## AICOPL2025

Annual International Conference on

# OPTICS, PHOTONICS AND LASERS

March 13-14, 2025 | Mercure Roma Cinecittà, Rome, Italy

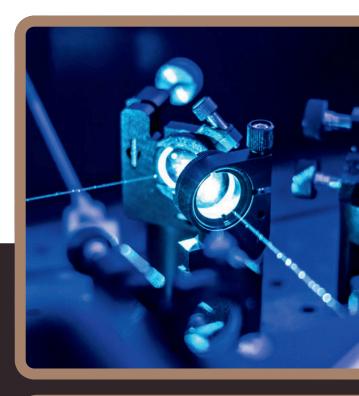
#### **AGENDA HIGHLIGHTS:**

- Plenary Talks
- Keynote Talks
- Invited Talks
- Live Q&A sessions

### **FINAL PROGRAM**



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#### March 13, 2025 | Thursday

Meeting Room: SALA2

09:00-09:15 Registrations & Badge Pick Up
09:15-09:30 Introduction & Opening Ceremony

#### PLENARY SESSION

Conference Chair: **Dieter Bimberg**, CIOMP of CAS, Changchun and TU Berlin, Germany

09:15-09:50 Title: Quantum Dots for Green Quantum Technologies	
	Dieter Bimberg, CIOMP of CAS, Changchun and TU Berlin,
	Germany
09:50-10:25	Title: Optical computing: Revisit an old guestion with new

09:50-10:25 Title: Optical computing: Revisit an old question with new hardware (TFLN) and software (cEP) perspective

Yoshihisa Yamamoto, Stanford University, USA

10:25-11:00 Title: Superresolved Imaging as a Quantum Sensing Problem

10:25-11:00 Title: Superresolved Imaging as a Quantum Sensing Problem **Alexander Lvovsky,** University of Oxford, UK

11:00-11:15	COFFEE BREAK
11:15-11:50	Title: Ultrafast mid-infrared lasers for intense-field science
	Zenghu Chang, University of Ottawa, Canada
11:50-12:25	Title: Lasers for remote medical diagnosis
	Zeev Zalevsky, Bar-Ilan University, Israel

	Chrysanthe Preza, The University of Memphis, USA
13:10-13:45	Title: Engineering 3D microscopy systems using computational imaging
12:30-13:10	COFFEE BREAK
12:25-12:30	Group Photograph

#### **KEYNOTE SESSION**

	KETNOTE SESSION
13:45-14:10	Title: Passively Mode-Locked Broad-Area Diode-Laser A source for high-energy, high-brightness, ultrashort pulses <b>Avi Peer,</b> Bar Ilan University, Israel
14:10-14:35	Title: Photoemission and optical tunnelling of quantum 2D materials <b>Lay Kee (Ricky) Ang,</b> Singapore University of Technology and Design, Singapore
14:35-15:00	Title: RAINBOW Organic Solar Cells: Implementing Spectral Splitting in Lateral Multi-Junction Architectures  Alejandro R. Goni, ICMAB-CSIC, Spain

15:00-15:25	Title: Silicon Photonics for Reconfigurable Optical Networks in Next-Gen Data Centers and Computing Systems <b>Binhao Wang,</b> Xi'an Institute of Optics and Precision Mechanics, CAS, China
15:25-15:50	Title: Merging Nanophotonics and Optical Fibers for Flexible Beam Control using 3D Nanoprinting  Markus Schmidt, Leibniz Institute of Photonic Technology, Germany
15:50-16:15	Title: Silicon Photonics Meets Al: Enabling Next-Gen Data Center Connectivity through Al and Inverse Design <b>Liron Gantz,</b> Nvidia Electro-Optics, USA
16:15-16:30	COFFEE BREAK
16:30-16:55	Title: A Multi-Perspective View of Radiation-Matter Interactions <b>Gian-Luca Lippi,</b> Université Côte d'Azur, France
16:55-17:20	Title: Multifunctional optical tweezers and their potential applications in parallel force measurement  Yansheng Liang, Xi'an Jiaotong University, China
	INVITED SESSION
17:20-17:40	Title: Terahertz and Infrared Plasmon Polaritons in PtTe2 Type-II Dirac Topological Semimetal <b>Salvatore Macis,</b> Sapienza University, Italy
17:40-18:00	Title: Photoconductivity and Memory Effects in 2D Materials: BP, MoS <sub>2</sub> , and BP/MoS <sub>2</sub> Heterostructures for Advanced Optoelectronic Applications <b>Ofelia Durante,</b> Università degli Studi di Salerno, Italy
18:00-18:20	Title: Steering light within 2D TMD semiconductor layers  Maria Caterina Giordano, Università di Genova, Italy
18:20-18:40	Title: Enhancing the Absorption of CVD Graphene Layers in an Optical Resonant Cavitiy: Challenges and Experimental Achievements
	7.0

### END OF DAY 1



## March 14, 2025 | Friday

Meeting Room: SALA2

PLENARY S	ESSION
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	PLENARY SESSION
Mode	erator for Day-2: <b>Salvatore Macis</b> , Sapienza University, Italy
09:15-09:50	Title: Integrated two-section Semiconductor Diode Lasers for All- optical Spiking Neural Network <b>Daan Lenstra,</b> Eindhoven University of Technology, Netherlands
09:50-10:25	Title: High-speed VCSELs Photonics for Al-computing and Datacenter Networks  Fumio Koyama, Institute of Science Tokyo, Japan
10:25-11:00	Title: Deterministic Steady-state Subradiance  Zidan Wang, The University of Hong Kong, HKSAR
11:00-11:15	COFFEE BREAK
11:15-11:50	Title: Lasers and Nanoplasmonics: Advancing Medical Diagnostics <b>Tuan Vo-Dinh,</b> Duke University, USA
	KEYNOTE SESSION
11:50-12:15	Title: From Stretching Rainbows to Reveal THz Fingerprint to Manipulation of Single Photon: a few exciting experiments using photonic crystal fibers  Joly Nicolas, Friedrich-Alexander Universität Erlangen-Nürnberg, Germany
12:15-12:40	Title: Ultimate Photonics: one photon, one molecule <b>Stephan Götzinger,</b> Friedrich-Alexander Universität Erlangen- Nürnberg, Germany
12:40-13:05	Title: Spatio-temporal Self-focusing in Ceramics Applied to 3D Multimode Nonlinear Imaging  Vincent Couderc, XLIM Research Institute (XLIM), France
13:05-13:45	LUNCH BREAK
	INVITED SESSION
13:45-14:05	Title: Broadband Parametric Amplifier for Optical Communication using PPLN Waveguides <b>Masaki Asobe,</b> Tokai university, Japan
14:05-14:25	Title: High-speed Image Reconstruction for Structured Illumination Microscopy  Ming Lei, Xian Jiaotong University, China
14:25-14:45	Title: Quantum imaging techniques: different platforms for different applications <b>Zanforlin Ugo,</b> Leonardo S.p.A, Italy

14:45-15:05	Title: Non-Degenerate Two-wave Mixing for Detection and Characterization of Biomolecules  Nabil Lawandy, Brown University School of Engineering, USA
15:05-15:25	Title: Mechanical Properties Evaluation of Metals with Grating Laser Ultrasonic Spectroscopy  Cuixiang Pei, Xi'an Jiaotong University, China
15:25-15:45	Title: Leveraging Conventional CMOS Technology for Metal Optics Nanophotonics <b>Sivan Trajtenberg Mills,</b> Massachusetts Institute of Technology, USA
15:45-16:05	Title: Phenothiazine as Versatile Molecular Platform from Medicine to Optoelectronics <b>Aneta Slodek,</b> University of Silesia, Poland
16:05-16:20	COFFEE BREAK
16:20-16:40	Title: Cutting-Edge Bismuth Hybrid Materials: Exploring Potential Uses
10 40 17 00	Yolanda Pérez, Rey Juan Carlos University/IMDEA Energy, Spain
16:40-17:00	Title: Shaping the Future of Quantum Networks <b>Rohit Ramakrishnan,</b> Indian Institute of Science, Bengaluru, India
17:00-17:20	Title: Superdispersion-enabled Ultrabroad and Aberration-free
17.00 17.20	Meta-devices
	Tong Cai, Air force Engineering University, China
17:20-17:40	Title: Optical Measurement Concepts For Industrial Process Control
	<b>Axel Kramer,</b> ABB Research Switzerland
17:40-18:00	Title: PaQS: The Paderborn Quantum Sampler
	Kai-Hong Luo, Paderborn University, Germany
18:00-18:20	Title: Single-photon Sources for Quantum Radiometry  Marco A. López O, Physikalisch-Technische Bundesanstalt (PTB),  Germany
18:20-18:40	Title: Techniques for Sustaining and Enhancing Communication Efficiency in Vehicle-to-Vehicle (V2V) Visible Light Communication (VLC)
	<b>Heba Yuksel,</b> Boğaziçi University, Turkey ,
18:40-19:00	Title: Role and Challenges of Optical I/O in the Era of Generative Al <b>Sajjad Moazeni,</b> University of Washington, Seattle, USA

#### POSTER PRESENTATION

P001

Title: New Bipolar N- and S-doped PAHs Based on Indolo- and Thienopyrrolo[3,2,1-jk]carbazole as Promising Candidates for Organic Optoelectronics

**Grażyna Szafraniec-Gorol,** University of Silesia in Katowice, Poland

19:00-19:15

AWARD CEREMONY & END OF CONFERENCE



\*\*\*\*LOOKING FORWARD TO SEE YOU ALL AT NEXT EDITION\*\*\*\*

# **NOTES**


## **NEXT EDITION**

# AICOPL2026

2nd Annual International Conference on

# OPTICS, PHOTONICS AND LASERS

April 13-15, 2026 | Lisbon, Portugal

https://aicopl2026.synergiasummits.com/

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