwame Nkrumah Univ. of Science and Technology (Ghana); Mohamed Chaker, Institut National de la Recherche Scientifique (Canada); Alain M. Dikande, Univ. of Buea (Cameroon); Andrew Forbes, Univ. of the Witwatersrand, Johannesburg (South Africa); Patience T. Mthunzi-Kufa, Univ. of South Africa (South Africa); Mohamed A. Swillam, The American Univ. in Cairo (Egypt); Mourad Zghal, SupTelecom (Tunisia)

Wednesday 15 April 2026

POSTERS-WEDNESDAY

15 April 2026 • 17:45 - 19:30 | Galerie Erasme (Niveau/Level 0)

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Poster Setup: Wednesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

14105-14 • 17:45 - 19:30

Strong coupling between surface plasmons and excitons in a nonmetallic excitonic material

Author(s): Imane Hamideddine, Mohammed VI Polytechnic Univ. (Morocco); Zouheir Sekkat, Univ. Mohammed V de Rabat (Morocco), Moroccan Foundation for Advanced Science, Innovation and Research (Morocco), Institute for Advanced Studies, Mohammed VI Polytechnic Univ. (Morocco)

14105-15 • 17:45 - 19:30

Drone-based multispectral and thermal sensing for water stress evaluation in citrus cultivation

Author(s): Siham Refki, Asmae Ahanssis, Abdessamad El baraghi, Zouheir Sekkat, Mohammed VI Polytechnic Univ. (Morocco)

14105-16 • 17:45 - 19:30

A comparative study of CZTS-based solar cells prepared with DMSO, DMF, and 2-ME solvents

Author(s): Safae TORKA, Faculty of Sciences, University Mohamed V, RABAT (Morocco), MAScIR, university mohamed VI polytechnic, Benguerir (Morocco); Naoufal Ennouhi, ASARI, Mohammed VI Polytechnic Univ. (Morocco); Imane Hamideddine, MAScIR, Mohammed VI Polytechnic Univ. (Morocco); Zouheir Sekkat, Univ. Mohammed V de Rabat (Morocco), MAScIR, Mohammed VI Polytechnic Univ. (Morocco), IAS, Mohammed VI Polytechnic Univ. (Morocco)

14105-17 • 17:45 - 19:30

The solar collector app project: an open-source project for the development of concentrated solar power projects in Africa

Author(s): Dam-Bé L. Douti, Serge D. Afenyiveh, Henoc N'gasama, Univ. de Kara (Togo); Akissi M. F. Yebouet, Institut National Polytechnique Félix Houphouët-Boigny (Côte d'Ivoire); Michael E. K. Donkor, Kwame Nkrumah Univ. of Science and Technology (Ghana); Andrew A. Huzortey, Univ. of Cape Coast (Ghana); Akyana Britwum, Kwame Nkrumah Univ. of Science and Technology (Ghana)

Thursday 16 April 2026

HOT TOPICS III

16 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Session Moderator:

Thierry Georges, Oxxius (France)

2026 Symposium Chair

9:00 hrs

Welcome and Opening Remarks

Introduction of Plenary Speakers

14082-700 • 9:05 - 9:50

Volumetric printing by reverse tomography: a new paradigm in additive manufacturing (Plenary Presentation)

Author(s): **Christophe Moser**, EPFL (Switzerland)

14089-701 • 9:55 - 10:40

From glass to gas: advances, applications and new challenges in hollow core fibre technology (Plenary Presentation)

Author(s): **Natalie V. Wheeler**, Optoelectronics Research Ctr. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 1: PHOTONIC MATERIALS AND SPECTROSCOPY

16 April 2026 • 11:00 - 12:40 | Adanauer (Niveau/Level 1)

Session Chair(s): **Abdelilah Benyoussef**, Académie Hassan II des Sciences et Techniques (Morocco)

14105-1 • 11:00 - 11:30

From Mott transition and Maxwell concept of heat stimuli to smart windows and nanofluids applications (Invited Paper)

Author(s): **Malik Maaza**, Univ. of South Africa (South Africa), iThemba Lab. for Accelerator-Based Sciences, National Research Foundation (South Africa)

14105-2 • 11:30 - 11:50

Experimental analysis of light-polarization effects on Raman scattering intensity

Author(s): **Mostafa K. Elghandour**, **Emad Mohamed**, **Abdulaziz H. Albdowi**, Faculty of Engineering, Ain Shams University (Egypt); **Mohamed S. Ismail**, Faculty of Science, Ain Shams University (Egypt); **Mazen Erfan**, **Ahmed A. Elsayed**, **Diaa Khalil**, Faculty of Engineering, Ain Shams University (Egypt)

14105-3 • 11:50 - 12:20

Vanadium dioxide for photonic applications (Invited Paper)

Author(s): **Mohamed Chaker**, Institut National de la Recherche Scientifique (Canada)

14105-4 • 12:20 - 12:40

LIBSpectraX: automated element identification in LIBS spectra via a vector-space model coupled with dimensionality reduction and multiclass classification

Author(s): **Dam-Bé L. Douti**, Univ. de Kara (Togo); **Kossi Amouzouvi**, TU Dresden (Germany), Kwame Nkrumah Univ. of Science and Technology (Ghana); **Kossi Mawouena Samuel Afolo**, TU Dresden (Germany); **Dawaïdom Samie**, **Tinfili Natta**, Univ. de Kara (Togo); **Akyana Britwum**, Kwame Nkrumah Univ. of Science and Technology (Ghana); **Farid Saberi-Movahed**, Graduate Univ. of Advanced Technology - Kerman (Iran, Islamic Republic of); **Sahar Vahdati**, Leibniz Information Ctr. for Science and Technology (Germany); **Jens Lehmann**, Institut für Angewandte Informatik e.V. (Germany)

Lunch Break 12:40 - 13:40

SESSION 2: GREEN PHOTONICS

16 April 2026 • 13:40 - 15:20 | Adanauer (Niveau/Level 1)

Session Chair(s): **Mohamed Chaker**, Institut National de la Recherche Scientifique (Canada)

14105-5 • 13:40 - 14:10

DFT-guided design of two-dimensional materials for hydrogen production and storage (Invited Paper)

Author(s): **Abdelilah Benyoussef**, Académie Hassan II des Sciences et Techniques (Morocco)

14105-6 • 14:10 - 14:30

Polarization switching and photovoltaic mechanisms in $\text{Bi}_2\text{FeCrO}_6$

Author(s): **Aziz Dinia**, IPCMS-CNRS/Université Strasbourg (France); **Chenyue Hu**, **Xavier Henning**, **Antoine Bagard**, **Killian Marin**, **Laurent Schlur**, **Gilles Versini**, **Daniel Stoeffler**, Institut de Physique et de Chimie des Matériaux de Strasbourg, Univ. de Strasbourg, CNRS (France); **Thomas Fix**, ICube, Univ. de Strasbourg, CNRS (France); **Mircea Rastei**, **Silviu Colis**, Institut de Physique et de Chimie des Matériaux de Strasbourg, Univ. de Strasbourg, CNRS (France)

14105-7 • 14:30 - 15:00

Control and shaping of the electroluminescence of organic light emitting diodes by using plasmonic Ag nanoparticle arrays *(Invited Paper)*

Author(s): **Azzedine Boudrioua**, Lab. de Physique des Lasers (France)

14105-8 • 15:00 - 15:20

Phase-change construction materials for sustainable building applications

Author(s): **SALMA KOUZZI**, **Mohammed Lhassane Lahlaouti**, Laboratory Energy Faculty of science Tetuan (Morocco); **Mohammed EL GANAOU**, LERMAB Laboratory, IUT de Lognwy, Lorraine University, Longwy, 54400, France (France)

Coffee Break 15:20 - 15:50

SESSION 3: PHOTONIC EDUCATION

16 April 2026 • 15:50 - 16:20 | Adanauer (Niveau/Level 1)

Session Chair(s): **Azzedine Boudrioua**, Lab. de Physique des Lasers (France)

14105-9 • 15:50 - 16:20

Empowering optics education in West Africa: synergies for sustainable development *(Invited Paper)*

Author(s): **Fabian Ruf**, Helping Hands Network (2HNET) (Liberia); **Akyana Britwum**, Kwame Nkrumah Univ. of Science and Technology (Ghana); **Charles Ofori Antipem**, DEXT Technology Ltd. (Ghana); **J. Wilfred Zeon**, Helping Hands Network (2HNET) (Liberia); **George Dwapanyin**, Univ. of St. Andrews (United Kingdom); **Tilman Hartwig**, Helping Hands Network (2HNET) (Liberia), Umweltbundesamt GmbH (Germany); **Adaeeze Ibik**, Helping Hands Network (2HNET) (Liberia), African Astronomical Society (South Africa); **Michael E. K. Donkor**, Kwame Nkrumah Univ. of Science and Technology (Ghana)

SESSION 4: BIO- & AGRO- PHOTONICS

16 April 2026 • 16:20 - 17:50 | Adanauer (Niveau/Level 1)

Session Chair(s): **Azzedine Boudrioua**, Lab. de Physique des Lasers (France)

14105-10 • 16:20 - 16:40

Plasmonic nanoparticles and their contribution to visible absorption enhancement of dye molecules

Author(s): **Amina Badir**, **Siham Refki**, **Zouheir Sekkat**, Mohammed VI Polytechnic Univ. (Morocco)

14105-11 • 16:40 - 17:00

A combined inverse Kubelka–Munk modelling and unsupervised clustering of human skin reflectance spectra from the NIST dataset

Author(s): **Andrew Atiogbe Huzortey**, Laser and Fibre Optics Centre, Department of Physics, University of Cape Coast (Ghana); **Jacob Nobka**, Ghana Photonics and Optics Laboratory, Department of Physics, Kwame Nkrumah University of Science and Technology (Ghana); **Akissi MF Yebouet**, National Polytechnic Institute Félix Houphouët-Boigny (Côte d'Ivoire); **Rabbi Boateng**, Univ. of Cape Coast (Ghana); **Micheal EK Donkor**, Ghana Photonics and Optics Laboratory, Department of Physics, Kwame Nkrumah University of Science and Technology (Ghana); **Benjamin Anderson**, Laser and Fibre Optics Centre, Department of Physics, University of Cape Coast (Ghana); **Akyana Britwum**, Ghana Photonics and Optics Laboratory, Department of Physics, Kwame Nkrumah University of Science and Technology (Ghana)

14105-12 • 17:00 - 17:20

In-situ remote diagnostics on Theobroma cacao plants with a 3D-printed fluorescence lidar

Author(s): **Rabbi Boateng**, **Andrew A. Huzortey**, Laser and Fibre Optics Centre, Department of Physics, University of Cape Coast (Ghana); **Manuel B. Amankwatia**, Department of Electrical and Computer Engineering, Kwame Nkrumah University of Science (Ghana); **Hampus Månefjord**, **Mikkel Brydegaard**, Department of Physics, Lund University, Sweden (Sweden); **Benjamin Anderson**, Laser and Fibre Optics Centre, Department of Physics, University of Cape Coast (Ghana)

14105-13 • 17:20 - 17:50

Photonics techniques and machine learning for diagnostics in healthcare and agri-food applications *(Invited Paper)*

Author(s): **Patience T. Mthunzi-Kufa**, Univ. of South Africa (South Africa)

CONFERENCE CA100

Co-located: PhoBioS COST Action Session - Biophotonic Surfaces and Light–Matter Interactions for Biomedical Sensing and Imaging

14 April 2026 | Varsovie/Salon 1 (Niveau/Level 0)

Conference Chair(s): Dror Fixler, Tel Aviv Univ. (Israel); Malgorzata Szczerska, Gdansk Univ. of Technology (Poland)

Tuesday 14 April 2026

SESSION 1: LIGHT-MATTER INTERACTIONS

14 April 2026 • 8:20 - 10:20 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): Dror Fixler, Tel Aviv Univ. (Israel)

CA100-201 • 8:20 - 8:40

Optical diagnostics based on spectral changes in urine

Author(s): Malgorzata Szczerska, Patryk Sokołowski, Kacper Cierpiak, Maria Babinska, Adam Władzinski, Gdansk Univ. of Technology (Poland); Sebastian Garcia Galan, Univ. de Jaén (Spain); Paweł Wityk, Medical Univ. of Gdansk (Poland)

CA100-202 • 8:40 - 9:00

Wide-field interferometric imaging via surface plasmon resonance of gold nanoparticles

Author(s): Natan Tzvi Shaked, Tel Aviv Univ. (Israel)

CA100-203 • 9:00 - 9:20

Imaging with metalenses: capabilities and limitations

Author(s): Uriel Levy, The Hebrew Univ. of Jerusalem (Israel)

CA100-204 • 9:20 - 9:40

Ultrasensitive Multiplex Detection of Cancer Protein Biomarkers in Serum Using SERS-Based Immunosensor on a Nanoporous Biosilica Strip

Author(s): Mehmet Kahraman, Gaziantep Üniv. (Turkey)

CA100-205 • 9:40 - 10:00

THz quantum cascade laser modelling for biomedical applications: Maxwell-Bloch simulations and machine learning frameworks

Author(s): Nikola Vuković, Univ. of Belgrade (Serbia); Novak Stanojević, Univ. of Belgrade (Serbia), VLATACOM Institute Ltd. (Serbia); Milan Ignjatovic, Mihailo Stojković, Univ. of Belgrade (Serbia); Aleksandar Milićević, Vinča Institute of Nuclear Sciences, Univ. of Belgrade, National Institute of the Republic of Serbia (Serbia); Aleksandar Demić, Dragan Indjin, Univ. of Leeds (United Kingdom); Jelena Radovanovic, Univ. of Belgrade (Serbia)

CA100-206 • 10:00 - 10:20

Liquid crystal optical sensors applied to the aquaculture sector

Author(s): Pedro M. de Almeida, Instituto Politécnico de Lisboa (Portugal); Simone Soares, CICECO – Instituto de Materiais de Aveiro, Univ. de Aveiro (Portugal), Institute of Nanostructures, Nanomodelling and Nanofabrication (Portugal); Nuno F. Santos, Institute of Nanostructures, Nanomodelling and Nanofabrication, Univ. de Aveiro (Portugal); Carlos Marques, CICECO – Instituto de Materiais de Aveiro, Univ. de Aveiro (Portugal)

Coffee Break 10:20 - 10:50

SESSION 2: BIOPHOTONICS SURFACES

14 April 2026 • 10:50 - 12:30 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): Malgorzata Szczerska, Gdansk Univ. of Technology (Poland)

CA100-207 • 10:50 - 11:10

Bioinspired Cellulosic Architectures for humidity Responsive Materials

Author(s): **José F. Malta, Francisco Sousa, Maria H. Godinho**, Univ. Nova de Lisboa (Portugal); **Pedro L. Almeida**, Instituto Superior de Engenharia de Lisboa, Instituto Politécnico de Lisboa (Portugal); **Ana Almeida**, Univ. Nova de Lisboa (Portugal), LAQV Requimte (Portugal), Institute of Nanostructures, Nanomodelling and Nanofabrication (Portugal)

CA100-208 • 11:10 - 11:30

Fast Partial 3×4 Mueller Polarimetry for Real-Time Diagnostic Imaging of Tissue

Author(s): **Tatiana Novikova, Sooyong Chae, Théotim Lucas**, Lab. de Physique des Interfaces et des Couches Minces, École Polytechnique, CNRS (France), Institut Polytechnique de Paris (France); **Jessica C. Ramella-Roman**, Herbert Wertheim College of Medicine, Florida International Univ. (United States)

CA100-209 • 11:30 - 11:50

Chiral Photonic Films from Opposite-Handed Cholesteric and Cellulose Liquid Crystalline Phases

Author(s): **Maria Helena Godinho, Joana Nascimento, Alice Calado, Vasco Ludovic, Luis Pinto, Andreia Santos**, Univ. Nova de Lisboa (Portugal)

CA100-210 • 11:50 - 12:10

Triple-wavelength imaging of skin and mucosa surfaces: potential for clinical diagnostics

Author(s): **Janis Spigulis**, Univ of Latvia (Latvia); **Uldis Rubins, Edgars Kviesis-Kipge**, Univ. of Latvia (Latvia)

CA100-211 • 12:10 - 12:30

The iso-pathlength (IPL) point for cuffless blood pressure measurement

Author(s): **Dror Fixler**, Tel Aviv Univ. (Israel)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Photonics Europe poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EPE/poster-presentation-guidelines>.

CA100-212 • 18:10 - 20:00

Nanoporous Biosilica-Based SERS Platforms for Simultaneous Separation and Detection of Circulating Cancer Protein Biomarkers

Author(s): **Ayşe Mine Sarıdag, Mehmet Kahraman**, Gaziantep Üniv. (Turkey)

CA100-213 • 18:10 - 20:00

Light as the carrier of quantum information-photonic qubits

Author(s): **Nicolina Pop**, Univ Politehnica Timisoara (Romania)

CONFERENCE 14106

Optical Design and Engineering X

14 - 16 April 2026 | Madrid 2/Salon 4 (Niveau/Level 0)

Conference Chair(s): **James Babington**, Leonardo UK Ltd. (United Kingdom); **Ulrike Fuchs**, asphericon GmbH (Germany); **Thierry Lépine**, Institut d'Optique (France), Lab. Hubert Curien (France)

Program Committee: **Julien Archer**, Airbus Defence and Space (France); **Nathalie Blanchard**, ABB Analytical Measurement (Canada); **Andrés Cifuentes**, ASE Optics Europe (Spain); **Andrew J. Court**, TNO (Netherlands); **Guillaume Druart**, ONERA (France); **Sandra Gely**, Ansys, Inc. (France); **Eric Herman**, Keysight Technologies, Inc. (United States); **Demetrio Labate**, Leonardo (Italy); **Iain A. Neil**, ScotOptix (Switzerland); **Thomas Nobis**, Carl Zeiss AG (Germany); **Chris Normanshire**, Ansys, Inc. (United Kingdom); **Jannick P. Rolland**, Univ. of Rochester (United States); **Elisabetta Rugi Grond**, Thales Alenia Space Switzerland (Switzerland); **Alessio Taiti**, Leonardo S.p.A. (Italy); **Simon Thibault**, Univ. Laval (Canada); **Andrew P. Wood**, Qioptiq Ltd. (United Kingdom); **Richard N. Youngworth**, Riyo-LLC (United States); **María J. Yzuel**, Univ. Autònoma de Barcelona (Spain)

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 1: MODELLING, SIMULATION, SOFTWARE I

14 April 2026 • 11:00 - 12:30 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Guillaume Druart**, ONERA (France); **Chris Normanshire**, Ansys, part of Synopsys, Inc. (United Kingdom)

14106-1 • 11:00 - 11:30

Eye modeling for human perception analysis in complex scenes (Invited Paper)

Author(s): **Sandra Gely**, Ansys France SAS (France); **Mina Nazari**, Ansys, Inc. (United States); **Mathieu Reigneau**, Ansys France SAS (France);

Berta Bernad, Ansys UK Ltd. (United Kingdom)

14106-2 • 11:30 - 11:50

Multi-spectral thermal imager STOP analysis for the Harmony mission

Author(s): **Nathalie Blanchard**, **Bruno Leduc**, **Louis Moreau**, ABB Inc. (Canada); **Aaron Algoedt**, **Domien Crevits**, OIP N.V. (Belgium);

Frederic Doyon, ABB Inc. (Canada); **Nhan Nguyen**, OIP N.V. (Belgium); **Ludger Wilkens**, **Thomas Deuschle**, OHB System AG (Germany);

Olivier Defauchy, European Space Research and Technology Ctr., European Space Agency (Netherlands)

14106-3 • 11:50 - 12:10

A systematic design study on telecentric large aperture lenses

Author(s): **Gokul Raju**, HENSOLDT Optronics GmbH (Germany); **Vladan Blahnik**, Friedrich-Schiller-Univ. Jena (Germany)

14106-4 • 12:10 - 12:30

Ray-tracing simulation of metalens elements for polarization imaging

Author(s): **Thibault Leportier**, Ansys (now part of Synopsys) (Canada); **Han-Hsiang Cheng**, Ansys, part of Synopsys, Inc. (Japan); **Chris Normanshire**, Ansys, part of Synopsys, Inc. (United Kingdom); **Artemios Karvounis**, Ansys, part of Synopsys, Inc. (Greece); **Greg Baethge**, Ansys, part of Synopsys, Inc. (France); **Jens Niegemann**, Ansys, part of Synopsys, Inc. (Canada)

Lunch/Exhibition Break 12:30 - 13:40

SESSION 2: LENS DESIGN, NEW METHODS, AI I

14 April 2026 • 13:40 - 15:30 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Thierry Lépine**, Institut d'Optique Graduate School (France)

14106-5 • 13:40 - 14:10

The modular principle in lens design: extreme color aberration correction case study *(Invited Paper)*

Author(s): **Aleksei S. Garshin**, Photonics Precision Engineering GmbH (Germany)

14106-6 • 14:10 - 14:30

Toward a rigorous nomenclature for TMA

Author(s): **Nicolas Tetaz**, **Benjamin Aymard**, **Audric Drogoul**, Thales Alenia Space (France)

14106-7 • 14:30 - 14:50

Breaking human priors: reinforcement learning for lens design

Author(s): **Ai Ping Yow**, Nanyang Technological Univ. (Singapore), Institute for Digital Molecular Analytics and Science (Singapore); **Thomas Nobis**, **Christoph Menke**, Carl Zeiss AG (Germany); **Ralf Wolleschensky**, Carl Zeiss Microscopy GmbH (Germany); **Peter Török**, Nanyang Technological Univ. (Singapore), Singapore Ctr. for Environmental Life Sciences Engineering (Singapore)

14106-8 • 14:50 - 15:10

From Specs to Systems: Automated Optical System Design Generation

Author(s): **Antonis Chatzikostas**, Ansys, part of Synopsys, Inc. (Netherlands); **João Mendes-Lopes**, Ansys, part of Synopsys, Inc. (Spain); **Erin Elliott**, **Brian Mischuck**, **Dustin Malicoat**, Ansys, part of Synopsys, Inc. (United States); **Daniel Cotton**, Ansys, part of Synopsys, Inc. (United Kingdom); **Esteban Carbajal**, Ansys, part of Synopsys, Inc. (United States)

14106-9 • 15:10 - 15:30

Using structural aberration coefficients to filter first order starting points for reflective freeform zoom ophthalmoscopes

Author(s): **Kendall A. Smith**, **Jacob A. Sacks**, **Doran S. Teverovsky**, **Julie L. Bentley**, Univ. of Rochester (United States)

Coffee Break 15:30 - 16:00

SESSION 3: FREEFORM OPTICS, META-COMPONENTS

14 April 2026 • 16:00 - 17:00 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Ulrike Fuchs**, asphericon GmbH (Germany)

14106-10 • 16:00 - 16:20

Experimental Characterization of Spiral Lens Performance at High Field Angles

Author(s): **Yara Abi Raad**, Laboratoire Photonique, Numérique et Nanosciences (France), Institut d'Optique Graduate School (France); **Bertrand Simon**, **jean Augereau**, Laboratoire Photonique, Numérique et Nanosciences (France); **Jean Brusau**, Spiral SAS (France)

14106-11 • 16:20 - 16:40

Freeform EDOF IOL design for eyes that have undergone LASEK

Author(s): **Julien CHARLOT**, IMT Atlantique (France), LaTIM (France), Cristalens Industrie (France); **Thierry Lépine**, Laboratoire Hubert Curien UMR 5516n, CNRS, Institut d'Optique Graduate School, Université Jean Monnet (France); **Fannie Castignoles**, Cristalens Industrie (France); **Vincent NOURRIT**, IMT Atlantique (France), LaTIM (France)

14106-14 • 16:40 - 17:00

Optical design of freeform volume holographic and computational holographic display systems

Author(s): **Tong Yang**, **Yongdong Wang**, **Yifan Huang**, **Dewen Cheng**, **Yongtian Wang**, Beijing Institute of Technology (China)

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14106-12 • 18:10 - 20:00

Geometry and performance comparison of three optical concentrators for OWC applications

Author(s): Sina Babadi, Hossein Safi, Othman Younus, Iman Tavakkolnia, Harald Haas, Univ. of Cambridge (United Kingdom)

14106-41 • 18:10 - 20:00

Integrated multiphysics simulation framework for non-sequential STOP analysis

Author(s): Masato Kawasaki, Mitsubishi Electric Corp (Japan)

14106-43 • 18:10 - 20:00

Micro-optical lens integrated cap with reflow solder stability for near-packaged optical (NPO) Interconnect applications

Author(s): Kiran S. G., Mayuri Adepu, Raghuvver M. C., Ramana Pamidighantam, Rohin Kumar Y., LightSpeed Photonics Pte. Ltd. (India)

14106-44 • 18:10 - 20:00

Experience in assembling high-aperture objectives operating outside the visible range.

Author(s): Dmitry N. Frolov, Labor-Microscopes (Russian Federation); Witold Hackemer, Labor-Microscopes (Germany); Olga Vinogradova, Labor-Microscopes (Russian Federation); Alexey Melnikov, Alexandr Pavlii, Optotechnica Ltd. (Russian Federation); Alexey N. Frolov, Alexey G. Tabachkov, Labor-Microscopes (Russian Federation)

14106-45 • 18:10 - 20:00

An Integrated Workflow for the Optimization of MicroLED Transmitters in Visible Light Communication Systems

Author(s): Elham Sarbazi, Ansys, part of Synopsys, Inc. (United Kingdom); Georgios Patsamanis, Ansys, part of Synopsys, Inc. (Greece)

14106-46 • 18:10 - 20:00

Dual-Band MWIR/LWIR Optical Design for Forest Fire Monitoring

Author(s): Jiawei Liu, Xi'an Institute of Optics and Precision Mechanics (China); Yun Su, 508 Institute, Fifth Academy of China Aerospace Science and Technology Corp. (China); Xiaopeng Shao, Xi'an Institute of Optics and Precision Mechanics (China)

14106-47 • 18:10 - 20:00

Design and performance of an integrated Doppler lidar instrument for ego velocity determination in UAVs

Author(s): Miguel Polotan Sison, Paloma Matia-Hernando, Iñaki Blanco-Martinez, Gorka Salgado, Pau Figueras, David Caruso, Thomas Siegel, ASENSE (Spain)

14106-48 • 18:10 - 20:00

A study of optical design for the drum projector and its application

Author(s): Yi Chin F. Fang, National Yang Ming Chiao Tung Univ. (Taiwan)

14106-49 • 18:10 - 20:00

A study of a recognition method for human visualization analysis

Author(s):

14106-50 • 18:10 - 20:00

Design and testing of a concave surface with changes in curvature using null-screens

Author(s): Francisco Javier Bautista-Clemente, Manuel Campos-García, Univ. Nacional Autónoma de México (Mexico)

14106-51 • 18:10 - 20:00

Preliminary Optical Design and Tolerance Analysis of a Ritchey-Chrétien Telescope for LEO Imaging

Author(s): Jeeyeon Yoon, Goeun Kim, Korea Aerospace Research Institute (Korea, Republic of)

14106-52 • 18:10 - 20:00

A data-driven approach to secondary color analysis

Author(s): Holger Münz, Carl Zeiss AG, Corporate Research & Technology (Germany); Martin Peschka, Carl Zeiss AG (Germany); Jacob A. Sacks, Julie L. Bentley, The Institute of Optics, Univ. of Rochester (United States)

14106-53 • 18:10 - 20:00

Exploring optomechanical metamaterials for stray-light control

Author(s): Jan M. Kaster, Carl Zeiss SMT GmbH (Germany)

14106-54 • 18:10 - 20:00

Pupil-dependent performances of EDOF lenses in eyes with post-LASIK spherical aberration

Author(s): **Julien CHARLOT**, IMT Atlantique (France), LaTIM (France), Cristalens Industrie (France); **Thierry LEPINE**, Laboratoire Hubert Curien UMR 5516n, CNRS, Institut d'Optique Graduate School, Université Jean Monnet (France); **Fannie CASTIGNOLES**, Cristalens Industrie (France); **Vincent Nourrit**, IMT Atlantique Bretagne-Pays de la Loire (France), Lab. de Traitement de l'Information Médicale (France)

14106-55 • 18:10 - 20:00

Bridging optical and thermoelastic simulations with surrogate models for system-level design

Author(s): **Jan M. Kaster**, Carl Zeiss SMT GmbH (Germany)

14106-56 • 18:10 - 20:00

Optical design of a Ritchey–Chrétien telescope with a decentered square aperture for 3U CubeSat

Author(s): **Chanisa Kanjanasakul**, National Astronomical Research Institute of Thailand (Thailand); **Thierry Lépine**, Institut d'Optique Graduate School (France); **Supachai Awiphan**, Wiphu Rujopakarn, National Astronomical Research Institute of Thailand (Thailand)

14106-59 • 18:10 - 20:00

Quantum computing for optical system designs discrete optimization

Author(s): **Daniel Perez Calero**, **Robert Wezeman**, **Stefan M. B. Bäumer**, TNO (Netherlands)

Wednesday 15 April 2026

SESSION 4: JOINT SESSION: COMPUTATIONAL OPTICS FOR OPTICAL DESIGN

15 April 2026 • 8:40 - 10:00 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Nikolai Schmitt**, Carl Zeiss SMT GmbH (Germany)

Joint session between conference 14106, Optical Design and Engineering and conference 14110, Computational Optics

14110-1 • 8:40 - 9:20

Harnessing nature's limits: computational 3D imaging from fast industrial inspection to "seeing the unseen" (Keynote Presentation)

Author(s): **Florian Willomitzer**, Wyant College of Optical Sciences (United States)

14106-15 • 9:20 - 9:40

End-to-end optimization environment built from a differentiable ray tracer

Author(s): **Gabriel Pradat-Peyre**, **Alice Fontbonne**, **Guillaume Druart**, ONERA (France); **François Goudail**, Institut d'Optique Graduate School (France)

Coffee Break 10:00 - 10:30

SESSION 5: MODELLING, SIMULATION, SOFTWARE II

15 April 2026 • 10:30 - 12:00 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Chris Normanshire**, Ansys, part of Synopsys, Inc. (United Kingdom)

14106-17 • 10:30 - 11:00

Automated Multiphysics approach from mission planning to thermally induced performance degradation of an optical system

(Invited Paper)

Author(s): **Vincenzo Maria Vitale**, Ansys France SAS (France); **Flurin Herren**, Ansys UK Ltd. (United Kingdom); **Yusuke Onishi**, Ansys Japan K.K. (Japan); **Margherita Coda**, Ansys Italia Srl. (Italy); **Sandra Gely**, Ansys France SAS (France); **Csilla Timar-Fulep**, Ansys UK Ltd. (United Kingdom); **Roberto Gemma**, Ansys Italia Srl. (Italy)

14106-18 • 11:00 - 11:20

Novel integrated metalens – grating coupler input/output workflow for photonic integrated circuits

Author(s): **Stefanie Markevich**, Ansys, part of Synopsys, Inc. (Canada); **Thibault Lepointier**, Ansys (now part of Synopsys) (Canada); **Chris Normanshire**, Ansys, part of Synopsys, Inc. (United Kingdom); **Artemios Karvounis**, Ansys, part of Synopsys, Inc. (Greece); **Federico Duque Gomez**, Ansys, part of Synopsys, Inc. (Canada); **Han-Hsiang Cheng**, Ansys, part of Synopsys, Inc. (Japan); **Greg Baethge**, Ansys, part of Synopsys, Inc. (France)

14106-19 • 11:20 - 11:40

Wide field-of-view thermal imaging optimization: towards a distortion-minimum design via image projection

Author(s): **Ifeanyichukwu Umeadi Okonkwo**, Vrije Univ. Brussel (Belgium); **Alejandro Madrid Sánchez**, **Simone Sorgato**, Vrije Univ. Brussel (Belgium), Flanders Make@VUB (Belgium); **Lien Smeesters**, Vrije Universiteit Brussel (Belgium), Flanders Make@VUB (Belgium)

14106-20 • 11:40 - 12:00

Optical Software-Assisted Design and simulation of Spatio-Temporal Profiles of ultrashort laser pulses

Author(s): **Lilian Franchois**, **Luc Froehly**, FEMTO-ST (France), Univ. Marie et Louis Pasteur (France); **Remo Giust**, **François Courvoisier**, Univ. Marie et Louis Pasteur (France), FEMTO-ST (France)

Lunch/Exhibition Break 12:00 - 13:40

SESSION 6: FUTURE OF OPTICAL DESIGN: PRESENTATION AND ROUND TABLE DISCUSSION

15 April 2026 • 13:40 - 15:10 | Madrid 2/Salon 4 (Niveau/Level 0)

Moderators:

Thierry Lépine, Institut d'Optique Graduate School (France)

Ulrike Fuchs, asphericon GmbH (Germany)

James Babington, Leonardo UK Ltd. (United Kingdom)

14106-21 • 13:40 - 14:10

The future of optical design for education, freeforms, metacomponents, and AI (Keynote Presentation)

Author(s): **Jannick P. Rolland**, Univ. of Rochester (United States)

Round Table Discussion: Future of Optical Design • 14:10 - 15:10

Coffee Break 15:10 - 15:40

SESSION 7: OPTICAL INSTRUMENTATION, SYSTEMS I

15 April 2026 • 15:40 - 17:50 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Ulrike Fuchs**, asphericon GmbH (Germany)

14106-22 • 15:40 - 16:00

Optical design and development of a multi-channel corrector for the 80-cm MezzoCielo wide-field demonstrator

Author(s): **Mohamed Yahia Bournane**, University of Padova (Italy), INAF-OAPD (Italy); **Davide Greggio**, **Oleksandra Rebrysz**, **Silvio Di Rosa**, INAF-OAPD (Italy); **Giovanni Boato**, University of Padova (Italy); **Demetrio Magrin**, INAF-OAPD (Italy); **Roberto Ragazzoni**, INAF-OAPD (Italy), University of Padova (Italy)

14106-23 • 16:00 - 16:20

Wide-Field Multispectral Imager Design for Martian Dust Storm Monitoring

Author(s): **Jiawei Liu**, Xi'an Institute of Optics and Precision Mechanics (XIOPM), Chinese Academy of Sciences (China); **Juan Lv**, **Yiyi Zhao**, **Bin Xue**, Xi'an Institute of Optics and Precision Mechanics (China); **Peiyue Xie**, Xidian Univ. (China)

14106-24 • 16:20 - 16:40

IFS spectrograph designs for the Wide-field Spectroscopic Telescope: Architecture and performance gains from curved sensors

Author(s): **Corentin Cudennec**, Université Claude Bernard Lyon 1, CNRS, Centre de Recherche Astrophysique de Lyon, UMR5574 (France); **Alexandre Jeanneau**, **Roland Bacon**, Ctr. de Recherche Astrophysique de Lyon, Univ. Claude Bernard Lyon 1, CNRS (France); **Thierry Lépine**, Lab. Hubert Curien, Univ. Jean Monnet Saint-Etienne, CNRS (France), Institut d'Optique Graduate School (France); **Matthew Lehnert**, Ctr. de Recherche Astrophysique de Lyon, Univ. Claude Bernard Lyon 1, CNRS (France)

14106-25 • 16:40 - 17:00

Optical concept model of the future cosmology project BISOU

Author(s): **Morgane Loquet Le Gall**, **Bruno Maffei**, Institut d'Astrophysique Spatiale (France); **Créidhe O'Sullivan**, **Neil Trappe**, Department of Physics, Maynooth University (Ireland); **Pierre Guiot**, Institut d'Astrophysique Spatiale (France)

14106-57 • 17:00 - 17:20

Development of a four-band SWIR optical payload for an Earth remote sensing nanosatellite

Author(s): **Dulat Akzhigitov**, **Bexultan Zhumazhanov**, Ghalam LLP (Kazakhstan)

14106-26 • 17:20 - 17:50

Design and simulation of diffractive wavefront sensors for ground-based optical communication links (*Invited Paper*)

Author(s): **Miguel Cagigas García**, **Luis Fernando Rodríguez Ramos**, **Diego Ayala Cajas**, Instituto de Astrofísica de Canarias (Spain); **Manuel Perez Cagigal**, Univ. de Cantabria (Spain); **Roberto López-López**, Instituto de Astrofísica de Canarias (Spain)

Thursday 16 April 2026

SESSION 8: LENS DESIGN, NEW METHODS, AI II

16 April 2026 • 8:50 - 10:20 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Thierry Lépine**, Institut d'Optique Graduate School (France)

14106-28 • 8:50 - 9:10

Design-for-assembly of optical systems built from off-the-shelf components

Author(s): **Alejandro Madrid Sánchez, Hugo Thienpont**, Vrije Univ Brussels (Belgium), Fermat (Belgium); **Indy Magnus**, Vrije Univ. Brussel (Belgium); **Heidi Ottevaere**, Vrije Univ Brussels (Belgium); **Jef Verbaenen, Yunfeng Nie**, Vrije Univ. Brussel (Belgium); **Pascal Menacher, Janos Sartor, Jan Müller, Michael Schneider**, Edmund Optics (Germany); **Fabian Duerr**, Fermat (Belgium), Vrije Univ Brussels (Belgium)

14106-29 • 9:10 - 9:30

Project-Driven and AI-Based Platform-Empowered: Teaching Reform of Optical System Design Course

Author(s): **Yifan Huang, Tong Yang, Dewen Cheng**, Beijing Institute of Technology (China)

14106-30 • 9:30 - 9:50

Using Fermat's Principle for closed-form, real-time tolerancing

Author(s): **Fabian Duerr, Alejandro Madrid Sánchez, Hugo Thienpont**, Vrije Univ Brussel (Belgium), Fermat (Belgium)

14106-31 • 9:50 - 10:20

Aberration principles behind an AI-based design method of zoom lens groups *(Invited Paper)*

Author(s): **Jacob A. Sacks**, University of Rochester (United States); **Julie L. Bentley**, Univ. of Rochester (United States)

Coffee Break 10:20 - 10:50

SESSION 9: OPTICAL INSTRUMENTATION, SYSTEMS II

16 April 2026 • 10:50 - 12:20 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Nathalie Blanchard**, ABB Analytical Measurement (Canada)

14106-32 • 10:50 - 11:20

Design and manufacturing of a laser light-sheet fluorescence add-on module for upright optical microscopes *(Invited Paper)*

Author(s): **Indy Magnus**, Vrije Univ Brussel (Belgium), Flanders Make (Belgium); **Emanuela Mensà, Giampaolo Zuccheri**, Univ. degli Studi di Bologna (Italy); **Jef Verbaenen**, Vrije Univ. Brussel (Belgium); **Heidi Ottevaere**, Vrije Univ. Brussel (Belgium), Flanders Make (Belgium)

14106-33 • 11:20 - 11:40

Exploring the XUV projection lithography design space

Author(s): **Tate M. Finger, Brendan E. Habert, Anes Macić, Trevor Shooshan, Jacob A. Sacks, Julie L. Bentley**, Univ. of Rochester (United States)

14106-35 • 11:40 - 12:00

The optical design of PRIMAgger, the hyperspectral and polarimetric imager of the PRIMA space mission

Author(s): **Johan D. Floriot, Kjetil Dohlen, Fabrice Madec, Anne Costille, Tony Pamplona, William Bon**, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ., Ctr. National d'Études Spatiales, CNRS (France)

14106-36 • 12:00 - 12:20

Design and simulation of a tunable fresnel lens with initial experimental validation

Author(s): **Sebastian Smarzyk**, Jade University of applied sciences (Germany); **Jan Tietze, Matthias Haupt**, Jade Hochschule (Germany); **Markus Degünther**, Technische Hochschule Mittelhessen (Germany)

Lunch Break 12:20 - 13:30

SESSION 10: STRAY LIGHT

16 April 2026 • 13:30 - 14:40 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Sandra Gely**, Ansys France SAS (France)

14106-37 • 13:30 - 14:00

Stray Light Analysis of the K-DRIFT G1 Enabling Low Surface Brightness Astronomical Observations *(Invited Paper)*

Author(s): **Jihun Kim, Seri Yeon, Yunjong Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Il Kweon Moon**, Korea Research Institute of Standards and Science (Korea, Republic of); **Yeonsik Kim**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Dohoon Kim**, Green Optics Co., Ltd. (Korea, Republic of); **Hyuksun Kwon**, ADSOLUTION Co., Ltd. (Korea, Republic of); **Seunghyuk Chang**, Ctr. for Integrated Smart Sensors (Korea, Republic of); **Kyohoon Ahn**, Korea Astronomy and Space Science Institute (Korea, Republic of); **Daewook Kim**, The Univ. of Arizona (United States); **Gayoung Lee, Seonwoo Kim, Gyeonggon Bahk, Woowon Byun, Kwang-Il Seon, Yongseok Lee, Sangmin Lee, Sang-Mok Cha, Jongyeob Park, Hong Soo Park, Jongwan Ko**, Korea Astronomy and Space Science Institute (Korea, Republic of)

14106-39 • 14:00 - 14:20

Anodized titanium reflectance behavior: investigations to reduce mechanical components induced straylight

Author(s): **Johanna Rousson, Jean-Marie Barbier**, KNDS Optronics (France)

14106-40 • 14:20 - 14:40

A systematic approach to quantifying the impact of stray diffractive orders in zoom systems with multiple diffractive surfaces

Author(s): **Santhoshi Tangirala, Martin Hübner**, HENSOLDT Optronics GmbH (Germany)

CONFERENCE 14107

Advances in Optical Thin Films IX

13 - 16 April 2026 | Varsovie/Salon 1 (Niveau/Level 0)

Conference Chair(s): **Julien Lumeau**, Institut Fresnel (France); **Markus K. Tilsch**, Viavi Solutions Inc. (United States); **Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany)

Program Committee: **Claude Amra**, Institut Fresnel (France); **Xinbin Cheng**, Tongji Univ. (China); **Hyun-Ju Cho**, Optonics Co., Ltd. (Korea, Republic of); **Garrett D. Cole**, Univ. of Arizona (United States); **Franck Delmotte**, Institut d'Optique Graduate School (France); **Colin M. Harthcock**, Lawrence Livermore National Lab. (United States); **Juan Ignacio Larruquert**, Consejo Superior de Investigaciones Científicas (Spain); **Cheng Chung Lee**, National Chung Hsing Univ. (Taiwan); **Xu Liu**, Zhejiang Univ. (China); **Ludvik Martinu**, Ecole Polytechnique de Montréal (Canada); **Vladimir Pervak**, Ludwig-Maximilians-Univ. München (Germany); **Francis Placido**, Univ. of the West of Scotland (United Kingdom); **Detlev Ristau**, Laser Zentrum Hannover e.V. (Germany); **Sven Schröder**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Silvia Schwyn Thoeny**, Evatec AG (Switzerland); **Weidong Shen**, Zhejiang Univ. (China); **Anna Sytchkova**, ENEA (Italy); **Alexander Tikhonravov**, Lomonosov Moscow State Univ. (Russian Federation)

Monday 13 April 2026

OPENING REMARKS

13 April 2026 • 8:25 - 8:35 | Varsovie/Salon 1 (Niveau/Level 0)

Julien Lumeau, Institut Fresnel (France)

Markus K. Tilsch, Viavi Solutions Inc. (United States)

Andreas Wienke, Laser Zentrum Hannover e.V. (Germany)

Conference Chairs

SESSION 1: INERTIAL LASER FUSION

13 April 2026 • 8:35 - 10:40 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Markus K. Tilsch**, Viavi Solutions Inc. (United States)

14107-1 • 8:35 - 9:10

TBA (Keynote Presentation)

Author(s): **Hans-Dieter Hoffmann**, Fraunhofer-Institut für Lasertechnik ILT (Germany)

14107-2 • 9:10 - 9:40

Enhance the Laser-Induced Damage Threshold of UV Coatings via Defect Mitigation (*Invited Paper*)

Author(s): **Meiping Zhu, Jingping Li, Jianda Shao**, Shanghai Institute of Optics and Fine Mechanics (China)

14107-3 • 9:40 - 10:00

Deposition of fusion laser coatings

Author(s): **James B. Oliver**, Vacuum Innovations, LLC (United States)

14107-4 • 10:00 - 10:20

LIDT analysis of gold coatings for multi-PW kJ-class laser beam transport

Author(s): **Adrien Chauvin, Tomas Tolenis, Martin Zahradník, Mojmir Havlík, Ludovít Haizer, Štěpán Vyhlička, Pavel Trojek, Jan Hřebíček, Bedřich Rus, Daniel Kramer**, ELI ERIC (Czech Republic)

14107-5 • 10:20 - 10:40

Nanostructured AR solutions for laser applications

Author(s): **Elise Fürch**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany), Institut für Angewandte Physik, Friedrich-Schiller-Univ. Jena (Germany); **Astrid Bingel, Friedrich Rickelt, Ulrike Schulz, Sven Schröder**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Andreas Tünnermann**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany), Institut für Angewandte Physik, Friedrich-Schiller-Univ. Jena (Germany)

Coffee Break 10:40 - 11:00

SESSION 2: COATINGS FOR QUANTUM APPLICATIONS

13 April 2026 • 11:00 - 12:30 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Julien Lumeau**, Institut Fresnel (France)

14107-6 • 11:00 - 11:30

Advancement in Optical Interference Filters for Quantum Applications (*Invited Paper*)

Author(s): **Georg J. Ockenfuss**, Viavi Solutions Inc. (United States)

14107-7 • 11:30 - 11:50

Enhanced narrow-band luminescence in epitaxial multilayer micro-cavities for sensor applications

Author(s): **Lionel Fliegans**, **Claude Amra**, **Paul Rouquette**, **Michel Lequime**, **Myriam Zerrad**, Institut Fresnel (France); **Pierre-Marie Coulon**, **Maksym Gromovyi**, **Katarina Mamic**, **Sébastien Chenot**, **Blandine Alloing**, CRHEA, Univ. Côte d'Azur, CNRS (France); **Eric Frayssinet**, CRHEA, Univ. Côte d'Azur, CNRS (France); **Philippe Boucaud**, CRHEA, Univ. Côte d'Azur, CNRS (France); **Philippe Ménini**, **Vincent Raimbault**, Lab. d'Analyse et d'Architecture des Systèmes, Univ. de Toulouse, CNRS (France); **Frédéric Cherioux**, Univ. Marie et Louis Pasteur (France); **Bernard Legrand**, Lab. d'Analyse et d'Architecture des Systèmes, Univ. de Toulouse, CNRS (France)

14107-8 • 11:50 - 12:10

Reflectivity improvement of lightweight additive manufactured metal mirrors for space applications

Author(s): **Alexandr Belosludtsev**, **Ignas Bitinaitis**, **Vitalij Kovalevskij**, **Karolis Stravinskas**, **Genrik Mordas**, Ctr. for Physical Sciences and Technology (Lithuania); **Anna Sytchkova**, ENEA (Italy)

14107-9 • 12:10 - 12:30

High-Q SiN Optomechanics Monolithically Integrated with Cavity Bragg Mirrors

Author(s): **Richard Norte**, Technische Univ. Delft (Netherlands)

Lunch Break 12:30 - 13:30

OPTICAL SYSTEMS DESIGN MONDAY PLENARY SESSION

13 April 2026 • 13:30 - 15:15 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

13:30 - 13:35 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14108-500 • 13:45 - 14:30

The active alignment of large astronomical telescopes with 3-D metrology tools (Plenary Presentation)

Author(s): **Andrew P. Rakich**, KiwiStar Optics (New Zealand)

14111-501 • 14:30 - 15:15

Future ESA Earth observation missions (Plenary Presentation)

Author(s): **Christophe Buisset**, European Space Agency (Netherlands)

Coffee Break 15:15 - 15:50

SESSION 3: COATINGS FOR SPACE AND ASTRONOMY

13 April 2026 • 15:50 - 17:40 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany)

14107-10 • 15:50 - 16:20

High uniformity IBS coatings for large Fabry-Perot etalon and dichroic plates for various telescope instruments. (*Invited Paper*)

Author(s): **Laurent Pinard**, **Benoit Sassolas**, **Christophe Michel**, **Eleonore Barthélémy-Mazot**, **Julien Teillon**, Lab. des Matériaux Avancés, CNRS (France)

14107-11 • 16:20 - 16:40

Realization of the 14 narrow bandpass filters of VEM instrument for Envision and Veritas missions

Author(s): **Xavier Buet**, **Colin Bondet**, **Pierre-Louis Martin**, **Didier Torricini**, **Grégory Chauveau**, **Hélène Krol**, CILAS (France)

14107-12 • 16:40 - 17:00

Multilayer band-pass filters emulating Gaia spectral bands, designs, fabrication and testing

Author(s): **Pierre Barroy**, Univ. de Picardie Jules Verne (France); **Andreas Zeinert**, **Martin Grandidier**, **Ahmed Kotbi**, Laboratoire de Physique de la Matière Condensée, Université de PICARDIE Jules VERNE, AMIENS (France); **Gabriel Vilain**, Univ. de Picardie Jules Verne (France); **William Thuillot**, Observatoire de Paris (France); **Michel Dennefeld**, Paris Institute of Astrophysics (IAP) (France); **Thierry Midavaine**, **Marc Serrau**, Société Astronomique de France (France); **Alain Badoche**, MCM Optique (France); **Arash Jamali**, Université de Picardie Jules Verne (France); **Abdelilah Lahmar**, Laboratoire de Physique de la Matière Condensée, Université de PICARDIE Jules VERNE, AMIENS (France); **Patrice Twardowski**, **Philippe Gérard**, **Simon Kempf**, **Manuel Flury**, ICube, Université de Strasbourg, CNRS, INSA, F-67000 Strasbourg, France (France)

14107-13 • 17:20 - 17:40

Ion beam sputtered broadband dielectric coatings for large-format mirrors for advanced astronomical instrumentation

Author(s): **Thomas Willemsen**, **Melanie Gauch**, **Tobias Groß**, **Henrik Ehlers**, **Wolfgang Ebert**, LASEROPTIK GmbH (Germany); **Christian Schwab**, Macquarie Univ. (Australia); **Andrea Tozzi**, **Simone D'Auria**, **Alen Khanbekyan**, **Anna Brucalassi**, **Paolo Picchi**, INAF - Osservatorio Astrofisico di Arcetri (Italy)

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

SESSION 4: LASER-INDUCED DAMAGE AND FAILURE ANALYSIS

14 April 2026 • 13:10 - 15:20 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Vladimir Pervak**, Ludwig-Maximilians-Univ. München (Germany)

14107-14 • 13:10 - 13:40

The impact of working gas and hafnia-silica composite coatings deposited by ion beam sputtering for 1064 nm (Invited Paper)

Author(s): **Colin M. Harthcock**, Lawrence Livermore National Lab. (United States)

14107-15 • 13:40 - 14:00

Effect of high temperature annealing on the laser-induced damage threshold of hafnia-based dielectric coatings

Author(s): **Amira Guediche**, **Jungmin Ha**, **Saaxewer Diop**, **Raluca Negres**, **Colin M. Harthcock**, Lawrence Livermore National Lab. (United States)

14107-16 • 14:00 - 14:20

Nanostructure Characterization of LIDT-failed Damage Sites of Thin Film Laser Mirrors

Author(s): **Christian Patzig**, Fraunhofer Institute for Microstructure of Materials and Systems IMWS (Germany); **Rene Feder**, **Alexander Kemptner**, **Stephan Gierth**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany); **Christoph Sturzenegger**, **Daniel Schachtler**, RhySearch (Switzerland); **Tobias Kruse**, **Morten Steinecke**, **Andreas Wienke**, **Marco Jupé**, Laser Zentrum Hannover e.V. (Germany); **Thomas Hoeche**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany)

14107-17 • 14:20 - 14:40

Femtosecond laser conditioning to enhance the 355 nm laser-induced damage resistance of optical coatings.

Author(s): **Kaixin Yuan**, Zhejiang University (China); **Feng Geng**, Research Center of Laser Fusion (China); **Yusi Wang**, **Yan Cheng**, **Weidong Shen**, Zhejiang University (China)

14107-18 • 14:40 - 15:00

Theoretical and experimental investigation of defect interaction with ultra-short pulse irradiation within optical thin films

Author(s): **Joshua McCauley**, Laser Zentrum Hannover e.V. (Germany); **Xiaochuan Ji**, Institute of Precision Optical Engineering, Tongji Univ. (China); **Jinlong Zhang**, Institute of Precision Optical Engineering, Tongji Univ. (China), MOE Key Lab. of Advanced Micro-Structured Materials (China); **Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany); **Detlev Ristau**, Laser Zentrum Hannover e.V. (Germany), Institut für Quantenoptik, Leibniz Univ. Hannover (Germany); **Marco Jupé**, Laser Zentrum Hannover e.V. (Germany)

14107-19 • 15:00 - 15:20

Quantum nanolaminates for inertial confinement fusion optics: RISED coating designs and LIDT testing

Author(s): **Tobias Kruse**, **Lukas Nägele**, **Alexander Weiß**, **Paul Leßmann**, **Morten Steinecke**, **Andreas Wienke**, **Marco Jupé**, Laser Zentrum Hannover e.V. (Germany); **Christian Patzig**, **Rene Feder**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany)

Coffee Break 15:20 - 15:50

SESSION 5: COATINGS FOR CW LASERS AND THERMAL EFFECTS

14 April 2026 • 15:50 - 18:00 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Colin M. Harthcock**, Lawrence Livermore National Lab. (United States)

14107-20 • 15:50 - 16:20

Absorption losses of Silicon Nitride and Silicon Oxynitride thin films deposited by Plasma Enhanced Chemical Vapour Deposition for Gravitational Wave Detection *(Invited Paper)*

Author(s): **Kirstin Saunders**, **Graeme I. McGhee**, Univ. of Glasgow (United Kingdom); **Simon Bublitz**, **Christian Mühlig**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Scott Fitzgerald**, **Margot Hennig**, Univ. of Glasgow (United Kingdom); **Caspar Clark**, Helia Photonics Ltd. (United Kingdom), Univ. of the West of Scotland (United Kingdom); **Des Gibson**, Univ. of the West of Scotland (United Kingdom); **Iain W. Martin**, **Carlos Garcia Nuñez**, Univ. of Glasgow (United Kingdom)

14107-21 • 16:20 - 16:40

Nanosecond-scale temperature retrieval from thermal radiation in metal-dielectric broadband absorbers

Author(s): **François Thullier**, CILAS (France); **Paul Rouquette**, **Claude Amra**, **Michel Lequime**, **Myriam Zerrad**, Institut Fresnel (France); **Hélène Krol**, CILAS (France); **Karine Mathieu**, Ctr. National d'Études Spatiales (France)

14107-22 • 16:40 - 17:00

Thermal-Stable Design of Steep-Edge Dichroic Mirrors for Suppressing Performance Degradation Under High Power Continuous Wave Laser Irradiation

Author(s): **Xinshang Niu**, **Zixun Zhao**, **Hongfei Jiao**, **Jinlong Zhang**, **Xiaochuan Ji**, **Jingjing Xia**, **Dongdong Li**, **Xinbin Cheng**, **Zhanshan Wang**, Tongji Univ. (China)

14107-23 • 17:00 - 17:20

Influence of surface roughness in thermal deformation of high diffraction efficiency multilayer dielectric grating

Author(s): **Purva Sharnagat**, Indian Institute of Technology Delhi (India)

14107-24 • 17:20 - 17:40

High-power spectral and polarization modulation coatings for long-wave infrared laser systems

Author(s): **Weibo Duan**, Shanghai Institute of Technical Physics (China)

14107-25 • 17:40 - 18:00

Innovative facet coating technique for edge-emitting lasers

Author(s): **Simone Biasco**, **Silvia Schwyn Thoeny**, **Jasmin Bamert**, **Georgios Christidis**, **Pinelopi Bagiati**, Evatec AG (Switzerland)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Optical Systems Design poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EOD/poster-presentation-guidelines>.

14107-60 • 18:10 - 20:00

1.5m aluminization plant calibration for 1m Carl Zeiss telescope mirror realuminization

Author(s): **Remya B. S.**, **Sriram S.**, **Nitish Singh**, Indian Institute of Astrophysics (India)

14107-61 • 18:10 - 20:00

Coating Plant Optimization for Aluminization of 1 m Carl Zeiss Telescope Mirror and Reflectivity Degradation Studies at Vainu Bappu Observatory

Author(s): **Remya B. S., Sriram S.**, Indian Institute of Astrophysics (India)

14107-62 • 18:10 - 20:00

Nanostructure characterization of LIDT-failed damage sites of QNL-based laser mirrors

Author(s): **Rene Feder**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany); **Christian Patzig**, Fraunhofer Institute for Microstructure of Materials and Systems IMWS (Germany); **Stephan Gierth, Alexander Kemptner, Alexander Müller**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany); **Tobias Kruse, Morten Steinecke, Andreas Wienke, Marco Jupé**, Laser Zentrum Hannover e.V. (Germany); **Thomas Hoeche**, Fraunhofer-Institut für Mikrostruktur von Werkstoffen und Systemen IMWS (Germany)

14107-63 • 18:10 - 20:00

Real-Time laser damage detection using scattered light and microscopy

Author(s): **Christoph Sturzenegger, Daniel Schachtler, Manuel Baertschi, Heidi Thomé**, RhySearch (Switzerland)

14107-64 • 18:10 - 20:00

Assessment of particle adhesion on coatings via particle deposition and microscopic analysis

Author(s): **Daniel Schachtler**, Rhysearch (Switzerland); **Christoph Sturzenegger, Maryam Nazari**, RhySearch (Switzerland); **Simon Scheidiger**, Bystronic Laser AG (Switzerland); **Heidi Thomé**, Rhysearch (Switzerland)

14107-65 • 18:10 - 20:00

High power conductive coatings for transparent electro-optical devices

Author(s): **Felix Weiß**, Laser Zentrum Hannover e.V. (Germany); **Matthew U. Mgbukwu, Uwe Helbig, René Gebhardt, Mathias Siebold, Ulrich Schramm, Stefan Bock**, Helmholtz-Zentrum Dresden-Rossendorf e. V. (Germany); **Andreas Wienke, Marco Jupé**, Laser Zentrum Hannover e.V. (Germany)

14107-66 • 18:10 - 20:00

Decoding LiF/Al Far-UV Filter Limitations for applications in the Far and Extreme UV

Author(s): **Francesc Valls-Vicent**, Instituto de Óptica "Daza de Valdés", Consejo Superior de Investigaciones Científicas (Spain), Ctr. de Micro-Análisis de Materiales, Univ. Autónoma de Madrid (Spain); **Paloma López-Reyes, Nuria Gutiérrez-Luna, Carlos Honrado-Benítez**, Instituto de Óptica "Daza de Valdés", Consejo Superior de Investigaciones Científicas (Spain); **Andres Redondo-Cubero**, Univ. Autónoma de Madrid (Spain), Ctr. de Micro-Análisis de Materiales, Univ. Autónoma de Madrid (Spain); **Jose Olivares**, Instituto de Óptica "Daza de Valdés", Consejo Superior de Investigaciones Científicas (Spain), Ctr. de Micro-Análisis de Materiales, Univ. Autónoma de Madrid (Spain); **Juan Ignacio Larraquert**, Instituto de Óptica "Daza de Valdés", Consejo Superior de Investigaciones Científicas (Spain)

14107-67 • 18:10 - 20:00

Formation of optical-quality antireflective gradient layers on N-SF10 glass by chemical etching

Author(s): **Jiri Junek**, Institute of Plasma Physics of the CAS vvi (Czech Republic); **Jan Václavík, Karel Židek**, Institute of Plasma Physics of the CAS, v.v.i. (Czech Republic)

14107-68 • 18:10 - 20:00

Study of the laser induced damage morphology on the Laser MegaJoule focusing grating

Author(s): **Martin Maillard, Marine Chovel, Jérôme Neauport**, CEA-Cesta (France)

14107-69 • 18:10 - 20:00

Enhancement of total internal reflection in Nd:YAG crystals by multilayer nanostructured coatings

Author(s): **Lukas Ramalis**, Center for Physical Sciences and Technology (Lithuania); **Simas Melnikas**, Ctr. for Physical Sciences and Technology (Lithuania); **Tomas Tolenis**, ELI Beamlines (Czech Republic)

14107-70 • 18:10 - 20:00

Development of fluoride thin films for large bandwidth applications using IBS

Author(s): **Kornelius Rautmann, Tarik Kellermann, Morten Steinecke, Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany)

14107-71 • 18:10 - 20:00

Comparison of SiO₂ and Al₂O₃ GLAD multilayer coatings operating at 351nm for the optical smoothing in high power lasers

Author(s): **Éric G. Lavastre, Solène Bertet, Marine Chovel**, CEA-Cesta (France); **Sara MacNally, Marcela Mireles**, Univ. of Rochester (United States); **Corinne Marcel**, CEA-Le Ripault (France); **Bruno Gallas**, Institut des nanosciences de Paris, Sorbonne Univ. (France)

14107-72 • 18:10 - 20:00

Impact of micro-sized stainless steel particles on the LIDT of high reflective and antireflective optical components

Author(s): **Joey Paterson, Paul Leßmann, Kevin Kiedrowski, Marco Jupé, Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany)

14107-73 • 18:10 - 20:00

Deposition of axially symmetric coatings

Author(s): **James B. Oliver**, Vacuum Innovations, LLC (United States)

14107-74 • 18:10 - 20:00

A study on the temperature dependence of cw laser irradiation in multilayer dielectric gratings subjected to various post-processing methods

Author(s): **Pyeong Gwon Moon**, Optonics Co Ltd (Korea, Republic of); **Jaeil Park, Se-Yun Oh, Hyun-Ju Cho**, Optonics Co., Ltd. (Korea, Republic of)

14107-75 • 18:10 - 20:00

Functional laser-induced damage threshold of contaminated 1 μm optics and the investigation of losses and further growth

Author(s): **Kevin Paul Jacob, Khalil Azzouz, Kevin Kiedrowski**, Laser Zentrum Hannover e.V. (Germany)

14107-76 • 18:10 - 20:00

Strain-tunable photonic spin Hall effect in WTe_2 thin films

Author(s): **Qi Wang, Qinggang Liu, Mantong Chen, Yang Li**, Tianjin Univ. (China)

14107-77 • 18:10 - 20:00

Modified Weak Measurement Model of the Photonic Spin Hall Effect in Weyl semimetals under strain modulation

Author(s): **Mantong Chen, Qi Wang, Yang Li, Qinggang Liu**, Tianjin Univ. (China)

14107-83 • 18:10 - 20:00

Fast atomic layer deposition for high-precision optical coatings on complex 3D surfaces

Author(s): **Stephan Mingels, Jani Holopainen, Dominik Moritz, Harro Hagedorn**, Bühler Alzenau GmbH (Germany)

Wednesday 15 April 2026

SESSION 6: DESIGN OF OPTICAL COATINGS

15 April 2026 • 8:30 - 10:20 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Silvia Schwyn Thoeny**, Evatec AG (Switzerland)

14107-26 • 8:30 - 9:00

Multilayer Coating Design for High-Performance Applications: Trends and Challenges *(Invited Paper)*

Author(s): **Michael K. Trubetskov**, Max-Planck-Institut für Quantenoptik (Germany), OTF Studio GmbH (Germany)

14107-27 • 9:00 - 9:20

A Physics-Informed AI Model for On-Demand Design of Complex Optical Coatings

Author(s): **Utsa Chattopadhyay**, Deutsches Elektronen-Synchrotron DESY (Germany); **Florian Carstens, Morten Steinecke, Tarik Kellermann, Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany); **Ingmar Hartl**, Deutsches Elektronen-Synchrotron DESY (Germany); **Nihat Ay**, Technical University of Hamburg (Germany); **Christoph M. Heyl, Henrik Tuennermann**, Deutsches Elektronen-Synchrotron DESY (Germany)

14107-28 • 9:20 - 9:40

Advanced multi-objective and robust design method for optical coatings

Author(s): **Xiaochuan Ji, Jianglin Dai, Jinlong Zhang, Hongfei Jiao, Xinshang Niu, Dongdong Li, Jingjing Xia, Xinbin Cheng, Zhanshan Wang**, Tongji Univ. (China)

14107-29 • 9:40 - 10:00

Optical filters for selecting shape memory alloy states from plasma-enhanced chemical vapour deposition, sputtering, and sol-gel methods

Author(s): **Pierre Barroy**, Univ. de Picardie Jules Verne (France); **Ahmed Kotbi, Michael Lejeune**, Université de Picardie Jules Verne (France); **Wiaam El-hakim, Frederic Lamarque**, Université de Technologie de Compiègne (UTC) (France); **Anna Cantaluppi, Ahraf AFO**, Université de Picardie Jules Verne (France); **Amina Moumini**, Univ. de Picardie Jules Verne (France); **Andreas Zeinert**, Université de Picardie Jules Verne (France)

14107-30 • 10:00 - 10:20

High chromatic complementary colours in diffuse and specular reflexion after laser-processing of an asymmetric Fabry-Perot resonator

Author(s): **Nicolas Jacquot**, IREIS (France); **Thibault Girardin**, Lab. Hubert Curien (France); **Robin Mermillod-Blondin**, TOPPAN Security France SAS (France); **Christophe Hubert**, Lab. Hubert Curien (France); **William Ravisy, Laurent Dubost**, Institut de Recherches en Ingénierie des Surfaces (France); **Nathalie Destouches**, Lab. Hubert Curien (France)

Coffee Break 10:20 - 10:50

SESSION 7: PROCESS CONTROL AND MONITORING

15 April 2026 • 10:50 - 12:20 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Xinbin Cheng**, Tongji Univ. (China)

14107-31 • 10:50 - 11:20

Control and compensation of substrate curvature during double-side coating process (*Invited Paper*)

Author(s): **Stefan Bruns, Thomas Melzig, Michael Vergöhl, Philipp Farr**, Fraunhofer-Institut für Schicht- und Oberflächentechnik IST (Germany)

14107-32 • 11:20 - 11:40

Experimental comparison of thickness precision in high-resolution versus standard broadband optical monitoring

Author(s): **Florian Carstens, Sebastian Schlichting, Jonas Matthes, Andreas Wienke**, Laser Zentrum Hannover e.V. (Germany); **Detlev Ristau**, Laser Zentrum Hannover e.V. (Germany), Leibniz Univ. Hannover (Germany)

14107-33 • 11:40 - 12:00

Development of advanced optical monitoring strategies for the fabrication of thin-film optical filters with magnetron sputtering technology

Author(s): **Lucas Arzac, Fabien Lemarchand**, Institut Fresnel, CNRS (France); **Detlef Arhilger, Harro Hagedorn**, Bühler Leybold Optics (Germany); **Julien Lumeau**, Institut Fresnel, CNRS (France)

14107-34 • 12:00 - 12:20

Direct optical monitoring considerations for coatings in plants with planetary motion systems

Author(s): **Markus K. Tilsch**, Viavi Solutions Inc. (United States)

Lunch/Exhibition Break 12:20 - 13:40

SESSION 8: UV COATINGS AND MATERIALS

15 April 2026 • 13:40 - 15:30 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Sven Schröder**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14107-35 • 13:40 - 14:10

Stability engineering in the UV: Ion Beam Sputtered mirrors at 193 nm and non-degrading performance beyond (*Invited Paper*)

Author(s): **Sabina Kuprenaite, Giedrius Kupcikas, Simonas Kicas**, OPTOMAN (Lithuania)

14107-36 • 14:10 - 14:30

High reflecting mirror coating with APS technology for the deep UV

Author(s): **Harro Hagedorn, Mithun Sheena Prasad, Ihteaz Muhaimeen Hossain, Andreas Schönlein**, Bühler Alzenau GmbH (Germany)

14107-37 • 14:30 - 14:50

Broadband high reflective Deep-UV Dispersive Mirrors for Sub-5 fs

Author(s): **Vladimir Pervak**, Ludwig-Maximilians-Univ. München (Germany), Ultrafast Innovations GmbH (Germany); **Aliaksei Kobiak**, UltraFast Innovations GmbH (Germany)

14107-38 • 14:50 - 15:10

Deposition Strategies for High-Reflectance Al/AlF₃ Mirrors in the Far-Ultraviolet Range

Author(s): **Nuria Gutiérrez-Luna, Carlos Honrado-Benítez, Paloma López-Reyes, Francesc Valls-Vicent, Juan Ignacio Larruquert**, Consejo Superior de Investigaciones Científicas (Spain)

14107-39 • 15:10 - 15:30

Enhanced laser-induced damage threshold of fused silica and CaF₂ substrates via surface chemical treatment

Author(s): **Kai Zheng, Jingjing Xia, Jinlong Zhang, Hongfei Jiao, Xinshang Niu, Xiaochuan Ji, Dongdong Li, Bin Ma, Xinbin Cheng, Zhanshan Wang**, Tongji Univ. (China)

Coffee Break 15:30 - 16:00

SESSION 9: X-RAY AND EUV COATINGS

15 April 2026 • 16:00 - 17:30 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Juan Ignacio Larruquert**, Consejo Superior de Investigaciones Científicas (Spain)

14107-40 • 16:00 - 16:30

Thin film Parylene Aluminium Filters (ParAlF) for Silicon X-ray detectors in high energy astrophysics missions *(Invited Paper)*

Author(s): **Smiriti Srivastava, Claudio Labanti, Riccardo Campana, Lorenzo Amati, Enrico Virgilli, Ezequiel J. Marchesini**, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

14107-41 • 16:30 - 16:50

Modeling EUV Multilayer Gratings in Classical and Conical Mountings

Author(s): **Camélia Takarit, Irene Papagiannouli, Sébastien de Rossi, Evgueni Meltchakov**, Lab. Charles Fabry, Institut d'Optique Graduate School (France); **Blandine Capitanio**, Synchrotron SOLEIL (France); **Franck Delmotte**, Lab. Charles Fabry, Institut d'Optique Graduate School (France)

14107-42 • 16:50 - 17:10

Investigation of W-based ultra-short period X-ray multilayer mirrors using HiPIMS and dcMS

Author(s): **Corentin Nannini**, Univ. Paris-Saclay, Institut d'Optique Graduate School, CNRS, Lab. Charles Fabry (France); **Evgueni Meltchakov**, Lab. Charles Fabry, Institut d'Optique Graduate School, Univ. Paris-Saclay, CNRS (France); **Antoine Lejars**, CEA, Centre DAM Ile-de-France, 91197 Arpajon (France); **Franck Delmotte**, Lab. Charles Fabry, Institut d'Optique Graduate School, Univ. Paris-Saclay, CNRS (France)

14107-43 • 17:10 - 17:30

Soft x-ray and EUV multilayers for astrophysics applications

Author(s): **Catherine Burcklen, Paul Fontejon, Dennis Ijpes, Chris Walton, Jennifer Alameda, Regina Soufli, Eberhard Spiller**, Lawrence Livermore National Lab. (United States); **Eric Gullikson**, Lawrence Berkeley National Lab. (United States)

Thursday 16 April 2026

SESSION 10: METASURFACES AND PATTERNED COATINGS

16 April 2026 • 8:50 - 10:20 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Anna Sytchkova**, ENEA (Italy)

14107-44 • 8:50 - 9:20

High-efficiency metagratings and their applications *(Invited Paper)*

Author(s): **Xinbin Cheng**, Tongji Univ. (China)

14107-45 • 9:20 - 9:40

Combining a metasurface with a multilayer: a new solution for reducing thermal noise in high reflectivity mirrors

Author(s): **Edith Hartmann, Michel Lequime**, Institut Fresnel (France); **Jerome Degallaix**, Lab. des Matériaux Avancés—IP2I, Université de Lyon, CNRS/IN2P3 (France); **Michael Hartmann, Paul Rouquette, Claude Amra, Myriam Zerrad**, Institut Fresnel (France)

14107-46 • 9:40 - 10:00

Microstructured ultranarrow bandpass filter for sun-induced fluorescence detection in smart farming applications

Author(s): **Florian Dr Gebert**, Fraunhofer Institute for Surface Engineering and Thin Films IST (Germany); **Chris Britze, Thomas Melzig**, Fraunhofer-Institut für Schicht- und Oberflächentechnik IST (Germany); **Caspar Dr Kneer**, JB Hyperspectral Devices GmbH (Germany); **Nancy Paetsch, Marcel Plogmeyer, Philipp Dr Farr, Michael Dr Vergöhl**, Fraunhofer Institute for Surface Engineering and Thin Films IST (Germany)

14107-47 • 10:00 - 10:20

Sensitivity enhancement of a phase-interrogated SPR biosensor using TiO₂-graphene composite thin films

Author(s): **Yang Li, Qi Wang, Mantong Chen, Qinggang Liu**, Tianjin Univ. (China)

Coffee Break 10:20 - 10:40

SESSION 11: COATING MATERIALS AND PROPERTIES

16 April 2026 • 10:40 - 12:30 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Franck Delmotte**, Institut d'Optique Graduate School (France)

14107-49 • 10:40 - 11:10

CeF₃ as a possible long infrared optical coating material *(Invited Paper)*

Author(s): **Shay Joseph, Edi Shaul**, Rafael Advanced Defense Systems Ltd. (Israel)

14107-50 • 11:10 - 11:30

Advances on magnetron sputtering for high performance infrared optical coatings for the LWIR range

Author(s): **Florian Gebert, Martin Bischoff, Philipp Farr, Michael Vergöhl**, Fraunhofer-Institut für Schicht- und Oberflächentechnik IST (Germany)

14107-51 • 11:30 - 11:50

Influence of dry etching parameters on the hydrophilic-to-hydrophobic transition of DLC-coated silicon surfaces

Author(s): **Yoav Gerchman**, MKS Instruments (Israel); **Emiliano Ioffe**, MKS Instruments Israel Ltd. (Israel)

14107-52 • 11:50 - 12:10

Encapsulation of porous nanostructured waveplates using atomic layer deposition

Author(s): **Darija Astrauskyte**, **Lukas Ramalis**, **Lina Grinevičiūtė**, Ctr. for Physical Sciences and Technology (Lithuania)

14107-53 • 12:10 - 12:30

Optical, microstructural and mechanical properties of Sol-Gel derived Al₂O₃ coatings for hydrophobic encapsulation

Author(s): **Anna Sytchkova**, ENEA (Italy); **Huda Akkaya**, **Alessandro Corozzi**, **Mariarosa Raimondo**, Istituto di Scienza, Tecnologia e Sostenibilità per lo Sviluppo dei Materiali Ceramici (Italy); **Silvano Del Gobbo**, ENEA (Italy); **Federica Mancini**, Istituto di Scienza, Tecnologia e Sostenibilità per lo Sviluppo dei Materiali Ceramici (Italy); **Claudio Larosa**, **Sabereh Taghdisi Rastkar**, ENEA (Italy)

Lunch Break 12:30 - 13:30

SESSION 12: CHARACTERIZATION AND PROPERTIES OF OPTICAL COATINGS

16 April 2026 • 13:30 - 15:40 | Varsovie/Salon 1 (Niveau/Level 0)

Session Chair(s): **Julien Lumeau**, Institut Fresnel (France)

14107-54 • 13:30 - 14:00

Scattering measurements and results analysis for TiO₂:GeO₂ and TiO₂:SiO₂ single-layer samples (*Invited Paper*)

Author(s): **Michel Lequime**, **Alexandra Carrez**, Institut Fresnel (France); **Aaron Davenport**, **Carmen Menoni**, Colorado State Univ. (United States); **Steven Armstrong**, **Chalisa Gier**, **Mariana Fazio**, **Stuart Reid**, Univ. of Strathclyde (United Kingdom); **Scott Fitzgerald**, **Graeme I. McGhee**, **Iain W. Martin**, Univ. of Glasgow (United Kingdom); **Claude Amra**, **Myriam Zerrad**, Institut Fresnel (France)

14107-55 • 14:00 - 14:20

Spectral transmission measurement of spatially variable filters with high dynamic range and high spatial resolution

Author(s): **Alexandra Carrez**, **Michel Lequime**, Institut Fresnel (France); **Laure Oudda**, **Karine Mathieu**, Ctr. National d'Études Spatiales (France); **Myriam Zerrad**, Institut Fresnel (France)

14107-56 • 14:20 - 14:40

Tracing second harmonic generation from thin-film buried interfaces with the aid of a metal overlayer

Author(s): **Anmol Kumar**, **Jakub Lukes**, **Vít Kanclíř**, **Jan Vaclavík**, **Karel Židek**, Institute of Plasma Physics of the CAS (Czech Republic)

14107-57 • 14:40 - 15:00

Form birefringence in magnetron sputter deposited nanolaminates of Ta₂O₅-SiO₂

Author(s): **Silvia Schwyn Thoeny**, Evatec AG (Switzerland); **Manuel Baertschi**, Rhysearch (Switzerland); **Stephan Waldner**, **Thomas Frei**, Evatec AG (Switzerland); **Vivek Devulapalli**, EMPA (Switzerland)

14107-58 • 15:00 - 15:20

Determining Types of Interfaces in Interference Optical Thin Films Using Picosecond Sonar Method

Author(s): **Petra Veselá**, Institute of Plasma Physics of the CAS vvi (Czech Republic); **Martina Hlubučková**, **Kryštof Hlinomaz**, **Pavel Mokřý**, **Vít Kanclíř**, **Jan Václavík**, **Karel Židek**, Institute of Plasma Physics of the CAS, v.v.i. (Czech Republic)

14107-59 • 15:20 - 15:40

Adhesion and environmental durability of anti-reflective coatings on cycloolefin copolymer

Author(s): **Yan Cheng**, Zhejiang Univ. (China)

CLOSING REMARKS

16 April 2026 • 15:40 - 15:50 | Varsovie/Salon 1 (Niveau/Level 0)

Julien Lumeau, Institut Fresnel (France)

Markus K. Tilsch, Viavi Solutions Inc. (United States)

Andreas Wienke, Laser Zentrum Hannover e.V. (Germany)

Conference Chairs

CONFERENCE 14108

Optical Fabrication and Testing IX

13 - 14 April 2026 | Madrid 1/Salon 3 (Niveau/Level 0)

Conference Chair(s): **Eric Ruch**, Safran Reosc (France); **Reinhard Völkel**, Focuslight Switzerland SA (Switzerland)

Program Committee: **Matthias Bischoff**, Berliner Glas KGaA Herbert Kubatz GmbH & Co. (Germany); **Xinbin Cheng**, Tongji Univ. (China); **Saad Doric**, Doric Lenses Inc. (Canada); **Yutaka Ezaki**, Mitsubishi Electric Corp. (Japan); **Oliver W. Föhnle**, PanDao GmbH (Switzerland); **Ulrike Fuchs**, asphericon GmbH (Germany); **Roland Geyl**, Safran Reosc (France); **Philippe Godefroy**, Winlight System S.A. (France); **James E. Harvey**, Photon Engineering LLC (United States); **François Houbre**, Savimex (France); **Shay Joseph**, Rafael Advanced Defense Systems Ltd. (Israel); **François Leprêtre**, Thales Angénieux S.A. (France); **Magnus Lindvall**, Microbas Precision AB (Sweden); **Carlos Miravet**, SENER Aeroespacial S.A. (Spain); **Jessica DeGroote Nelson**, Edmund Optics Inc. (United States); **Jérôme Néauport**, Commissariat à l'Énergie Atomique (France); **Sven Schröder**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Arkadiusz Swat**, CRW Telesystem-Mesko Sp. z o.o. (Poland); **Fabrice Wolfs**, AMOS S.A. (Belgium); **Alexander Yascovich**, Space Research Institute (Russian Federation)

Monday 13 April 2026

SESSION 1: FREEFORM OPTICS

13 April 2026 • 10:40 - 12:00 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Eric Ruch**, Safran Reosc (France)

14108-1 • 10:40 - 11:00

Development of an optical bench detecting absorbing micro-scale defects for large and highly reflective mirrors.

Author(s): **Maxime Le Jean**, Lab. des Matériaux Avancés (France)

14108-4 • 11:00 - 11:20

Supersmooth freeform polishing of optical components for high-power laser applications

Author(s): **Heidi Cattaneo**, **Liam Guntli**, **Simon Walder**, **Cord Henrik Surberg**, OST Eastern Switzerland University of Applied Sciences (Switzerland); **Bernd Eiermann**, WZW OPTIC AG (Switzerland)

14108-5 • 11:20 - 11:40

Advances towards the automated alignment of freeform optical systems

Author(s): **Jonathan L. Friedman**, University of Rochester (United States), MIT Lincoln Laboratory (United States); **Christopher D. Roll**, **James B. Johnson**, **Steven L. Mazzola**, **Maxim A. Duque**, MIT Lincoln Lab. (United States); **John Lambropoulos**, Univ. of Rochester (United States)

14108-6 • 11:40 - 12:00

Manufacturing and testing of complex freeform optics at Safran Reosc : goals and achievements.

Author(s): **Renaud Mercier-Ythier**, **Fabien Plé**, **Ekaterina Boldyreva**, **Guillaume Foucaud**, Safran Reosc (France)

Lunch Break 12:00 - 13:30

OPTICAL SYSTEMS DESIGN MONDAY PLENARY SESSION

13 April 2026 • 13:30 - 15:15 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

13:30 - 13:35 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14108-500 • 13:45 - 14:30

The active alignment of large astronomical telescopes with 3-D metrology tools (Plenary Presentation)

Author(s): **Andrew P. Rakich**, KiwiStar Optics (New Zealand)

14111-501 • 14:30 - 15:15

Future ESA Earth observation missions (Plenary Presentation)

Author(s): **Christophe Buisset**, European Space Agency (Netherlands)

Coffee Break 15:15 - 15:40

SESSION 2: ALIGNMENT AND METROLOGY

13 April 2026 • 15:40 - 17:50 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Eric Ruch**, Safran Reosc (France)

14108-11 • 15:40 - 16:10

Results of using Machine Learning Algorithms for the Alignment Verification of the Roman Space Telescope (Invited Paper)

Author(s): **Joseph M. Howard**, NASA (United States); **Robert Campion**, Aerodyne Industries LLC (United States); **Scott Rohrbach**, **Margaret Dominguez**, NASA (United States)

14108-7 • 16:10 - 16:30

Ritchey-Common test for low uncertainty metrology of ELT pre-focal station M6N mirrors

Author(s): **Andrew Bainbridge**, **Andrew Dickins**, **Paul Rees**, Glyndwr Innovations Ltd. (United Kingdom), Wrexham University (United Kingdom)

14108-8 • 16:30 - 16:50

A Framework for The Automation of Optical Alignment Tasks

Author(s): **Donald Risbridger**, **Gautami Alagarsamy**, **David A. Robb**, Heriot-Watt Univ. (United Kingdom); **Howard V. Snelling**, Luxinar Ltd. (United Kingdom); **Mike J. Chantler**, **M.J. Daniel Esser**, **Richard M. Carter**, Heriot-Watt Univ. (United Kingdom)

14108-9 • 16:50 - 17:10

Laser triangulation for measuring deformable convex surfaces with diffuse reflectivity

Author(s): **Manuel Campos-García**, Universidad Nacional Autónoma de México (Mexico); **Tyra Delgadillo-Mendoza**, **Alberto Caballero-Ruiz**, **Luis Cruz-Terán**, Univ. Nacional Autónoma de México (Mexico); **Víctor Iván Moreno-Oliva**, Univ. del Istmo (Mexico)

14108-10 • 17:10 - 17:30

Dynamic polychromatic null-screen deflectometry for concave surface characterization

Author(s): **Manuel Campos-García**, Universidad Nacional Autónoma de México (Mexico); **Alexander Perez-Degante**, Univ. Nacional Autónoma de México (Mexico)

14108-12 • 17:30 - 17:50

Design and testing of additively manufactured optics mounts

Author(s): **Lucas Groult**, Heriot-Watt Univ. (United Kingdom); **Michael McPhillimy**, Leonardo UK Ltd. (United Kingdom); **Jack Hanson**, The Univ. of Edinburgh (United Kingdom); **Joshua Collins**, Heriot-Watt Univ. (United Kingdom); **Stephen J. Beecher**, **Ian J. Thomson**, Leonardo UK Ltd. (United Kingdom); **Richard M. Carter**, **Duncan P. Hand**, **M.J. Daniel Esser**, Heriot-Watt Univ. (United Kingdom)

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

Coffee Break 10:35 - 11:00

SESSION 3: METASURFACES

14 April 2026 • 11:00 - 12:20 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Eric Ruch**, Safran Reosc (France)

14108-13 • 11:00 - 11:20

Microlens shape optimization through lithographic photoresist volume control

Author(s): **Tao Shen**, Focuslight Switzerland (Switzerland); **Toralf Scharf**, Focuslight Switzerland SA (Switzerland)

14108-14 • 11:20 - 11:40

Recent material innovations based on hybrid polymers for next generation optical elements and photonics

Author(s): **Maria Russew**, **Thomas Wiglenda**, **Arne Schleunitz**, **Gabi Grützner**, **Alexander Plucinski**, micro resist technology GmbH (Germany)

14108-15 • 11:40 - 12:00

Nanoarchitected Metasurfaces for High-Performance Biomedical Imaging and Molecular Sensing

Author(s): **Sukhmani Singh**, **Jyoti Gaur**, Rayat Bahra Univ. (India)

14108-16 • 12:00 - 12:20

Dual-environment organic Micro-Ring-Resonator as subaquatic photonic material

Author(s): **Melchi Chosenyah**, **Rajaram Swaraj**, **Rajadurai Chandrasekar**, Univ. of Hyderabad (India)

Lunch/Exhibition Break 12:20 - 14:00

SESSION 4: MANUFACTURING I

14 April 2026 • 14:00 - 15:20 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Fabrice Wolfs**, AMOS S.A. (Belgium)

14108-17 • 14:00 - 14:20

CSOA0.5: under 500mm optical manufacturing capabilities for advanced astronomical components at the Instituto de Astrofísica de Canarias.

Author(s): **Verónica Canto-Caño**, **Jorge Pérez-Hernández**, **Ana Belén Fragoso-López**, **José Luís Rasilla-Piñeiro**, Instituto de Astrofísica de Canarias (Spain)

14108-18 • 14:20 - 14:40

Development and Fabrication of a lightweighted, metallic telescope for aviation-related quantum communication

Author(s): **Markus Unger**, **Nils Heidler**, **Thomas Peschel**, **Johannes Hartung**, **Hannes Klinke**, **Wilko Fuhlrott**, **Peter Weider**, **Mathias Rohde**, **Matthias Goy**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Fabian Steinlechner**, Institut für Angewandte Physik, Friedrich-Schiller-Univ. Jena (Germany)

14108-19 • 14:40 - 15:00

ELT M5 manufacturing and testing status

Author(s): **Claire Lamour**, **Guillaume Foucaud**, **Claire Li**, **Philippe Wuillaume**, **Elodie Milhiet**, **Romain Meunier**, **Nicolas Verbrugge**, **Thomas Yoo**, **Thibaud Marchand**, **Emilien Harmand**, Safran Reosc (France)

14108-20 • 15:00 - 15:20

Deformable bioplastic gratings with variable curvature based on chitosan from seafood waste

Author(s): **Efren Gumayan**, **Ian Ken Dimzon**, **Joel Maquiling**, Ateneo de Manila Univ. (Philippines); **Raphael A. Guerrero**, Ateneo de Manila Univ (Philippines)

Coffee Break 15:20 - 15:50

SESSION 5: MANUFACTURING II

14 April 2026 • 15:50 - 17:10 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Eric Ruch**, Safran Reosc (France)

14108-21 • 15:50 - 16:10

Development and fabrication of an EUV, ultra-low blaze angle diffraction grating for a NASA space telescope

Author(s): **Fabien Grisé**, The Pennsylvania State Univ. (United States); **Brian Fleming, Emily Farr, Nicholas Kruczek, Kristina Davis, Kevin France, Briana Indahl**, Univ. of Colorado Boulder (United States); **Jake McCoy, Randy McEntaffer**, The Pennsylvania State Univ. (United States)

14108-22 • 16:10 - 16:30

Femtosecond laser direct writing of annular binary phase mask in glasses

Author(s): **Guillaume Druart, Paul Mathieu, Florence M. De La Barrière, Alice Fontbonne, Pauline Trouvé-Peloux**, ONERA (France); **Gladys Santandrea, Matthieu Lancry**, Institut de Chimie Moléculaire et des Matériaux d'Orsay (France)

14108-23 • 16:30 - 16:50

Development of radial and spherical Gradient Index optics by ion exchange to improve the performances of infrared optronic systems

Author(s): **Dupré Roxane**, ONERA (France), Institut des Sciences Chimiques de Rennes (France); **Xianghua Zhang**, Institut des Sciences Chimiques de Rennes (France); **Florence M. De La Barrière, Guillaume Druart**, ONERA (France); **Laurent Calvez, Jean Guichard, Antoine Gautier**, Institut des Sciences Chimiques de Rennes (France); **Mathieu Rozé, Frédéric Charpentier, Raphaël Proux, Yann Guimond**, Umicore IR Glass (France); **Sylvie M. Paolacci-Riera**, Agence de l'Innovation de Défense (France)

14108-2 • 16:50 - 17:10

Protected silver coatings at the IAC. Monitoring the degradation of the reflectivity of the coatings at the Izaña Observatory

Author(s): **Maider Insausti Múgica**, Instituto de Astrofísica de Canarias (Spain)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Optical Systems Design poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EOD/poster-presentation-guidelines>.

14108-25 • 18:10 - 20:00

In-situ particle detection during optical coating process

Author(s): **Heidi Cattaneo**, OST Eastern Switzerland University of Applied Sciences (Switzerland); **Fabian Holzknecht, Rico Benz**, RhySearch (Switzerland); **Tina Strüning, Marco Roth**, OST – Ostschweizer Fachhochschule (Switzerland); **Samuel Knüsel, Sandro Widmer**, RhySearch (Switzerland); **Martin Gutsche**, OST – Ostschweizer Fachhochschule (Switzerland); **Heidi Thome**, RhySearch (Switzerland)

14108-26 • 18:10 - 20:00

Optical system for precision inspection of flatness defects

Author(s): **Saïd Meguellati**, Univ. Ferhat Abbas de Sétif (Algeria)

CONFERENCE 14109

Illumination Optics VIII

13 April 2026 | Luxembourg/Salon 2 (Niveau/Level 0)

Conference Chair(s): Tina E. Kidger, Kidger Optics Associates (United Kingdom); Stuart David, GPD Optoelectronics Corp. (United States); Thorsten Schupp, Keysight Technologies Deutschland GmbH (Germany)

Conference Co-Chair(s): Rengmao Wu, Zhejiang Univ. (China)

Program Committee: William Cassarly, Keysight Technologies, Inc. (United States); Fabian Duerr, Vrije Univ. Brussel (Belgium); Florian R. Fournier, Synopsys, Inc. (United States); R. John Koshel, College of Optical Sciences, The Univ. of Arizona (United States); Monika Kroneberger, digitX (Germany); Julius A. Muschaweck, JMO GmbH (Germany); Henning Rehn, FISBA AG (Switzerland); Steffen Reichel, Pforzheim Univ. (Germany); Jannick P. Rolland, Univ. of Rochester (United States); Travis W. Sawyer, Wyant College of Optical Sciences (United States)

Monday 13 April 2026

SESSION 1: THEORY AND MORE

13 April 2026 • 8:50 - 10:20 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): Henning Rehn, Illuminatio Solutions GmbH (Switzerland)

14109-1 • 8:50 - 9:20

The case for angular extent X (*Invited Paper*)

Author(s): Julius Muschaweck, JMO Illumination Optics (Germany); Henning Rehn, Illuminatio Solutions GmbH (Switzerland)

14109-2 • 9:20 - 9:40

Enabling freeform optics design for extended light source

Author(s): Haotian Sun, Yuqin Chen, Rengmao Wu, Zhejiang Univ. (China)

14109-3 • 9:40 - 10:00

Solving inverse freeform illumination problems via deep learning

Author(s): Jeroen Cerpentier, Youri Meuret, KU Leuven (Belgium)

14109-4 • 10:00 - 10:20

Design and fabrication of a high-power, LED-based artificial light source for green methanol production

Author(s): Simone Sorgato, Jürgen Van Erps, Jef Verbaenen, Kurt Rochlitz, Vrije Universiteit Brussel (Belgium), FlandersMake@VUB (Belgium)

Coffee Break 10:20 - 10:50

SESSION 2: DESIGN ASPECTS

13 April 2026 • 10:50 - 12:20 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): William J. Cassarly, Keysight Technologies, Inc. (United States)

14109-5 • 10:50 - 11:20

A fiber light engine design with pocus adjustment (*Invited Paper*)

Author(s): Henning Rehn, Illuminatio Solutions GmbH (Switzerland)

14109-6 • 11:20 - 11:40

Design of side-lit lightguides with inkjet-printed color-conversion structures

Author(s): Ravi Kishore, Light and Lighting Laboratory, Waves: Core Research and Engineering, KU Leuven (Belgium); Youri Meuret, Jeroen Cerpentier, Frédéric Leloup, KU Leuven (Belgium)

14109-7 • 11:40 - 12:00

Extremely high-contrast cut-off line design with lens array

Author(s): Ching-Cherng Sun, National Central Univ. (Taiwan)

14109-8 • 12:00 - 12:20

Micro-element design for uniform and decorative lighting

Author(s): **Julien Goechnahts**, Keysight Technologies Deutschland GmbH (Germany); **Thomas Tessnow**, Keysight Technologies, Inc. (United States); **Thorsten Schupp**, Keysight Technologies Deutschland GmbH (Germany)

Lunch Break 12:20 - 13:30

OPTICAL SYSTEMS DESIGN MONDAY PLENARY SESSION

13 April 2026 • 13:30 - 15:15 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

13:30 - 13:35 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14108-500 • 13:45 - 14:30

The active alignment of large astronomical telescopes with 3-D metrology tools (Plenary Presentation)

Author(s): **Andrew P. Rakich**, KiwiStar Optics (New Zealand)

14111-501 • 14:30 - 15:15

Future ESA Earth observation missions (Plenary Presentation)

Author(s): **Christophe Buisset**, European Space Agency (Netherlands)

Coffee Break 15:15 - 15:40

SESSION 3: SIMULATION ASPECTS

13 April 2026 • 15:40 - 17:30 | Luxembourg/Salon 2 (Niveau/Level 0)

Session Chair(s): **Julius Muschaweck**, JMO Illumination Optics (Germany)

14109-9 • 15:40 - 16:10

Combining sequential and non-sequential trace in illumination design (Invited Paper)

Author(s): **William J. Cassarly**, Keysight Technologies, Inc. (United States)

14109-10 • 16:10 - 16:30

Rapid lighting map prediction with Ansys Optics and SimAI

Author(s): **Pengyuan Lu**, **Stefan Thoene**, **Florian Jacta**, **Csilla Timar-Fulep**, Ansys Inc (United States)

14109-11 • 16:30 - 16:50

Automated solar-focus risk assessment for automotive lighting

Author(s): **Mohammed Tariqul Islam**, Ansys Software Pvt Ltd (India); **Pengyuan Lu**, Ansys, part of Synopsys, Inc. (United States)

14109-12 • 16:50 - 17:10

Optical and thermal simulations for infrared powder coating processes

Author(s): **Monika Kroneberger**, digitX GbR (Germany); **Eva Stanik**, NETZ Technologietransferzentrum für nachhaltige Energien (Germany), Technische Hochschule Aschaffenburg (Germany); **Thorsten Döhring**, Technische Hochschule Aschaffenburg (Germany)

14109-13 • 17:10 - 17:30

Differentiable phase-space simulation for rapid irradiance estimation and optimization

Author(s): **Håkon Jarand Dugstad Johnsen**, Norwegian Univ of Science and Technology (Norway)

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Optical Systems Design poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EOD/poster-presentation-guidelines>.

14109-14 • 18:10 - 20:00

Tunable intramolecular and intermolecular excited-state dynamics driving single-component white emitter for the simplified white OLED

Author(s): **Ehsan Ullah Rashid**, Kaunas Univ. of Technology (Lithuania); **Rishika Suresh**, Vellore Institute of Technology (India); **Dmytro Volyniuk**, Kaunas Univ. of Technology (Lithuania); **Sathiyarayanan Kulathu Lier**, Vellore Institute of Technology (India); **Juozas Vidas Gražulevicius**, Kaunas Univ. of Technology (Lithuania)

14109-15 • 18:10 - 20:00

Pyrido[2,3-b]pyrazine-based donor-acceptor emitters for high-efficiency TADF OLEDs

Author(s): **Domantas Lekavičius**, **Rasa Keruckienė**, **Matas Gužauskas**, Kaunas University of Technology (Lithuania); **Dmytro Volyniuk**, Kaunas Univ. of Technology (Lithuania); **Juozas Vidas Gražulevičius**, Kaunas University of Technology (Lithuania)

14109-16 • 18:10 - 20:00

Prototype facility for an industrial infrared powder coating process

Author(s): **Eva Stanik**, TH Aschaffenburg University of Applied Sciences (Germany), NETZ Technology Transfer Center for Sustainable Energies (Germany); **Thorsten Döhrring**, TH Aschaffenburg University of Applied Sciences (Germany); **Andreas Vath**, TH Aschaffenburg University of Applied Sciences (Germany), NETZ Technology Transfer Center for Sustainable Energies (Germany); **Monika Kroneberger**, digitX GbR (Germany)



CONFERENCE 14110

Computational Optics 2026

15 - 16 April 2026 | Madrid 1/Salon 3 (Niveau/Level 0)

Conference Chair(s): **Andreas Erdmann**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany); **Nikolai P. Schmitt**, Carl Zeiss SMT GmbH (Germany); **Daniel G. Smith**, Aeva Inc. (United States)

Program Committee: **Miguel A. Alonso**, Univ. of Rochester (United States); **Annika Bonhoff**, RWTH Aachen Univ. (Germany); **Gerardo Bottiglieri**, ASML Netherlands B.V. (Netherlands); **Sven Burger**, Konrad-Zuse-Zentrum für Informationstechnik Berlin (Germany); **Donis G. Flagello**, Nikon Research Corp. of America (United States); **Patrice Genevet**, Colorado School of Mines (United States); **Roarke Horstmeyer**, Duke Univ. (United States); **Ivo Ihrke**, Institut National de Recherche en Informatique et en Automatique (France); **Stéphane Lanteri**, Ctr. Inria d'Univ. Côte d'Azur (France); **Olivier J. F. Martin**, Ecole Polytechnique Fédérale de Lausanne (Switzerland); **Carsten Rockstuhl**, Karlsruher Institut für Technologie (Germany); **H. Paul Urbach**, Technische Univ. Delft (Netherlands); **Wei Wang**, Heriot-Watt Univ. (United Kingdom); **Frank Wyrowski**, Friedrich-Schiller-Univ. Jena (Germany)

INFORMATION

Best Paper Award

SPIE Optical Systems Design conference on Computational Optics will offer a Best Paper Award. Eligibility is extended to all speakers who are present to deliver their research work in person at the conference. Papers will be judged based on clarity of presentation, scientific merit, and potential innovative impact. The Best Paper Award will include a cash reward and an award certificate.

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Optical Systems Design poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EOD/poster-presentation-guidelines>.

14110-31 • 18:10 - 20:00

Engineering the imaging system's field of view using coded phase apertures

Author(s): **Sai Deepika Sure**, Ben-Gurion University of the Negev (Israel); **Jawahar Prabhakar Desai**, ; **Joseph Rosen**, Ben-Gurion Univ. of the Negev (Israel)

14110-32 • 18:10 - 20:00

Multiagent reinforcement learning for discrete optimization of hole based photonic integrated circuits

Author(s): **Lukas Berg**, Leibniz University Hannover (Germany); **Yannik Mahlau**, **Bodo Rosenhahn**, Leibniz Univ. Hannover (Germany)

14110-33 • 18:10 - 20:00

Hybrid-matrix RCWA for anisotropic gratings: computational advances and SiC applications

Author(s): **Roberta Zsófia Kiss**, Semilab Semiconductor Physics Laboratory (Hungary); **Örs Sepsi**, **Emeric Balogh**, Semilab Semiconductor Physics Lab. Co., Ltd. (Hungary)

14110-35 • 18:10 - 20:00

Investigation of self-reconstruction in polarization singularity lattice

Author(s): **Rahul Joshi**, Indian Institute of Technology Delhi (India); **Anuj Maurya**, IIT Delhi, New Delhi (India); **Sushant Kumar Pal**, Center for Quantum Science and Technology (CQST), Siksha 'O' Anusandhan University, Odisha (India); **Sunil Kumar**, **P. Senthilkumaran**, IIT Delhi, New Delhi (India)

14110-36 • 18:10 - 20:00

Simulation of EUV mask defect classification based on optical neural network

Author(s): **Bowen Sun**, University of Chinese Academy of Sciences (China), Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **Yunsong Guan**, Shanghai Institute of Optics and Fine Mechanics (China), Univ. of Shanghai for Science and Technology (China); **Shanghu Shi**, Shanghai Institute of Optics and Fine Mechanics (China); **Sikun Li**, Shanghai Institute of Optics and Fine Mechanics (China), Univ. of Chinese Academy of Sciences (China)

14110-37 • 18:10 - 20:00

Polarization reflection-transmission separation based on multi-feature fusion and adaptive segmentation

Author(s): **Yudong Cai**, **Xuan Li**, **Shijie Wang**, Xidian Univ. (China)

14110-38 • 18:10 - 20:00

Single, Double, Triple Slit Diffraction of Ellipse Field Singularities

Author(s): **Anuj Maurya**, Indian Institute of Technology Delhi (India)

14110-39 • 18:10 - 20:00

High-FOM surface plasmon resonance sensors through dielectric and structural engineering

Author(s): **Rahul Runthala**, Birla Institute of Technology and Science, Pilani (India); **Pankaj Arora**, BITS Pilani (India)

14110-40 • 18:10 - 20:00

High aperture lens objectives for laser beam focusing. Optical design and unification of parameters.

Author(s): **Dmitry N. Frolov**, Labor-Microscopes (Russian Federation); **Witold Hackemer**, Labor-Microscopes (Germany); **Olga Vinogradova**, Labor-Microscopes (Russian Federation); **Alexey Melnikov**, **Alexandr Pavlii**, Optotechnica Ltd. (Russian Federation); **Alexey Frolov**, Labor-Microscopes (Russian Federation)

Wednesday 15 April 2026

SESSION 1: JOINT SESSION: COMPUTATIONAL OPTICS FOR OPTICAL DESIGN

15 April 2026 • 8:40 - 10:00 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Nikolai Schmitt**, Carl Zeiss SMT GmbH (Germany)

Joint session between conference 14106, Optical Design and Engineering and conference 14110, Computational Optics

14110-1 • 8:40 - 9:20

Harnessing nature's limits: computational 3D imaging from fast industrial inspection to "seeing the unseen" (Keynote Presentation)

Author(s): **Florian Willomitzer**, Wyant College of Optical Sciences (United States)

14106-15 • 9:20 - 9:40

End-to-end optimization environment built from a differentiable ray tracer

Author(s): **Gabriel Pradat-Peyre**, **Alice Fontbonne**, **Guillaume Druart**, ONERA (France); **François Goudail**, Institut d'Optique Graduate School (France)

Coffee Break 10:00 - 10:30

SESSION 2: STUDENT PRESENTATIONS I

15 April 2026 • 10:30 - 12:30 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Daniel G. Smith**, Aeva Inc. (United States)

14110-2 • 10:30 - 10:50

Deep learning wavefront retrieval in a double-pass setup

Author(s): **Konstantinos Ntatsis**, Diestia Systems PC (Greece), Laboratorio de Óptica, University of Murcia (Spain); **Dimitrios Christaras**, Diestia Systems (Greece); **Augusto Arias**, ZEISS Vision Science Lab, University of Tübingen (Germany); **Siegfried Wahl**, ZEISS Vision Science Lab, University of Tübingen (Germany), Carl Zeiss Vision International GmbH (Germany); **Pablo Artal**, Laboratorio de Óptica, University of Murcia (Spain); **Harilaos Ginis**, Diestia Systems (Greece)

14110-3 • 10:50 - 11:10

Towards a fully differentiable digital twin for solar cells

Author(s): **Marie Louise Schubert**, Houssam Metni, Jan David Fischbach, Marjan Krstić, Ulrich Wilhelm Paetzold, Seyedamir Orooji, Karlsruher Institut für Technologie (Germany); **Olivier J. J. Ronsin**, HI-ERN (Germany); **Yasin Ameslon**, Jens Harting, HI-ERN (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Chris Dreessen**, Eunchi Kim, Sandheep Ravishankar, Forschungszentrum Jülich GmbH (Germany); **Thomas Kirchartz**, Forschungszentrum Jülich GmbH (Germany), Univ. of Duisburg-Essen (Germany); **Christian Sprau**, Karlsruher Institut für Technologie (Germany); **Mohamed Hussein**, Karlsruher Institut für Technologie (Germany), Ain Shams Univ. (Egypt); **Alexander Colsmann**, Karlsruher Institut für Technologie (Germany); **Karen Forberich**, HI-ERN (Germany); **Klaus Jaeger**, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH (Germany), Zuse Institute Berlin (Germany); **Pascal Friederich**, Carsten Rockstuhl, Karlsruher Institut für Technologie (Germany)

14110-4 • 11:10 - 11:30

Diffraction neural networks for robust laser beam shaping with B-spline-parameterized phase masks

Author(s): **Dominik Onyszkiewicz**, RWTH Aachen University (Germany); **Kira Laumann**, Paul Buske, Annika Bonhoff, RWTH Aachen Univ. (Germany); **Carlo Holly**, RWTH Aachen Univ. (Germany), Fraunhofer-Institut für Lasertechnik ILT (Germany)

14110-5 • 11:30 - 11:50

Numerical field optimization for enhanced efficiency in time-reversible gradient computation of open-source GPU-accelerated FDTD simulations

Author(s): **Yannik Mahlau**, Lukas Berg, Bodo Rosenhahn, Leibniz Univ. Hannover (Germany)

14110-6 • 11:50 - 12:10

Hybrid PINO-Analytical Method for Efficient Diffraction Modeling from EUV Nano-optics

Author(s): **Vlad Medvedev**, Andreas Erdmann, Andreas Roskopf, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany)

14110-7 • 12:10 - 12:30

Transfer learning for dispersion-driven inverse design across photonic devices

Author(s): **Daniel Rodriguez-Guillen**, Lorena Velazquez-Ibarra, Universidad de Guanajuato (Mexico)

Lunch/Exhibition Break 12:30 - 13:50

SESSION 3: METHODS

15 April 2026 • 13:50 - 15:20 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Andreas Erdmann**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany)

14110-9 • 13:50 - 14:20

Modeling the angular scattering response of substrated metasurfaces (Invited Paper)

Author(s): **Karim Achouri**, EPFL (Switzerland)

14110-8 • 14:20 - 14:40

Light scattering in stratified backgrounds: a surface integral equation approach

Author(s): **Parmenion Mavrikakis**, Olivier J. F. Martin, EPFL (Switzerland)

14110-10 • 14:40 - 15:00

Numerical simulation of long pulse amplification in solid-state laser amplifiers

Author(s): **Christoph Pflaum**, Friedrich-Alexander Universität Erlangen-Nürnberg (Germany); **Souryadeep Saha**, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Nikolaus Metzger**, high-E Photonics (Australia)

14110-11 • 15:00 - 15:20

The radiation spectrum method: a next-generation computational tool for photonics

Author(s): **Philippe Gérard**, Institut National des Sciences Appliquées de Strasbourg (France); **Patrice Twardowski**, **Manuel Flury**, ICube (France)

Coffee Break 15:20 - 15:50

SESSION 4: STUDENT PRESENTATIONS II

15 April 2026 • 15:50 - 18:10 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Daniel G. Smith**, Aeva Inc. (United States)

14110-12 • 15:50 - 16:10

Reconfigurable beam shaping with rotating phase masks using diffractive neural networks

Author(s): **Paul Buske**, **Louis Michels**, **Dominik Onyszkiewicz**, RWTH Aachen Univ. (Germany); **Christian Wahl**, **Christopher Grossert**, Midel Photonics GmbH (Germany); **Annika Bonhoff**, RWTH Aachen Univ. (Germany); **Carlo Holly**, RWTH Aachen Univ. (Germany), Fraunhofer-Institut für Lasertechnik ILT (Germany)

14110-13 • 16:10 - 16:30

Analysis of modes in periodic EUV mask structures using a Bloch–Floquet-based analytical modal approach

Author(s): **Varun Jadhav**, **Andreas Erdmann**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany)

14110-14 • 16:30 - 16:50

Understanding multi-kW diode laser pump delivery in amplifiers via data-validated ray tracing

Author(s): **Lucas Warnecke**, Fraunhofer-Institut für Lasertechnik ILT (Germany), RWTH Aachen Univ. (Germany); **Sarah Klein**, **Martin Traub**, **Jenny Knöfelt**, Fraunhofer-Institut für Lasertechnik ILT (Germany)

14110-15 • 16:50 - 17:10

Optimal origin selection for minimal multipolar modeling of bianisotropic metasurfaces

Author(s): **Hossein Allahverdizadeh**, **Karim Achouri**, EPFL (Switzerland)

14110-16 • 17:10 - 17:30

Constrained optimization of a zoom lens with CMA-ES algorithm

Author(s): **Sébastien Héron**, **Tristan Marty**, **Yann Semet**, Thales Research & Technology (France)

14110-17 • 17:30 - 17:50

Computational voxel control in two-photon lithography via a generalized compact model

Author(s): **Yuan Yu**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany), Friedrich-Alexander-Universität Erlangen-Nürnberg (Germany); **Valeriia Sedova**, **Andreas Erdmann**, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany)

14110-34 • 17:50 - 18:10

Complex sample characterization using a multidimensional single-pixel microscope

Author(s): **Lukas Klein**, Technical University of Liberec (Czech Republic), Institute of Plasma Physics of CAS (Czech Republic); **Karel Zidek**, Institute of Plasma Physics of the CAS, v.v.i. (Czech Republic)

Thursday 16 April 2026

SESSION 5: METASURFACES AND NANOSTRUCTURES

16 April 2026 • 9:20 - 10:30 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Annika Bonhoff**, RWTH Aachen Univ. (Germany)

14110-18 • 9:20 - 9:50

Hybrid meta-surface lens system for long wave infrared applications (*Invited Paper*)

Author(s): **Lieven Penninck**, PlanOpSim (Belgium); **Sébastien Héron**, Thales Research & Technology (France)

14110-19 • 9:50 - 10:10

Tilt angle estimation for conical diffraction correction in lensless imaging of nanostructures

Author(s): **Paolo Ansuinelli**, Paul Scherrer Institute (Switzerland); **Yasin Ekinci**, **Iacopo Mochi**, Paul Scherrer Institut (Switzerland)

14110-41 • 10:10 - 10:30

TBA

Coffee Break 10:30 - 11:00

SESSION 6: LITHOGRAPHY

16 April 2026 • 11:00 - 12:50 | Madrid 1/Salon 3 (Niveau/Level 0)
Session Chair(s): **Gerardo Bottiglieri**, ASML Netherlands B.V. (Netherlands)

14110-21 • 11:00 - 11:30

Is inverse lithography technology (ILT) ready for high-volume manufacturing (HVM): the past, present and future for ILT (*Invited Paper*)

Author(s): **Danping Peng**, Siemens EDA (United States)

14110-22 • 11:30 - 11:50

Efficient speckle approximation for imaging simulations in optical lithography

Author(s): **Christian Scholz**, ASML (Netherlands); **Jette van den Broeke**, **Edwin de Jong**, ASML Netherlands B.V. (Netherlands)

14110-23 • 11:50 - 12:10

Deep Neural Network for modeling Displacement Talbot Lithography

Author(s): **Zhixin Wang**, **Stefan Rietmann**, Eulitha AG (Switzerland); **Kelsey Wooley**, Eulitha US, Inc. (United States); **Harun Solak**, Eulitha AG (Switzerland)

14110-24 • 12:10 - 12:30

Simulating rotated 1D patterns in anamorphic systems efficiently for lens aberration reconstruction from in-resist measurements

Author(s): **Bas van Meerten**, **Hilbert van Loo**, **Laurens de Winter**, ASML Netherlands B.V. (Netherlands)

14110-25 • 12:30 - 12:50

Resist profile aware SMO for EUV lithography

Author(s): **Shih-Hsiang Liu**, **Renier van der Meer**, **Parul Dhagat**, ASML Netherlands B.V. (Netherlands)

Lunch Break 12:50 - 14:00

SESSION 7: DEEP LEARNING IN PHOTONICS

16 April 2026 • 14:00 - 15:00 | Madrid 1/Salon 3 (Niveau/Level 0)
Session Chair(s): **Olivier J. F. Martin**, EPFL (Switzerland)

14110-26 • 14:00 - 14:20

Learning-based multi-spectral meta-optics for extended depth of field computational microscopy

Author(s): **Humeyra Caglayan**, Technische Univ. Eindhoven (Netherlands)

14110-27 • 14:20 - 14:40

A Methodology to Automate Precision Optical Alignment using Sensitivity-Aware Optimization

Author(s): **Gautami Alagarsamy**, Heriot-Watt Univ. (United Kingdom); **Stephen Beecher**, Leonardo UK Ltd. (United Kingdom); **Donald Risbridger**, **Lucas Groult**, **Mike J. Chantler**, **M.J. Daniel Esser**, **Richard M. Carter**, Heriot-Watt Univ. (United Kingdom)

14110-28 • 14:40 - 15:00

Transformer models for optical systems design

Author(s): **Aaron Margolis**, **Alan Geller**, Optimized Optics (United States)

Coffee Break 15:00 - 15:30

BEST STUDENT AWARDS ANNOUNCEMENT

16 April 2026 • 15:30 - 15:40 | Madrid 1/Salon 3 (Niveau/Level 0)

Announcement of the 2026 Computational Optics conference best student presentation

Moderators:

Daniel G. Smith, Aeva Inc. (United States)

Andreas Erdmann, Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB (Germany)

Conference Chairs

SESSION 8: METHODS AND TOOLS

16 April 2026 • 15:40 - 16:40 | Madrid 1/Salon 3 (Niveau/Level 0)

Session Chair(s): **Stéphane Lanteri**, Ctr. Inria d'Univ. Côte d'Azur (France)

14110-29 • 15:40 - 16:10

Automatic differentiable light scattering with PyMieDiff and TorchGDM *(Invited Paper)*

Author(s): **Peter R. Wiecha**, **Sofia Ponomareva**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Oscar Jackson**, Univ. of Southampton (United Kingdom); **Simone De Liberato**, Univ. of Southampton (United Kingdom), CNR-Istituto di Fotonica e Nanotecnologie (Italy), Sensorium Technological Labs. Inc. (United States); **Otto Muskens**, Univ. of Southampton (United Kingdom); **Antoine Azéma**, Lab. d'Analyse et d'Architecture des Systèmes du CNRS (France); **Arnaud Arbouet**, **Christian Girard**, Ctr. d'Elaboration de Matériaux et d'Etudes Structurales (France)

14110-30 • 16:10 - 16:40

Optimization Strategies for Photonic Inverse Design *(Invited Paper)*

Author(s): **Jens Niegemann**, **Eric Zhu**, **Philippe De Tillieux**, **Federico Duque Gomez**, Ansys Canada Ltd. (Canada)

CONFERENCE 14111

Optical Instrument Science, Technology, and Applications IV

13 April 2026 | Madrid 2/Salon 4 (Niveau/Level 0)

Conference Chair(s): **Holger Münz**, Carl Zeiss AG (Germany); **Breann N. Sitarski**, NASA Goddard Space Flight Ctr. (United States); **Nandini Bhattacharya**, Technische Univ. Delft (Netherlands)

Program Committee: **Harald Bosse**, Physikalisch-Technische Bundesanstalt (Germany); **Markus Degünther**, Technische Hochschule Mittelhessen (Germany); **Simon Hall**, Colour Holographic Ltd. (United Kingdom); **Andrew R. Harvey**, Univ. of Glasgow (United Kingdom); **Nils Haverkamp**, Carl Zeiss Industrielle Messtechnik GmbH (Germany); **Keith J. Kasunic**, Optical Systems Group, LLC (United States); **Stefan Kück**, Physikalisch-Technische Bundesanstalt (Germany); **Michael Layh**, Hochschule Kempten (Germany); **Daniel Rotter**, Swarovski Optik KG (Austria); **Richard N. Youngworth**, Riyo LLC (United States)

Monday 13 April 2026

SESSION 1: LIFE SCIENCES AND MINIATURIZED OPTICS

13 April 2026 • 8:20 - 10:00 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Holger Münz**, Carl Zeiss AG (Germany)

14111-1 • 8:20 - 8:40

Exploiting nonresonant background signal of Multiplex-CARS as an intrinsic contrast mechanism for mapping muscle proteins with M-CARS spectroscopy

Author(s): **Malik Nafa**, XLIM (France); **Ludovic Trautmann**, Institut National de Recherche en Informatique et en Automatique (France); **Ugo Arles Bottega**, **Tigran Mansuryan**, **Alessandro Tonello**, **Marc Fabert**, XLIM (France); **Laetitia Magnol**, **Véronique Blanquet**, Univ. de Limoges (France); **Vincent Couderc**, XLIM (France); **Claire Carrion**, Biologie Intégrative Santé Chimie Environnement (France); **Jean-René Duclère**, Institut de Recherche sur les Céramiques (France), Univ. de Limoges (France); **Claire Lefort**, XLIM, CNRS (France)

14111-2 • 8:40 - 9:00

Contactless vital sign parameter measurement using compact snapshot multispectral multi-aperture camera: design, realization, application, evaluation

Author(s): **Martin Hubold**, Fraunhofer Institute of Applied Optics and Precision Engineering IOF, Jena, Germany (Germany); **Johanna Karl**, **Kevin Srokos**, **Ingo Gebhart**, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); **Chen Zhang**, Technische Univ. Ilmenau (Germany); **Gunther Notni**, Technische Univ. Ilmenau (Germany), Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

14111-3 • 9:00 - 9:20

A miniature chromatic confocal sensing probe enabled by metasurfaces

Author(s): **James Williamson**, **Daniel Townend**, **Dawei Tang**, Univ. of Huddersfield (United Kingdom); **Robert Owen**, Biodiscovery Institute, The Univ. of Nottingham (United Kingdom); **Haydn Martin**, **Andrew Henning**, **Xiangqian Jiang**, Univ. of Huddersfield (United Kingdom)

14111-4 • 9:20 - 9:40

Endolaser photocoagulation dual-clad fiber probe with integrated optical coherence tomography using 3D printed micro-optics

Author(s): **Dongyue Wu**, Corporate Research & Technology, Carl Zeiss AG (Germany); **Florian Lux**, Univ. of Freiburg (Germany); **Max Mai Tobon**, **Holger Münz**, **Sören Schmidt**, **Eleonora Tagliabue**, **Philipp Matten**, Carl Zeiss AG (Germany); **Çağlar Ataman**, Univ. of Freiburg (Germany)

14111-5 • 9:40 - 10:00

NIRA 3D: toward a 3D NIR microscopy and Raman spectroscopy instrument for astrogeological exploration

Author(s): **Conor Ryan**, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

Coffee Break 10:00 - 10:30

SESSION 2: ASTRONOMICAL INSTRUMENTATION

13 April 2026 • 10:30 - 12:10 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Breann N. Sitarski**, NASA Goddard Space Flight Ctr. (United States)

14111-6 • 10:30 - 11:00

End-to-end simulation of an automated metrology instrument for camera testing (*Invited Paper*)

Author(s): **Jonathan F. Brand, Matthew Novak**, Keysight Technologies, Inc. (United States)

14111-7 • 11:00 - 11:20

CO2M Earth observation telescope development and testing

Author(s): **Antonio Casciello**, Thales Alenia Space Switzerland (Switzerland)

14111-9 • 11:20 - 11:40

Design of a three-lens wide field corrector with aspherical surfaces for the 2.34-m VBT

Author(s): **Nitish Singh, S. Sriram, Bharat Kumar Yerra**, Indian Institute of Astrophysics Bengaluru (India)

14111-10 • 11:40 - 12:10

Pushing boundaries with optical frequency combs (*Invited Paper*)

Author(s): **Tiphane Delsalle, Benjamin Sprenger, Michele Giunta, Wolfgang Hänsel, Martin Wolferstetter, Frederik Böhle, Matthias Lezius, Marc Fischer, Ronald Holzwarth**, Menlo Systems GmbH (Germany)

Lunch Break 12:10 - 13:30

OPTICAL SYSTEMS DESIGN MONDAY PLENARY SESSION

13 April 2026 • 13:30 - 15:15 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

13:30 - 13:35 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14108-500 • 13:45 - 14:30

The active alignment of large astronomical telescopes with 3-D metrology tools (Plenary Presentation)

Author(s): **Andrew P. Rakich**, KiwiStar Optics (New Zealand)

14111-501 • 14:30 - 15:15

Future ESA Earth observation missions (Plenary Presentation)

Author(s): **Christophe Buisset**, European Space Agency (Netherlands)

Coffee Break 15:15 - 15:40

SESSION 3: METROLOGY AND RADIOMETRY

13 April 2026 • 15:40 - 17:50 | Madrid 2/Salon 4 (Niveau/Level 0)

Session Chair(s): **Nandini Bhattacharya**, Technische Univ. Delft (Netherlands)

14111-11 • 15:40 - 16:10

Optical overlay metrology for semiconductor device manufacturing (*Invited Paper*)

Author(s): **Zili Zhou, Tamar Cromwijk, Arie J. den Boef**, ASML Netherlands B.V. (Netherlands)

14111-12 • 16:10 - 16:30

A data fusion approach for multiscale and hybrid surface topography metrology of porous materials

Author(s): **Oumaima Guissem**, Leibniz University Hannover (Germany); **Lennart Hinz, Hans-Juergen Maier, Johannes Stegmann**, Leibniz Univ. Hannover (Germany); **Lenarde-Oliver Friedrich, Jörg Seewig**, Rheinland-Pfälzische Technische Univ. Kaiserslautern-Landau (Germany)

14111-13 • 16:30 - 16:50

Study of an airborne micro-joule Raman lidar for temperature and density measurements

Author(s): **Gabriel Cynober**, Airbus France (France)

14111-14 • 16:50 - 17:10

Laser-driven plasma sources as transfer standards for spectral irradiance

Author(s): **Aaron Seymour, Paul Dekker**, VSL National Metrology Institute (Netherlands); **Sven Pape, Peter Sperfeld, Vijeta .**, Physikalisch-Technische Bundesanstalt (PTB) (Germany); **Toomas Kübarsepp, Matt Rammo**, AS Metrosert (Estonia); **Saulius Nevas**, Physikalisch-Technische Bundesanstalt (PTB) (Germany)

14111-15 • 17:10 - 17:30

From incandescent lamps to array spectroradiometers: enabling detector-based traceability for spectral irradiance measurements

Author(s): **Vijeta .**, Physikalisch-Technische Bundesanstalt (PTB) (Germany); **Peter Sperfeld, Saulius Nevas**, Physikalisch-Technische Bundesanstalt (Germany)

14111-16 • 17:30 - 17:50

TRUTHS cryogenic absolute radiometer test results

Author(s): **Stefan Lutz Schulze-Walewski, Lisa Gambicorti, Morad Masaoudi, Piet Belgraver, Patrick Lochmatter, Antonio Casciello, Elisabetta Rugi Grond**, Thales Alenia Space Switzerland (Switzerland); **Florian Reinhard, Manfred Gyo, Wolfgang Finsterle**, Physikalisch-Meteorologisches Observatorium Davos/World Radiation Ctr. (Switzerland); **Alexander Sabino, Clement Chauveaux**, Micos Engineering GmbH (Switzerland); **Aisha Qadir, Alexander Upcott-Gill**, Airbus Defence and Space (United Kingdom); **Pierre Coste**, Airbus Defence and Space (France); **Alessandro Zuccaro Marchi, Wilfried Glastre, Andrea Marini**, European Space Research and Technology Ctr. (Netherlands)

Tuesday 14 April 2026

OPTICAL SYSTEMS DESIGN TUESDAY PLENARY SESSION

14 April 2026 • 9:00 - 10:35 | Auditorium Erasme (Niveau/Level 0)

Plenary Moderators:

Marta C. de la Fuente, ASE Optics Europe (Spain)

Tina Kidger, Kidger Optics Associates (United Kingdom)

Thierry Lépine, Institut d'Optique & Hubert Curien Lab (France)

9:00 - 9:05 hrs:

Welcome and Opening Remarks

Introduction of the Plenary Speakers

14109-600 • 9:05 - 9:50

Multi-LED illumination: from freeform optics design to spectroscopic sensing (Plenary Presentation)

Author(s): **Lien Smeesters**, Vrije Univ. Brussel (Belgium)

14106-601 • 9:50 - 10:35

An optical design journey through the computer age (Plenary Presentation)

Author(s): **Philip J. Rogers**, VNF Ltd. (United Kingdom)

POSTERS-TUESDAY

14 April 2026 • 18:10 - 20:00 | Galerie Erasme (Niveau/Level 0)

Conference attendees are invited to attend the Optical Systems Design poster session on Tuesday evening. Come view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions.

Poster Setup: Tuesday 10:00 - 17:30 hrs

Poster authors, view poster presentation guidelines and set-up instructions at <http://spie.org/EOD/poster-presentation-guidelines>.

14111-17 • 18:10 - 20:00

Gamified optical prototype for adaptive binocular vision enhancement

Author(s): **Anastasija Jakovica**, University of Latvia (Latvia); **Gunta Krumina, Jelena Slabcova**, Univ. of Latvia (Latvia); **Liana Plavina**, National Armed Forces (Latvia); **Valters Riekstins**, Eyedoo Ltd. (Latvia)

14111-18 • 18:10 - 20:00

A wideband microscope for detecting and analyzing extraterrestrial life in the solar system

Author(s): **Keigo Enya**, Institute of Space and Astronautical Science (Japan); **Hinano Kanno**, ISAS/JAXA (Japan); **Atsuo Miyakawa**, Tokyo University of Pharmacy and Life Sciences (Japan); **Yoshitaka Yoshimura**, Tamagawa University (Japan); **Satoshi Sasaki**, Tokyo University of Technology (Japan); **Koki Yumoto**, ISAS/JAXA, Observatoire de Paris (Japan)

14111-19 • 18:10 - 20:00

Pioneering x-ray images selected for UNESCO's memory of the world register

Author(s): **Anna Kätker**, **Marcel Michels**, **Uwe Busch**, Deutsches Röntgen-Museum (Germany); **Thorsten Döhning**, Technische Hochschule Aschaffenburg (Germany); **Eva Stanik**, Technische Hochschule Aschaffenburg (Germany), NETZ Technologietransferzentrum für nachhaltige Energien, Alzenau (Germany)

14111-21 • 18:10 - 20:00

Inline measuring system for the identification of oil contaminants on metal surfaces using infrared spectroscopy

Author(s): **Ettore Eder**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), 4th Physics Institute and Stuttgart Research Center of Photonic Engineering, University of Stuttgart (Germany); **Friederike Münch**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Simon Angstenberger**, 4th Physics Institute and Stuttgart Research Center of Photonic Engineering, University of Stuttgart (Germany); **Benedikt Hauer**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany); **Harald Giessen**, 4th Physics Institute and Stuttgart Research Center of Photonic Engineering, University of Stuttgart (Germany); **Daniel Carl**, Fraunhofer Institute for Physical Measurement Techniques IPM (Germany), Department of Sustainable Systems Engineering - INATECH, University of Freiburg (Germany)

14111-22 • 18:10 - 20:00

Summary for the SPICA coronagraph instrument (SCI)

Author(s): **Keigo K. Enya**, Institute of Space and Astronautical Science (Japan)

14111-23 • 18:10 - 20:00

Optical IoT for smart cities: integrating visible light communication and deep reinforcement learning in intelligent traffic systems

Author(s): **Gonçalo Galvão**, Instituto Superior de Engenharia de Lisboa (Portugal); **Manuel A. Vieira**, ISEL/IPL UNINOVA –CTS and LASI (Portugal); **Manuela Vieira**, UNINOVA –CTS and LASI (Portugal); **Mário A. Véstias**, **Pedro A. Vieira**, Instituto Superior de Engenharia de Lisboa (Portugal); **Paula P. Louro**, Instituto Superior de Engenharia de Lisboa (Portugal), UNINOVA (Portugal)

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The following policies and conditions apply to all SPIE events, both online and in person. As a condition of registration, you will be required to acknowledge and accept the SPIE policies and conditions contained herein.

SPIE has established a confidential reporting system for all SPIE event participants to raise concerns about possible unethical or inappropriate behavior within our community. When at an SPIE event, you may contact any SPIE staff with concerns. If you feel that you are in immediate danger, please dial the local emergency number for police intervention.

Affiliate events/meetings

For SPIE events, all meeting and event spaces, as well as sponsorship opportunities within the convention center and contracted nearby hotels, are approved at the discretion of SPIE with preference given to exhibiting companies.

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Attendee agrees to release and hold harmless SPIE from any and all claims, demands, and causes of action arising out of or relating to your participation in the event you are registering to participate in and use of any associated facilities or hotels.

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It is SPIE policy that all employees, volunteers, and participants are entitled to respectful treatment. Any form of bullying, discrimination, harassment, sexual or otherwise, is unacceptable and will not be tolerated. This policy applies to all locations and situations where SPIE business is conducted and to all SPIE-sponsored activities and events.

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<https://spie.org/about-spie/the-society/policies-and-reporting>

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Exhibitors or co-sponsors may request to scan your registration badge to collect your contact information. When you allow your badge to be scanned, you are agreeing to receive communications from them. You will be subject to those entities' communications and privacy policies and must opt-out with them directly if you no longer wish to receive information from them. SPIE is not responsible for their use of your contact information obtained when you volunteer your badge to be scanned.

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If for some unforeseen reason, SPIE should have to cancel a course or an entire event, processed registration fees for the canceled activity will be refunded to registrants. Registrants will be responsible for the cancellation of travel arrangements or housing reservations and the applicable fees.

Event policies for children 17 years of age or younger

Conferences and Exhibition Hall: Registered attendees may bring a child 17 years of age or younger for free. All events require a badge to enter, which can be obtained onsite at the SPIE registration desk. Children 17 years of age or younger must be accompanied to the event by an adult. Guardians are asked to help maintain a professional, disturbance-free environment for event attendees. Children under 18 are not allowed in the exhibition area during exhibition move-in and move-out.

Student author attendees under 18 years of age: A Parental/Guardian Consent Form giving permission for the minor to attend and/or participate in the conference must be submitted by the Parent or Guardian by 8 weeks before the event start date (form link located on the Abstract Submission Guidelines page of the event). Student author attendees must register for the event, pay the student registration fee, and be accompanied to the event by a faculty advisor, parent, or guardian. Faculty advisors must also register for the full meeting. Parents/guardians may inquire about a chaperone badge onsite at the registration desk.

Identification requirement

To verify registered participants and provide a measure of security, SPIE will ask attendees to present a government-issued photo identification at registration to collect registration materials. Individuals are not allowed to pick up badges for other attendees. Further, attendees may not have some other person participate in their place at any conference-related activity. Such other individuals will be required to register on their own behalf to participate.

For online events, SPIE requires individuals to register with their legal identity.

Laser-pointer safety policy

SPIE events are subject to the applicable laser safety rules and regulations of the host location. SPIE supplies industry-standard Class 2 presentation laser pointers for all conference and other meeting rooms. For safety reasons, SPIE requests that presenters use provided laser pointers. The use of a personal laser pointer represents the user's acceptance of liability for any damage or injuries to the presenter or others.

Lena Image Usage

The use of the Lena image is prohibited in all SPIE events, including but not limited to presentations, workshops, exhibitor displays, and promotional materials. Any event materials containing the Lena image must be revised to comply with this policy before presentation or distribution.

No smoking policy

Attendees will observe all non-smoking regulations that are publicly posted by the facilities used by the event.

Online commenting policy

SPIE moderates all comments posted in an online event. We encourage robust discussion, the exchange of scientific ideas, and the sharing of multiple, diverse perspectives. We expect the discussion to be consistent with the norms of scholarly research community interactions at events. Online event participants should report any comments or content that falls short of those community norms. We will remove comments, content, or people that are considered inappropriate by SPIE standards or that:

- are defamatory, libelous, obscene, indecent, abusive, or threatening to others
- infringe the copyright, trademark, or other rights of a third party
- upload viruses or are a cybersecurity hazard
- are off-topic or inappropriately commercial in nature
- are in violation of any applicable laws or regulations

Payment policy

Registrations must be fully paid before access to the conference is allowed. SPIE accepts VISA, MasterCard, American Express, Discover, Diner's Club, checks, and wire transfers. Onsite registrations can also be paid with cash.

Recording policy

Conferences and poster sessions: audio and video recordings are prohibited without prior written consent of SPIE and the presenter. Consent forms are available at Speaker Check-in, SPIE Registration, or the Chair Services Desk. Individuals not complying with this policy will be asked to surrender their recording media and leave the conference room. Refusal to comply with such requests is grounds for expulsion from the event. Please see the SPIE code of conduct.

Courses: audio and video recordings are prohibited without explicit permission from SPIE and the instructor. Individuals not complying with this policy will be asked to surrender their recording media and leave the classroom. Refusal to comply with such requests is grounds for expulsion from the event.

Exhibition: attendees may not record interviews on the exhibition floor nor record or photograph exhibitor booth displays and/or products without explicit permission from SPIE and on-site company representatives. Consent forms are available at Exhibitor Assistance. Individuals not complying with this policy will be asked to surrender their recording media and leave the exhibition hall. Refusal to comply with such requests is grounds for expulsion from the event.

SPIE Conferences app connect feature

The connect feature in the SPIE Conferences app is a personal networking tool that allows individuals to share their contact information with other attendees via their phones while using the SPIE app. This tool should not be used for systematic scanning of badges for managing sales leads. Inappropriate use is a violation of event policy.

SPIE Conferences app lead retrieval feature

The lead retrieval feature in the SPIE Conferences app is a lead generation tool that allows attendees to share their contact information with SPIE exhibitors. Exhibitor representatives using the lead retrieval app may scan attendee badges in the exhibition or supporting company events after receiving permission from an attendee. It should not be used in the technical conference area. The lead retrieval feature will be disabled for exhibitor representatives who exceed reasonable use or are in violation of other SPIE event policies. Attendees should report inappropriate use by notifying staff or contacting support via the help link in the app.

SPIE Conferences app messaging policy

The SPIE Conferences app supports attendee-to-attendee messaging to facilitate professional networking among meeting participants. This feature should not be used to push high-volume solicitations, and messaging will be disabled for attendees who exceed reasonable use or are in violation of other SPIE event policies. Attendees should report inappropriate use via the app reporting feature. SPIE will also monitor for high-volume patterns suggesting improper use.

Unauthorized solicitation

Unauthorized solicitation in the exhibition hall is prohibited. Any non-exhibiting organization observed to be distributing information or soliciting business in the aisles, or in another company's booth, will be asked to leave immediately.

Unsecured items

Personal belongings should not be left unattended in meeting rooms or public areas. Unattended items are subject to removal by security. SPIE is not responsible for items left unattended.

Wireless internet service

At most events, SPIE provides wireless access for attendees. Properly secure your computer before accessing the public wireless network. SPIE is not responsible for computer viruses or other kinds of computer damage.

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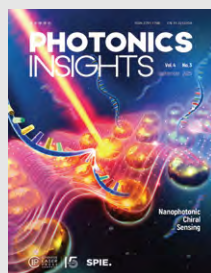
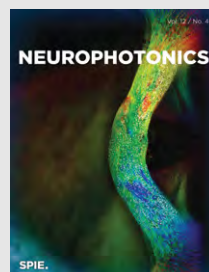
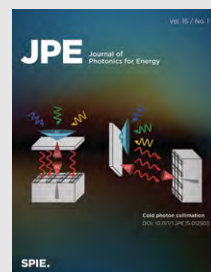
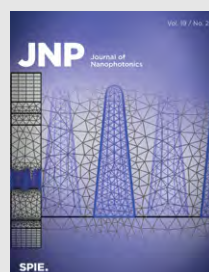
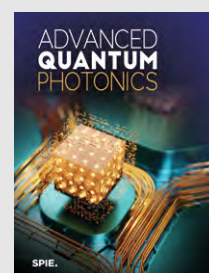
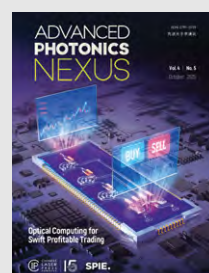
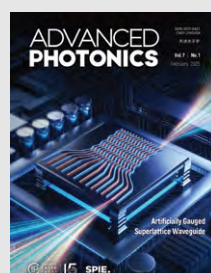
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