2023 IEEE Photonics Conference (IPC) Welcome Message

On behalf of the 2023 IEEE Photonics Conference (IPC) organizing committee, it is my pleasure to welcome you to the IEEE Photonics Society flagship conference taking place 12-16 November 2023 in Orlando, Florida. This year’s program brings together the most recent advances in the areas of photonic sciences, technologies, and applications. The conference includes twelve topic areas including photonic materials and devices, integrated photonics, nonlinear optics, nanophotonics, as well as bio-photonics, quantum photonics, optical AI, etc. Additionally, we have numerous workshops, events, and forums to offer. We hope that you will be inspired and find this year’s IPC a rewarding one.

It is our honor to have 5 distinguished speakers for our Plenary Sessions that will take place during the conference. The first Plenary Session will start with Prof. Kei May Lau from Hong Kong University of Science & Technology, with a presentation on “Photonic Integration on SOI by Epitaxy”. Followed by Prof. Ming Wu from University of California, Berkeley, who will present on “Large-Scale Silicon Photonic Switches for AI/ML Computing and 3D Sensing”. In the second Plenary Session we have Prof. Laura Lechuga from Catalan Institute of Nanoscience and Nanotechnology with a presentation on “Nanophotonic Biosensors for Ultrasensitive and Decentralised Diagnostics at the Point-of-Need” and Prof. Dirk Englund from Massachusetts Institute of Technology presenting on “Full-stack Design of Scalable Quantum Links”. Lastly on Thursday during the IPC 2023 Plenary Session, Post-Deadline Presentations and Closing Ceremony, Prof. Tobias Kippenberg from the Swiss Federal Institute of Technology will present on the topic of “Next Generation Integrated Photonics: From Chipscale Frequency Combs, Erbium Amplifiers to Cryogenic Quantum Interconnects”.

This year’s IPC technical program offers over 380 oral and poster presentations of which over 80 are Invited and Tutorial presentations by some of the most respected researchers in our community. We include two Special Symposia to complement the regular technical sessions targeting special topics on “neurophotonics” and “quantum photonic materials”.

To kick-off the conference week, IPC has year-over-year put together an innovative and comprehensive Sunday Program to introduce new forums and panels to the IEEE Photonics Conference. Join us on Sunday to learn how to promote your research and how to interact with government labs and agencies, to discuss modern lab automation and to get insights into short and long term goals for quantum technologies.

On Sunday afternoon, we are also excited to offer a hands-on workshop titled ‘Photonic Design Automation: From Devices to Systems’, which is sponsored and facilitated by VPIphotonics. This workshop will be offered with limited space.

We continue to offer our popular Industry Day programming, which is now called the “Photonics Industry Focus”, with invited presentations by outstanding speakers and panels on various topics. In addition to a career fair, luncheons and the CREOL Lab Tours, this programming strives to increase engagement between industry and the photonics community, provides opportunities for future collaborations and showcases the photonic technologies transfer to the market.

Finally, the conference will conclude on Thursday morning with our final Plenary Speaker, Post-Deadline Presentations and Closing Ceremony, where the Best Student Paper and Best Student Poster selection results will also be announced.

We believe we have an exciting program for IPC 2023! This comprehensive program is a result of the teamwork of many dedicated volunteers constituting the conference’s organizing, technical and industry committees, and the IEEE Photonics Society staff. I extend my most sincere thanks to all.

On behalf of the entire team, I appreciate your participation and sincerely hope you have a rewarding conference experience. Look forward to meeting you all in Orlando, Florida!

Dominique Dagenais
General Chair, 2023 IEEE Photonics Conference (IPC)
National Science Foundation, USA
2023 IEEE Photonics Conference (IPC)
Technical Program Committee

General Chair:
Dominique Dagenais, National Science Foundation, USA

Program Chair:
Di Liang, University of Michigan, USA

Program Vice-Chair:
Gabriella Bosco, Politecnico di Torino, Italy

Member-at-Large:
Michael Brodsky, U.S. Army Research Laboratory, USA

Biophotonics and Medical Optics
Topic Chair:
Peter Munro, University College London, United Kingdom

Topic Co-Chair:
Srivallesha Mallidi, Tufts University, USA

Committee Members:
Balpreet Sing Ahluwalia, University of Tromso (UiT), Norway
Liang Gao, University of California, Los Angeles, USA
Jamie Guggenheim, University of Birmingham, United Kingdom
Myeong Jin Ju, University of British Columbia, Canada
Yang Liu, University of Pittsburgh Hillman, USA
Nisan Ozana, Bar Ilan University, Israel
Jung-Hoon Park, Ulsan National Institute of Science and Technology, South Korea
Francisco (Paco) Robles, Georgia Institute of Technology, USA
Judy Su, University of Arizona, USA
Lei Tian, Boston University, USA

Detection, Sensing, and Energy
Topic Chair:
Ganesh Balakrishnan, University of New Mexico, USA

Topic Co-Chairs:
Nicola D'Ascenzo, Huazhong University of Science and Technology, China
Stephanie Tomasulo, Naval Research Laboratory, USA

Committee Members:
Sadhvikas Addamane, Sandia National Laboratory, USA
Seth Bank, University of Texas at Austin, USA
Andreas Beling, University of Virginia, USA
Sanjay Krishna, Ohio State University, USA
Andrej Lenert, University of Michigan, USA
Paul Simmonds, Boise State University, USA
Jun Tatebayashi, University of Osaka, Japan

Light Sources
Topic Chair:
Nelson Tansu, The University of Adelaide, Australia

Topic Co-Chairs:
Paul Crump, Leibniz-Institut für Höchstfrequenztechnik, Germany
Boon S.Ooi, KAUST, Saudi Arabia
Committee Members:
Menaka De Zoysa, Kyoto University, Japan
William Fenwick, Lawrence Livermore National Lab, USA
Lan Fu, Australian National University, Australia
Qing Gu, North Carolina State University, USA
Changmin Lee, Kyocera SLD Laser, USA
Davide Priante, Coherent, USA
Haiding Sun, University of Science and Technology of China, China
Ying Xue, Hong Kong University of Science and Technology, Hong Kong

Materials, Foundries and Fabrication
Topic Chair:
Shamsul Arafain, The Ohio State University, USA
Topic Co-Chair:
Sarvagya Dwivedi, Rockley Photonics, USA
Committee Members:
Andy Boes, University of Adelaide, Australia
Naresh Emani, Indian Institute of Technology Hyderabad, India
Tatsurou Hiraki, NTT, Japan
Shankar Kumar Selvaraja, Indian Institute of Science, India
Bart Kuyken, University Gent-imec, Belgium
Wayesh Qarony, University of California at Berkeley, USA
Hoe Tan, Australian National University, Australia
Qifan Yang, Peking University, China
Linjie Zhou, Shanghai Jiao Tong University, China

Microwave Photonics and Vehicular Optics
Topic Chair:
Charles Middleton, Critical Frequency, USA
Topic Co-Chair:
David Moilanen, Lockheed Martin, USA
Committee Members:
Lawrence Chen, McGill University, Canada
Ivana Gasulla, Universitat Politecnica de Valencia, Spain
Yang Liu, EPFL, Switzerland
Elaine Wong, University of Melbourne, Australia
Siva Yegnanarayanan, MIT Lincoln Lab, USA
XiaoKe Yi, University of Sydney, Australia
Justin Zobel, Johns Hopkins University Applied Physics Laboratory, USA

Nano Photonics, Plasmonics, and Metamaterials
Topic Chair:
Jennifer Choy, University of Wisconsin, Madison, USA
Topic Co-Chair:
Parag Deotare, University of Michigan, Ann Arbor, USA
Committee Members:
Meryem Benelajla, Ghent University – IMEC, Belgium
Sathwik Bharadwaj, Purdue University, USA
Shanying Cui, HRL, USA
Kejie Fang, University of Illinois Urbana-Champaign, USA
Jaime Gomez Rivas, Eindhoven University of Technology, Netherlands
Sushil Mujumdar, Tata Institute of Fundamental Research, India
Moussa N’Gom, Rensselaer Polytechnic Institute, USA

Nonlinear Photonics and Novel Optical Phenomena
Topic Chair:  
Alireza Marandi, California Institute of Technology, USA

Topic Co-Chair:  
Hanieh Fattahi, Max-Planck Institute for Science of Light (MPL), Germany

Committee Members:  
Andrea Blanco-Redondo, CREOL, University of Central Florida, USA  
Wenshan Cai, Georgia Institute of Technology, USA  
Avik Dutt, University of Maryland, USA  
Rachel Grange, ETH Zurich, Switzerland  
Md Selim Habib, Florida Polytechnic University, USA  
Mohammed Hassan, University of Arizona, USA  
Kirk Ingold, USMA at West Point, USA  
Kambiz Jamshidi, Technische Universität Dresden, Germany  
Matthias Kling, Stanford University, USA  
Francois Leo, Université Libre de Bruxelles, Belgium  
Mohammad-Ali Miri, City University of New York, USA  
Yoshitomo Okawachi, Columbia University, USA  
Mohsen Rahmani, Nottingham Trent University, United Kingdom  
Kartik Srinivasan, NIST, USA  
Kenta Takata, NTT Basic Research Laboratories, Japan  
Logan Wright, Yale University, USA

Optical AI and Computational Photonics
Topic Chair:  
Volker Sorger, University of Florida, USA

Topic Co-Chair:  
Giovanni Volpe, University of Gothenburg, Sweden

Committee Members:  
Wim Bogaerts, University of Gent, Belgium  
Daniel Brunner, CNRS, France  
Hamed Dalir, University of Florida, USA  
Philip Feng, University of Florida, USA  
Elham Heidari, University of Maryland, USA  
Chaoran Huang, University of Hong Kong, Hong Kong  
Emanuel Peinke, 3E8 Inc., Canada  
Thomas Van Vaerenbergh, Hewlett Packard Enterprise, Belgium  
Ben Yoo, University of California, Davis, USA

Optical Communication and Networks
Topic Chair:  
Deepa Venkitesh, IIT Madras, India

Topic Co-Chair:  
Darli Mello, Unicamp, Brazil

Committee Members:  
Youichi Akasaka, Fujitsu, USA  
Xun Guan, Tsinghua University, China  
Fotini Karinou, Microsoft, United Kingdom
Hai-Han Lu, National Taipei University of Technology, Taiwan
Nicola Sambo, Sant’Anna School of Advanced Studies, Italy
Takehiro, Tsuritani KDDI, Japan
Metodi Yankov, Denmark Technical University, Denmark

**Optical Communication: Devices, Interconnects and Subsystems**

**Topic Chair:**
Giovanni Milione, NEC Labs America, USA

**Topic Co-Chairs:**
Daoxin Dai, Zhejiang University, China
Tingyi Gu, University of Delaware, USA

**Committee Members:**
Kyle Bottrill, University of Southampton, United Kingdom
Sang Yeon Cho, U.S. Army Research Laboratory, USA
Martijn Heck, Eindhoven University of Technology, Netherlands
Xingchen Ji, Shanghai Jiaotong University, China
Dun Mao, University of Delaware, USA
Yiwei Peng, Hewlett Packard Enterprise, USA
Brian Stern, Nokia Bell Labs, USA
Honki Tsang, Chinese University of Hong Kong, China
Ting Wang, Institute of Physics, Chinese Academy of Sciences, China
Yujie Xia, University of California Santa Barbara, USA

**Propagation, Spectroscopy, and Imaging**

**Topic Chair:**
Kevin Tsia, University of Hong Kong, Hong Kong

**Topic Co-Chair:**
Zhaowei Liu, University of California San Diego, USA

**Committee Members:**
Lingze Duan, The University of Alabama in Huntsville, USA
Jessica Houston, New Mexico State University, USA
Takuro Ideguchi, University of Tokyo, Japan
Puxiang Lai, Hong Kong Polytechnic University, Hong Kong
Arka Majumdar, Washington University, USA
Aydogan Ozcan, University of California Los Angeles, USA
Junsuk Rho, Pohang University of Science and Technology, South Korea
Liangyan Shi, University of California San Diego, USA

**Quantum Photonics**

**Topic Chair:**
Mahdi Hosseini, Northwestern University, USA

**Topic Co-Chair:**
Hadiseh Alaeian, Purdue University, USA

**Committee Members:**
Markus Allagaier, University of Oregon, USA
Boulat Bash, Arizona University, USA
Michael Fanto, Air Force Research Laboratory, USA
Geza Giedke, Donostia International Physics Center, Spain
Xiongfeng Ma, Tsinghua University, China
Robert McConnell, MIT Lincoln Lab, USA
David Meyer, ARL Army, USA
Daniel Oblak, *University of Calgary*, Canada  
Sarah Sharif, *The University of Oklahoma*, USA

**Special Symposium on Advances in Neurophotonics**  
**Topic Chair:**  
Nisan Ozana, *Bar Ilan University*, USA  
**Topic Co-Chair:**  
Peter Munro, *University College London*, United Kingdom  
**Committee Members:**  
Ikbal Şencan-Eğilmez, *Washington University in St. Louis*, USA  
Meryem Yucel, *Boston University*, USA

**Special Symposium on Quantum Photonic Materials and Devices for Quantum Computing**  
**Topic Chair:**  
Mahdi Hosseini, *Northwestern University*, USA  
**Topic Co-Chair:**  
Daniel Oblak, *University of Calgary*, Canada  
**Committee Members:**  
Simeon Bogdanov, *University of Illinois Urbana-Champaign*, USA  
Michael Stefszky, *University of Paderborn*, Germany  
Feihu Xu, *University of Science and Technology of China*, China

**Photonics Industry Focus:**  
**Topic Chair:**  
Daniel Renner, *Atacama Optics & Electronics*, USA
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<tr>
<th>Time</th>
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<td>9am</td>
<td>Sunday Program I - Su1: Share Your Excitement! Promoting Your Personal Brand Effectively.</td>
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<td>10am</td>
<td>Coffee Break</td>
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<td>11am</td>
<td>Sunday Program II - Su2: Lab Automation and Experimental Techniques Hackathon</td>
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<td>1pm</td>
<td>Sunday Program III - Su3: Practical Edge and Long-Term Perspectives of Quantum Technologies</td>
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<td>4pm</td>
<td>Sunday Program IV - Su4: Shedding Light on Government Partnerships</td>
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<td>6pm</td>
<td>Welcome Reception, Poster Session &amp; Career Fair</td>
<td>Palm Event Center</td>
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<tr>
<td>9am</td>
<td>IEEE Member Appreciation Lounge</td>
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<td>10am</td>
<td>Coffee Break &amp; Exhibits</td>
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<tr>
<td>8:30am</td>
<td>Special Symposium on Quantum Photonic Materials and Devices for Quantum Computing I - MA1: Quantum Sources for Optical Quantum Computing</td>
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<td></td>
<td>Optical Communication: Devices, Interconnects and Subsystems I - MB1: Space and Mode Division Multiplexing over Free Space and Optical Fibers</td>
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<td>Optical Communication and Networks I - MC1: Digital Signal Processing</td>
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<td>Detection, Sensing, and Energy I - MD1: III-V Compound Semiconductor Based Detectors</td>
<td>Palm Event Center FG</td>
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<td>Biophotonics and Medical Optics I - MF1: Progress in Diffuse Optics</td>
<td>Palm Event Center MN</td>
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<tr>
<td>10:30am</td>
<td>Special Symposium on Quantum Photonic Materials and Devices for Quantum Computing II - MA2: Heterogeneous Quantum Photonics</td>
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<td>Optical Communication: Devices, Interconnects and Subsystems II - MB2: Mode Division Multiplexing with Integrated Photonics</td>
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<td>Optical Communication and Networks II - MC2: Optical Network Modelling</td>
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<td>Light Sources I - MD2: Surface Emitting Lasers (VCSEL, PCSEL &amp; Topological)</td>
<td>Palm Event Center FG</td>
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<td>12pm</td>
<td>Lunch Break (on own)</td>
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<tr>
<td>1:30pm</td>
<td>Nonlinear Photonics and Novel Optical Phenomena I - MA3: Integrated Nonlinear Optics I</td>
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<td>Optical Communication: Devices, Interconnects and Subsystems III - MB3: Novel Optical Receivers and Signal Monitoring</td>
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<td>Optical Communication and Networks III - MC3: Optical Networking and Parameter Monitoring</td>
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<td>Light Sources II - MD3: Micro and Nano I</td>
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Detection, Sensing, and Energy II - ME3: Sensor Design and Fabrication
Palm Event Center KL

Biophotonics and Medical Optics II - MF3: Novel Imaging Techniques
Palm Event Center MN

Microwave Photonics and Vehicular Optics I - MG3: Advanced Components for Microwave Photonics
Palm Event Center O

Materials, Foundries, and Fabrication I - MH3: Heterogeneous Integration for Silicon Photonics
Palm Event Center P

3pm

Coffee Break & Exhibits
Palm Event Center

3:30pm

Nonlinear Photonics and Novel Optical Phenomena II - MA4: Integrated Nonlinear Optics II
Palm Event Center AB

Optical Communication: Devices, Interconnects and Subsystems IV - MB4: Novel Optical Modulation Subsystems and Devices
Palm Event Center CD

Light Sources III - MD4: Micro and Nano II
Palm Event Center FG

Tuesday, 14 November

8:30am

Nonlinear Photonics and Novel Optical Phenomena III - TuA1: Frequency Combs
Palm Event Center AB

Palm Event Center CD

Optical Communication and Networks IV - TuC1: Radio-over-fiber and Free-space Optical Systems
Palm Event Center E

Detection, Sensing, and Energy IV - TuD1: Novel Materials for Detectors
Palm Event Center O

Materials, Foundries, and Fabrication II - MH4: Novel Concept for Photonic Integration
Palm Event Center P

6pm

*OPEN TO ALL REGISTERED ATTENDEES - IEEE Photonics Society Awards Banquet (Reception)
Pavilion

7pm

OPEN TO ALL REGISTERED ATTENDEES - IEEE Photonics Society Awards Banquet (Seated Dinner)
Pavilion

10am

Coffee Break & Exhibits
Palm Event Center

10:30am

Quantum Photonics I - TuA2: Engineering Quantum Emitting Devices
Palm Event Center AB

Optical Communication: Devices, Interconnects and Subsystems VI - TuB2: Lasers and Amplifier Subsystems and Devices
Palm Event Center CD

Optical Communication and Networks V - TuC2: Optical Signal Processing
Palm Event Center E

Light Sources IV - TuD2: Heterogeneous Integration
Palm Event Center FG

Materials, Foundries, and Fabrication III - TuE2: PIC Technologies for Emerging Applications
Palm Event Center KL

Propagation, Spectroscopy, and Imaging II - TuF2: Near-field and Subwavelength Interactions in Nanostructures
Palm Event Center O

TuH1: PHOTONICS INDUSTRY FOCUS: Government Photonic Opportunities
Palm Event Center P

TuH2: PHOTONICS INDUSTRY FOCUS: Photonic Opportunities - Commercial and Educational
Palm Event Center P
# 2023 IEEE Photonics Conference (IPC) 12 - 16 Nov 2023 All times in EST

## Tuesday, 14 November

### 12pm

**PHOTONICS INDUSTRY FOCUS: Standards / Industry Connections Luncheon**

Meyer

Lunch Break (on own)

### 1:30pm

- **Quantum Photonics II - TuA3: Engineering Quantum Emitters II**
Palm Event Center AB

- **Optical Communication: Devices, Interconnects and Subsystems VII - TuB3: Photonic Integrated Modulators**
Palm Event Center CD

- **Optical Communication and Networks VI - TuC3: SDM and Multiband Transmission**
Palm Event Center E

- **Light Sources V - TuD3: High Power Lasers**
Palm Event Center FG

- **Materials, Foundries, and Fabrication IV - TuE3: Novel Materials and Advanced Fabrication**
Palm Event Center KL

- **Biophotonics and Medical Optics V - TuF3: Resonance Based Methods**
Palm Event Center MN

- **Microwave Photonics and Vehicular Optics III - TuG3: Microwave Photonic Systems**
Palm Event Center O

## Wednesday, 15 November

### 3pm

- **Coffee Break & Exhibits**
Palm Event Center

### 3:30pm

- **TuI4: Plenary Session & IEEE Photonics Society Awards Recipients**
  Citron East/West

### 8:30am

- **Quantum Photonics III - WA1: Hyper-Entanglement and Multiplexing Optical States**
Palm Event Center AB

- **Optical Communication: Devices, Interconnects and Subsystems VIII - WB1: Novel Optical Fiber Designs**
Palm Event Center CD

- **Special Symposium on Advances in Neurophotonics I - WC1: Advances in Neurophotonics I**
Palm Event Center E

- **Detection, Sensing, and Energy V - WD1: Integrated Photodetection System**
Palm Event Center FG

- **Materials, Foundries, and Fabrication V - WE1: Photonic Components for Silicon Photonics**
Palm Event Center KL

### 10am

- **Quantum Photonics IV - WA2: Integrated Quantum Photonics**
Palm Event Center AB

- **Optical Communication: Devices, Interconnects and Subsystems IX - WB2: Photonic Integrated Couplers and Switches**
Palm Event Center CD

- **Special Symposium on Advances in Neurophotonics II - WC2: Advances in Neurophotonics II**
Palm Event Center E

- **Detection, Sensing, and Energy VI - WD2: Advances in Photodetection I**
Palm Event Center FG

- **Materials, Foundries, and Fabrication VI - WE2: Novel Photonic Components**
Palm Event Center KL

### 12pm

**PHOTONICS INDUSTRY FOCUS: Young Professionals Luncheon**

Meyer

Lunch Break (on own)

### 1:30pm

- **Biophotonics and Medical Optics VI - WB3: Characterization of Tissues and Cells**
Palm Event Center CD

- **Microwave Photonics and Vehicular Optics IV - WC3: Photonic Signal Processing**
Palm Event Center E

- **Detection, Sensing, and Energy VII - WD3: Advances in Photodetection II**
Palm Event Center FG

- **Materials, Foundries, and Fabrication VI - WE3: Novel Photonic Components**
Palm Event Center KL

### 3pm

**PHOTONICS INDUSTRY FOCUS: Standards / Industry Connections Luncheon**

Meyer

Lunch Break (on own)

### 3:30pm

- **TuI4: Plenary Session & IEEE Photonics Society Awards Recipients**
  Citron East/West
2023 IEEE Photonics Conference (IPC) 12 - 16 Nov 2023 All times in EST

Continued from Wednesday, 15 November

Nano Photonics, Plasmonics and Metamaterials VII - WF3: Integrated Photonics for On-chip Modulation
Palm Event Center MN

Light Sources VI - WG3: Optimizing at Extreme Wavelengths (UV, QCL, MIR)
Palm Event Center O

3pm
Coffee Break & Exhibits
Palm Event Center

3:30pm
WI4: Plenary Session & IEEE Photonics Society Awards Recipients
Citron East/West

5:30pm
PHOTONICS INDUSTRY FOCUS: Industry Reception and CREOL Lab Tours
CREOL, The College of Optics and Photonics at UCF

Thursday, 16 November

8:30am
Propagation, Spectroscopy, and Imaging III - ThA1: Advanced Imaging Techniques
Palm Event Center AB

Light Sources VII - ThB1: Communication and Comb Sources
Palm Event Center CD

Microwave Photonics and Vehicular Optics V - ThC1: Integrated Microwave Photonics
Palm Event Center E

Optical AI and Computational Photonics V - ThD1: Reconfigurable Photonic Systems
Palm Event Center FG

Nonlinear Photonics and Novel Optical Phenomena VI - ThE1: Ultrafast Photonics
Palm Event Center KL

Nano Photonics, Plasmonics and Metamaterials VIII - ThF1: Nanoscale Light-matter Interactions in Quantum Materials
Palm Event Center MN

10am
Coffee Break & Exhibits
Palm Event Center

10:30am
IPC 2023 Post-Deadline Presentations and Closing Ceremony
Citron East/West
Sunday, 12 November

9am  Sunday Program I - Su1: Share Your Excitement! Promoting Your Personal Brand Effectively
Palm Event Center AB
Chaired by: Hannah Pierson (United States) and Linda Harris (United States) and Kimberly Clifton (United States)

10am  Coffee Break
Palm Event Center

11am  Sunday Program II - Su2: Lab Automation and Experimental Techniques Hackathon
Palm Event Center CD
Chaired by: Nicolas Fontaine (United States) and Dr. Mohamad Hossein Idjadi (United States)

1pm  Sunday Program III - Su3: Practical Edge and Long-Term Perspectives of Quantum Technologies
Palm Event Center AB
Chaired by: Michael Brodsky (United States)

1pm  VPIphotons Workshop: Photonic Design Automation: From Devices to Systems
Palm Event Center E
Chaired by: Chris Maloney (United States)

3:30pm  Coffee Break
Palm Event Center

4pm  Sunday Program IV - Su4: Shedding Light on Government Partnerships
Palm Event Center AB
Chaired by: James Cahill (United States)

6pm  Welcome Reception, Poster Session & Career Fair
Palm Event Center

P1 - Experimental demonstration of online learning in deep photonic neural networks
» Dr. Xi Li (United States)¹, Ms. Disha Biswas (United States)², Mr. Peng Zhou (United States)³, Mr. Wesley Brigner (United States)⁴, Prof. Joseph Friedman (United States)⁵, Prof. Qing Gu (United States)⁶ (1. North Carolina State University, 2. The University of Texas at Dallas)

P2 - Inverse Design of Silicon Photonics Components: A Study from Deep Learning Perspective
» Dr. Mohammad Jobayer Hossain (United States)¹, Mr. David Reitano (United States)², Dr. Adnan Siraj Rakin (United States)³ (1. American Institute for Manufacturing Integrated Photonics (AIM Photonics), Albany, NY 12203, USA, 2. Computer Science Department, Binghamton University, Binghamton, NY 13902, USA)

P3 - Bilayer Silicon Nitride Based On-chip Polarization Rotator for O-band Photonic Applications
» Dr. Mohammad Jobayer Hossain (United States)¹, Dr. M Rakib Uddin (United States)², Dr. Lewis G. Carpenter (United States)³, Dr. Amit Dikshit (United States)⁴, Dr. Jin Wallner (United States)⁵, Mr. Javery Mann (United States)⁶, Dr. Nicholas M Fahrenkopf (United States)⁷, Dr. David L. Harame (United States)⁸ (1. American Institute for Manufacturing Integrated Photonics (AIM Photonics), Albany, NY 12203, USA)
P4 - Compact Modeling of Key Passive Silicon Photonic Components for a Process Design Kit

» Dr. Mohammad Joobayer Hossain (United States), Dr. Amit Dikshit (United States), Dr. Jin Wallner (United States), Dr. M Rakib Uddin (United States), Dr. Yukta Timalsina (United States), Dr. Lewis G. Carpenter (United States), Mr. Javery Mann (United States), Dr. Nicholas M Fahrenkopf (United States), Dr. David L. Harame (United States), Mr. Pratap Fahrenkopf (United States)

1. American Institute for Manufacturing Integrated Photonics (AIM Photonics), Albany, NY 12203, USA

P5 - Effect of the forming gas annealing on the Zinc Gallium Oxide based Deep UV photodetector characteristics grown by metalorganic chemical vapor deposition

» Mr. Siddharth Rana (India), Dr. Fu-Gow Tarntair (Taiwan), Prof. Jitendra Pratap Singh (India), Prof. Ray-Hua Horng (Taiwan)

1. Indian Institute of Technology Delhi, 2. National Yang-Ming Chiao-Tung University

P6 - Design of Frequency Diverse Array using two Coherent Electro-Optic Frequency Combs

» Dr. Youngseok Bae (Korea, Republic of), Dr. Sungjun Yoo (Korea, Republic of), Dr. Seungbae Ahn (Korea, Republic of), Mr. Sanghoon Jin (Korea, Republic of), Dr. Ingeun Lee (Korea, Republic of), Dr. Yoonsun Choi (Korea, Republic of), Dr. Jinwoo Shin (Korea, Republic of)

1. Agency for Defense Development

P7 - Spectropolarimetric Characterization of Vortex Optics

» Ms. Eliia James (United States), Mr. Don Gregory (United States)

1. University of Alabama in Huntsville

P8 - Estimation of Spectral Spacing in Gridless Nyquist- WDM systems using Fuzzy Clustering and Deep Learning

» Mr. César Montoya Ocampo (Colombia), Dr. Jhon Granada Torres (Colombia)

1. Universidad de Antioquia

P9 - Manufacturing of cylindrical-shaped CVD-SiC Mold Material for High-resolution Glass Lens

» Mr. Taiki Kumagai (Japan), Dr. Tatsuya Furuki (Japan), Dr. Hirofumi Suzuki (Japan), Mr. Tatsuya Fukuda (Japan), Mr. Katsui Fujii (Japan), Mr. Yosuke Ito (Japan)

1. Gifu University, 2. Chubu University, 3. Tokai Engineering Service Co., Ltd., 4. NS Tool Co., Ltd.

P10 - All-optical high performance microwave oscillator with enhanced modulation efficiency based on SOAs

» Dr. Huang Yali (China), Dr. Zhu Xiang (China), Dr. Yu Xianbin (China)

1. Zhejiang Lab, 2. Zhejiang University

P11 - Rational Selection of Metal Subwavelength Apertures for Sensing Aerosol Nanoparticles

» Ms. Sophia Judge (United States), Dr. Hao Jiang (United States)

1. Lawrence Technological University

P12 - Wide-Bandwidth Photonic Assisted–RF Signal Measurement System for High-Power RF sources

» Dr. Ingeun Lee (Korea, Republic of), Dr. Yoonsun Choi (Korea, Republic of), Dr. Sungjun Yoo (Korea, Republic of), Dr. Jinwoo Shin (Korea, Republic of), Dr. Youngseok Bae (Korea, Republic of)

1. Agency for Defense Development

P13 - Enhancing Low Light Images with VEID Algorithm using Optical Systems Acceleration (ENVICE)

» Mr. Zibo Hu (United States), Dr. Haoyan Kang (United States), Mr. Yiming Zhou (United States), Mr. Jiachi Ye (United States), Prof. Hamed Dalir (United States), Prof. Bahram Jalali (United States), Prof. Volker Sorger (United States)


P14 - Experimental Generation of Concentric Vortex Beams With Independent Topological Charges

» Prof. Walter Furlan (Spain), Dr. F.M. Muñoz (Spain), Dr. V Ferrando (Spain), Dr. J. Castro (Spain), Dr. J.R. Arias-Gonzalez (Spain), Dr. J.A. Monsoriu (Spain)

1. Universitat de València, 2. Centro de Tecnologías Físicas, Universitat Politècnica de València, E-46022, València, Spain, 3. Centro de Tecnologías Físicas, Universitat Politècnica de València, E-46022, València
P15 - Optimization of UV LED design using evolutionary algorithms
> Mrs. Lucie Leguay (Germany)1, Dr. Herbert Maczkó (Germany)2, Dr. Andrei Schlüwa (Germany)1, Dr. Stefan Birner (Germany)1 (1. Technische Universität Berlin, 2. nextnano GmbH)

P16 - Enhanced Photon Absorption in Subwavelength Mercury Cadmium Telluride Layer for Infrared Detectors Operating at Higher Temperature
> Mr. Md. Ariful Hoque Sojib (United States)1, Mr. Rezwan Mohammad Sayeed (United States)1, Dr. Vitaliy Avrutin (United States)1, Dr. Umit Ozgur (United States)1, Dr. Nibir Dhar (United States)1 (1. Virginia Commonwealth University)

P17 - Multi-Step Pulse Conversion for Temporal Mode (De)Multiplexing
> Ms. Shiva Behzadfar (United States)1, Dr. Alireza Farooost (United States)1, Dr. Seth Smith-Dryden (United States)1, Dr. Guifang Li (United States)1 (1. College of Optics and Photonics, University of Central Florida, 2. CREOL, The college of Optics and Photonics, University of Central Florida, 4304 Scorpius Street, 32816, Orlando, USA, 3. University of Central Florida)

P19 - Imaging Window Optimization for Reflection-mode Continuous-Wave Terahertz Imaging
> Mr. Nathan Arduino (United States)1, Ms. Mia Raley (United States)1, Mr. Patrick Maguire (United States)1, Dr. Allison Marn (United States)1 (1. Roger Williams University)

P20 - Synthesis and Properties of Ge-Based Metal Halide Perovskites for Sustainable Optoelectronic Devices
> Mr. Yang Yue (United States)1, Dr. Hongyang Zhu (United States)2, Dr. Saroj Thapa (United States)2, Mr. Deverneton Saint Paul (United States)1, Dr. Peifen Zhu (United States)2 (1. University of Missouri at Columbia, 2. The University of Tulsa)

P21 - Impact of Epitaxial Oxygen on High Power Diode Performance
> Dr. Elaine McVay (United States)1, Dr. Robert Deri (United States)1, Dr. William Fenwick (United States)1, Dr. Salmaan Baxamusa (United States)1, Mr. Matthew Boiselle (United States)1, Dr. Jiangu Li (United States)1, Dr. Joel Varley (United States)1, Ms. Rebecca Swertfeger (United States)1, Ms. Laina Gilmore (United States)1, Dr. Mark Crowley (United States)2, Dr. Prabhumath Thigajaran (United States)2, Dr. Jiyon Song (United States)2, Dr. Gerald Thaler (United States)1 (1. Lawrence Livermore National Lab, 2. Leonardo Electronics US Inc.)

P22 - Plug and Play Measurement Device Independent quantum secure communication
> Mr. Anuj Sethia (Canada)1, Mr. Jordan Smith (Canada)1, Mr. Amir Ahadi (Canada)1, Dr. Hanen Chenini (Canada)1, Dr. Ashutosh Singh (Canada)1, Mr. Nick Kuzmin (Canada)1, Dr. Daniel Oblak (Canada)1 (1. University of Calgary)

P23 - On the Characterization of PDL Distribution in Wavelength Selective Switches
> Mr. Giacomo Borraccini (Italy)1, Mr. Andrea D’Amico (Italy)1, Dr. Stefano Straullu (Italy)1, Mr. Francesco Aquilino (Italy)1, Dr. Stefano Picciaccia (Italy)1, Dr. Álberto Tanzi (Italy)1, Dr. Gabriele Galimberti (Italy)1, Prof. Vittorio Curri (Italy)1 (1. Department of Electronics and Communications, Politecnico di Torino, 2. LINKS Foundation, 10129, Torino, 3. CISCO Photonics, Vimercate (MB), 4. Internet Engineering Task Force)

P24 - Rapid Quantification of Nitrate in Murashige-Skoog (MS) media using Spontaneous Raman Spectroscopy
> Mr. Dipankar Sen (United States)1, Mr. Ze-Tian Fang (United States)1, Dr. Alma Fernández (United States)1, Mr. Brian Henrich (United States)1, Prof. Alexei Sokolov (United States)1, Prof. Sakiko Okamoto (United States)1, Dr. Aart Verhoef (United States)1 (1. Texas A&M University)
Continued from Sunday, 12 November

P25 - High-order Harmonic Generation from the van der Waals Layered Heterostructure Copper Indium Thiolophosphate
» Dr. Aamir Mushtaq (United States), Ms. Troie Journigan (United States), Mr. Ryan Siebenaller (United States), Ms. Chau Truong (United States), Mr. Mohamed Yaseen Noor (United States), Mr. Dipendra Khatri (United States), Dr. Michael Susner (United States), Dr. Enam Chowdhury (United States), Prof. Michael Chin (United States) (1. Department of Physics, University of Central Florida, Orlando, Florida 32816, USA, 2. Department of Materials Science and Engineering, 140W 19th Ave, Columbus, OH 43210, USA, 3. University of Central Florida, 4. Materials and Manufacturing Directorate, Air Force Research Laboratory, 2179 12th Street, Wright-Patterson Air Force Base, Ohio 45433, USA)

P26 - Investigation on étendue expansion property of the lenslet array with converging axes
» Mr. Minseok Chae (Korea, Republic of), Mr. Chun Chen (Korea, Republic of), Ms. Eunbi Lee (Korea, Republic of), Prof. Yoonchan Jeong (Korea, Republic of), Prof. Byoungho Lee (Korea, Republic of) (1. Seoul National University)

P27 - Novel Lambert W-kink solitons in ac-driven non-centrosymmetric waveguides
» Ms. Sanjana Bhatia (India), Prof. C N Kumar (India) (1. Department of Physics, Panjab University, Chandigarh, 2. Department of Physics, Panjab University, Chandigarh, India)

P28 - An All-Optical Neuron for Scaling Integrated Photonic Neural Networks
» Mr. Md Saiful Islam Sumon (United States), Mr. Mihai Crisan (United States), Mr. Weicheng You (United States), Mr. Shrivatsang Shankar (United States), Dr. Imad Faruque (United Kingdom), Dr. Sarvagna Dwivedi (United States), Prof. Shamsul Arafin (United States) (1. The Ohio State University, 2. University of Bristol, 3. Rockley Photonics)

P29 - Speckle Reduced Multi-Depth Hologram Generation Using an Optimized Rotating Mask
» Ms. Eunbi Lee (Korea, Republic of), Mr. Youngjin Jo (Korea, Republic of), Mr. Siwoo Lee (Korea, Republic of), Prof. Yoonchan Jeong (Korea, Republic of), Prof. Byoungho Lee (Korea, Republic of) (1. Seoul National University)

P30 - Programmable Multiband Microwave Photonic Filters based on Optical Frequency Comb with Varying the Gaussian window
» Ms. Youngjin Jung (Korea, Republic of), Dr. Minje Song (Korea, Republic of), Mr. Hyunjong Choi (Korea, Republic of), Mr. Taehyun Lee (Korea, Republic of), Mr. Gyudong Choi (Korea, Republic of), Dr. Minhyup Song (Korea, Republic of) (1. Photonic/Wireless Devices Research Division, Electronics and Telecommunications Research Institute)

P31 - Localized Vortex Solitons in Nonlinear Multicore Fiber with Two Opposite Polarizations
» Ms. Shamaeem Khushhali (India), Prof. Samudra Roy (India), Mr. Andrea Marini (Italy) (1. Indian Institute of Technology Kharagpur, 2. Department of Physics, Indian Institute of Technology Kharagpur, West Bengal 721302, 3. Department of Physical and Chemical Sciences, University of L’Aquila, Via Vetoio, L’Aquila 67100)

Monday, 13 November

8:30am Special Symposium on Quantum Photonic Materials and Devices for Quantum Computing I - MA1: Quantum Sources for Optical Quantum Computing
Palm Event Center AB
Chaired by: Dr. Daniel Oblak (Canada) and Prof. Mahdi Hosseini (United States)

8:30am MA1.1 (Invited) - Fields of dream: quantum computing over the rainbow
» Prof. Olivier Pfister (United States) (1. University of Virginia)
### 2023 IEEE Photonics Conference (IPC) 12 - 16 Nov 2023 All times in EST

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| 9am    | **MA1.2 (Invited) - Squeezed light generation using Lithium Niobate Waveguides for photonic quantum computing**<br>Prof. Tobias Gehring (Denmark)
|        | (1. Technical University of Denmark)                                                                                   |
| 9:30am | **MA1.3 (Invited) - Pulse Shape Engineering for Laser-Triggered Single Photon Sources**<br>Prof. Kimberly Hall (Canada),
|        | Mr. Grant Wilbur (Canada), Mr. Ali Binali-Motlagh (Canada), Ms. Alison Clarke (Canada), Dr. Ajan Ramachandran (Canada),
|        | Mr. Nick Milson (Canada), Mr. John Healey (Canada), Dr. Sabine O'Neal (United States), Prof. Dennis Deppe (United States),
|        | Dr. Dan Dalacu (Canada), Dr. Angela Gamouras (Canada), Dr. Philip Poole (Canada) (1. Dalhousie University, 2. University of Central Florida, 3. National Research Council Canada) |
| 8:30am | **Optical Communication: Devices, Interconnects and Subsystems**<br>**MB1: Space and Mode Division Multiplexing over Free Space and Optical Fibers**
|        | Palm Event Center CD<br>Chaired by: Dr. Giovanni Milione (United States) and Dr. Wataru Kohno (United States) |
| 8:30am | **MB1.2 - Experimental demonstration of a non-mode selective MPLC (de)multiplier**<br>Mr. Shree Ram Thapa (United States),
|        | Dr. Seth Smith-Dryden (United States), Dr. Zheyuan Zhu (United States), Dr. Sean Pang (United States),
|        | Dr. Guifang Li (United States) (1. University of Central Florida, 2. CREOL, The college of Optics and Photonics, University of Central Florida, 4304 Scorpius Street, 32816, Orlando, USA) |
| 8:45am | **MB1.3 - Mode Group Division Multiplexing Communication Using Graded-index Plastic Optical Fiber**<br>Mr. Yuichiro Takimoto (Japan),
|        | Prof. Koichi Takiguchi (Japan) (1. Ritsumeikan University) |
| 9am    | **MB1.4 - Enhanced Mode-coupling: A Multi-mode Hollow-core Anti-resonant Fiber Design**<br>Dr. Md Selim Habib (United States) (1. Florida Institute of Technology) |
| 9:15am | **MB1.5 - Polarization-Mode Dispersion of Different Core Types in Heterogeneous Multi-Core Fibers**
|        | Mr. Gustavo Ocampo (Japan), Prof. Takanori Saitoh (Japan), Mr. Yoshimichi Amma (Japan), Prof. Kunimasa Saitoh (Japan) (1. Hokkaido University, 2. Fujikura Ltd.) |
| 8:30am | **Optical Communication and Networks**<br>**MC1: Digital Signal Processing**
|        | Palm Event Center E<br>Chaired by: Prof. Darli Mello (Brazil) |
| 8:30am | **MC1.1 (Invited) - Digital Signal Processing for 1.6 Tb/s+ Intra-Data Center Networks**
|        | Prof. Stephan Pachnicke (Germany), Mr. Silas Oettinghaus (Germany), Dr. Stefano Calabro (Germany),
|        | Mr. Tom Wettlin (Germany), Mr. Nebojsa Stojanovic (Germany), Dr. Talha Rahman (Germany) (1. Kiel University, 2. Huawei Technologies Düsseldorf University, 3. Hamburg University of Applied Sciences (HAW), 4. University of British Columbia (UBC), 5. Friedrich-Alexander-University Erlangen-Nurnberg (FAU)) |
| 9am    | **MC1.2 - Nonlinear Fourier Transform for Continuous Signal Processing: Novel Windowing Approach**
|        | Mr. Egor Sedov (United Kingdom), Dr. Igor Chekhovskoy (Russian Federation) (1. Aston Institute of Photonic Technologies, Aston University, Birmingham, B4 7ET, UK, 2. Novosibirsk State University, Novosibirsk, 630090, Russia) |
| 9:15am | **MC1.3 - Detection of a 624 GHz, QPSK, 1.2 Tbit/s rectangular bandwidth channel with 4 GHz electronics**
|        | Prof. Abhinand Venugopalan (Germany), Dr. Paulomi Mandal (Germany), Dr. Janosch Meier (Germany),
|        | Mr. Karanveer Singh (Germany), Prof. Thomas Schneider (Germany) (1. Technische Universität Braunschweig) |
| 9:30am | **MC1.4 - Enhanced Physical-Layer Security in Visible Light Communications – A Joint Waveform Approach**
<p>|        | Dr. Jan Mietzner (Germany), Dr. Lutz Lampe (Canada), Dr. Robert Schober (Germany) (1. Hamburg University of Applied Sciences (HAW), 2. University of British Columbia (UBC), 3. Friedrich-Alexander-University Erlangen-Nurnberg (FAU)) |</p>
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<tr>
<td>9:45am</td>
<td>MC1.5</td>
<td>Decision Trees-based Demodulation in Gridless Nyquist-WDM Systems to Minimize ICI Effects</td>
<td></td>
<td>Mr. Kevin Martinez Zapata (Colombia), Dr. Jhon Granada Torres (Colombia) (1. Universidad de Antioquia)</td>
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<td>8:30am</td>
<td>MD1.1</td>
<td>Detection, Sensing, and Energy I - MD1: III-V Compound Semiconductor Based Detectors</td>
<td></td>
<td>Chaired by: Prof. Daniel Wasserman (United States) and Dr. Richard Mirin (United States)</td>
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<td></td>
<td>(Invited) - New directions in III-V light absorbers: from night vision to photovoltaics</td>
<td></td>
<td>Dr. Minjoo Lawrence Lee (United States) (1. University of Illinois)</td>
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<td>9am</td>
<td>MD1.2</td>
<td>Staircase Avalanche Photodiode with a Mid-wave Infrared Absorber</td>
<td></td>
<td>Mr. Adam Dadey (United States), Dr. Andrew Jones (United States), Dr. Stephen March (United States), Dr. Seth Bank (United States), Dr. Joe Campbell (United States) (1. University of Virginia, 2. University of Texas at Austin)</td>
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<tr>
<td>9:15am</td>
<td>MD1.3</td>
<td>Defect Spectroscopy of MBE-grown GaAs0.51Sb0.49 pin Infrared Detectors on InP Substrates</td>
<td></td>
<td>Ms. Rachel Adams (United States), Ms. Hyemin Jung (United States), Mr. Nathan Gajowski (United States), Dr. Seunghyun Lee (United States), Prof. Sanjay Krishna (United States), Prof. Steven Ringel (United States) (1. The Ohio State University)</td>
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<td>9:30am</td>
<td>MD1.4</td>
<td>Low-Noise InGaAs/AlInAsSb Avalanche Photodiodes on InP Substrates</td>
<td></td>
<td>Mr. Bingtian Guo (United States), Ms. Mariah Schwartz (United States), Mr. Sri Kodati (United States), Dr. Kyle McNicholas (United States), Ms. Hyemin Jung (United States), Dr. Seunghyun Lee (United States), Mr. Jason Konowitch (United States), Dr. Dekang Chen (United States), Mr. Junwu Bai (United States), Ms. Xiangwen Guo (United States), Dr. Theodore Ronningen (United States), Prof. Christoph Grein (United States), Dr. Joe Campbell (United States), Prof. Sanjay Krishna (United States) (1. University of Virginia, 2. The Ohio State University, 3. MIT Lincoln Lab, 4. University of Illinois Chicago)</td>
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<td>9:45am</td>
<td>MD1.5</td>
<td>Precise Control of Charge Carriers in Gallium Nitride Nanowires for Emerging Photodetectors</td>
<td></td>
<td>Dr. Shi Fang (China), Dr. Danhao Wang (China), Mr. Yang Kang (China), Dr. Wei Chen (China), Prof. Haiding Sun (China) (1. School of Microelectronics, University of Science and Technology of China, 2. Department of Electrical Engineering and Computer Science University of Michigan, 3. School of Microelectronics University of Science and Technology of China, 4. USTC, 5. University of Science and Technology of China)</td>
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<td>8:30am</td>
<td>MF1.1</td>
<td>Biophotonics and Medical Optics I - MF1: Progress in Diffuse Optics</td>
<td></td>
<td>Chaired by: Nisan Ozana (Israel) and Prof. Peter Munro (United Kingdom)</td>
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<td>8:30am</td>
<td>MF1.1</td>
<td>Diffuse optics meets photonics</td>
<td></td>
<td>Dr. Vivek Srinivasan (United States) (1. NYU Langone Health)</td>
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<td>8:30am</td>
<td>MG1.1</td>
<td>Optical AI and Computational Photonics I - MG1: Photonic Neural Networks</td>
<td></td>
<td>Chaired by: Prof. Volker Sorger (United States) and Prof. Nicola Peserico (United States)</td>
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<td>8:30am</td>
<td><strong>MG1.1 (Invited) - Fully Integrated Photonic Tensor Core for Neural Network Applications</strong></td>
<td>Palm Event Center P</td>
<td><strong>Mr. Russell Schwartz</strong> (United States), Mr. Xiaoxuan Ma (United States), Prof. Hamed Dalir (United States), Prof. Bhavini Shastri (Canada), Prof. Volker Sorger (United States), Prof. Nicola Peserico (United States) (1. University of Florida, 2. George Washington University, 3. Queen's University)</td>
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<td>9am</td>
<td><strong>MG1.2 - Online training and pruning of photonic neural networks</strong></td>
<td></td>
<td><strong>Mr. Weipeng Zhang</strong> (United States), Mr. Tengji Xu (Hong Kong), Mr. Jiawei Zhang (United States), Prof. Bhavini Shastri (Canada), Prof. Chaoran Huang (Hong Kong), Prof. Paul Prucnal (United States) (1. Princeton University, 2. The Chinese University of Hong Kong, 3. Queen's University)</td>
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<td>9:15am</td>
<td><strong>MG1.3 - Physics-informed mode decomposition neural network for structured light in multimode fibers</strong></td>
<td></td>
<td><strong>Mr. Qian Zhang</strong> (Germany), Ms. Yuan Sui (Germany), Dr. Stefan Rothe (Germany), Prof. Jürgen Czarnecki (Germany) (1. Chair of Measurement and Sensor System Technique, Faculty of Electrical and Computer Engineering, TU Dresden)</td>
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<td>9:30am</td>
<td><strong>MG1.4 - Noise Aware Design Enables Robust Diffractive Deep Neural Network Designs in Visible Wavelengths</strong></td>
<td></td>
<td><strong>Mr. Ramith Hettiarachchi</strong> (United States), Mr. Hasindu Kariyawasam (United States), Dr. Dushan Wadduwage (United States) (1. Center for Advanced Imaging, Faculty of Arts and Sciences, Harvard University)</td>
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<td>9:45am</td>
<td><strong>MG1.5 - Complex-valued Optical Neural Networks Enabled by Multimode Interferometers and Phase Shifters</strong></td>
<td></td>
<td><strong>Mr. Weiwei Pan</strong> (China), Mrs. Wanshu Xiong (China), Ms. Zhangchan Peng (China), Ms. Ruoyun Yao (China), Ms. Jinhua Chen (China), Prof. Chen Ji (China) (1. Zhejiang University, 2. Zhejiang Lab)</td>
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<td>8:30am</td>
<td><strong>MH1: PHOTONICS INDUSTRY FOCUS: Photonic Products Showcase</strong></td>
<td>Palm Event Center P</td>
<td><strong>Chaired by: Daniel Renner</strong> (United States)</td>
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<td>9am</td>
<td><strong>IEEE Member Appreciation Lounge</strong></td>
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<td><strong>Meyer</strong></td>
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<td>10am</td>
<td><strong>Coffee Break &amp; Exhibits</strong></td>
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<td><strong>Palm Event Center</strong></td>
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<td>10:30am</td>
<td><strong>Special Symposium on Quantum Photonic Materials and Devices for Quantum Computing II - MA2: Heterogeneous Quantum Photonics</strong></td>
<td>Palm Event Center AB</td>
<td><strong>Chaired by: Prof. Mahdi Hosseini</strong> (United States) and Dr. Daniel Oblak (Canada)</td>
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<td>10:30am</td>
<td><strong>MA2.1 (Invited) - Control of spin and light-matter interactions in semiconductors</strong></td>
<td></td>
<td><strong>Prof. Edo Waks</strong> (United States), Dr. Changmin Lee (United States), Mrs. Fariba Islam (United States), Mr. Yuxi Jiang (United States), Prof. Samuel Harper (United States), Dr. Mustafa Buyukkaya (United States), Dr. Nils Driesch (Germany), Dr. Alex Pawlis (Germany) (1. University of Maryland, 2. Peter-Grünberg-Institute)</td>
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<td>11am</td>
<td><strong>MA2.2 (Invited) - Direct-bonded diamond membranes for heterogeneous quantum photonics</strong></td>
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<td><strong>Prof. Alexander High</strong> (United States) (1. University of Chicago)</td>
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<td>11:30am</td>
<td><strong>MA2.3 - Ultra-bright Source of Coherent Single Photons</strong></td>
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<td><strong>Prof. Alisa Javadi</strong> (United States), Dr. Natasha Tomm (Switzerland), Dr. Nadia Antoniadis (Switzerland), Dr. Alexander Korsch (Germany), Dr. Daniel Najer (Switzerland), Dr. Matthias Ioebi (Switzerland), Dr. Ruediger Schott (Germany), Dr. Sascha Valentin (Germany), Prof. Andreas Wieck (Germany), Dr. Arne Ludwig (Germany), Prof. richard warburton (Switzerland) (1. The University of Oklahoma, 2. University of Basel, 3. ruhr-uni-bochum, 4. unibas.ch)</td>
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<td>10:30am</td>
<td><strong>Optical Communication: Devices, Interconnects and Subsystems II - MB2: Mode Division Multiplexing with Integrated Photonics</strong></td>
<td>Palm Event Center CD</td>
<td><strong>Chaired by: Mr. Brian Vyhnalek</strong> (United States) and Dr. Giovanni Milione (United States)</td>
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<td>10:30am</td>
<td>MB2.1 - Towards Mode-Division-Multiplexed Optical Fiber Communications using Silicon Photonics</td>
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<td>» Ms. Dan Yi (Hong Kong), Mr. Xuetong Zhou (Hong Kong), Prof. Honki Tsang (Hong Kong) (1. The Chinese University of Hong Kong)</td>
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<td>10:45am</td>
<td>MB2.2 - Topology Optimized Integrated SIN Mode Converters</td>
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<td>» Mr. Michael Probst (United States), Dr. Stephen Ralph (United States), Dr. Alec Hammond (United States) (1. Georgia Institute of Technology, 2. Reality Labs)</td>
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<tr>
<td>11:00am</td>
<td>MB2.3 - Machine learning enabled the design of compact and efficient wavelength demultiplexing photonic devices</td>
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<td>» Prof. Mirbek Turduev (Kyrgyzstan), Mr. Emre Bor (Turkey), Dr. Onur Aparslan (Japan), Dr. Yusuf Sinan Hanay (Turkey), Prof. Hamza Kurt (Korea, Republic of), Prof. Masayuki Murata (Japan), Prof. Shin’ichi Arakawa (Japan) (1. Electrical and Electronics Engineering, Kyrgyz-Turkish Manas University, 2. Department of Electrical and Electronics Engineering, TOBB University of Economics and Technology, Ankara 06560, Turkey, 3. Graduate School of Information Science and Technology, Osaka University, Osaka 565-0871, Japan, 4. Department of Computer Engineering, Akdeniz University, Antalya 07070, Turkey, 5. School of Electrical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, 34141, Republic of Korea)</td>
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<tr>
<td>11:15am</td>
<td>MB2.4 - Machine learning enabled the design of compact and efficient wavelength demultiplexing photonic devices</td>
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<td>» Prof. Mirbek Turduev (Kyrgyzstan), Mr. Emre Bor (Turkey), Dr. Onur Aparslan (Japan), Dr. Yusuf Sinan Hanay (Turkey), Prof. Hamza Kurt (Korea, Republic of), Prof. Masayuki Murata (Japan), Prof. Shin’ichi Arakawa (Japan) (1. Electrical and Electronics Engineering, Kyrgyz-Turkish Manas University, 2. Department of Electrical and Electronics Engineering, TOBB University of Economics and Technology, Ankara 06560, Turkey, 3. Graduate School of Information Science and Technology, Osaka University, Osaka 565-0871, Japan, 4. Department of Computer Engineering, Akdeniz University, Antalya 07070, Turkey, 5. School of Electrical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, 34141, Republic of Korea)</td>
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<tr>
<td>10:30am</td>
<td>Optical Communication and Networks II - MC2: Optical Network Modelling</td>
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<td>Palm Event Center E</td>
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<td>Chaired by: Dr. Metodi Plamenov Yankov (Denmark) and Dr. Joao Pedro (Portugal)</td>
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<tr>
<td>10:30am</td>
<td>MC2.1 (Tutorial) - Synergistic use of AI and physics models in planning and controlling multi-band optical networks</td>
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<td>» Prof. VITTORIO CURRI (Italy) (1. Politecnico di Torino)</td>
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</table>

11:30am  | MC2.2 - Experimental Test of a UWB Closed-Form EGN Model                                  |
|         | » Dr. Yanhao Jiang (Italy), Prof. Gabriella Bosco (Italy), Dr. Antonino Nespoli (Italy), Dr. Alberto Tanzi (Italy), Dr. Stefano Piciaccia (Italy), Dr. Mahdi Ranjbarzefreh (Italy), Prof. Fabrizio Forghieri (Italy), Prof. PIERLUIGI POGGIOLINI (Italy) (1. OptCom, DET, Politecnico di Torino, 10129, Torino, 2. Politecnico di Torino, 3. LINKS Foundation, 10129, Torino, 4. CISCO Photonics, Vimercate (MB), 5. CISCO Photonics, Vimercate (MB)) |

11:45am  | MC2.3 - DNN-based QoT Estimation Using Topological Inputs and Training with Synthetic-Physical Data |
|         | » Dr. Kayol Mayer (Brazil), Mr. Luan Dos Santos (Brazil), Mr. Rossano Pinto (Brazil), Mr. Marcos Dal Maso (Brazil), Prof. Christian Rothenberg (Brazil), Prof. Dalton Arantes (Brazil), Prof. Darli Mello (Brazil) (1. Unicamp) |

10:30am  | Light Sources I - MD2: Surface Emitting Lasers (VCSEL, PCSEL & Topological)               |
|         | Palm Event Center FG                                                                      |
|         | Chaired by: Dr. William Fenwick (United States) and Prof. Boon S. Ooi (Saudi Arabia)      |

10:30am  | MD2.1 - High-wall-plug-efficiency InP-based photonic-crystal surface-emitting lasers with reflective metal mirror |
|         | » Dr. Yuuki Itoh (Japan), Dr. Takeshi Aoki (Japan), Dr. Kenshi Takada (Japan), Mr. Kosuke Fujii (Japan), Mr. Hiroyuki Yoshinaga (Japan), Dr. Naoki Fujiwara (Japan), Mr. Makoto Ogawara (Japan), Mr. Rei Tanaka (Japan), Dr. Hideki Yagi (Japan), Dr. Masaki Yanagisawa (Japan), Dr. Masahiro Yoshida (Japan), Dr. Takuya Inoue (Japan), Dr. Menaka De Zoysa (Japan), Dr. Kenji Ishizaki (Japan), Prof. Susumu Noda (Japan) (1. Sumitomo Electric Industries, Ltd., 2. Kyoto University) |

10:45am  | MD2.2 - Free Space Emission Spectra and Bandwidths of Vertical Cavity Surface Emitting Lasers (VCSELs) for Optical Wireless Communication |
|         | » Dr. Nasibeh Haghighi (Germany), Mr. Pouria Emtenani (Germany), Dr. Martin Zorn (Germany), Prof. James Lott (Germany) (1. Technical University Berlin, 2. JENOPTIK Optical Systems GmbH) |
### 2023 IEEE Photonics Conference (IPC) 12 - 16 Nov 2023 All times in EST

**Continued from Monday, 13 November**

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<tr>
<td>11am</td>
<td><strong>ME2.3 - Frequency Response Characteristics of High-Power Photonic Crystal Surface-Emitting Lasers</strong>&lt;br&gt;» Dr. Mingsen Pan (United States), Mr. Chhabindra Gautam (United States), Dr. Akhil Kalapala (United States), Mr. Yudong Chen (United States), Dr. Thomas Rotter (United States), Dr. Ming Zhou (United States), Mr. Ricky Gibson (United States), Prof. Robert Bedford (United States), Prof. Shanhui Fan (United States), Prof. Ganesh Balakrishnan (United States), Prof. Weidong Zhou (United States) (1. University of Texas at Arlington, 2. University of New Mexico, 3. Stanford University, 4. Air Force Research Laboratory)</td>
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<td>11:15am</td>
<td><strong>ME2.4 - Edge-mode Lasing from A non-Hermitian Topological Bulk</strong>&lt;br&gt;» Mr. Dayang Lin (United States), Dr. Zhitong Li (United States), Dr. Xi-Wang Luo (United States), Dr. Abouzar Gharajeh (United States), Dr. Jiyoung Moon (United States), Dr. Junpeng Hou (United States), Prof. Chuanwei Zhang (United States), Prof. Qing Gu (United States) (1. North Carolina State University, 2. The University of Texas at Dallas)</td>
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<td>11:30am</td>
<td><strong>High-Speed VCSELs in the 650-nm Transmission Window of Polymer Optical Fibers</strong>&lt;br&gt;» Mrs. Nawal Almaymoni (Saudi Arabia), Dr. Omar Alkhazragi (Saudi Arabia), Mr. Fabian Finkbeiner (Saudi Arabia), Dr. Tien Khee Ng (Saudi Arabia), Prof. Boon S. Ooi (Saudi Arabia) (1. Photonics Laboratory, King Abdullah University of Science and Technology (KAUST), 2. King Abdullah University of Science and Technology, 3. Photonics Laboratory King Abdullah University of Science and Technology (KAUST))</td>
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<tr>
<td>10:30am</td>
<td><strong>Nano Photonics, Plasmonics and Metamaterials II - ME2: Metamaterials for Bio-sensing and Microscopy</strong>&lt;br&gt;<em>Palm Event Center KL</em>&lt;br&gt;Chaired by: Jennifer Choy (United States) and Prof. Jaime Gomez Rivas (Netherlands)</td>
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<td>10:30am</td>
<td><strong>ME2.1 (Invited) - Photonic Metasurfaces for Advanced Biosensing and Biospectroscopy</strong>&lt;br&gt;» Prof. Filiz Yesilkay (United States) (1. University of Wisconsin, Madison)</td>
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<tr>
<td>11am</td>
<td><strong>ME2.2 - Plasmonic Rainbow Chip for Super-Resolution Displacement Spectrometer and Surface Biosensor</strong>&lt;br&gt;» Prof. Qiaoqiang Gan (Saudi Arabia) (1. King Abdullah University of Science and Technology)</td>
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<td>11:15am</td>
<td><strong>ME2.3 - Intersubband Cavity Polaritons in Single Quantum Well Systems on Flexible Substrate</strong>&lt;br&gt;» Ms. Puspita Paul (United States), Dr. Sadhvikas Addamane (United States), Prof. Peter Qiang Liu (United States) (1. University at Buffalo, 2. Sandia National Laboratories)</td>
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<td>11:30am</td>
<td><strong>ME2.5 - Metacrystal Structured Illumination Microscopy</strong>&lt;br&gt;» Dr. John Haug (United States), Dr. Milan Palei (United States), Prof. Josh Shrout (United States), Prof. Evgenii Narimanov (United States), Prof. Paul Bohn (United States), Prof. Anthony Hoffman (United States) (1. University of Notre Dame, 2. Purdue University)</td>
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<td>11:45am</td>
<td><strong>ME2.5 - Highly sensitive terahertz metamaterial refractive index sensor for glucose detection</strong>&lt;br&gt;» Dr. Raj Kumar (India), Dr. Bipin K Singh (India), Prof. Praveen Pandey (India) (1. Indian Institute of Technology BHU Varanasi, 2. University of Mumbai)</td>
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<td>12pm</td>
<td><strong>ME2.6 - Sensing with Metamaterial Perfect Absorber at Terahertz Frequency</strong>&lt;br&gt;» Ms. Ruchi Bhati (India), Prof. Anil K Malik (India) (1. Chaudhary Charan Singh University, Meerut, India)</td>
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**10:30am**  
**Propagation, Spectroscopy, and Imaging I - MF2: Advanced Computational Imaging**  
*Palm Event Center MN*  
Chaired by: Prof. Kevin Tsia (Hong Kong) and Prof. Zhaowei Liu (United States)

**10:30am**  
**MF2.1 (Invited) - Speckle Structured Illumination of Dynamic Samples with a Neural Space-time Model**  
» Prof. Laura Waller (United States) (1. University of California at Berkeley)
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<tr>
<td>11am</td>
<td><strong>MF2.2 - High speed single pixel imaging with advanced microLED digital light projector</strong>&lt;br&gt;» Dr. Graeme Johnstone (United Kingdom)&lt;sup&gt;1&lt;/sup&gt;, Dr. Stuart Bennett (United Kingdom)&lt;sup&gt;1&lt;/sup&gt;, Dr. Paul Murray (United Kingdom)&lt;sup&gt;1&lt;/sup&gt;, Prof. Robert Henderson (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;, Dr. Steven Johnson (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;, Dr. Catherine Higham (United kingdom)&lt;sup&gt;2&lt;/sup&gt;, Prof. Roderick Murray-Smith (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;, Prof. Miles Padgett (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;, Dr. Johannes Herrnsdorf (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;» Prof. Martin D. Dawson (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;, Prof. Michael Strain (United Kingdom)&lt;sup&gt;2&lt;/sup&gt;&lt;br&gt;1 (1. University of Strathclyde, 2. University of Edinburgh, 3. University of Glasgow)</td>
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<td>11:15am</td>
<td><strong>MG2.3 - Compact and Low-Loss PCM-based Silicon PhotonicMZIs for Photonic Neural Networks</strong>&lt;br&gt;» Dr. Amin Shafiee (United States)&lt;sup&gt;2&lt;/sup&gt;, Dr. Sanmitra Banerjee (United States)&lt;sup&gt;2&lt;/sup&gt;, Dr. Benoît Charbonnier (France)&lt;sup&gt;2&lt;/sup&gt;, Prof. Sudipa Pasricha (United States)&lt;sup&gt;2&lt;/sup&gt;, Prof. Mahdi Nikdast (United States)&lt;sup&gt;2&lt;/sup&gt; (1. Department of Electrical and Computer Engineering, Colorado State University, 2. NVIDIA Corporation, 3. CEA-LETI)</td>
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<td>11:30am</td>
<td><strong>MG2.4 - On-chip Nonlinear Activation and Gradient Functions for Photonic Backpropagation Training and Inference</strong>&lt;br&gt;» Dr. Farshid Ashtiani (United States)&lt;sup&gt;2&lt;/sup&gt;, Dr. Mohamad Hossein Idjadi (United States)&lt;sup&gt;2&lt;/sup&gt; (1. Nokia Bell Labs)</td>
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<td>11:45am</td>
<td><strong>MG2.5 - Dual-Functional Intelligent Spectrometer Using a Plasmonic Rainbow Chip</strong>&lt;br&gt;» Prof. Qiaoqiang Gan (Saudi Arabia)&lt;sup&gt;2&lt;/sup&gt; (1. King Abdullah University of Science and Technology)</td>
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<td>10:30am</td>
<td><strong>MH2: PHOTONICS INDUSTRY FOCUS: Photonics Business and Markets</strong>&lt;br&gt;Palm Event Center P&lt;br&gt;Chaired by: Matthew Weed (United States)</td>
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<td>12pm</td>
<td>Lunch Break (on own)</td>
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<td>1:30pm</td>
<td><strong>MA3: Integrated Nonlinear Optics I</strong>&lt;br&gt;Palm Event Center AB&lt;br&gt;Chaired by: Alireza Marandi (United States) and Md Selim Habib (United States)</td>
</tr>
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<td>1:30pm</td>
<td><strong>MA3.1 (Invited) - Photo-induced cascaded nonlinear effects in silicon nitride microresonators</strong>&lt;br&gt;» Prof. Camille-Sophie Bres (Switzerland)&lt;sup&gt;2&lt;/sup&gt; (1. EPFL)</td>
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### 2pm

**MA3.2 - Spanning the green gap through on-chip Kerr optical parametric oscillation**

- Dr. Yi Sun (United States), Dr. Jordan Stone (United States), Dr. Xiyuan Lu (United States), Dr. Kartik Srinivasan (United States) (1. Joint Quantum Institute, University of Maryland, 2. NIST)

### 2:15pm

**MA3.3 - Singly-Resonant Four-Wave Mixing Based on an On-Chip Fabry-Perot Bragg Grating Cavity**

- Mr. Chaohao Ye (Denmark), Mr. Yang Liu (Denmark), Dr. Chanju Kim (Denmark), Prof. Kresten Yvind (Denmark), Prof. Minhao Pu (Denmark) (1. Technical University of Denmark)

### 2:30pm

**MA3.4 - Theoretical design for broadband parametric amplification in thin film lithium niobate**

- Dr. Pragati Aashna (Singapore), Mr. Hong-Lin Lin (Singapore), Dr. El Hadj Dogheche (France), Dr. Giacomo Benvenuti (France), Ms. Thanh NK Bui Kim (France), Prof. Aaron Danner (Singapore) (1. National University of Singapore, 2. Institut d’Electronique, de Microélectronique et de Nanotechnologie, IEMN CNRS UMR 8520, Université Polytechnique Hauts de France, Valenciennes, 59309, France, 3. 3D-Oxides, 130 rue Gustave Eiffel, F-01630 Saint-Genis-Pouilly, France)

### 2:45pm

**MA3.5 - Widely Tunable Frequency Conversion with Self-Pumped Bragg Reflection Photonic Crystal Lasers**

- Dr. Bilal Janjua (Canada), Mr. Zacharie Léger (Canada), Mr. Meng Lon Iu (Canada), Mr. Arsalan Khan (Canada), Prof. Amr Helmy (Canada) (1. University of Toronto)

### 1:30pm

**Optical Communication: Devices, Interconnects and Subsystems III - MB3: Novel Optical Receivers and Signal Monitoring**

*Palm Event Center CD*

Chaired by: Mr. Brian Vyhnalek (United States) and Brian Stern (United States)

### 1:30pm

**MB3.1 (Invited) - Carrier-Less Phase Retrieval Receiver: Principle, Implementation and Integration**

- Prof. Haoshuo Chen (United States) (1. Nokia Bell lab)
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Continued from Monday, 13 November

2pm

**MC3.2 (BEST STUDENT PAPER FINALIST) - Estimation Accuracy of Polarization State from Coherent Receivers for Sensing Applications**

- Mr. Saverio Pellegrini (Italy)
- Mr. Lorenzo Andrenacci (Italy)
- Mr. Leonardo Minelli (Italy)
- Dr. Dario PiliOr (Italy)
- Prof. Gabriella Bosco (Italy)
- Mr. Luca Della Chiesa (Italy)
- Prof. Roberto Gaudino (Italy)

(1. Politecnico di Torino, 2. CISCO Photonics, Vimercate (MB),)

2:15pm

**MC3.3 - Experimental Comparison of Single-Sided and Double-Sided Filtering in ROADM Networks**

- Mr. Steven Searcy (United States)
- Dr. Thomas Richter (United States)
- Dr. Sorin Tibuleac (United States)

(1. Adtran)

2:30pm

**MC3.4 - Longitudinal Power Monitoring Performance with Subcarrier Multiplexing Transmission**

- Mr. Lorenzo Andrenacci (Italy)
- Prof. Gabriella Bosco (Italy)
- Dr. Dario PiliOr (Italy)

(1. Politecnico di Torino)

2:45pm

**MC3.5 - Coexistence of 50 G TWDM with current PON infrastructures**

- Mr. miguel masanas (Spain)
- Ms. Ana Tavares (Portugal)
- Mr. Claudio Rodrigues (Portugal)
- Mr. João Santos (Portugal)
- Prof. Josep Prat (Spain)
- Prof. António Teixeira (Portugal)

(1. Universitat Politècnica de Catalunya, 2. PIC Advanced S.A, 3. Altice Labs, 4. Universidade de Aveiro)

1:30pm

**Light Sources II - MD3: Micro and Nano I**

*Palm Event Center FG*

Chaired by: Prof. Zhaowei Liu (United States) and Dr. Yuuki Itoh (Japan)

1:30pm

**MD3.1 (Tutorial) - Physics and Applications of Semiconductor Nanolasers**

- Prof. Stephan Reitzenstein (Germany)

(1. Technische Universität Berlin)

1:30pm

**MD3.2 - Ion implantation effect on the performance of micro-light emitting diodes array**

- Ms. Yu-Hsuan Hsu (Taiwan)
- Ms. Xin-Dai Lin (Taiwan)
- Prof. Yi-Hsin Lin (Taiwan)
- Prof. Ray-Hua Horng (Taiwan)

(1. Department of Photonics, National Yang Ming Chiao Tung University, 2. Institute of Electronics Engineering, National Yang Ming Chiao Tung University)

1:30pm

**Detection, Sensing, and Energy II - ME3: Detector Design and Fabrication**

*Palm Event Center KL*

Chaired by: Dr. Minjoo Lawrence Lee (United States) and Prof. Ganesh Balakrishnan (United States)

1:30pm

**MD3.3 - Micro-LED Nanosecond Pulsed Structured Light Sources with 405 nm - 510 nm Wavelength**

- Mr. Johnathan Gray (United Kingdom)
- Dr. Jonathan McKendry (United Kingdom)
- Dr. Johannes Herrnsdorf (United Kingdom)
- Prof. Robert Henderson (United Kingdom)
- Prof. Michael Strain (United Kingdom)
- Prof. Martin D. Dawson (United Kingdom)

(1. University of Strathclyde, 2. University of Edinburgh)

1:30pm

**MD3.4 - Efficient DUV microLED and arrays for various applications**

- Mr. Huabin Yu (China)
- Ms. Muhammad Hunain Memon (China)
- Ms. Shudan Xiao (China)
- Prof. Haiding Sun (China)

(1. University of Science and Technology of China)

1:30pm

**MD3.5 (BEST STUDENT PAPER FINALIST) - Tunable dual wavelength laser on thin film lithium niobate**

- Mr. Isacq Luntaalda Lufungula (Belgium)
- Mr. Felix Mayor (United States)
- Mr. Jason Herrmann (United States)
- Mr. Taewon Park (United States)
- Mr. Hubert S. Stokowski (Poland)
- Mr. Alexander Huang (United States)
- Dr. Camiel Op de Beeck (Belgium)
- Mr. Okaa Atalar (United States)
- Mr. Wentao Jiang (United States)
- Prof. Bart Kuyken (Belgium)
- Prof. Amir Safavi-Naeini (United States)

ME3.2 - 4H-SiC PIN Photodiode for VUV Detection Using an Enhanced Emitter Doping Design
- Mr. Michael Schraml (Germany), Dr. Niklas Papathanasiou (Germany), Mr. Alexander May (Germany), Dr. Mathias Rommel (Germany), Dr. Tobias Erlbacher (Germany) (1. Fraunhofer Institute for Integrated Systems and Device Technology IISB, 2. sglux GmbH, 3. Nexperia Germany GmbH)

ME3.3 - Evaluation of requirements for phase-shift cavity ring-down spectroscopy biosensing using integrated microring resonators
- Mr. MohammadHossein Motavas (Canada), Mr. Timothy Perrier (Canada), Prof. Andrew G Kirk (Canada) (1. McGill University)

ME3.4 - Two-Dimensional Material Based Optoelectronic Devices Rapid Prototyping using 2D Material Transfer System (2DMTS)
- Mr. Qian Cai (United States), Prof. Elham Heidari (United States), Prof. Navid Asadizanjani (United States), Prof. Volker Sorger (United States), Prof. Hamed Dalir (United States), Mr. Chandraman Patil (United States) (1. Electrical and Computer Engineering, University of Florida, 2. University of Florida)

ME3.5 - A Gold-Coated FBG Sensor for Heat-Flux Measurement in Harsh Environment
- Ms. Rebekah Burgess (United States), Mr. Sy Hulgan (United States), Ms. Sara Mog (United States), Ms. Ashley Mazingo (United States), Mr. Owen Thome (United States), Ms. Autumn Brunz (United States), Dr. Lingze Duan (United States) (1. University of Alabama in Huntsville)

1:30pm
Biophotonics and Medical Optics II - MF3: Novel Imaging Techniques
Palm Event Center MN
Chaired by: Prof. Myeong Jin Ju (Canada) and Prof. Yang Liu (United States)

1:30pm
MF3.1 (Invited) - Reflection matrix microscopy and computational adaptive optics
- Prof. Seokchan Yoon (Korea, Republic of), Dr. Sungsam Kang (Korea, Republic of), Mr. Yongwoo Kwon (Korea, Republic of), Dr. Jin Hee Hong (Korea, Republic of), Prof. Wonshik Choi (Korea, Republic of) (1. School of Biomedical Convergence Engineering, Pusan National University, 2. Center for Molecular Spectroscopy and Dynamics, Institute for Basic Science)

1:30pm
MF3.2 - Electrowetting lens for focus-tunable three-photon excitation microscopy
- Mr. Samuel Gilinsky (United States), Ms. Diane Jung (United States), Mr. Gregory Futia (United States), Dr. Mo Zohrab (United States), Ms. Tarah Welton (United States), Prof. Emily Gibson (United States), Prof. Diego Restrepo (United States), Dr. Victor Bright (United States), Dr. Juliet Gopinath (United States) (1. Electrical and Computer Energy Engineering, University of Colorado Boulder, 2. Mechanical Engineering, University of Colorado Boulder, 3. Bioengineering, University of Colorado Anschutz Medical Campus, 4. Cell and Developmental Biology, University of Colorado Anschutz Medical Campus)

2:15pm
MF3.3 - An integrated platform for mesoscale quantitative phase imaging and hyperplex fluorescence microscopy
- Dr. Maomao Chen (United States), Dr. Hongqiang Ma (United States), Dr. Jianquan Xu (United States), Dr. Xuemiao Sun (United States), Prof. Yang Liu (United States) (1. Departments of Medicine and Bioengineering, University of Pittsburgh)

2:30pm
MF3.4 - Artificial Iris on Smart Contact Lens using Twisted Nematic Cell for Photophobia Alleviation
- Dr. Chayanjit Ghosh (United States), Mr. Adwait Deshpande (United States), Dr. Mohit U. Karkhanis (United States), Dr. Aishwaryadeep Banerjee (United States), Dr. Erfan Pourshaban (United States), Mr. Md. Rabiu Hasan (United States), Mr. Amirali Niknejhal (United States), Mr. Md. Golam Dastigir (United States), Dr. Hanseup Kim (United States), Dr. Carlos H. Mastrangelo (United States) (1. The University of Utah)
1:30pm Microwave Photonics and Vehicular Optics I - 
MG3: Advanced Components for Microwave Photonics
*Palm Event Center O*
Chaired by: Elaine Wong (Australia) and Charles Middleton (United States)

1:30pm MG3.1 (Tutorial) - Plasmonics for Microwave Photonics
*Prof. Juerg Leuthold (Switzerland)*, Dr. Jasmin Smajic (Switzerland)
, Mr. Michael Baumann (Switzerland)
, Mrs. Hande Ibili (Switzerland)
, Mr. Boris Vukovic (Switzerland)
, Mr. Laurenz Kulmer (Switzerland)
, Mr. Tobias Blatter (Switzerland)
, Mr. Yannik Horst (Switzerland)
, Mr. Stefan M. Koepfl (Switzerland)
, Dr. Yuriy Fedoryshyn (Switzerland)
, Dr. Yannick Salamin (United States)
, Prof. Maurizio Burla (Germany)
(1. ETH Zurich, 2. MIT, 3. TU Berlin)

2:15pm MG3.3 - Near-Ballistic Uni-Traveling-Carrier Photodiodes with Undercut Collector for Enhancements in THz Output Power and Responsivity
*Mr. Yu-Cyuan Huang (Taiwan)*, Prof. Nan-Wei Chen (Taiwan)
, Mr. Ye-Kun Wu (Taiwan)
, Dr. none Naseem (Taiwan)
, Prof. Jin-Wei Shi (Taiwan)
(1. National Central University, 2. Yuan Ze University, 3. National Central University)

2:30pm MG3.3 - Generation of 10.2 dBm millimeter-wave power at 100 GHz using soliton microcomb and modified uni-traveling carrier photodiode
*Ms. Fatemehsadat Tabatabaei (United States)*, Dr. Jesse S. Morgan (United States)
, Ms. SHUMAN SUN (United States)
, Ms. Samin Hanifi (United States)
, Ms. Ruxuan Liu (United States)
, Dr. Steven Estrella (United States)
, Dr. Madison Woodson (United States)
, Prof. Steven M. Bowers (United States)
, Prof. Xu Yi (United States)
, Prof. Andreas Beling (United States)
(1. University of Virginia, 2. Freedom Photonics LLC)

1:30pm Materials, Foundries, and Fabrication I - 
MH3: Heterogeneous Integration for Silicon Photonics
*Palm Event Center P*
Chaired by: Prof. Shamsul Araf (United States) and Dr. Yuta Ueda (Japan)

1:30pm MH3.1 (Invited) - Heterogeneous Integration of Membrane DMLs on Si Platform using Micro-transfer Printing
*Mr. Yoshiho Maeda (Japan)*, Dr. Tatsuru Hiraki (Japan)
, Dr. Takuma Aihara (Japan)
, Dr. Takuro Fujii (Japan)
, Dr. Koji Takeda (Japan)
, Dr. Tai Tsuchizawa (Japan)
, Dr. Hiroki Sugiyama (Japan)
, Dr. Tomonari Sato (Japan)
, Dr. Toru Segawa (Japan)
, Dr. Yasutomo Ota (Japan)
, Dr. Satoshi Iwamoto (Japan)
, Dr. Yasuhiko Arakawa (Japan)
, Dr. Shinji Matsuo (Japan)
(1. NTT Device Technology Labs., 2. Keio University, 3. University of Tokyo)

2pm MH3.2 - Fabrication of Si/GaAs0.51Sb0.49 Heterostructure Diodes via Transfer Printing
*Mr. Yongkang Xia (United States)*, Mr. Sk Shafaat Saud Nikor (United States)
, Ms. Naga Swetha Nallamothu (United States)
, Ms. Rachel Adams (United States)
, Ms. Hyemin Jung (United States)
, Mr. Nathan Gajowski (United States)
, Dr. Seunghyun Lee (United States)
, Prof. Ronald M. Reano (United States)
, Prof. Sanjay Krishna (United States)
, Prof. Steven Ringel (United States)
, Prof. Shamsul Araf (United States)
(1. The Ohio State University)

2:15pm MH3.3 - a-Si:H Layer Enabling a sub-1.2 dB loss SiN-III/V-SiN Transition for Evanescently Coupled Lasers at 920 nm
*Mr. Konstantinos Akritidis (Belgium)*, Dr. Maximilien Billet (Belgium)
, Dr. Sandeep Seema Saseendran (Belgium)
, Mr. Stijn Poelman (Belgium)
, Prof. Gunther Roelkens (Belgium)
, Dr. Pieter Neutens (Belgium)
, Dr. Joost Brouckaert (Belgium)
, Prof. Pol Van Dorpe (Belgium)
, Prof. Bart Kuyken (Belgium)
(1. UGent – IMEC, 2. IMEC, 3. University Gent-imec)

2:30pm MH3.4 (Invited) - Transfer Printing Integration for Chip-scale Photonic Devices
*Prof. Michael Strain (United Kingdom)*, Prof. Martin D. Dawson (United Kingdom)
(1. University of Strathclyde)

3pm Coffee Break & Exhibits
*Palm Event Center*
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| 3:30pm| **Nonlinear Photonics and Novel Optical Phenomena II - MA4: Integrated Nonlinear Optics II**  
*Palm Event Center AB*  
Chaired by: Alireza Marandi (United States) and Prof. Camille-Sophie Bres (Switzerland) |
| 3:30pm| **MA4.1 - Single-photon downconversion in GaAs, AlGaAs and InGaP-on-Insulator**  
*» Mr. Emil Ulsg (Denmark)*¹, Mr. Magnus Madsen (Denmark)¹, Dr. Eric Stanton (United States)², Dr. Dileep Reddy (United States)², Dr. Iterio Degli-Eredi (Belgium)³, Dr. Richard Mirin (United States)⁴, Prof. Nicolas Völt (Denmark)⁵ (1. Aarhus University, Department of Electrical and Computer Engineering, 2. National Institute of Standards and Technology, 3. Luceda Photonics) |
| 3:45pm| **MA4.2 - Saturable absorption in the C-Band employing 2D 1T-MoTe2**  
*» Mrs. Maria Volpato (Brazil)*¹, Dr. Henrique Rosa (Brazil)², Dr. Pierre-Louis de Assis (Brazil)², Dr. Newton Frateschi (Brazil)² (1. Unicamp, 2. Mackenzie Presbyterian University) |
| 4pm   | **MA4.3 - Coupled Resonators Optical Waveguide Based on Taiji Microresonators**  
*» Dr. Bülent Aslan (Italy)*¹, Dr. Riccardo Franchi (Italy)¹, Dr. Stefano Biasi (Italy)¹, Mr. Salamat Ali (Italy)¹, Prof. Lorenzo Pavese (Italy)¹ (1. University of Trento) |
| 4:15pm| **MA4.4 - Nonvolatile switching in a ring resonator with saturable absorption**  
*» Mr. Isaac Luntadila Lufungula (Belgium)*¹, Prof. Bart Kuyken (Belgium)² (1. Ghent University – IMEC, 2. University Ghent - imec) |
| 3:30pm| **Optical Communication: Devices, Interconnects and Subsystems IV - MB4: Novel Optical Modulation Subsystems and Devices**  
*Palm Event Center CD*  
Chaired by: Brian Stern (United States) |

**3:30pm**

**MB4.1 (Invited) - Low-loss midex waveguides and Soliton microcombs**  
*Prof. Wenfu Zhang (China)*¹ (1. State Key Laboratory of Transient Optics and Photonics, Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences)  

**4pm**

**MB4.2 (BEST STUDENT PAPER FINALIST) - Free-Space Gigabit Data Transmission with a Directly Modulated Interband Cascade Laser Epitaxially Grown on Silicon**  
*Ms. Sara Zaminska (France)*¹, Mr. Pierre Didier (France)¹, Ms. Hyunah Kim (France)¹, Dr. Daniel Andres Díaz Thomas (France)¹, Prof. Alexei Baranov (France)², Mr. Jean Baptiste Rodriguez (France)², Prof. Eric Tournié (France)², Ms. Hedwig Knoetig (Austria)², Dr. Olivier Spitz (United States)³, Prof. Benedikt Schwarz (Austria)³, Prof. Laurent Cerutti (France)³, Prof. Frederic Grillot (France)³ (1. Telecom Paris, 2. University of Montpellier, 3. Technische Universität Wien, 4. CREOL, The College of Optics and Photonics, University of Central Florida, Orlando, FL 32816, USA)  

**4:15pm**

**MB4.3 - OFDM Signal Transmission Using Distributed Fiber-Optic Acoustic Sensing**  
*Dr. Wataru Kohno (United States)*¹, Dr. Jian Fang (United States)¹, Mr. Shuji Murakami (United States)¹, Dr. Giovanni Milione (United States)¹, Dr. Ting Wang (United States)¹ (1. NEC Labs America)  

**4:30pm**

**MB4.4 - Gigabit Per Second UV-C LEDs for Communications**  
*Mr. Hichem Zimi (United Kingdom)*¹, Mr. Daniel Maclure (United Kingdom)¹, Dr. Cheng Chen (United Kingdom)¹, Dr. Jonathan McKendry (United Kingdom)¹, Dr. David Stothard (United Kingdom)¹, Dr. Johannes Herrnsdorf (United Kingdom)¹, Prof. Harald Haas (United Kingdom)¹, Prof. Martin D. Dawson (United Kingdom)¹ (1. University of Strathclyde, 2. fraunhofer centre for applied photonics)  

**4:45pm**

**MB4.5 - Underwater Wireless Optical Communications Using Integrated Optical Phased Arrays**  
*Mr. Daniel DeSantis (United States)*¹, Ms. Milica Notaros (United States)¹, Mr. Michael Torres (United States)¹, Prof. Jelena Notaros (United States)¹ (1. Massachusetts Institute of Technology)
<table>
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<th>Time</th>
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| 3:30pm | **Light Sources III** - MD4: Micro and Nano II  
*Palm Event Center FG*  
Chaired by: Prof. Stephan Reitzenstein (Germany) and Dr. Yating Wan (Saudi Arabia) |
| 3:30pm | **MD4.1 - Nanoparticle-doped Polymer Hybrid Material as Color Conversion Layer for Micro-LED Displays Technology**  
Mr. Chen-Hsun Wu (Taiwan), Mr. Chih-Yuan Tsai (Taiwan), Mr. Jian-Hong Lin (Taiwan), Mr. Yen-Chia Cheng (Taiwan), Ms. Shan-Yu Chen (Taiwan), Mr. Chi-Shiang Chen (Taiwan), Prof. Ching-Fuh Lin (Taiwan) (1. National Taiwan University) |
| 3:45pm | **MD4.2 - (Invited) Structured Light and Engineered Nanostructures**  
Prof. Natalia Litchinitser (United States), Mr. Jiannan Gao (United States), Mr. Hooman Barati Sede (United States), Ms. Renee George (United States), Dr. Wenho Li (United States), Mr. Dmitrii Tsvetkov (United States), Dr. Danilo Gomes Pires (United States) (1. Duke University) |
| 4:15pm | **MD4.3 - Dual-Wavelength Visible Light Communication through Perovskite-Integrated InGaN Micro-LEDs**  
Mr. Tae-Yong Park (Saudi Arabia), Ms. Yue Wang (Saudi Arabia), Dr. Omar Alkhazragi (Saudi Arabia), Dr. Jung-Hong Min (Korea, Republic of), Dr. Tien Khee Ng (Saudi Arabia), Prof. Osman M. Bakr (Saudi Arabia), Prof. Omar F. Mohammad (Saudi Arabia), Prof. Boon S. Ooi (Saudi Arabia) (1. Photonics Laboratory, King Abdullah University of Science and Technology (KAUST), 2. Light Source Research Division Korea Photonics Technology Institute, 3. King Abdullah University of Science and Technology, 4. King Abdullah University of Science and Technology (KAUST)) |
| 4:30pm | **MD4.4 (Invited) - Nanoscale light source enabled by inelastic electron tunneling**  
Prof. Zhaowei Liu (United States) (1. University of California San Diego) |
| 3:30pm | **Detection, Sensing, and Energy III** - ME4: Sensors  
*Palm Event Center KL*  
Chaired by: Dr. Minjoo Lawrence Lee (United States) |
| 3:30pm | **ME4.1 - Temperature and Strain Fiber Sensing Using Orbital Angular Momentum**  
Ms. Katelynn Wootten (United States), Dr. Mo Zohrabi (United States), Dr. Mark Siemens (United States), Dr. Juliet Gopinath (United States) (1. Department of Physics, University of Colorado Boulder, 2. Electrical, Computer and Energy Engineering, University of Colorado Boulder, 3. Department of Physics and Astronomy, University of Denver) |
| 3:45pm | **ME4.2 - Lumped Element Model for an Optomechanical Ultrasound sensor**  
Mr. Cedric Pieters (Belgium), Mr. Rachid Haouari (Belgium), Dr. Fabrice-Roland Lamberti (Belgium), Dr. Grim Keulemans (Belgium), Dr. Jon Kjellman (Belgium), Dr. Xavier Rottenberg (Belgium) (1. IMEC) |
| 4pm   | **ME4.3 - Liquid-Metal-Based SERS Sensors for Trace Analyte Detection**  
Mr. Shreyan Datta (United States), Dr. Xianglong Miao (United States), Prof. Peter Qiang Liu (United States) (1. University at Buffalo) |
| 4:15pm | **ME4.4 - An Optofluidic Nanoplasmonic Sensor for Aerosols**  
Dr. Hao Jiang (United States), Ms. Sophia Judge (United States) (1. Lawrence Technological University) |
| 4:30pm | **ME4.5 - Phase-shifted two-wire waveguide Bragg gratings for high sensitivity gas detection in the terahertz spectral range**  
Prof. Yang Cao (China), Dr. Kathirvel Nallapann (Canada), Dr. Guofu Xu (Canada), Prof. Maksim Skorobogaty (Canada) (1. Hebei University of Technology, 2. Polytechnique Montréal, 3. Polytechnique Montréal) |
| 3:30pm | **Biophotonics and Medical Optics III** - MF4: Applications of Machine Learning  
*Palm Event Center MN*  
Chaired by: Prof. Peter Munro (United Kingdom) and Nisan Ozana (Israel) |
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| 3:30pm | **MF4.1 (Invited) - Redesigning the optical microscope with physics inspired machine learning**  
  » Dr. Dushan Wadduwage (United States)¹, Mr. Udith Haputhanthri (United States)² (1. Center for Advanced Imaging, Faculty of Arts and Sciences, Harvard University,) |                                                                                                                                                                                                       |
| 4pm   | **MF4.2 - Large-scale label-free morphological profiling for drug screening by high-throughput spinning imaging**  
  » Dr. Dickson Siu (Hong Kong)³, Mr. Victor Wong (Hong Kong)⁴, Prof. Kenneth Wong (Hong Kong)⁵, Prof. Kevin Tsia (Hong Kong)⁵ (1. University of Hong Kong) |                                                                                                                                                                                                       |
| 4:15pm | **MF4.3 - All-in-one multimodal imaging platform for information-rich spatial biology**  
  » Dr. Hongjiang Ma (United States)⁶, Prof. Yang Liu (United States)⁶ (1. University of Pittsburgh, 2. Departments of Medicine and Bioengineering, University of Pittsburgh) |                                                                                                                                                                                                       |
| 3:30pm | Microwave Photonics and Vehicular Optics II -  
  **MG4: Advanced Devices for Microwave Photonics**  
  *Palm Event Center O*  
  Chaired by: Elaine Wong (Australia) and Justin Zobel (United States) |                                                                                                                                                                                                       |
| 3:30pm | **MG4.1 (Invited) - Acoustoelectric Photonic and Microwave Phononic Devices**  
  » Prof. Matt Eichenfield (United States)⁷ (1. University of Arizona and Sandia National Labs) |                                                                                                                                                                                                       |
| 4pm   | **MG4.2 - Noise Filtering of Narrowband Temporal Optical Waveforms by All-Fiber Talbot Processing**  
  » Mr. Majid Goodarzi (Canada)⁸, Dr. Manuel P. Fernandez (Canada)⁹, Prof. José Azaña (Canada)⁹, Mr. Benjamin Crockett (Canada)² (1. Institut National de la Recherche Scientifique-Centre Énergie, Matériaux et Télécommunications (INRS-EMT), 2. Institut national de la recherche scientifique) |                                                                                                                                                                                                       |

### 4:15pm MG4.3 - Thermal-noise-limited, compact optical reference cavity operated without a vacuum enclosure  
» Ms. Yifan Liu (United States)¹, Mr. Charles McLemore (United States)¹, Ms. Megan Kelleher (United States)¹, Mr. Dahyeon Lee (United States)¹, Dr. Takuma Nakamura (United States)¹, Mr. Naijun Jin (United States)¹, Dr. Susan Schima (United States)¹, Dr. Peter Rakich (United States)¹, Dr. Scott Diddams (United States)¹, Dr. Franklyn Quinlan (United States)¹ (1. Department of Physics, University of Colorado Boulder, 2. Time and Frequency Division, National Institute of Standards and Technology, 3. Department of Applied Physics, Yale University, 4. Electrical, Computer and Energy Engineering, University of Colorado Boulder)
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6pm
*OPEN TO ALL REGISTERED ATTENDEES - IEEE Photonics Society Awards Banquet (Reception)
Pavilion

7pm
OPEN TO ALL REGISTERED ATTENDEES - IEEE Photonics Society Awards Banquet (Seated Dinner)
Pavilion

Tuesday, 14 November

8:30am
Nonlinear Photonics and Novel Optical Phenomena III - TuA1: Frequency Combs
Palm Event Center AB
Chaired by: Jordan Stone (United States) and Alireza Marandi (United States)

8:30am
TuA1.1 (Invited) - Frequency Combs from Nano-structured Microresonators
» Dr. Tobias Herr (Germany) (1. University of Hamburg)

9am
TuA1.2 - Dynamic Optimization of a Cavity Soliton Dispersive Wave through Kerr-Induced Synchronization
» Dr. Gregory Moille (United States), Ms. Michal Chojnacki (United States), Mr. Pradyoth Shandilya (United States), Dr. Usman Javid (United States), Prof. Curtis Menyuk (United States), Dr. Kartik Srivisan (United States) (1. NIST, 2. University of Maryland at Baltimore County)

9:15am
TuA1.3 - Vernier Microcombs for Future Miniature Yb+ Clocks
» Mr. Nathan O’Malley (United States), Dr. Kai Wu (United States), Ms. Saleha Fatema (United States), Dr. Cong Wang (United States), Mr. Marcello Girardi (Sweden), Prof. Mohammed S. Alshaykh (Saudi Arabia), Dr. Zhichao Ye (Sweden), Daniel E. Leaird (United States), Prof. Minghao Qi (United States), Prof. Victor Torres-Company (Sweden), Prof. Andrew Weiner (United States) (1. Purdue University, 2. Indiana University, 3. Chalmers University of Technology, 4. King Saud University)

9:30am
TuA1.4 - Non-Volatile III-V/Si Photonic Charge-Trap Flash Memory
» Dr. Stanley Cheung (United States), Dr. Yuan Yuan (United States), Dr. Yiwei Peng (United States), Dr. Yingtao Hu (United States), Dr. Geza Kurczveil (United States), Dr. Di Liang (United States), Dr. Raymond Beausoleil (United States) (1. Hewlett Packard Enterprise)

9:45am
TuA1.5 - Robust Generation of Dark Soliton Combs in AlGaAs-on-Insulator Microresonators
» Mr. Yang Liu (Denmark), Mr. Chaochao Ye (Denmark), Mr. Yueguang Zhou (Denmark), Dr. Yi Zheng (Denmark), Dr. Yanjing Zhao (Denmark), Prof. Leif Katsuo Oxenløwe (Denmark), Prof. Kresten Yvind (Denmark), Prof. Minhao Pu (Denmark) (1. Technical University of Denmark)

8:30am
Palm Event Center CD
Chaired by: Dr. Giovanni Milione (United States)

8:30am
TuB1.1 (Tutorial) - A Tutorial on Silicon Heterogeneous Integrated Photonic Integrated Circuits: From Data Centers to Sensors
» Prof. John Bowers (United States) (1. University of California Santa Barbara)

9:15am
TuB1.2 (Invited) - III-V photonic membrane for dense integration and wafer-scale assembly with electronics
» Dr. Yuqing Jiao (Netherlands) (1. Eindhoven University of Technology)
Continued from Tuesday, 14 November

8:30am Optical Communication and Networks IV -
**TuC1**: Radio-over-fiber and Free-space Optical Systems
*Palm Event Center E*
Chaired by: Dr. Aneesh Sobhanan (United States)

8:30am **TuC1.1** (Invited) - InAs/InP Quantum-Dash Mode-Locked Laser For Duplex Radio Over Fiber Links
» Prof. Jianping Yao (Canada)¹, Dr. Long Huang (Canada)¹, Dr. Zhenguo Lu (China)², Prof. Ke Wu (Canada)³ (1. University of Ottawa, 2. National Research Council, 3. Polytechnique Montréal)

9am **TuC1.3** - A LEAF-FSO-5G NR/6G Converged System
» Mr. JIA-LIANG JIN (Taiwan)¹, Ms. Tsai-Man Wu (Taiwan)¹, Mr. Yan-Zhen Xu (Taiwan)¹, Mr. Chih-Hong Lin (Taiwan)¹, Mr. Wei-Xiang Chen (Taiwan)¹, Prof. Hai-Han Lu (Taiwan)¹ (1. National Taipei University of Technology)

9:15am **TuC1.4** - Power-efficient Radio-over-Fiber aided Spatial Modulation
» Dr. Yichuan Li (China)¹, Prof. Mohammed El-Hajjar (United Kingdom)², Mr. Arman Safarnejadlan (Canada)³ (1. Harbin Institute of Technology (Shenzhen), 2. University of Southampton, 3. Centre d’optique, photonique et laser (COPL), Université Laval)

9:30am **TuC1.5** - Enhanced Hybrid Asymmetrically Clipped Optical OFDM for IM/DD WOC Systems
» Dr. Zuhang Geng (China)¹, Dr. Xinke Tang (China)², Prof. Yuhang Dong (China)¹, Dr. Ying Xue (Hong Kong)³ (1. Tsinghua University, 2. Peng Cheng Laboratory, 3. Hong Kong University of Science and Technology)

8:30am Detection, Sensing, and Energy IV -
**TuD1**: Novel Materials for Detectors
*Palm Event Center FG*
Chaired by: Prof. Daniel Wasserman (United States) and Prof. Ganesh Balakrishnan (United States)

8:30am **TuD1.1** (Invited) - High-efficiency, superconducting nanowire single-photon detectors from ultraviolet to infrared
» Dr. Richard Mirin (United States)¹, Dr. Benedikt Hampel (United States)², Dr. Adriana Lita (United States)², Dr. Adam McCaughan (United States)², Dr. Bahkrom Oripov (United States)², Dr. Dileep Reddy (United States)², Dr. Kevin Silverman (United States)², Dr. Martin Stevens (United States)², Dr. Varun Verma (United States)², Dr. Sae Woo Nam (United States)² (1. National Institute of Standards and Technology, 2. NIST)

9am **TuD1.2** - P-doped bilayer graphene based photodetector with colloidal quantum dots absorber
» Mr. Md Fazle Rabbe (United States)¹, Dr. Volodymyr Sheremet (United States)¹, Mr. David Pate (United States)¹, Dr. Vitaliy Avrutin (United States)¹, Dr. Umit Ozgur (United States)¹, Dr. Nibir Dhar (United States)¹ (1. Virginia Commonwealth University)

9:15am **TuD1.3** - Dynamics of light-induced charge transfer from ferroelectric crystal surfaces to metallic nanoparticles
» Dr. Eric Asché (Germany)¹, Dr. Riccardo Zamboni (Germany)¹, Prof. Cornelia Denz (Germany)¹, Prof. Jörg Imbrock (Germany)¹ (1. Institute of Applied Physics, 48149 Muenster)

9:30am **TuD1.5** - Novel organic materials and device architectures for sensitive broadband photodetectors
» Prof. Guodan Wei (China)¹ (1. Tsinghua University)

8:30am Optical AI and Computational Photonics III -
**TuE1**: Photonic Algorithm-Hardware Homomorphism and Inverse Design
*Palm Event Center KL*
Chaired by: Prof. Volker Sorger (United States) and Prof. Nicola Peserico (United States)

8:30am **TuE1.1** (Invited) - Hardware-Software Codesign for Integrated Photonic Neural Networks
» Prof. Mahdi Nikdast (United States)¹ (1. Department of Electrical and Computer Engineering, Colorado State University)
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<tr>
<td>9am</td>
<td>TuE1.2 - Analysis of Local Optimization Behavior: Toward a Novel Inverse Design Paradigm</td>
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<td>» Mr. Robert Pesch (United States), Mr. Arjun Khurana (United States), Mr. Joel Slaby (United States), Mr. Jacob Hiesener (United States), Dr. Stephen Ralph (United States) (1. Georgia Institute of Technology)</td>
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<tr>
<td>9:15am</td>
<td>TuE1.3 - Differentiable Modeling of Nonlinear Dynamics in Multimode Fibers</td>
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<td>» Mr. Hasindu Kariyawasam (United States), Dr. Savithru Jayasinghe (United States), Mr. Yasith Jayawardana (United States), Dr. Dushan Wadduwage (United States) (1. Center for Advanced Imaging, Faculty of Arts and Sciences, Harvard University, 2. Independent Researcher, 3. Old Dominion University, Norfolk, VA, 4. Center for Advanced Imaging, Faculty of Arts and Sciences, Harvard University,)</td>
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<tr>
<td>9:30am</td>
<td>TuE1.4 - Hardware-accelerated inverse design of a large-area CMOS-compatible grating coupler</td>
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<td>» Dr. Xinzhong Chen (United States), Dr. Emerson Melo (United States), Dr. Tyler Hughes (United States), Dr. Momchil Minkov (United States) (1. Flexcompute Inc)</td>
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<tr>
<td>9:45am</td>
<td>TuE1.5 - Accelerate Inverse Design of Photonic Devices with GPUs</td>
</tr>
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<td>» Dr. Peng Sun (United States), Dr. Andrew Michaels (United States), Dr. Liron Gantz (Israel) (1. NVIDIA Corporation, 2. Aurora Operations, Inc)</td>
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- **8:30am**  
  - Biophotonics and Medical Optics IV - TuF1: Advances in Optical Coherence Tomography  
    - Palm Event Center MN  
    - Chaired by: Dr. Jamie Guggenheim (United Kingdom) and Prof. Myeong Jin Ju (Canada)

- **8:30am**  
  - TuF1.1 (Invited) - Computational extending and enhancing optical coherence tomography imaging  
    - Dr. Shuichi Makita (Japan) (1. Computational Optics Group, University of Tsukuba)

- **9am**  
  - TuF1.2 - TDMS: An open source Time Domain Maxwell Solver for simulations in biomedical optics  
    - Prof. Peter Munro (United Kingdom) (1. University College London)

- **9:15am**  
  - TuF1.3 - Polarization-diversity optical coherence tomography retinal imaging of laser-induced choroidal neovascularization in small animal models  
    - Mr. Jun Song (Canada), Dr. Yusi Miao (Canada), Prof. Joanne Matsubara (Canada), Prof. Myeong Jin Ju (Canada) (1. University of British Columbia (UBC), 2. University of British Columbia)

- **9:30am**  
  - TuF1.4 - Pre-Transplantation Evaluation of Human Liver Using Polarization-Sensitive Optical Coherence Tomography  
    - Mr. Feng Yan (United States), Mr. Chen Wang (United States), Mr. Qinghao Zhang (United States), Mr. Ebenezer Raj Selvaraj Mercyshalinie (United States), Dr. Zhongxin Yu (United States), Dr. Kar-Ming A Fung (United States), Dr. Qinggong Tang (United States) (1. The University of Oklahoma, 2. The University of Oklahoma Health Sciences Center)

- **8:30am**  
  - Nano Photonics, Plasmonics and Metamaterials III - TuG1: Optimization of Nanophotonic Designs  
    - Palm Event Center O  
    - Chaired by: Prof. Filiz Yesilkoy (United States)

- **8:30am**  
  - TuG1.1 - Increasing the upward radiation efficiency of optical phased arrays using asymmetric silicon horn antennas  
    - Ms. Henna Farheen (Germany), Mr. Suraj Joshi (Germany), Prof. J. Christoph Scheytt (Germany), Dr. Viktor Myroshnichenko (Germany), Prof. Jens Förstner (Germany) (1. University of Paderborn)

- **8:45am**  
  - TuG1.2 - Design and Optimization of a Thermal Emitter using Automatic Machine Learning  
    - Mr. Ambali Odebowale (Australia), Mr. Salah Abdo (Australia), Ms. Nusrat Alam (Australia), Dr. Khalid As'ham (Australia), Dr. Haroldo T. Hattori (Australia), Prof. Andrey Miroshnichenko (Australia) (1. The University of New South Wales, 2. The university of New South Wales)
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<td><strong>TuG1.3 - Optimal Design of Omni-directional Optical Cloaking by Annular Sectorized Unit-cells</strong>&lt;br&gt;Chaired by: Prof. Mahdi Hosseini (United States)</td>
</tr>
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<td>by: Prof. Mirbek Turduev (Krygzsthan)¹, Mr. Muratcan Ayik (Turkey)², Mr. Bumin Kaan Yildirim (Saudi Arabia)³, Prof. Oleg V. Minin (Russian Federation)⁴, Prof. Igor V. Minin (Russian Federation)⁵, Prof. Hamza Kurt (Korea, Republic of)⁶ (1. Department of Electrical and Electronics Engineering, Kyrgyz-Turkish Manas University, Bishkek 720038, Kyrgyzstan, 2. Department of Electrical and Electronics Engineering, Middle East Technical University, Ankara 06800, Turkey, 3. King Abdullah University of Science and Technology (KAUST) Solar Center, Thuwal 23955-6900, Kingdom of Saudi Arabia, 4. Nondestructive school, Tomsk Polytechnic University, 634050, Tomsk, Russia, 5. School of Electrical Engineering, Korea Advanced Institute of Science and Technology, Daejeon, 34141, Republic of Korea)</td>
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<td>9:15am</td>
<td><strong>TuG1.4 - Polarization Independent Add-Drop Filter</strong>&lt;br&gt;Chaired by: Charles Middleton (United States)</td>
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<td>8:30am</td>
<td><strong>TuH1: PHOTONICS INDUSTRY FOCUS: Government Photonic Opportunities</strong>&lt;br&gt;Palm Event Center P&lt;br&gt;Chaired by: Charles Middleton (United States)</td>
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<tr>
<td>8:30am</td>
<td><strong>TuH1.1 (Invited) - Not Just “Light” Infantry: The State of Photonics in US Army R&amp;D</strong>&lt;br&gt;Chaired by: Dr. Jason Zeibel (United States)¹ (1. US Army CSISR Center)</td>
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<tr>
<td>9am</td>
<td><strong>TuH1.2 (Invited) - Quantum Photonics at AFRL</strong>&lt;br&gt;Chaired by: Dr. Michael Fanto (United States)³ (1. US Air Force Research Labs (AFRL))</td>
</tr>
<tr>
<td>9:30am</td>
<td><strong>TuH1.3 (Invited) - Photonics for Navy Applications</strong>&lt;br&gt;Chaired by: Dr. Keith Williams (United States)³ (1. US Naval Research Labs (NRL))</td>
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<tr>
<td>10am</td>
<td><strong>Coffee Break &amp; Exhibits</strong>&lt;br&gt;Palm Event Center</td>
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<td>10:30am</td>
<td><strong>TuA2: Engineering Quantum Emitters I</strong>&lt;br&gt;Palm Event Center AB&lt;br&gt;Chaired by: Prof. Mahdi Hosseini (United States)</td>
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<td>10:30am</td>
<td><strong>TuA2.1 (Tutorial) - Deterministic Photon-emitter Interfaces</strong>&lt;br&gt;Chaired by: Prof. Peter Lodahl (Denmark)¹ (1. Niels Bohr Institute, University of Copenhagen)</td>
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<td>11:15am</td>
<td><strong>TuA2.2 - Quantum Interference of Identical Photons from Remote GaAs Quantum Dots</strong>&lt;br&gt;Chaired by: Dr. Alisa Javadi (United States)¹, Dr. Liang Zhai (Switzerland)², Dr. Nam Nguyen (Switzerland)³, Dr. Clemens Spinnler (Switzerland)⁴, Dr. Julian Ritzmann (Germany)⁵, Dr. Matthias Ioebi (Switzerland)⁶, Prof. Andreas Wieck (Germany)⁷, Dr. Arne ludwig (Germany)⁸, Prof. Richard warburton (Switzerland)⁹ (1. The University of Oklahoma, 2. University of Basel, 3. ruhr-uni-bochum.de, 4. unibas.ch, 5. ruhr-uni-bochum)</td>
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<td>11:30am</td>
<td><strong>TuA2.3 - Screening and deterministic integration of nanodiamond-based color centers for high-bandwidth quantum photonics</strong>&lt;br&gt;Chaired by: Prof. Simeon Bogdanov (United States)¹, Ms. Swetapadma Sahoo (United States)², Mr. Junyue Jiang (United States)³, Ms. Hana Azzouz (United States)⁴, Mr. Chad Germany (United States)⁵, Mr. Kieran Loehr (United States)⁶, Mr. Jincheng Zhou (United States)⁷, Prof. Bryan Clark (United States)⁸, Prof. Viatcheslav Agafonov (France)⁹, Prof. Valery Davydov (Russian Federation)¹ (1. University of Illinois Urbana-Champaign, 2. University of Tours, 3. L.F. Vereshchagin Institute for High Pressure Physics)</td>
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<tr>
<td>11:45am</td>
<td><strong>TuA2.4 - Toward Engineering 2D Atomic Arrays in Solids</strong>&lt;br&gt;Chaired by: Dr. Trevor Kling (United States)¹, Mr. Haechan An (United States)², Prof. Mahdi Hosseini (United States)³ (1. Northwestern University, 2. Purdue University)</td>
</tr>
<tr>
<td>10:30am</td>
<td><strong>Optical Communication: Devices, Interconnects and Subsystems VI - TuB2: Lasers and Amplifier Subsystems and Devices</strong>&lt;br&gt;Palm Event Center CD&lt;br&gt;Chaired by: Dr. Yuqing Jiao (Netherlands)</td>
</tr>
</tbody>
</table>
### 10:30am
**TuB2.1 (Invited) - Silicon Photonics Devices and Monolithic Integration**
» Prof. Xuhan Guo (China), Prof. Haoshuo Chen (United States) (1. Shanghai Jiao Tong University, 2. NOKIA Bell Lab)

### 11am
**TuB2.2 - Stable CW operation of III-V/Si hybrid lasers by chip-on-wafer direct bonding technique using UV-ozone hydrophilization**
» Mrs. Naoko Inoue (Japan), Mr. Takehiko Kikuchi (Japan), Dr. Naoki Fujiwara (Japan), Mr. Munetaka Kurokawa (Japan), Dr. Takuo Hiritani (Japan), Mr. Toshiyuki Nitta (Japan), Mr. Akira Furuya (Japan), Dr. Chang-yong Lee (Japan), Dr. Yuuki Itoh (Japan), Prof. Nobuhiro Nishiyama (Japan), Dr. Hideki Yagi (Japan) (1. Photonics Electronics Technology Research Association (PETRA) and Sumitomo Electric Industries, Ltd., 2. Photonics Electronics Technology Research Association (PETRA), 3. Tokyo Institute of Technology)

### 11:15am
**TuB2.3 - Designs of Resonant-Characteristics-Monitorable Si Wavelength Filters For Heterogeneously Integrated Tunable Lasers**
» Prof. Takanori Sato (Japan), Prof. Takeshi Fujisawa (Japan), Dr. Yusuke Sawada (Japan), Dr. Takuya Mitarai (Japan), Dr. Takuo Hiritani (Japan), Dr. Takuya Okimoto (Japan), Dr. Tsutomu Ishikawa (Japan), Dr. Naoki Fujiwara (Japan), Dr. Hideki Yagi (Japan), Prof. Kunimasa Saito (Japan) (1. Hokkaido University, 2. Sumitomo Electric Industries, Ltd.)

### 11:30am
**TuB2.4 - Optically-Pumped Semiconductor Optical Amplifier with Low Noise Figure**
» Dr. Dhruvkumar Desai (United States), Dr. Aneesh Sobhanan (United States), Dr. Inwoong Kim (United States), Dr. Olga Vassileiva (United States), Dr. Youichi Akasaka (United States), Dr. Paparlo Palacharla (United States), Dr. Xun Li (Canada), Dr. Sethumadhavan Chandrasekhar (United States), Dr. Patrick LiKamWa (United States), Dr. Guifang Li (United States) (1. University of Central Florida, 2. Fujiitsu, 3. McMaster University, 4. Elephint LLC)

### 11:45am
**TuB2.5 - Er-doped Fiber Design for FM-SDM Amplification**
» Mr. Pierre-Olivier Janvier (Canada), Prof. Leslie Rusch (Canada), Prof. Sophie LaRochelle (Canada) (1. Université Laval)

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### 10:30am
**Optical Communication and Networks V - TuC2: Optical Signal Processing**
*Palm Event Center E*

**Chaired by:** Prof. Stephan Pachnicke (Germany) and Prof. Alan Lau (Hong Kong)

### 10:30am
**TuC2.1 (Invited) - Neuromorphic Photonics for Digital Signal Processing**
» Dr. Lorenzo De Marinis (Italy), Prof. Ioannis Roumplos (Greece), Dr. Nicola Andrioli (Italy), Dr. Miltiadas Moralis-Pegios (Greece), Prof. Nikos Pleros (Greece), Prof. Giampiero Contestabile (Italy) (1. Scuola Superiore Sant’Anna, 2. Aristotle University of Thessaloniki, 3. CNR - IELT)

### 11am
**TuC2.2 - An All-optical delayed complex perceptron for signal equalization in IMDD fiber transmission**
» Mr. Emiliano Staffoli (Italy), Dr. Mattia Mancinelli (Switzerland), Prof. Paolo Bettotti (Italy), Prof. Lorenzo Pavesi (Italy) (1. University of Trento, 2. LIGENTEC SA)

### 11:15am
**TuC2.3 - Secure Optical Hashing for Information Compression in a Convolutional Neural Network**
» Dr. Haoyan Kang (United States), Mr. Jiachi Ye (United States), Dr. Maria Solyanik-Gorgone (United States), Dr. Behrouz Movahhed Nouri (United States), Dr. Hao Wang (United States), Prof. Hamed Dalir (United States), Prof. Volker Sorger (United States) (1. University of Florida, 2. George Washington University)

### 11:30am
**TuC2.4 - All-Optical Wavelength Conversion in Optically-Pumped Semiconductor Optical Amplifiers**
» Dr. Aneesh Sobhanan (United States), Dr. Dhruvkumar Desai (United States), Dr. Guifang Li (United States) (1. University of Central Florida)

### 11:45am
**TuC2.5 - Spread-photon architecture for quantum-secure communications**
» Dr. Michael Bullock (United States), Mr. Wesley Webb (United States), Dr. Samuel Knarr (United States), Dr. Timothy Burt (United States), Dr. James Drakes (United States), Dr. Victor Bucklew (United States), Dr. Saikat Guha (United States), Dr. Boulat Bash (United States) (1. University of Arizona, 2. L3Harris Technologies)
Continued from Tuesday, 14 November

10:30am Light Sources IV -
TuD2: Heterogeneous Integration
Palm Event Center FG
Chaired by: Dr. Jos Boschker (Germany) and Prof. Natalia Litchinitser (United States)

10:30am TuD2.1 (Invited) - On-Chip Lasers in Silicon Photonics: Pathways to Integration and Applications
» Mr. Xiangpeng Ou (Saudi Arabia)
» Mr. Zhican Zhou (Saudi Arabia)
» Mr. William He (Saudi Arabia)
» Mr. Artem Prokoshin (Saudi Arabia)
» Dr. Ying Shi (Saudi Arabia)
» Dr. Yating Wan (Saudi Arabia)
(1. Integrated Photonics lab, King Abdullah University of Science and Technology, 23955-6900, Thuwal, Saudi Arabia)

11am TuD2.2 - Comparison of InP QDs and GaAsP QW lasers grown by MOCVD
» Mr. Wen Gu (Hong Kong)
» Dr. Liying Lin (Hong Kong)
» Mr. Jie Huang (Hong Kong)
» Dr. Wei Luo (Hong Kong)
» Prof. Kei May Lau (Hong Kong)
(1. Hong Kong University of Science and Technology)

11:15am TuD2.3 - In-plane 1.5 µm DFB lasers laterally grown on SOI
» Dr. Ying Xue (Hong Kong)
» Ms. Jie Li (Hong Kong)
» Dr. Yi Wang (Hong Kong)
» Mr. Ke Xu (Hong Kong)
» Mr. Zhengshan Xing (Hong Kong)
» Prof. Kam Sing Wong (Hong Kong)
» Prof. Honki Tsang (Hong Kong)
» Prof. Kei May Lau (Hong Kong)
(1. Hong Kong University of Science and Technology, 2. The Chinese University of Hong Kong)

11:30am TuD2.4 - Low-loss III-V photonics and high efficiency grating couplers incorporating low-index AlOx layers
» Ms. Fwoziah Albeladi (United Kingdom)
» Dr. Sara Gillgrass (United Kingdom)
» Ms. Josie Travers-Nabialek (United Kingdom)
» Dr. Chris Hodges (United Kingdom)
» Dr. Mingchu Tang (United Kingdom)
» Dr. Huwien Deng (United Kingdom)
» Prof. Huiyun Liu (United Kingdom)
» Prof. Peter Smowton (United Kingdom)
(1. School of Physics and Astronomy, Cardiff University, 2. Department of Electrical Engineering, University College London)

11:45am TuD2.5 - 980 nm QW lasers with GaAsP barriers monolithically grown on (001) Si by MOCVD
» Mr. Jie Huang (Hong Kong)
» Ms. Qi Lin (Hong Kong)
» Dr. Wei Luo (Hong Kong)
» Mr. Wen Gu (Hong Kong)
» Dr. Liying Lin (Hong Kong)
» Prof. Kei May Lau (Hong Kong)
(1. Hong Kong University of Science and Technology)

10:30am Materials, Foundries, and Fabrication III -
TuE2: PIC Technologies for Emerging Applications
Palm Event Center KL
Chaired by: Dr. Wayesh Qarony (United States) and Prof. Shamsul Arafat (United States)

10:30am TuE2.1 (Invited) - Low-latency processing with integrated neuromorphic photonics
» Dr. Thomas Ferreira de Lima (United States)
» Prof. Bhavin Shastri (Canada)
» Prof. Paul Prucnal (United States)
» Prof. Eric Blow (United States)
(1. NEC Laboratories America, Inc., 2. Queen’s University, 3. Princeton University)

11am TuE2.2 - Optical Tweezing of Microspheres and Cells Using Integrated Optical Phased Arrays
» Mr. Tal Sneh (United States)
» Ms. Sabrina Corsetti (United States)
» Ms. Milica Notaros (United States)
» Ms. Kruthika Kikkeri (United States)
» Prof. Joel Voldman (United States)
» Prof. Jelena Notaros (United States)
(1. Massachusetts Institute of Technology)

11:15am TuE2.3 - Real Valued Models for Verification of Silicon Photonic Systems
» Mr. Daniel Cross (United States)
(1. Cadence Design Systems)

11:30am TuE2.4 (Invited) - Programmable photonics for free space optics communications and computing
» Prof. Andrea Melloni (Italy)
» Mr. Andres Martinez (Italy)
» Mr. Gabriele Cavicchioli (Italy)
» Prof. Seyedmohammad Seyedinnavadeh (Iran)
» Dr. Francesco Zanetto (Italy)
» Prof. David A.B. Miller (United States)
» Prof. Francesco Morichetti (Italy)
(1. Politecnico di Milano, 2. Ginerton Laboratory, Stanford University)
### 10:30am

**Propagation, Spectroscopy, and Imaging II - TuF2: Novel Methods and Devices in Spectroscopy**

_Palm Event Center MN_

_Chaired by: Prof. Kevin Tsia (Hong Kong) and Prof. Zhaowei Liu (United States)_

#### 10:30am

**TuF2.1 (Invited) - Frequency comb spectroscopy for atmospheric measurements**

- Dr. Ian Coddington (United States)¹, Dr. Nathan Malarich (United States)² (1. NIST)

#### 11am

**TuF2.2 - Near-Petahertz Femtosecond Fieldscopy: A Leap in Liquid Phase Spectroscopy**

- Mr. Ankit Srivastava (Germany)¹, Mr. Andreas Herbst (Germany)², Dr. Francesco Tani (Italy)¹, Dr. Hanieh Fattahi (Germany)³ (1. Max-Planck Institute for Science of Light (MPL))

#### 11:15am

**TuF2.3 - Measurement of capillary wave phase velocity using orbital angular momentum (OAM) and the Doppler effect**

- Dr. J. Keith Miller (United States)¹, Dr. Evan Robertson (United States)², Mr. Tyler Cramer (United States)³, Mr. Vincent Holsenback (United States)⁴, Mr. Jaxon Wiley (United States)⁴, Prof. Eric Johnson (United States)⁴ (1. Clemson University)

#### 11:30am

**TuF2.4 - Ultrafast dynamic pulsed beam steering using virtually imaged phased array**

- Ms. Suparna Seshadri (United States)¹, Ms. Jie Wang (United States)¹, Prof. Andrew Weiner (United States)¹ (1. Purdue University)

#### 11:45am

**TuF2.5 - High Throughput Arrayed Waveguide Grating with Resolving Power over 100,000**

- Dr. Yang Zhang (United States)¹, Mr. Wei-Lun Hsu (United States)¹, Dr. Pradip Gatkine (United States)¹, Prof. Sylvain Veilleux (United States)¹, Prof. Mario Dagenais (United States)¹ (1. University of Maryland, 2. California Institute of Technology)

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### 10:30am

**Nano Photonics, Plasmonics and Metamaterials IV - TuG2: Near-field and Subwavelength Interactions in Nanostructures**

_Palm Event Center O_

_Chaired by: Prof. Abdoulaye Ndao (United States) and Jennifer Choy (United States)_

#### 10:30am

**TuG2.1 - Experimental determination of the Green's function with double probe THz near-field microscopy**

- Prof. Jaime Gomez Rivas (Netherlands)¹, Dr. Stan ter Huurne (Netherlands)², Dr. Niels van Hoof (Netherlands)³, Mr. Djoer Peeters (Netherlands)⁴, Dr. Dook van Mechelen (Netherlands)⁵ (1. Eindhoven University of Technology)

#### 10:45am

**TuG2.2 - Sub-Terahertz Plasma Wave Generation by Dyakonov-Shur Instability in p-Diamond TeraFET**

- Mr. Muhammad Mahmudul Hasan (United States)¹, Prof. Nezih Pala (United States)², Prof. Michael Shur (United States)³ (1. Florida International University, 2. Rensselaer Polytechnic Institute)

#### 11am

**TuG2.3 - Counter-propagating scalar and vector beams for subwavelength shaping and particle manipulation**

- Mr. Eric Asché (Germany)¹, Dr. Eileen Otte (Germany)², Prof. Cornelia Denz (Germany)³, Dr. Jörn Imbrock (Germany)⁴ (1. Institute of Applied Physics, 48149 Muenster, 2. Stanford University)

#### 11:15am

**TuG2.4 - A hole charging layer of Co3O4 stabilizes the GaN nanowires and promotes efficient carrier transport with record-high photo-response**

- Mr. Yang Kang (China)¹, Dr. Danhao Wang (China)², Mr. Xin Liu (China)³, Prof. Haidong Sun (China)³ (1. School of Microelectronics University of Science and Technology of China, 2. Department of Electrical Engineering and Computer Science University of Michigan, 3. University of Science and Technology of China)

#### 11:30am

**TuG2.5 - Nanofabrication of EGaIn Liquid Metal Near-Infrared Photonic Structures**

- Mr. Md Abdul Kaim Khan (United States)¹, Prof. Peter Qiang Liu (United States)¹ (1. University at Buffalo)
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<th>Time</th>
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| 10:30am | **TuH2: PHOTONICS INDUSTRY FOCUS: Photonic Opportunities - Commercial and Educational**  
*Palm Event Center P*  
Chair by: Carlos Lee (Belgium) |
| 12pm    | **PHOTONICS INDUSTRY FOCUS: Standards / Industry Connections Luncheon**  
*Meyer*  
Chair by: John Kulick |
| 12pm    | Lunch Break (on own) |
| 1:30pm  | **Quantum Photonics II - TuA3: Engineering Quantum Emitters II**  
*Palm Event Center AB*  
Chair by: Sarah Sharif (United States) and Dr. Daniel Oblak (Canada) |
| 1:30pm  | **TuA3.1 - Cascaded Quantum Well Structure Emitting Entangled Multiphoton States**  
> Mr. Amir Sivan (Israel), Prof. Meir Orenstein (Israel) (1. Andrew and Erna Viterbi Faculty of Electrical and Computer Engineering, Technion—Israel Institute of Technology, Technion City, Haifa, 3200003, Israel) |
| 1:45pm  | **TuA3.2 - Monolithic InAs QDs based Active-Passive Integration for Photonic Integrated Circuits**  
> Ms. Abigail Enderson (United Kingdom), Dr. Pawan Mishra (United Kingdom), Dr. Zhongming Cao (United Kingdom), Ms. Fwoziah Albeladi (United Kingdom), Dr. Sara Gillgrass (United Kingdom), Mr. Bogdan-Petrin Ratu (United Kingdom), Dr. Nanhua Peng (United Kingdom), Dr. Mingchu Tang (United Kingdom), Prof. Huiyun Liu (United Kingdom), Dr. Samuel Shuttles (United Kingdom), Prof. Peter Smouwton (United Kingdom) (1. School of Physics and Astronomy, Cardiff University, 2. Surrey Ion Beam Centre, University of Surrey, 3. Department of Electrical Engineering, University College London) |
| 2pm     | **TuA3.3 - Cavity Quantum Electrodynamics based on Lifetime-Limited Emission in Hexagonal Boron Nitride**  
> Prof. Yanan Wang (United States), Mr. Sanchaya Pandit (United States) (1. University of Nebraska-Lincoln) |
| 1:30pm  | **Optical Communication: Devices, Interconnects and Subsystems VII - TuB3: Photonic Integrated Modulators**  
*Palm Event Center CD*  
Chair by: Prof. Xuhun Guo (China) and Dr. Yuqing Jiao (Netherlands) |
| 1:30pm  | **TuB3.1 - 152 Gbaud Transmission using Strong Ferroelectric Mach-Zehnder Interferometer Modulator**  
> Prof. Shiyoshi Yokoyama (Japan), Dr. Jiawei Mao (Japan), Mr. Futa Uemura (Japan), Dr. Hiromu Sato (Japan), Prof. Guo-Wei Lu (Japan) (1. Kyushu University) |
| 1:45pm  | **TuB3.2 - Effects of Junction Doping Profile on the Performance of Traveling-Wave Silicon Modulators**  
> Mr. Abdolkhaleg Mohammadi (Canada), Mr. Alireza Geravand (Canada), Prof. Leslie RUSCH (Canada), Prof. Wei Shi (Canada) (1. Centre d'optique, photonique et laser (COPL), Université Laval) |
| 2pm     | **TuB3.3 - A 160 Gb/s Two-Segment Silicon Microring Modulator with Z-Shape Doping Profile**  
> Dr. Yuan Yuan (United States), Dr. Yiwei Peng (United States), Dr. Wayne Sorin (United States), Dr. Stanley Cheung (United States), Dr. Zhihong Huang (United States), Dr. Di Liang (United States), Dr. Marco Fiorentino (United States), Dr. Raymond Beausoleil (United States) (1. Hewlett Packard Enterprise) |
| 2:15pm  | **TuB3.4 - 50Gb/s transmission in Short-Reach distance using Silicon Photonics Negative-Chirp SiGe EAM**  
> Dr. Yi-jen Chiu (Taiwan), Mr. Rih-You Chen (Taiwan), Ms. Ya-Han Chang (Taiwan) (1. National Sun Yat-sen University, 2. Department of Photonics, National Sun Yat-sen University, 3. Department of Photonics, National Sun Yat-sen University) |
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2:30pm  TuB3.5 - Variation-Aware Layout and Design Optimization of Silicon Photonic Mach-Zehnder Interferometers
» Mrs. Zahra Ghanaatian (United States)¹, Mr. Amin Shafiee (United States)¹, Prof. Mahdi Nikdast (United States)² (1. Department of Electrical and Computer Engineering, Colorado State University)

1:30pm  Optical Communication and Networks VI - TuC3: SDM and Multiband Transmission
Palm Event Center E
Chaired by: Prof. Jianping Yao (Canada)

1:30pm  TuC3.1 (Invited) - Physical-layer aware signal processing and control strategies for dynamic multi-band networks
» Prof. Alan Pak Tao Lau (Hong Kong)¹, Ms. Yan He (Hong Kong)¹, Dr. Liang Dou (China)², Dr. Zhiqun Zhai (China)², Dr. Zhuli Huang (China)², Prof. Chao Lu (Hong Kong)¹, Dr. Chongjin Xie (United States)² (1. Hong Kong Polytechnic University, 2. Alibaba Cloud)

2pm  TuC3.2 - Crosstalk suppression by mid-span isolators in bidirectional multi-core fiber transmission systems
» Dr. Werner Klaus (Japan)¹, Dr. Peter Winzer (United States)², Prof. Masanori Koshiba (Japan)² (1. National Institute of Information and Communications Technology, 2. Nubis Communications, 3. Hokkaido University)

2:15pm  TuC3.3 - Digital few-mode fiber multiplexer using multiplane light conversion
» Mr. Dennis Pohle (Germany)¹, Mr. Fabio A. Barbosa (United Kingdom)², Dr. Filipe M. Ferreira (United Kingdom)², Dr. Stefan Rothe (Germany)¹, Prof. Jürgen Czarske (Germany)¹ (1. Chair of Measurement and Sensor System Technique, Faculty of Electrical and Computer Engineering, TU Dresden, 2. Department of Electrical Engineering, University College London)

2:30pm  TuC3.4 - Statistical Dependence of Average Intercore Crosstalk on Random Loss in Long-haul Uncoupled MCF Links
» Prof. Joao Rebola (Portugal)¹, Prof. Adolfo V. T. Cartaxo (Portugal)¹ (1. Iscte - Instituto Universitário de Lisboa, Lisbon 1649-026, Portugal)

2:45pm  TuC3.5 - On the Degree of Polarization of the Intercore Crosstalk in Weakly-Coupled Multicore Fibers
» Prof. Tiago Alves (Portugal)¹, Prof. Joao Rebola (Portugal)¹, Prof. Adolfo Cartaxo (Portugal)¹ (1. Iscte - Instituto Universitário de Lisboa, Lisbon 1649-026, Portugal)

1:30pm  Light Sources V - TuD3: High Power Lasers
Palm Event Center FG
Chaired by: Prof. Amr Helmy (Canada) and Dr. Ying Xue (Hong Kong)

1:30pm  TuD3.1 - Slope Efficiency Suppression at High Current Densities in Broad Area AlGaAs Diode Lasers
» Dr. Robert Deri (United States)¹, Dr. William Fenwick (United States)¹, Dr. Jiang Li (United States)¹, Mr. David Pope (United States)¹, Mr. Matthew Boiselle (United States)¹, Mr. David Dutra (United States)¹, Dr. Mark Crowley (United States)¹, Dr. Prabhu Thiagarajan (United States)², Dr. Gerald Thaler (United States)² (1. Lawrence Livermore National Lab, 2. Leonardo Electronics US Inc.)

1:45pm  TuD3.2 (Invited) - Thermal lens engineering for high brightness edge emitters
» Dr. Mohammad Jareb Miah (Bangladesh)¹, Dr. Dominik Martin (Germany)¹, Mr. Arnim Ginolas (Germany)², Mr. Mohamed Elattar (Germany)¹, Dr. Pietro Della Casa (Germany)², Mr. Stefan Grützner (Germany)², Dr. Stephan Strohmeier (Germany)², Dr. Andrea Knigge (Germany)², Prof. Günter Trankle (Germany)², Dr. Paul Crump (Germany)² (1. Institute of Information and Communication Technology, Bangladesh University of Engineering and Technology, 1205 Dhaka, 2. Ferdinand-Braun-Institut gGmbH, Gustav-Kirchhoff-Str. 4, 12489 Berlin, 3. TRUMPF Laser GmbH, 78713 Schramberg)
Continued from Tuesday, 14 November

2:15pm

TuD3.3 - Determination of Laser Diode Nonradiative Carrier Lifetimes using Subthreshold Power-Current-Voltage Characteristics

» Dr. Robert Deri (United States), Dr. Elaine McVay (United States), Dr. William Fenwick (United States), Dr. Salmaan Baxamusa (United States), Dr. Jiang Li (United States), Dr. Noah Allen (United States), Dr. Daniel Mittelberger (United States), Ms. Rebecca Swertfeger (United States), Mr. Steve Telford (United States), Mr. Matthew Boiselle (United States), Mr. David Pope (United States), Mr. David Dutra (United States), Dr. Logan Martin (United States), Ms. Laina Gilmore (United States), Dr. Gerald Thaler (United States), Dr. Mark Crowley (United States), Dr. Prabhuram Thiagarajan (United States), Dr. Jyiong Song (United States) (1. Lawrence Livermore National Lab, 2. Leonardo Electronics US Inc.)

2:30pm

TuD3.4 (Invited) - Laser facet passivation technology for long-term reliability of high-power edge emitters: a critical comparison of hydrogen-clean and vacuum-cleave

» Dr. Jos Boschker (Germany), Dr. David Feise (Germany), Dr. Steffen Knigge (Germany), Dr. Andre Maasdorf (Germany), Dr. Anna Mogilatenko (Germany), Dr. Peter Ressell (Germany), Mr. Uwe Spengler (Germany), Dr. Andrea Knigge (Germany) (1. Ferdinand-Braun-Institut gGmbH, Leibniz-Institut für Höchstfrequenztechnik, Gustav-Kirchhoff-Str. 4, 12489 Berlin)

1:30pm

Materials, Foundries, and Fabrication IV -
TuE3: Novel Materials and Advanced Fabrication

Palm Event Center KL

Chaired by: Prof. Martin D. Dawson (United Kingdom) and Dr. Sarvagya Dwivedi (United States)

1:30pm

TuE3.1 - Enhancing Imaging Performance in Electrowetting Prism Scanners through Electrode Gap Reduction

» Mr. Eduardo Miscles (United States), Dr. Mo Zohrabi (United States), Dr. Juliet Gopinath (United States), Dr. Victor Bright (United States) (1. Mechanical Engineering, University of Colorado Boulder, 2. Electrical, Computer and Energy Engineering, University of Colorado Boulder)

1:45pm

TuE3.2 - Transfer-printing of GeSn membranes for broadband photodetection in the extended short-wave infrared

» Mr. Cédric Lemieux-Leduc (Canada), Dr. Mahmoud R. M. Atalla (Canada), Dr. Simone Assali (Canada), Dr. Patrick Daoost (Canada), Mr. Gérard Daligou (Canada), Mr. Julien Brodeur (Canada), Prof. Stéphane Kéna-Cohen (Canada), Prof. Yves-Alain Peter (Canada), Prof. Oussama Moutanabbir (Canada) (1. Polytechnique Montréal)

2pm

TuE3.3 - PZT micro-transfer printing for photonic MEMS

» Mr. Irfan Ansari (Belgium), Mr. Kobe De Geest (Belgium), Mr. Jasper De Witte (Belgium), Mr. Tom Vandekerckhove (Belgium), Dr. Hannes Rijckaert (Belgium), Mr. Ewout Picavet (Belgium), Mr. Enes Lievens (Belgium), Mr. Gilles F. Feutamba (Belgium), Ms. Tessa Van de Veire (Belgium), Prof. Bart Kuyken (Belgium), Prof. Jeroen Beeckman (Belgium), Prof. Dries Van Thourhout (Belgium) (1. Ghent University – IMEC, 2. Ghent University)

2:15pm

TuE3.4 - Inductively coupled plasma etching of orthorhombic gallium oxide films grown by mist chemical vapor deposition

» Ms. Yara Banda (Saudi Arabia), Mr. Seong-Ho Cho (Korea, Republic of), Mrs. Yanqing Jia (Saudi Arabia), Dr. Si-Young Bae (Korea, Republic of), Dr. Tien Khee Ng (Saudi Arabia), Prof. Boon S. Ooi (Saudi Arabia) (1. Photonics Laboratory, King Abdullah University of Science and Technology (KAUST), 2. Korean Institute of Ceramic Engineering and Technology (KICT), 3. King Abdullah University of Science and Technology, 4. KAUST)

2:30pm

TuE3.5 - Fabrication of stretchable PDMS filaments coupled to optical fibers for elongation monitoring

» Mr. Diego Ortega-Picazo (Mexico), Mr. Rodolfo Carrillo-Betancourt (Mexico), Dr. Juan Hernandez-Cordero (Mexico) (1. Universidad Nacional Autónoma de México)

1:30pm

Biophotonics and Medical Optics V -
TuF3: Resonance Based Methods

Palm Event Center MN

Chaired by: Prof. Peter Munro (United Kingdom) and Dr. Jamie Guggenheim (United Kingdom)
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<td>1:30pm</td>
<td><strong>TuF3.1 (Invited) - Ultra-fast Super-Wide-field Photoacoustic Microscopy of Tissue Functions</strong>&lt;br&gt;Chair by: Prof. Xiaoke Yi (Australia) and Justin Zobel (United States)</td>
<td>Prof. Junjie Yao (United States) (1. Duke University)</td>
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<td>2pm</td>
<td><strong>TuF3.2 - Increasing the sensitivity of Fabry-Perot ultrasound sensors by multi-channel averaging</strong>&lt;br&gt;Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)</td>
<td>Dr. Jamie Gregersen (United Kingdom), Dr. Nam Trung Huynh (United Kingdom), Dr. Edward Zhang (United Kingdom), Prof. Paul Beard (United Kingdom) (1. University of Birmingham, 2. University College London)</td>
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<td>2:15pm</td>
<td><strong>TuF3.3 - Design and Development of Planar Pressure Measurement Device Using Optical Sensor</strong>&lt;br&gt;Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)</td>
<td>Dr. Preeta Sharan (India), Mr. Anup Upadhyaya (India), Dr. Sandip Roy (United Arab Emirates), Dr. Debpryo Roy (United States) (1. The Oxford College of Engineering, 2. S P Jain school of global management, 3. Lead Data Scientist at Verizon)</td>
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<tr>
<td>2:30pm</td>
<td><strong>TuF3.4 - Automated photonic resonator absorption microscope for point of care biomarker detection</strong>&lt;br&gt;Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)</td>
<td>Mr. Weinan Liu (United States), Mrs. Ayupova Takhmina (United States), Ms. Weijing Wang (United States), Ms. Shepherd Skye (United States), Dr. Xiaoqing Wang (United States), Prof. Manish Kohli (United States), Prof. Utkan Demirci (United States), Prof. Brian Cunningham (United States) (1. University of Illinois Urbana-Champaign, 2. The University of Utah, 3. Stanford University)</td>
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<td>2:45pm</td>
<td><strong>TuF3.5 (BEST STUDENT PAPER FINALIST) - Photonic Crystal Enhanced Fluorescence with DNA-based Nano-gripper for Ultrasensitive SARS-CoV-2 Biosensing</strong>&lt;br&gt;Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)</td>
<td>Ms. Yanyu Xiong (United States), Dr. Lifeng Zou (China), Dr. Laura Cooper (United States), Ms. Shepherd Skye (United States), Dr. Tingjie Song (United States), Dr. Abhisek Dwivedy (United States), Prof. Lijun Rong (United States), Dr. Tong Wang (United States), Prof. Xing Wang (United States), Prof. Brian Cunningham (United States) (1. University of Illinois Urbana-Champaign, 2. Peking University, 3. University of Illinois Chicago, 4. City University of New York)</td>
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#### 1:30pm

- **TuG3.1 (Invited) - Microwave and Millimeter-Wave Photonic Imaging Systems**<br>Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)<br>Chair by: Prof. Xiaoke Yi (Australia) and Justin Zobel (United States)
  - Dr. Dennis Prather (United States), Dr. Christopher Schuetz (United States), Dr. Shouyuan Shi (United States), Mr. Charles Harrity (United States) (1. University of Delaware, 2. Phase Sensitive Innovations, Inc.)

#### 2pm

- **TuG3.2 - Using Free Space Optics for Beamsteering of 5G Metasurface Antenna**<br>Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)
  - Mr. Asif Bilal (Cyprus), Dr. Abdul Quddious (Germany), Dr. Marcos Antoniades (Canada), Prof. Atsushi Kanno (Japan), Dr. Pham Dat (Japan), Dr. Keizo Inagaki (Japan), Prof. Tetsuya Kawanishi (Japan), Prof. Stavros Iezerkiel (Cyprus) (1. University of Cyprus, 2. Technical University of Dresden, 3. Toronto Metropolitan University, 4. Nagoya Institute of Technology, 5. National Institute of Information and Communications Technology, 6. Waseda University)

#### 2:15pm

- **TuG3.3 - System Performance Analysis of a Photonics-based Wireless Signal Receiver for Terahertz Communication**<br>Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)
  - Mr. Kota Miyake (Japan), Dr. Takahiro Kaji (Japan), Prof. Atsushi Kanno (Japan), Dr. Isao Morohashi (Japan), Dr. Akira Otomo (Japan), Prof. Hiroki Kishikawa (Japan), Prof. Takeshi Yasui (Japan), Prof. Shintaro Hisatake (Japan) (1. Gifu University, 2. National Institute of Information and Communications Technology, 3. Nagoya Institute of Technology, 4. Tokushima University)

#### 2:30pm

- **TuG3.4 - Ultra-Wideband Microwave Photonic Spectrometer for Planetary Boundary Layer Sensing**<br>Chair by: Dr. Dennis Prather (United States) and Dr. Christopher Schuetz (United States)
  - Dr. Mehmet Ogut (United States), Dr. Shannon Brown (United States), Dr. Sidharth Misra (United States), Dr. Eric Kittlaus (United States), Dr. Pekka Kangaslahti (United States), Dr. Janusz Murakowski (United States), Dr. Michael Gehl (United States) (1. Jet Propulsion Laboratory, 2. Phase Sensitive Innovations, Inc., 3. Sandia National Laboratory)
### Wednesday, 15 November

#### 8:30am
**Quantum Photonics III** -

**WA1 - Hyper-Entanglement and Multiplexing Optical States**

*Palm Event Center AB*

Chaired by: Michael Fanto (United States)

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<tr>
<td>8:30a</td>
<td><strong>WA1.1 - (Invited) Entanglement and hyper-entanglement generation in periodically poled silica fibers</strong></td>
<td><em>Prof. Li Qian</em> (Canada)¹ (1. University of Toronto)</td>
</tr>
<tr>
<td>8:45a</td>
<td><strong>WA1.2 - The Potential for Span Length Increase with NANF</strong></td>
<td><em>Prof. PIERLUIGI POGGIOLINI</em> (Italy)¹, <em>Prof. Gabriella Bosco</em> (Italy)¹, <em>Dr. Yanchao Jiang</em> (Italy)¹, <em>Prof. Francesco Poletti</em> (United Kingdom)² (1. OptCom, DET, Politecnico di Torino, 10129, Torino, 2. Microsoft Azure Fiber)</td>
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</tbody>
</table>

#### 9am

**WA1.2 - Tomography of ultrabroadband polarization-frequency hyperentangled photons**

*Dr. Hsuan-Hao Lu* (United States)¹, Dr. Muneer Alshowkan (United States)², *Mr. Karthik Myilswamy* (United States)², *Prof. Andrew Weiner* (United States)³, *Dr. Joseph Lukens* (United States)¹, *Dr. Nicholas Peters* (United States)¹ (1. Oak Ridge National Laboratory, 2. Purdue University, 3. Arizona State University)

#### 9:15am

**WA1.3 - Procrustean entanglement concentration in dense wavelength-division multiplexing**

*Dr. Hsuan-Hao Lu* (United States)¹, Dr. Muneer Alshowkan (United States)², *Mr. Jude Alnas* (United States)², *Dr. Joseph Lukens* (United States)³, *Dr. Nicholas Peters* (United States)¹ (1. Oak Ridge National Laboratory, 2. Duke University, 3. Arizona State University)

#### 9:30am

**WA1.4 (Invited) - Certification of Non-Gaussian States using Double Homodyne Detection**

*Prof. Nicolas Treps* (France)³ (1. Sorbonne University)
### Continued from Wednesday, 15 November

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<th>Time</th>
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<tr>
<td>9am</td>
<td><strong>WB1.3 - Ultra-Long-Haul WDM PM-16QAM Transmission in a Reduced Inter-Modal Interference NANF</strong>&lt;br&gt;» Dr. Antonino Nespoli (Italy), Dr. Seyed Reza Sandoghchi (United Kingdom), Dr. Lucy Hooper (United Kingdom), Dr. Marcelo Alonso Gouveia (United Kingdom), Dr. Thomas D Bradley (United Kingdom), Dr. Hesham Sakr (United Kingdom), Dr. Gregory Jasion (United Kingdom), Dr. Eric Numkum Fokuoa (United Kingdom), Dr. Stefano Straullu (Italy)&lt;br&gt;Prof. Gabriella Bosco (Italy), Prof. Andrea Carena (Italy), Dr. Yanchao Jiang (Italy), Dr. Ann Margaret Rose Brusin (Italy), Dr. Yong Chen (United Kingdom), Dr. John R Hayes (United Kingdom), Dr. Fabrizio Forghieri (Italy), Prof. David J Richardson (United Kingdom), Prof. Francesco Poletti (United Kingdom), Prof. PIERLUIGI POGGIOLINI (Italy) (1. LINKS Foundation, 10129, Torino, 2. Microsoft Azure Fiber, 3. Optoelectronics Research Centre, University of Southampton, 4. OptCom, DET, Politecnico di Torino, 10129, Torino, 5. CISCO Photonics, Vimercate (MB).)</td>
</tr>
<tr>
<td>9:15am</td>
<td><strong>WB1.4 - Fiber Bragg Grating in Dual Ring Hollow-core Fiber</strong>&lt;br&gt;» Dr. Charu Goel (Singapore), Dr. Yuxi Wang (Singapore), Dr. Seongwoo You (United Kingdom), Dr. Wonkeun Chang (Singapore) (1. Nanyang Technological University, 2. University of Glasgow)</td>
</tr>
<tr>
<td>9:30am</td>
<td><strong>WB1.5 - Thermal Properties of a Hollow-Core Optical Fiber Spooled onto a Drum with Negative Coefficient of Thermal Expansion</strong>&lt;br&gt;» Ms. Irene Barbedo Edreira (United Kingdom), Dr. Meng Ding (United Kingdom), Mr. Bo Shi (United Kingdom), Dr. Zitong Feng (United Kingdom), Dr. Giuseppe Marra (United Kingdom), Dr. Ian Davidson (United Kingdom), Dr. Jaroslav Rzegocki (United Kingdom), Dr. Mohammad Mousavi (United Kingdom), Dr. Gregory Jasion (United Kingdom), Prof. Francesco Poletti (United Kingdom), Prof. Radan Slavik (United Kingdom) (1. University of Southampton, 2. National Physical Laboratory)</td>
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<tr>
<td>9:45am</td>
<td><strong>WB1.6 - Single-Mode Single-Polarization Hollow-Core Fiber Design at 2 μm</strong>&lt;br&gt;» Mr. Herschel Herring (United States), Mr. Md Selim Habib (United States) (1. Florida Polytechnic University, 2. Florida Institute of Technology)</td>
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<tr>
<td>8:30am</td>
<td><strong>Special Symposium on Advances in Neurophotonics I - WC1: Advances in Neurophotonics I</strong>&lt;br&gt;<em>Palm Event Center E</em>&lt;br&gt;Chaired by: Nisan Ozana (Israel)</td>
</tr>
<tr>
<td>8:30am</td>
<td><strong>WC1.1 (Tutorial) - Remote photonic sensing of brain activity</strong>&lt;br&gt;» Prof. Ze'ev Zalevsky (Israel) (1. Faculty of Engineering and the Nanotechnology Center, Bar-Ilan University, Ramat-Gan 52900, Israel)</td>
</tr>
<tr>
<td>9:30am</td>
<td><strong>WC1.2 (Invited) - Towards wearable blood flow measurements with Integrated Diffuse Speckle Contrast Spectroscopy</strong>&lt;br&gt;» Dr. Ashwin Parthasarathy (United States) (1. University of South Florida)</td>
</tr>
<tr>
<td>8:30am</td>
<td><strong>Detection, Sensing, and Energy V - WD1: Integrated Photodetection System</strong>&lt;br&gt;<em>Palm Event Center FG</em>&lt;br&gt;Chaired by: Dr. Sadhvikas Addamane (United States)</td>
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<tr>
<td>8:30am</td>
<td><strong>WD1.1 (Invited) - Integrated Optical Phased Arrays: AR Displays, 3D Printing, Biophotonics, and Beyond</strong>&lt;br&gt;» Prof. Jelena Notaros (United States) (1. Massachusetts Institute of Technology)</td>
</tr>
<tr>
<td>9am</td>
<td><strong>WD1.2 - SiN-based integrated optical phased array for 2D beam steering at 905nm</strong>&lt;br&gt;» Dr. Sylvain Guerber (France), Dr. Daivid Fowler (France), Mr. Jonathan Faugier-Tovar (France), Dr. Olivier Castany (France), Dr. Bertrand Szelag (France), Dr. Michel Krakowski (France) (1. CEA-LETI, 2. III-V lab)</td>
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<tr>
<td>9:15am</td>
<td><strong>WD1.3 - Machine Learning Aided Nondestructive IC Testing by THz Response</strong>&lt;br&gt;» Mr. Muhammad Mahmudul Hasan (United States), Prof. Nezhif Pala (United States), Prof. Michael Shur (United States) (1. Florida International University, 2. Renisselaer Polytechnic Institute)</td>
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<td>9:30am</td>
<td><strong>WE1.4 - Avalanche Photodiode with Multiple Multiplication-Layers and Flip-Chip Bonding Package for 4-D FMCW LiDAR Applications</strong></td>
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<td></td>
<td>» Mr. Yan-Chieh Chang (Taiwan), Mr. LIN YU SHIANG (Taiwan), Dr. Zohauddin Ahmad (Taiwan), Prof. Chia-Chien Wei (Taiwan), Prof. You-Chia Chang (Taiwan), Prof. Jin-Wei Shi (Taiwan) (1. National Central University, 2. National Sun Yat-Sen University, 3. National Yang-Ming Chiao-Tung University)</td>
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<td>9:45am</td>
<td><strong>WE1.5 - Entomological lidar: where lasers and insects meet</strong></td>
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<td>» Mr. Yi-yun Li (United States), Dr. Robert Brick (United States), Prof. Alexei Sokolov (United States), Prof. Marlan Scully (United States) (1. Institute for Quantum Science and Engineering, Department of Physics and Astronomy, Texas A&amp;M University, 2. Institute for Quantum Science and Engineering, Department of Physics and Astronomy, Texas A&amp;M University &amp; Department of Physics, Baylor University)</td>
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<tr>
<td>8:30am</td>
<td><strong>Materials, Foundries, and Fabrication V - WE1: Photonic Components for Silicon Photonics</strong></td>
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<td><em>Palm Event Center KL</em></td>
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<td>Chaired by: Prof. Andrea Melloni (Italy) and Dr. Wayesh Qarony (United States)</td>
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<td>8:30am</td>
<td><strong>WE1.1 - Power Efficiency of Multi-channel Silicon Modulators for Coherent Detection</strong></td>
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<td>» Mr. Arman Safarinejadian (Canada), Prof. Leslie RUSCH (Canada), Prof. Wei Shi (Canada), Prof. Ming Zeng (Canada) (1. Centre d'optique, photonique et laser (COPL), Université Laval)</td>
</tr>
<tr>
<td>8:45am</td>
<td><strong>WE1.2 - Bias-stable Sub-Volt Visible Electro-optic Modulator in Thin-Film Lithium Niobate</strong></td>
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<td>» Mr. Oguz Tolga Celik (United States), Ms. Nancy Yousry Ammar (United States), Mr. Hubert S. Stokowski (Poland), Mr. Taewon Park (United States), Prof. Amir Safavi-Naeini (United States) (1. Stanford University)</td>
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<tr>
<td>9am</td>
<td><strong>WE1.3 - Integrated Liquid-Crystal-Based Modulators: Packaging Processes and Evaluation Techniques</strong></td>
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<td>» Mr. Andres Garcia Coletto (United States), Ms. Milica Notaros (United States), Prof. Jelena Notaros (United States) (1. Massachusetts Institute of Technology)</td>
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<tr>
<td>9:15am</td>
<td><strong>WE1.4 - Hybrid III-V/Si high-confinement lateral-current injection optical waveguide in Si photonics</strong></td>
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<td>» Dr. Yi-chen Chiu (Taiwan), Mr. Chih-min Liao (Taiwan) (1. National Sun Yat-sen University, 2. National Sun Yat-Sen University)</td>
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<td>9:30am</td>
<td><strong>WE1.5 - Liquid crystal-based electrically controlled polarization beam splitter for controlling the logic gate operations</strong></td>
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<td>» Mr. Vaibhav Sharma (India), Prof. Aloka Sinha (India) (1. Indian Institute of Technology Delhi)</td>
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<tr>
<td>9:45am</td>
<td><strong>WE1.6 - Refractive Index Modification in Thin Film Barium Titanate-on-Insulator and Dry Etch Free Fabrication of Waveguide Devices</strong></td>
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<td>» Dr. Yu Cao (Singapore), Mr. Hong-Lin Lin (Singapore), Dr. Haidong Liang (Singapore), Prof. Andrew Bettiol (Singapore), Prof. Elhadj Dogheche (France), Prof. Aaron Danner (Singapore) (1. National University of Singapore, 2. Université Polytechnique Hauts-de-France)</td>
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<tr>
<td>8:30am</td>
<td><strong>Nano Photonics, Plasmonics and Metamaterials V - WF1: Topological Control of Nanostructures and their Application</strong></td>
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<td><em>Palm Event Center MN</em></td>
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<td>Chaired by: Jennifer Choy (United States)</td>
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<td>8:30am</td>
<td><strong>WF1.2 - Inverse Engineering of Absorption and Scattering in Nanoparticles: A Machine Learning Approach</strong></td>
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<td>» Mr. Alex Vallone (United States), Dr. Nooshin M. Estakhri (United States), Prof. Nasim Mohammadi Estakhri (United States) (1. Chapman University, 2. Virginia Tech)</td>
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<td>8:45am</td>
<td><strong>WF1.3 - Unitary Control of Optical Absorption and Emission</strong></td>
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<td>» Dr. Cheng Guo (United States), Prof. Shanhui Fan (United States) (1. Stanford University)</td>
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### 9am
**WF1.4 - Resonance properties of simple and topological optical lattice slabs**
- Prof. Yeong Hwan Ko (United States)
- Prof. Ivan Richer (Czech Republic)
- Prof. Robert Magnusson (United States)
  (1. University of Texas at Arlington, 2. Czech Technical University in Prague)

### 8:30am
**Nonlinear Photonics and Novel Optical Phenomena IV - WG1: Novel Phenomena I**
*Palm Event Center O*
Chaired by: Dr. Birgit Stiller (Germany) and Alireza Marandi (United States)

### 8:30am
**WG1.1 (Tutorial) - Optical thermodynamics of highly multimode nonlinear photonic systems**
- Dr. Demetrios Christodoulides (United States)
  (1. University of Southern California)

### 9:15am
**WG1.2 - Synchronization of forced pulses in an array of semiconductor lasers subject to optical feedback**
- Dr. Olivier Spitz (United States), Dr. Suyesh Koyu (United States), Dr. Mark Berrill (United States), Dr. Yehuda Braiman (United States)
  (1. College of Optics and Photonics, University of Central Florida, 2. Oak Ridge National Laboratory)

### 9:30am
**WG1.3 (Invited) - Landau levels of light in a 2D photonic crystal**
- Prof. Mikael Rechtsman (United States)
  (1. Pennsylvania State University)

### 8:30am
**WH1: PHOTONICS INDUSTRY FOCUS: Photonic Products Showcase**
*Palm Event Center P*
Chaired by: Daniel Renner (United States)

### 10am
**Coffee Break & Exhibits**
*Palm Event Center*

### 10:30am
**Quantum Photonics IV - WA2: Integrated Quantum Photonics**
*Palm Event Center AB*
Chaired by: Michael Fanto (United States) and Sarah Sharif (United States)

### 10:30am
**WA2.1 (Tutorial) - VLSI Fabricated Quantum Photonic Integrated Circuits**
- Prof. Matt Eichenfield (United States)
  (1. University of Arizona and Sandia National Labs)

### 11:15am
**WA2.2 (Invited) - Scalable semiconductor quantum photonic technologies**
- Prof. Jelena Vuckovic (United States), Mr. Daniil Lukin (United States)
  (1. Stanford University)

### 11:45am
**WA2.3 - All-silicon quantum light source by embedding a single color center in a nanophotonic cavity**
- Dr. Wayesh Qarony (United States), Dr. Walid Redjem (United States), Mr. Yertay Zhiyenbayev (United States), Dr. Vsevolod Ivanov (United States), Mr. Christos Papapanos (United States), Dr. Wei Liu (United States), Dr. Kaushalya Jhuria (United States), Prof. Z. Y. Al Balushi (United States), Mr. Scott Dhuey (United States), Dr. Adam Schwartzberg (United States), Dr. Liang Tan (United States), Dr. Thomas Schenkel (United States), Prof. Boubacar Kante (United States)

### 12pm
**WA2.4 - Towards Single-Pixel Quantum Thermal Imaging**
- Mr. Haechan Aq (United States), Mr. Hamza Ather (United States), Prof. Ali Shakouri (United States), Prof. Mahdi Hosseini (United States)
  (1. Purdue University, 2. Northwestern University)

### 10:30am
**Optical Communication: Devices, Interconnects and Subsystems IX - WB2: Photonic Integrated Couplers and Switches**
*Palm Event Center CD*
Chaired by: Prof. Haoshuo Chen (United States) and Dr. Giovanni Milione (United States)
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<td>10:30am</td>
<td><strong>WB2.1 - Passive Alignment of Fiber Array to InP Photonic Integrated Circuit using Suspended Waveguides</strong>&lt;br&gt;Ms. Wenjing Tian (Netherlands)(^1), Eindhoven Hendrik Casimir Institute, Eindhoven University of Technology</td>
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<tr>
<td>10:45am</td>
<td><strong>WB2.2 - Asymmetric Metasurface Couplers for Silicon Photonic Integrated Circuits</strong>&lt;br&gt;Dr. Sang Yeon Cho (United States)(^1), Dr. Weimin Zhou (United States)(^2), Dr. Justin Bickford (United States)(^1) (1. U.S. Army Research Laboratory)</td>
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<tr>
<td>11am</td>
<td><strong>WB2.3 - Bandwidth-Adaptive Single- and Double-Channel Silicon Photon Contra-Directional Couplers</strong>&lt;br&gt;Mr. Mohammad Amin Mahdian (United States)(^1), Mr. Lorenzo Tunesi (Italy)(^1), Prof. Paolo Bardella (Italy)(^1), Prof. Mahdi Nikdast (United States)(^1) (1. Department of Electrical and Computer Engineering, Colorado State University, 2. Department of Electronics and Communications, Politecnico di Torino)</td>
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<tr>
<td>11:15am</td>
<td><strong>WB2.4 - Proposal of Dual-Mode Adiabatic 3-dB Coupler via Shortcuts to Adiabaticity at Wavelength 2.1 μm</strong>&lt;br&gt;Mr. Taichi Muratsubaki (Japan)(^1), Prof. Takeda Fujisawa (Japan)(^1), Prof. Takanori Sato (Japan)(^1), Prof. Kunimasa Saitoh (Japan)(^1) (1. Hokkaido University)</td>
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<tr>
<td>11:30am</td>
<td><strong>WB2.5 - Remotely Controllable All-Optical MZI-based Thermo-Optic Switch</strong>&lt;br&gt;Dr. Zhu Liang (Japan)(^1), Prof. Yuya Shoji (Japan)(^1) (1. Department of Electrical and Electronic Engineering, School of Engineering, Tokyo Institute of Technology, 2. Department of Electrical and Electronic Engineering, School of Engineering, Tokyo Institute of Technology &amp; Laboratory for Future Interdisciplinary Research of Science and Technology, Tokyo Institute of Technology)</td>
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<tr>
<td>10:30am</td>
<td><strong>WC2.1 (Invited) - Advanced approaches to cerebral blood flow monitoring with diffuse correlation spectroscopy</strong>&lt;br&gt;Dr. Mitchell Robinson (United States)(^1), Dr. Marco Renna (United States)(^2), Dr. Zachary Starkweather (United States)(^3), Mr. Tom Cheng (United States)(^4), Dr. Jonathan Richardson (United States)(^5), Dr. Stefan Carp (United States)(^6), Dr. Maria Angela Franceschini (United States)(^1) (1. Massachusetts General Hospital, 2. Boston University, 3. MIT Lincoln Lab)</td>
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<tr>
<td>11am</td>
<td><strong>WC2.2 (Invited) - Development and demonstration of cutting-edge technologies for time-domain diffuse optics</strong>&lt;br&gt;Dr. Laura Di Sieno (Italy)(^1) (1. Politecnico di Milano)</td>
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<td>11:30am</td>
<td><strong>WC2.3 (Invited) - Imaging through scattering tissue based on NIR Multispectral Image Fusion technique.</strong>&lt;br&gt;Dr. Amir Shemer (Israel)(^1) (1. Jerusalem College of Engineering)</td>
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<td>10:30am</td>
<td><strong>Detection, Sensing, and Energy VI - WD2: Advances in Photodetection I</strong>&lt;br&gt;<em>Palm Event Center FG</em>&lt;br&gt;Chaired by: Prof. Andreas Beling (United States) and Prof. Jelena Notaros (United States)</td>
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<tr>
<td>10:30am</td>
<td><strong>WD2.1 - Improvement of Thermal Dissipation of High-Power Photodiodes</strong>&lt;br&gt;Mr. Junwu Bai (United States)(^1), Dr. Yang Shen (United States)(^2), Dr. Peng Yao (United States)(^1), Dr. Dekang Chen (United States)(^1), Dr. Matthew Konkol (United States)(^1), Ms. Xiangwen Guo (United States)(^1), Mr. Bingtian Guo (United States)(^1), Dr. Victoria Carey (United States)(^1), Dr. Joe Campbell (United States)(^1), Dr. Dennis Prather (United States)(^1) (1. University of Virginia, 2. Phase Sensitive Innovations, Inc.)</td>
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<tr>
<td>10:45am</td>
<td><strong>WD2.2 - Saturation effects in heterogeneously integrated high-speed photodiodes on thin-film lithium niobate</strong>&lt;br&gt;Ms. Xiangwen Guo (United States)(^1), Dr. Lingyan He (United States)(^1), Dr. Mian Zhang (United States)(^2), Prof. Andreas Beling (United States)(^1) (1. University of Virginia, 2. Hyperlight Corporation)</td>
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</table>
11am  WE2.3 - Analysis of Silicon Nitride Trampoline Resonators for Ultrasensitive Infrared Detection  
» Mr. Yuncong Liu (United States)¹, Mr. Connor Watkins (United States)¹, Dr. Philip Feng (United States)¹ (1. University of Florida)

11:15am  WE2.5 - Self-Powered Flexible Broadband Photodetector Enabling Detection Across Visible to Near Infrared Wavelengths  
» Mr. Saleem Althaleb (United States)¹, Mr. Jiachi Ye (United States)¹, Dr. Haoyan Kang (United States)¹, Dr. Chaobong Dong (United States)², Dr. Chandraman Patil (United States)³, Prof. Hamed Dalir (United States)³, Prof. Volker Sorg (United States)³, Prof. Hao Wang (United States)³ (1. University of Florida; 2. George Washington University)

10:30am  Optical AI and Computational Photonics IV - WE2: Photonic Reservoir Computing and Processors  
_Palm Event Center KL_  
Chaired by: Prof. Volker Sorg (United States) and Prof. Nicola Peserico (United States)

10:30am  WE2.1 - Photonic VCSEL-based RC for Classification of RADAR Signals  
» Dr. Joshua Robertson (United Kingdom)¹, Mr. Matej Hejda (United Kingdom)¹, Mr. Dafydd Owen-Newn (United Kingdom)¹, Dr. Carmine Clemente (United Kingdom)¹, Dr. Antonio Hurtado (United Kingdom)¹ (1. University of Strathclyde)

10:45am  WE2.2 - Classification and Demultiplexing of OAM-coded signal via Fourier optical convolutional neural network  
» Mr. Jiachi Ye (United States)¹, Dr. Haoyan Kang (United States)¹, Dr. Hao Wang (United States)¹, Mr. Saleem Althaleb (United States)¹, Prof. Elham Heidari (United States)¹, Prof. Navid Asadizanjani (United States)¹, Prof. Volker Sorg (United States)¹, Prof. Hamed Dalir (United States)¹ (1. University of Florida)

11am  WE2.4 - Application-Specific Photonic Integrated Chip for Partial Differential Equations  
» Mr. Chen Shen (United States)¹, Mr. Belal Jahannia (United States)², Mr. Behrouz Movahhed Nouri (United States)³, Prof. Hamed Dalir (United States)³, Prof. Nicola Peserico (United States)², Prof. Volker Sorg (United States)³ (1. George Washington University; 2. University of Florida)

11:30am  WE2.6 (Invited) - Photonic-Electronic Ultra-Broadband Signal Processing: Concepts and Technologies  
» Prof. Christian Koons (United States)¹ (1. Karlsruhe Institute of Technology (KIT))

10:30am  Nano Photonics, Plasmonics and Metamaterials VI - WF2: Color and Polarization Control in Nanostructures  
_Palm Event Center MN_  
Chaired by: Prof. Mengjie Yu (United States) and Jennifer Choy (United States)

10:30am  WF2.1 (Invited) - Ultra-Broadband Reflection Suppression by multi-layer resonant metasurfaces  
» Prof. Jacob Scheuer (Israel)¹, Mr. Dotan Arad (Israel)¹ (1. Tel-Aviv University)

11am  WF2.2 - Reflective Color Filter Using Series Connection of Semiconductors in Asymmetric Fabry-Perot Nanocavity  
» Mr. Kirtan Dixit (United States)¹, Mr. Zachary Houtman (United States)¹, Dr. Don Gregory (United States)¹ (1. University of Alabama in Huntsville)
10:30am  WH2: PHOTONICS INDUSTRY FOCUS: Entrepreneurship – Best Practices
Palm Event Center P
Chaired by: Dalma Novak (United States)

10:30am  WH2.1 (Invited) - What they don't teach you in start-up school: Mistakes, misunderstandings and the scramble for survival
» Dr. Simon Poole (Australia)¹ (1. The Australian National Fabrication Facility (ANFF), and Recipient of the Industry Achievement Award)

11am  WH2.2 (Invited) - The Photonics industry in Brazil and promoting entrepreneurship in Photonics within academia
» Prof. Newton Frateschi (Brazil)¹ (1. University of Campinas)

11:30am  WH2.3 (Invited) - VIGO Photonics - Dream of a man of science that come true to support society with multiple innovations.
» Mr. Adam Piotrowski (Poland)¹ (1. VIGO Photonics)

12pm  PHOTONICS INDUSTRY FOCUS: Young Professionals Luncheon
Meyer

12pm  Lunch Break (on own)

1:30pm  Biophotonics and Medical Optics VI - WB3: Characterization of Tissues and Cells
Palm Event Center CD
Chaired by: Prof. Yang Liu (United States) and Dr. Jamie Guggenheim (United Kingdom)

1:30pm  WB3.1 (Invited) - Advances in optical coherence elastography for cell mechanics
» Dr. Brendan Kennedy (Australia)¹ (1. University of Western Australia)
Continued from Wednesday, 15 November

2pm
**WB3.2 - Continuous Blood Lactate and Potassium Monitoring via Intravascular Catheter Fiber Optic Sensors**
- Dr. Lawrence Renna (United States)
- Mr. Narciso Guzman (United States)
- Ms. Emily Vu (United States)
- Dr. George Harea (United States)
- Dr. Gerardo Ico (United States)
- Dr. Teryn Roberts (United States)
- Dr. Andry Batchinsky (United States)

2:15pm
**WB3.3 - Myocardial tissue characterization using Mueller matrix-based optical system**
- Ms. Twinkle Bagha (India)
- Ms. Seema Patel (India)
- Ms. Poojasree M (India)
- Dr. Prasanna Simha Mohan Rao (India)
- Prof. Hardik J. Pandya (India)
- (1. Indian Institute of Science, 2. Sri Jayadeva Institute of Cardiovascular Sciences and Research)

2:30pm
**WB3.4 - Highly Sensitive PCF-SPR Biosensor for Glioblastoma Brain Cancer Detection**
- Prof. MUHAMMAD REZAUL HOQUE KHAN (Bangladesh)
- Mr. Atiqul Alam Chowdhury (Bangladesh)
- Prof. Mohammad Rakibul Islam (Bangladesh)
- Mr. Mirza Muntasir Nishat (Bangladesh)
- Mr. Obydullah NA (Bangladesh)
- Mr. Md Sanowar Hosen (Bangladesh)
- (1. Islamic University of Technology, 2. Daffodil International University)

1:30pm
**Microwave Photonics and Vehicular Optics IV - WC3: Photonic Signal Processing**
- Palm Event Center E
- Chaired by: Siva Yegnanarayanan (United States) and Prof. Xiaoke Yi (Australia)

1:30pm
**WC3.1 (Invited) - Mobile Fronthaul Networks: Approaches and Challenges**
- Prof. Aampalanapalli Rirmalathas (Australia)
- Mr. Yijie Tao (Australia)
- Dr. Tingting Song (Australia)
- Prof. Christina Lim (Australia)
- Dr. Chathurika Ranaweera (Australia)
- Dr. Sampath Edirisinghe (Sri Lanka)
- Dr. Yu Tian (Australia)
- (1. University of Melbourne, 2. Deakin University, 3. University of Sri Jayawardene pura)

1:30pm**
WC3.2 - Reconfigurable Microwave Photonic Filter with Linear Amplitude Response Based on Quantum Dash Mode-Locked Laser for Instantaneous Frequency Measurement**
- Mr. Yuxuan Xie (Canada)
- Mr. Mostafa Khalil (Canada)
- Mr. Jiaren Liu (Canada)
- Mr. Zhengu Lu (Canada)
- Mr. Philip Poole (Canada)
- Prof. Lawrence Chen (Canada)
- (1. McGill University, 2. National Research Council Canada)

2:15pm
**WC3.3 - A 16-32GHz RF Silicon Photonic Receiver with 22nm FD-SOI CMOS Driver**
- Mr. Yu-Lun Luo (United States)
- Mr. Dharma Paladugu (United States)
- Mr. Ramy Rady (United States)
- Dr. Entesari Kamran (United States)
- Prof. Samuel Palermo (United States)
- (1. Texas A&M University)

2:30pm
**WC3.4 - Broadband Electro-Optic Comb Generation using a Stable and Low Noise Photonically Filtered Optoelectronic Oscillator**
- Mr. Lawrence Trask (United States)
- Mr. Srinivas Varma Pericherla (United States)
- Dr. Chinnay Shirpurkar (United States)
- Prof. Peter Delfyett (United States)
- (1. University of Central Florida)

2:45pm
**WC3.5 - Self-referenced Full-field Acquisition of Optical Signals Via a Real-time Photonics Spectrometer**
- Mr. Benjamin Crockett (Canada)
- Mr. Connor Rowe (Canada)
- Prof. José Azaña (Canada)
- (1. Institut national de la recherche scientifique)

1:30pm
**Detection, Sensing, and Energy VII - WD3: Advances in Photodetection II**
- Palm Event Center FG
- Chaired by: Prof. Andreas Beling (United States) and Dr. Sadhvikas Addamane (United States)

1:30pm
**WD3.1 - Enhancing THz Chemical Sensing with Elliptical Cladding Elements in Negative Curvature Fibers**
- Mr. Ethan Howard (United States)
- Ms. Julia Ward (United States)
- Mr. Bradley King (United States)
- Prof. Ahmet Akosman (United States)
- (1. Roger Williams University)
### WE3.2 - Second-order optical nonlinealities in ferroelectric ScAlN for quantum photonics
- Mr. Jiangnan Liu (United States)¹, Mr. Pierre-Luc Thériault (Canada)², Dr. Shuai Liu (United States)¹, Dr. Ding Wang (United States)¹, Mr. Wade Wu (United States)¹, Ms. Qiannan Wen (United States)¹, Prof. Zheshen Zhang (United States)¹, Dr. Moe Soltani (United States)², Prof. Mackillo Kira (United States)², Prof. Stéphane Kéna-Cohen (Canada)², Prof. Zetian Mi (United States)¹ (1. University of Michigan, 2. École Polytechnique de Montréal, 3. Raytheon BBN Technologies)

### WE3.3 (Invited) - The Berkeley Surface Emitting Laser (BerkSEL): a scale-invariant laser?
- Prof. Boubacar Kanté (United States)¹ (1. University of California Berkeley)

### WE3.4 - Mid-infrared All-ZBLAN Optical Fiber Couplers
- Mr. Gebrehiwot Tesfay Zeweldi (Canada)¹, Mr. Yi Fan Li (Canada)¹, Mr. Mathieu Laparé (Canada)¹, Mr. Joshua Xu (Canada)¹, Mr. Juan Cheng Li (Canada)¹, Mr. Moshen Rezaei (Canada)¹, Mr. Hosne Mobarak Shamin (Canada)¹, Prof. Martin Rochette (Canada)¹ (1. McGill University)

### Nano Photonics, Plasmonics and Metamaterials VII - WF3: Integrated Photonics for On-chip Modulation
- Chaired by: Dr. Biqin Huang (United States)

### WF3.1 (Invited) - Integrated lithium niobate microwave photonics
- Dr. Cheng Wang (Hong Kong)¹ (1. City University of Hong Kong)

### WF3.2 (Invited) - Ultrafast Photonics on Thin Film Lithium Niobate
- Prof. Mengjie Yu (United States)¹ (1. University of Southern California)

### WF3.3 - ITO-based Spatial Light Modulators for Potential Integration with VCSELs and Photonic Integrated Circuits
- Prof. Hao Wang (United States)¹, Dr. Martin Thomaschewski (United States)¹, Mr. Jiachi Ye (United States)¹, Dr. Haoyan Kang (United States)¹, Dr. Yaliang Gui (United States)¹, Dr. Chaobo Dong (United States)¹, Dr. Chandraman Patil (United States)¹, Prof. Elham Heidari (United States)¹, Prof. Volker Sorger (United States)¹, Prof. Hamed Dalir (United States)¹ (1. University of Florida, 2. George Washington University)
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<tr>
<td>2:45pm</td>
<td><strong>WF3.4 - VO2-based All-optical Reflection Modulator for 2μm Wave Band</strong></td>
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<td>» Mr. Asif Hossain Bhuiyan (Bangladesh)(^1), Ms. Shamima Akter Mitu (United States)(^2), Dr. Sajid Muhaimin Choudhury (Bangladesh)(^3) (T. Brac University, Dhaka, 2, Northwestern University, 3, Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology, Dhaka 1205)(^4)</td>
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<td>1:30pm</td>
<td><strong>Light Sources VI -</strong></td>
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<td><strong>WG3: Optimizing at Extreme Wavelengths (UV, QCL, MIR)</strong></td>
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<td>Chaired by: Dr. Di Liang (United States) and Prof. Boon S. Ooi (Saudi Arabia)</td>
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<td>1:30pm</td>
<td><strong>WG3.1 - Improved Current Injection for Resonant Leaky-Wave Coupled Arrays of Mid-Infrared Quantum Cascade Lasers</strong></td>
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<td>» Mr. Shuai Zhang (United States)(^1), Dr. Jae Ha Ryu (United States)(^2), Dr. Jeremy Kirch (United States)(^3), Prof. Dan Botez (United States)(^4), Prof. Luke Mawst (United States)(^5), Mr. Tom Earles (United States)(^6), Mr. Steven Ruder (United States)(^7) (1. University of Wisconsin, Madison, 2. DRS Daylight Solutions)</td>
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<td>1:45pm</td>
<td><strong>WG3.2 - Active-Region Design of Mid-Infrared Quantum Cascade Lasers via Machine Learning</strong></td>
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<td>» Mr. Yunhan Hu (United States)(^1), Mr. Suraj Suri (United States)(^2), Dr. Jeremy Kirch (United States)(^3), Dr. Benjamin Knipfer (United States)(^4), Dr. Steve Jacobs (United States)(^5), Mr. Sreenivas Nair (United States)(^6), Mr. Ziyu Zhou (United States)(^7), Prof. Zongfu Yu (United States)(^8), Prof. Dan Botez (United States)(^9), Prof. Luke Mawst (United States)(^10) (1. University of Wisconsin, Madison, 2. Intraband LLC)</td>
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<td>2pm</td>
<td><strong>WG3.3 - Development of novel far-UVC light source for high germicidal effects and low human health risk.</strong></td>
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<td>» Mr. Koichi Shinoda (Japan)(^1), Dr. Thi Kim Nguyen Bui (Japan)(^2), Dr. Kazuaki Mawatari (Japan)(^3), Mr. Hitoshi Hirakawa (Japan)(^4), Mr. Kenji Awamoto (Japan)(^5), Mr. Masayuki Wakitani (Japan)(^6), Dr. Tsutae Shinoda (Japan)(^7), Prof. Akira Takahashi (Japan)(^8) (1. Tokushima University, 2. Shikoh Tech Co., Ltd.)</td>
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**2:15pm**

**WG3.4 - All-fiber erbium-doped ZBLAN ring cavity laser**

» Mr. Nasrollah Karampour (Canada)\(^1\), Mr. Gebrehiwot Tesfay Zeweldi (Canada)\(^2\), Prof. Martin Rochette (Canada)\(^3\) (1. McGill University)

**2:30pm**

**WG3.5 - Micro ring-structured deep ultraviolet LEDs with enhanced light extraction efficiency**

» Mr. Muhammad Hunain Memon (China)\(^1\), Mr. Huabin Yu (China)\(^2\), Mr. Hongfeng Jia (China)\(^3\), Ms. Shudan Xiao (China)\(^4\), Prof. Haiding Sun (China)\(^5\) (1. University of Science and Technology of China, 2. School of Microelectronics, University of Science and Technology of China, Hefei, Anhui, 230026, China)

**2:45pm**

**WG3.6 - Multi-Mode Interference Reflector for Integrated Photonics**

» Dr. Fwoziah Albeladi (United Kingdom)\(^1\), Dr. Sara Gillgrass (United Kingdom)\(^2\), Ms. Josie Travers-Nabialek (United Kingdom)\(^3\), Dr. Richard Forrest (United Kingdom)\(^4\), Dr. Pawan Mishra (United Kingdom)\(^5\), Mr. Tahani Albeladi (United Kingdom)\(^6\), Dr. Craig Alford (United Kingdom)\(^7\), Dr. Samuel Shutts (United Kingdom)\(^8\), Prof. Peter Smowton (United Kingdom)\(^9\) (1. School of Physics and Astronomy, Cardiff University)

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<tr>
<td>3pm</td>
<td><strong>Coffee Break &amp; Exhibits</strong></td>
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<td><strong>Palm Event Center</strong></td>
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<td>3:30pm</td>
<td><strong>WI4: Plenary Session &amp; IEEE Photonics Society Awards Recipients</strong></td>
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<td><strong>Citron East/West</strong></td>
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<td>Chaired by: Dominique Dagenais (United States)</td>
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<td>3:30pm</td>
<td><strong>WI4.1 (Plenary) - Nanophotonic Biosensors for Ultrasensitive and Decentralised Diagnostics at the Point-of-Need</strong></td>
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<td>» Prof. Laura Lechuga (Spain)(^1) (1. Professor, Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC, BIST and CIBER-BBN)</td>
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<td>4:30pm</td>
<td><strong>WI4.2 (Plenary) Full-stack Design of Scalable Quantum Links</strong></td>
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<td>» Prof. Dirk Englund (United States)(^1) (1. Professor, Quantum Photonics Laboratory, Massachusetts Institute of Technology)</td>
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<td>5:30pm</td>
<td><strong>PHOTONICS INDUSTRY FOCUS: Industry Reception and CREOL Lab Tours</strong></td>
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<td>CREOL, The College of Optics and Photonics at UCF</td>
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### Thursday, 16 November

#### 8:30am
**ThA1: Advanced Imaging Techniques**  
*Palm Event Center AB*  
Chaired by: Prof. Kebin Shi (China)

- **ThA1.1 (Invited) - Single objective light sheet imaging by using axial-to-lateral signal mapping**  
  - **Prof. Kebin Shi** (China)¹ (1. Peking University)

- **ThA1.2 - Selection of Illumination Angles for Object Rotation and Illumination Scanning Configurations in Optical Diffraction Tomography**  
  - **Mr. John Aziz** (United States)¹, **Dr. Seth Smith-Dryden** (United States)², **Prof. Bahaa Saleh** (United States)³, **Dr. Guifang Li** (United States)⁴  
  - **1. CREOL, The College of Optics and Photonics, University of Central Florida, Orlando, FL 32816, USA. 2. CREOL, The college of Optics and Photonics, University of Central Florida, 4304 Scorpius Street, 32816, Orlando, USA. 3. University of Central Florida**

#### 9am
**ThA1.3 - Deeply subwavelength terahertz solid immersion microscopy using rutile optics.**  
- **Mr. Vladislav Zhelnov** (Russian Federation)¹, **Dr. Nikita Chernomyrdin** (Russian Federation)¹, **Dr. Gleb Katyba** (Russian Federation)², **Prof. Maksim Skorobogaty** (Canada)³, **Dr. Kirill Zaytsev** (Russian Federation)⁴  
  - **1. Prokhorov General Physics Institute, 2. Ospyan Institute of Solid State Physics, 3. Polytechnique Montréal**

#### 9:15am
**ThA1.4 - Characterising optical randomness of the surface and bulk in multiply scattering media**  
- **Mr. Shubham Dawda** (United States)¹, **Dr. Aristide Dogariu** (United States)²  
  - **1. University of Central Florida**

#### 9:45am
**ThA1.5 - Ultrafast Visible Light Imaging: 100 Gigavoxels/sec Time-Stretch 4D-Optical Coherence Tomography**  
- **Prof. Hossein Asghari** (United States)¹ (1. Loyola Marymount University)

### 8:30am
**Light Sources VII - ThB1: Communication and Comb Sources**  
*Palm Event Center CD*  
Chaired by: Md. Jarez Miah (Bangladesh) and Prof. Peter Smowton (United Kingdom)

- **ThB1.1 - 40-nm widely tunable laser with Mach-Zehnder interferometer based intra-cavity filter**  
  - **Mrs. Tasfia Kabir** (Netherlands)¹, **Mr. Stefano Tondini** (Netherlands)², **Prof. Martijn Heck** (Netherlands)³  
    - **1. Eindhoven University of Technology**

- **ThB1.2 - Active and passive mode-locking of a laser using a graphene modulator on an SOI chip**  
  - **Mr. Tom Reep** (Belgium)¹, **Mr. Cheng-Han Wu** (Belgium)², **Dr. Steven Brems** (Belgium)³, **Dr. Didit Yudianta** (Belgium)⁴, **Dr. Joris Van Campenhout** (Belgium)⁵, **Dr. Marianna Pantouvaki** (Belgium)⁶, **Prof. Dries Van Thourhout** (Belgium)⁷, **Prof. Bart Kuyken** (Belgium)⁸  
    - **1. UGent – IMEC, 2. IMEC, 3. University Gent-imec**

#### 8:45am
**ThB1.3 - Low Phase Noise InP-SiN Hybrid Mode-Locked Laser working at 3.64 GHz**  
- **Dr. François DUPORT** (France)¹, **Dr. Sylvain Boust** (France)², **Dr. Yasmine Ibrahim** (France)³, **Dr. Ghaya Baili** (France)⁴, **Dr. Guenole Dande** (France)⁵, **Dr. Stéphanie Garcia** (France)⁶, **Dr. Quentin Wilmart** (France)⁷, **Dr. Alexandre Garreau** (France)⁸, **Mr. Jean-François Paret** (France)⁹, **Ms. Catherine Fortin** (France)¹⁰, **Mr. Karim Mekhazni** (France)¹¹, **Mr. Harry Gariah** (France)¹², **Mr. Philippe Charbonnier** (France)¹³, **Dr. Fabrice Blache** (France)¹⁴, **Dr. Frédéric van Dijk** (France)¹⁵  
  - **1. III-V lab, 2. Thales Research and Technology, 3. CEA-LETI**

#### 9am
**ThB1.4 - Broadband Quantum-Dot Frequency-Modulated Comb Laser Induced by Kerr Nonlinearity**  
- **Dr. Bozhang Dong** (United States)¹, **Mr. Mario Dumont** (United States)², **Dr. Osama Terra** (United States)³, **Dr. Heming Wang** (United States)⁴, **Mr. Andrew Netherton** (United States)⁵, **Prof. John Bowers** (United States)⁶  
  - **1. University of California Santa Barbara**
Continued from Thursday, 16 November

9:30am  
**ThB1.5 - Fabricating And Testing AlGanAs Multiple Quantum-Well Laser Diodes For Space Application**  
» Mr. Di Huang (United States)¹, Mr. Bryant Colin (United States)², Mr. Kellen Arnold (United States)², Dr. Enxia Zhang (United States)², Prof. Sharon Weiss (United States)², Prof. Robert Reed (United States)², Prof. Peter Delfyett (United States)² (1. University of Central Florida, 2. Vanderbilt University)

9:45am  
**ThB1.6 - External cavity optical filtering and self-injection locking a chip-scale Mode-locked laser using a Fabry-Perot Etalon**  
» Mr. Srinivas Varma Pericherla (United States)¹, Mr. Lawrence Trask (United States)¹, Dr. Chinmay Shirpurkar (United States)², Dr. Ashish Bhardwaj (United States)², Dr. Gloria Hoeffer (United States)², Prof. Peter Delfyett (United States)² (1. University of Central Florida, 2. Infineon corporation)

8:30am  
**Microwave Photonics and Vehicular Optics V - ThC1: Integrated Microwave Photonics**  
*Palm Event Center E*  
Chaired by: Charles Middleton (United States) and Siva Yegnanarayanan (United States)

8:30am  
**ThC1.1 (Invited) - Towards system-on-chip integration of photonic-based coherent distributed Synthetic Aperture Radar**  
» Dr. Luca Rinaldi (Italy)¹, Dr. Federico Camponeschi (Italy)¹, Dr. Haris Amir (Italy)², Dr. Salvatore Maresca (Italy)², Dr. Manuel Reza (Italy)², Dr. Gaurav Pandey (Italy)², Dr. Muhammad Imran (Italy)², Dr. Paolo Ghelfi (Italy)², Dr. Mirco Scaffardi (Italy)¹, Prof. Antonella Bogoni (Italy)² (1. CNIT, 2. Sant’Anna School, 3. CNR - Istituto di Elettronica e Informatica, 4. Sant’Anna School-CNIT)

9am  
**ThC1.2 - Integrated Microwave-to-Optical Converters on Thin-Lithium Nitride**  
» Ms. Farzaneh Arab Jumehjani (United States)¹, Mr. Milad Gholipour Vazimli (United States)¹, Mr. Ectis Velazquez (United States)¹, Dr. Kim Fook Lee (United States)¹, Prof. Xun Gong (United States)¹, Prof. Gregory Kanter (United States)¹, Prof. Sasan Fatpouri (United States)¹ (1. University of Central Florida, 2. NuCrypt LLC, 3. University of Florida)

9:15am  
**ThC1.3 - Compact and High-extinction-ratio Integrated Optical Switch for Optical True Time Delay**  
» Dr. Jianfu Wang (Australia)¹, Dr. Shijie Song (Australia)¹, Dr. Liwei Li (Australia)¹, Prof. Linh Nguyen (Australia)¹, Prof. Xiaoke Yi (Australia)¹ (1. University of Sydney)

9:30am  
**ThC1.4 (Invited) - High dynamic range integrated microwave photonic filters**  
» Prof. David Marpaung (Netherlands)¹ (1. Nonlinear Nanophotonics group, University of Twente)

8:30am  
**Optical AI and Computational Photonics V - ThD1: Reconfigurable Photonic Systems**  
*Palm Event Center FG*  
Chaired by: Prof. Nicola Pisarcico (United States)

8:30am  
**ThD1.1 (Invited) - 3D photonic interconnects for scalable neural networks**  
» Dr. Javier Porte Parera (United Kingdom)¹, Mr. Adrià Grabulosa (France)², Dr. Johnny Moughames (France)², Dr. Muamer Kadic (France)², Dr. Daniel Brunner (France)² (1. University of Strathclyde, 2. FEMTO-ST Institute, 3. CNRS)

9am  
**ThD1.2 - A Multi-Layer Topologically Reconfigurable Broadcast-and-Weight Photonic Network**  
» Mr. Joshua Lederman (United States)¹, Mr. Yusuf Jihim (United States)¹, Mr. Simon Bilodeau (United States)¹, Mr. Weipeng Zhang (United States)¹, Mr. Eric Blow (United States)¹, Dr. Thomas Ferreira de Lima (United States)¹, Prof. Bhavin Shastri (Canada)², Prof. Paul Prucnal (United States)¹ (1. Princeton University, 2. NEC Laboratories America, Inc., 3. Queen’s University)

9:15am  
**ThD1.3 - Sparse coherent photonic processor for solving eigenmode problems**  
» Mr. Andrew Klein (United States)¹, Dr. Zheyuan Zhu (United States)¹, Mr. Dewan Salham (United States)¹, Dr. Guifang Li (United States)¹, Dr. Sean Pang (United States)¹ (1. University of Central Florida)
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| 9:30am    | ThE1.4 (Invited) - Hybridized nonlinear optics for high quantum efficiency parametric amplification and beyond  
            » Prof. Jeffrey Moses (United States)
            (1. Cornell University) |
| 8:30am    | Nano Photonics, Plasmonics and Metamaterials VIII -  
            ThF1: Nanoscale Light-matter Interactions in Quantum Materials  
            Palm Event Center MN  
            Chaired by: Mr. Jiangnan Liu (United States) |
| 8:30am    | ThF1.1 (Invited) - Integrated Photonic with Divacancy Defects in  
            4H-SiC-on-Insulator Platform  
            » Dr. Bingin Huang (United States), Dr. Brett Yurash (United States), Dr. Samuel Whiteley (United States), Mr. Xiwei Bai (United States), Mr. Tsung Yang (United States), Dr. Tong Wang (United States), Dr. Shuoqin Wang (United States), Dr. Thaddeus Ladd (United States), Dr. Shanying Cui (United States)  
            (1. HRL Laboratories LLC) |
| 9am       | ThF1.2 (Invited) - Nanophotonic Quantum Sensing with Solid-State Spin Qubits  
            » Prof. Laura Kim (United States), Dr. Hyeongrak Choi (United States), Dr. Matthew Trusheim (United States), Mr. Hanfeng Wang (United States), Prof. Dirk Englund (United States)  
            (1. UCLA, 2. MIT) |
| 9:30am    | ThF1.3 - Enhancing the luminescence efficiency of colloidal quantum dots in compound supraparticles  
            » Dr. Pedro Alves (United Kingdom), Dr. Dimitars Jevtics (United Kingdom), Prof. Michael Strain (United Kingdom), Prof. Martin D. Dawson (United Kingdom), Dr. Nicolas Laurand (United Kingdom)  
            (1. University of Strathclyde) |
| 9:45am    | ThF1.4 - Photocatalytic-ready Supraparticle Lasers  
            » Dr. Charlotte J. Eling (United Kingdom), Dr. Nicolas Laurand (United Kingdom)  
            (1. University of Strathclyde) |
| 10am      | Coffee Break & Exhibits  
            Palm Event Center |
Continued from Thursday, 16 November

10:30am  IPC 2023 Post-Deadline Presentations and Closing Ceremony
Citron East/West
Chaired by: Dr. Di Liang (United States)

10:30am

Best Student Paper and Best Student Poster Awards Announcement
» Dr. Di Liang (United States) (1. University of Michigan)

10:45am

PD1 - Rate-adaptive geometric shaping for BICM with off-the-shelf component blocks
» Dr. Metodi Plamenov Yankov (Denmark)¹, Dr. Smaranika Swain (Denmark)¹, Dr. Francesco Da Ros (Denmark)¹ (1. Technical University of Denmark)

10:57am

PD2 - Record Photon Information Efficiency with Optical Clock Transmission and Recovery of 12.5 bits/photon After 77 dB of Optical Path Loss
» Mr. Cheng Guo (United States)¹, Dr. Sai Kanth Dacha (United States)¹, Dr. Rene-Jean Essiambre (United States)¹, Dr. Alexei Ashikhmin (United States)¹, Dr. Andrea Blanco-Redondo (United States)¹, Dr. Frank R. Kschischang (Canada)¹, Dr. Konrad Banaszek (Poland)¹, Dr. Matthew Weiner (United States)¹, Dr. Rose Kopf (United States)¹, Dr. Ian Crawley (United States)¹, Dr. Mohamad Hossein Idjadi (United States)¹, Dr. Ayed A. Sayem (United States)¹, Dr. Jie Zhao (United States)¹, Mr. James D. Sandoz (United States)¹, Dr. Nicolas Fontaine (United States)¹, Ms. Nicole Menkart (United States)¹, Dr. Roland Ryf (United States)¹, Mr. John Cloonan (United States)¹, Dr. Michael Vasilyev (United States)¹, Dr. Thomas E. Murphy (United States)¹, Dr. Elis Burrows (United States)¹ (1. Nokia Bell Labs, 2. CREOL, University of Central Florida, 3. University of Toronto, 4. University of Warszawa, 5. Nokia, 6. The University of Texas at Arlington, 7. University of Maryland)

11:09am

PD3 - Surface acoustic wave Brillouin scattering in a photonic integrated circuit
» Mr. Govert Neijts (Australia)¹, Dr. Choon Kong Lai (Australia)¹, Ms. Maren Kramer Riseng (Australia)¹, Dr. Duk-Yong Choi (Australia)¹, Dr. Kunlun Yan (Australia)¹, Prof. David Marpaung (Netherlands)¹, Prof. Stephen Madden (Australia)¹, Prof. Benjamin Eggleton (Australia)¹, Dr. Moritz Merklein (Australia)¹ (1. Institute of Photonics and Optical Science (IPOS) and The University of Sydney Nano Institute (Sydney Nano), School of Physics, The University of Sydney, NSW 2006, Australia, 2. Laser Physics Centre, Research School of Physics, Australian National University, Canberra, ACT 2601, Australia, 3. Nonlinear Nanophotonics group, University of Twente)

11:21am

PD4 - High-speed Physical Random Number Generation Using Self-Chaotic Broad-Area VCSEL
» Ms. Hang Lu (Saudi Arabia)¹, Dr. Omar Alkhazragi (Saudi Arabia)¹, Dr. Tien Khee Ng (Saudi Arabia)¹, Prof. Boon S. Ooi (Saudi Arabia)¹ (1. Photonics Laboratory, King Abdullah University of Science and Technology (KAUST))

11:33am

PD5 - Foundry-fabricated silicon source of broadband polarization entanglement
» Dr. Alexander Miloshevsy (United States)¹, Mr. Lucas Cohen (United States)¹, Mr. Karthik Mylswamy (United States)¹, Ms. Saleha Fatema (United States)¹, Dr. Muneer Alshowkan (United States)¹, Dr. Hsuan-Hao Lu (United States)¹, Prof. Andrew Weiner (United States)¹, Dr. Joseph Lukens (United States)¹ (1. Oak Ridge National Laboratory, 2. Purdue University, 3. Arizona State University)

11:45am

PD6 - Ultra low density and high performance InAs quantum dot single photon emitters
» Dr. Chen Shang (United States)¹, Mr. Marco De Gregorio (Germany)², Mr. Quirin Buchinger (Germany)², Prof. Sven Hofling (Germany)², Prof. John Bowers (United States)² (1. University of California Santa Barbara, 2. University of Wurzburg)