

IEEE PHOTONICS SOCIETY

SUMMER TOPICALS MEETING SERIES 2019

CONFERENCE PROGRAM



8-10 July 2019
The Westin Fort Lauderdale Beach Resort
Fort Lauderdale, Florida, USA

www.ieee-sum.org

General Chair:

Nicolas Fontaine, Nokia Bell Labs, USA

Chair Elect:

Michael Brodsky, U.S. Army Research Laboratory





Monday, 8 July

8am **Breakfast**
Atlantic Foyer Ballroom

8:30am **MA1.1 -
MA1: Tutorial Talks**
Atlantic Ballroom I
Chaired by: Prof. Oussama Moutanabbir

**8:30am-9:15am - MA1.1 - Strained-Engineered Group-IV
Semiconductor Nanomembranes for Infrared Photonics (Tutorial)**
» [Mr. Roberto Paiella](#)

**9:15am-10:00am - MA1.2 - Light Emission from Hexagonal SiGe
(Tutorial)**
» [Dr. Jos Haverkort](#)

8:30am **MB1: Coherent Access I**
Atlantic Ballroom II
Chaired by: Junwen Zhang

**8:30am-9:00am - MB1.1 - Digital Coherent PON Technology for
100G to 1T Based Optical Access Networks (Invited)**
» [Mr. Naoki Suzuki](#), Mr. Hiroshi Miura, Mr. Keisuke Matsuda

**9:00am-9:45am - MB1.2 - Evolution of Access Networks in the Era
of Coherent Optics (Plenary)**
» [Dr. Alberto Campos](#), Dr. Zhensheng Jia, Dr. Jing Wang

8:30am **MC1: Random Lasers**
Atlantic Ballroom III
Chaired by: Prof. Alexander Gaeta and Mr. Mahmood Bagheri

**8:30am-9:15am - MC1.1 - Spatio-temporal Dynamics of
Semiconductor Lasers in Wave-chaotic Cavities (Keynote)**
» [Dr. Hui Cao](#)

**9:15am-10:00am - MC1.2 - Low Coherence Flexible Perovskite
Random Lasers (Keynote)**
» [Prof. Tien-chang Lu](#)

**10:00am-10:15am - MC1.3 - Spatio-temporal Correlations in
Multimode Fibers for Pulse Delivery**
» [Ms. Wen Xiong](#), Dr. Chia-Wei Hsu, Dr. Hui Cao

8:30am **MD1: Photonic Neural Networks**
Atlantic Ballroom IV
Chaired by: Prof. Alex Yasha Yi

**8:30am-9:15am - MD1.1 - Advances in Neuromorphic Silicon
Photonics (Keynote)**
» [Prof. Paul Prucnal](#), Dr. Alexander Tait, Mr. Mitchell Nahmias, Mr. Thomas Ferreira de Lima, Mr. Hsuan-Tung Peng, Prof. Bhavin Shastri

**9:15am-9:45am - MD1.2 - Programmable Silicon Photonic Processor
Based on a SCOW Resonant Structure (Invited)**
» [Prof. Liangjun Lu](#), Ms. Lin Shen, Prof. Linjie Zhou, Prof. Jianping Chen

**9:45am-10:00am - MD1.3 - A Review on Neuromorphic Photonics
and AI**
» [Mr. David Alejandro Trejo Pizzo](#)

8:30am **ME1: Opening Session**
Atlantic Ballroom V
Chaired by: Prof. David Miller

**8:30am-9:00am - ME1.1 - The New World of Programmable
Photonics (Invited)**
» [Prof. Wim Bogaerts](#), Prof. David Miller, Prof. José Capmany



Continued from **Monday, 8 July**

9:00am-9:30am - ME1.2 - Field-Programmable Photonic Gate Arrays (FPPGAs) (Invited)

» [Dr. Daniel Pérez](#), Dr. Prometheus Dasmahapatra, Prof. José Capmany

9:30am-10:00am - ME1.3 - High-performance III-V/Si Phase Shifter Arrays for Beam Steering (Invited)

» [Dr. Weiqiang Xie](#), Prof. John Bowers

8:30am MF1: Applications in Quantum Information

Atlantic Ballroom VI

Chaired by: Mr. Fabio Sciarrino

8:30am-9:00am - MF1.1 - Quantum Multiplexing in Integrated Photonics (Invited)

» [Prof. William Munro](#)

9:00am-9:30am - MF1.2 - Integrated Homodyne Detection for Large Scale Silicon Quantum Photonic Technologies (Invited)

» Mr. Jonathan Frazer, Mr. Joel Tasker, Dr. Giacomo Ferranti, Mr. David Payne, Mr. Jake Biele, Dr. Euan Allen, Dr. Josh Silverstone, [Dr. Jonathan Matthews](#)

9:30am-10:00am - MF1.3 - Hybrid GaP-on-diamond Photonics for Quantum Networks (Invited)

» [Prof. Kai-Mei Fu](#)

10am Coffee Break

Atlantic Foyer Ballroom

10:30am MA2: GeSn — Materials

Atlantic Ballroom I

Chaired by: Dr. Dan Buca

10:30am-11:00am - MA2.1 - GeSn and GeSiSn Heterostructures for Optoelectronic Applications (Invited)

» [Prof. Osamu Nakatsuka](#), Mr. Masahiro Fukuda, Dr. Masashi Kurosawa, Dr. Shigehisa Shibayama, Mr. Mitsuo Sakashita, Prof. Shigeaki Zaima

11:00am-11:30am - MA2.2 - GeSn Semiconductors: Growth, Structure, and Optical Properties (Invited)

» [Dr. Simone Assali](#), Mr. Jérôme Nicolas, Mr. Aashish Kumar, Dr. Samik Mukherjee, Mr. Étienne Bouthillier, Mr. Alain Dijkstra, Mr. Anis Attiaoui, Prof. Oussama Moutanabbir

11:30am-12:00pm - MA2.3 - Germanium/Germanium-Tin Core/Shell Nanowires: Manipulating Composition and Strain Distributions to Tune Photonic Properties (Invited)

» [Prof. Paul McIntyre](#)

10:30am MB2: Coherent Access II

Atlantic Ballroom II

Chaired by: Junwen Zhang

10:30am-11:00am - MB2.1 - Coherent Technologies for Passive Optical Networks (Invited)

» [Dr. Domanic Lavery](#), Prof. Polina Bayvel, Dr. Robert Killey

11:00am-11:15am - MB2.2 - Ubiquitous Coverage Next Generation Access Networks Based on Fiber/FSO Convergence with OBI-free Heterodyne Detection

» [Ms. Shuang Yao](#), Dr. You-Wei Chen, Mr. Charles Su, Prof. Gee-Kung Chang

11:15am-12:00pm - MB2.3 - 100G Full Duplex Coherent Optics for Access Networks (Plenary)

» [Dr. Zhensheng Jia](#)

10:30am MC2: Nanolasers

Atlantic Ballroom III

Chaired by: Mr. weng chow and Prof. Tien-chang Lu



Continued from **Monday, 8 July**

10:30am-11:15am - MC2.1 - Fano Photonics (Keynote)

» [Prof. Jesper Mork](#)

11:15am-11:30am - MC2.2 - Unstable Emission from Random Lasers

» [Mr. Zachariah Peterson](#)

10:30am MD2: Intelligent Photonic Communications

Atlantic Ballroom IV

Chaired by: Prof. Qiwen Zhan

10:30am-11:00am - MD2.1 - High-speed Visible Light Communication Based on Machine Learning (Invited)

» [Prof. Nan Chi](#), Dr. Yingjun Zhou, Dr. Yiheng Zhao, Dr. Guoqiang Li, Dr. Fangchen Hu

11:00am-11:30am - MD2.2 - Visible Diode Lasers for Lighting and High Data Rate Visible Light Communications (Invited)

» [Prof. Boon Ooi](#)

11:30am-12:00pm - MD2.3 - Visible Light Communication and Ranging System Using High-speed Stereo Cameras (Invited)

» [Dr. Masayuki Kinoshita](#), Prof. Koji Kamakura, Prof. Takaya YAMAZATO

10:30am ME2: Molding the Flow of Light (but No Photonic Crystals)

Atlantic Ballroom V

Chaired by: Prof. Samuel Palermo

10:30am-11:15am - ME2.1 - Self-configuring Photonic Architectures and Algorithms (Tutorial)

» [Prof. David Miller](#)

11:15am-11:30am - ME2.2 - A Graph-based Design and Programming Strategy for Reconfigurable Photonic Circuits

» [Mr. Xiangfeng Chen](#), Prof. Wim Bogaerts

11:30am-12:00pm - ME2.3 - High Density 3D Silicon Photonic Integrated Circuits (Invited)

» [Dr. Yu Zhang](#), Mr. Yi-Chun Ling, Prof. S. J. Ben Yoo

10:30am MF2: Cluster States in Quantum Information

Atlantic Ballroom VI

Chaired by: Mario Dagenais

10:30am-11:00am - MF2.1 - On-chip Generation, Coherent Control and Processing of Complex Entangled Photon States (Invited)

» Ms. Stefania Sciara, Dr. Christian Reimer, Dr. Michael Kues, Mr. Piotr Roztocki, Mr. Mehedi Islam, Dr. Luis Romero Cortes, Dr. Yanbing Zhang, Mr. Bennet Fisher, Mr. Sebastien Loranger, Prof. Raman Kashyap, Prof. Alfonso Carmelo Cino, Prof. Sai T. Chu, Prof. Brent E. Little, Prof. David J. Moss, Prof. Lucia Caspani, Prof. William J. Munro, Prof. Jose Azana, [Prof. Roberto Morandotti](#)

11:30am-12:00pm - MF2.3 - Silicon Nitride Based Microresonators for Biphoton Frequency Comb Generation and Quantum Information Processing (Invited)

» [Mr. Minghao Qi](#)

12pm Lunch (on own)

1:30pm MA3: Tutorial + Group IV Materials

Atlantic Ballroom I

Chaired by: Prof. Oussama Moutanabbir

1:30pm-2:15pm - MA3.1 - Topological Photonics (Tutorial)

» [Ms. Mercedeh Khajavikhan](#)

2:15pm-2:45pm - MA3.2 - Partial Local Atomic Ordering in Ge-Sn Alloy (Invited)

» Mr. Boxiao Cao, Dr. Enshi Xu, [Prof. Tianshu Li](#)

2:45pm-3:15pm - MA3.3 - SiGe: A Material Platform for Near and Mid-IR Photonics (Invited)

» [Prof. Giovanni Isella](#)



Continued from **Monday, 8 July**

1:30pm **MB3: High Speed PON I**
Atlantic Ballroom II
 Chaired by: Dora Van Veen

1:30pm-2:00pm - MB3.1 - Recent Trends in Fiber Access Network Developments - An Operator's Perspective (Invited)

» [Mr. Shuang Yin](#)

2:00pm-2:30pm - MB3.2 - Lossless Optical Splitting and Combining for PON Network Employing Remote Mode Forming (Invited)

» [Dr. Haoshuo Chen](#)

2:30pm-3:00pm- MB3.3 - Distributed Raman Amplification for Short-Reach Applications Including Passive Optical Networks (Invited)

» Ms. Andrea Tellez, [Mr. Patrick Iannone](#), Mr. Ellsworth Burrows

1:30pm **MC3: Mode-locking**
Atlantic Ballroom III
 Chaired by: Prof. Peter Delfyett

1:30pm-2:00pm - MC3.1 - Spontaneous Mode Locking and Frequency Comb Generation in a Quantum-dot Laser (Invited)

» [Mr. weng chow](#)

2:00pm-2:30pm - MC3.2 - Monolithic Mode-locked Semiconductor Lasers: Ultrafast Pulse Generation and Stabilization (Invited)

» Prof. Paolo Bardella, Dr. Lorenzo Columbo, Prof. Mariangela Gioannini, Mr. Oleg Nikiforov, Prof. Thomas Walther, Dr. Andreas Klehr, Dr. Andrea Knigge, Mr. Stefan Meinecke, Dr. Lina Jaurigue, Prof. Kathy Lüdge, Prof. Julien Javaloyes, Prof. Luke Lester, Dr. Songtao Liu, Prof. John Bowers, Mr. Dominik Auth, Mr. Christoph Weber, Mr. Stefan Heppe, Mr. Sebastian Stutz, Mr. Martin Birkholz, Mr. Lukas Drzewietzki, [Dr. Stefan Breuer](#)

2:30pm-3:00pm - MC3.3 - Analysis of Mode Locking in Quantum Dot Laser Diodes (Invited)

» Dr. Lorenzo Columbo, Mr. Christoph Weber, Dr. Stefan Breuer, Prof. Mariangela Gioannini, [Prof. Paolo Bardella](#)

1:30pm **MD3: Intelligent Integrated Photonic Components I**
Atlantic Ballroom IV
 Chaired by: Prof. Alex Yasha Yi

1:30pm-2:00pm - MD3.1 - Transfer Learning for Nanophotonics (Invited)

» [Prof. Min Qiu](#)

2:00pm-2:30pm - MD3.2 - Writing and Integrating Micro-optical Components by Femtosecond Lasers (Invited)

» [Prof. Hong-Bo Sun](#)

2:30pm-2:45pm - MD3.3 - Usage of the BB84 Protocol for Communications in Pairs of Orbiting Satellites

» [Prof. Huber Nieto-Chaupis](#)

2:45pm-3:00pm - MD3.4 - Photonics to Track Advances of Attack by the Bark Beetle in Cashew Trees

» Ms. Yogini Prabhu, [Dr. Jivan Parab](#)

1:30pm **ME3: Joint QIP & PP: Programmable Photonics for Quantum Information Processing**
Atlantic Ballroom V
 Chaired by: Prof. Benjamin Eggleton

1:30pm-2:15pm - ME3.1 - Integrated Photonics for Quantum Technologies (Plenary)

» [Prof. Ian Walmsley](#)

2:15pm-2:45pm - ME3.2 - Programming Quantum Optics at Scale (Invited)

» [Dr. Joshua Silverstone](#)



Continued from **Monday, 8 July**

2:45pm-3:15pm - ME3.3 - Certification of Integrated Quantum Platforms via Machine Learning (Invited)

» [Mr. Fabio Sciarrino](#)

3pm

Coffee Break

Atlantic Foyer Ballroom

3:30pm

MA4: Materials & Applications

Atlantic Ballroom I

Chaired by: Donguk Nam

3:30pm-4:00pm - MA4.1 Epitaxial Design of GeSn Quantum Wells for Optoelectronic Applications (Invited)

» [Prof. Takeshi Fujisawa](#), Prof. Masakazu Arai, Prof. Kunimasa Saitoh

4:00pm-4:30pm - MA4.2 - Infrared Photodetection Based on Photon-assisted Tunneling in the Silicon Photonics Platform (Invited)

» [Prof. Kyoungsik Yu](#)

4:30pm-5:00pm - MA4.3 Mid-Infrared Trace Gas Sensing Using Photonic Crystal Waveguides (Invited)

» Mr. Ali Rostamian, Mr. Jason Midkiff, Mr. Kyoung Min Yoo, Ms. Yue Cheng, Dr. Swapnajit Chakravarty, [Prof. Ray Chen](#)

3:30pm

MB4: High Speed PON II

Atlantic Ballroom II

Chaired by: Dora Van Veen

3:30pm-4:00pm - MB4.1 - Beyond 50 Gb/s Directly-Modulated Long-Wavelength VCSELs for Next-Gen Access Network (Invited)

» [Dr. Alberto Gatto](#), Ms. Mariangela Rapisarda, Dr. Paola Parolari, Mr. Christian Neumeyr, Dr. Paolo Martelli, Prof. Pierpaolo Boffi

4:00pm-4:30pm - MB4.2 - High-speed Burst Detection and Signal Recovery Technologies for NG-PONs (Invited)

» [Prof. Xin Yin](#)

4:30pm-5:00pm - MB4.3 - Next Generation PON and Data Center Interconnect: Exploring Synergies on FEC (Invited)

» [Mr. Ilya Lyubomirsky](#)

3:30pm

MC4: Combs & Mode-locking

Atlantic Ballroom III

Chaired by: Dr. Hui Cao and Dr. Stefan Breuer

3:30pm-4:15pm - MC4.1 - Advances and Dynamics in Microresonator Frequency Combs (Keynote)

» [Mr. Chee Wei Wong](#)

4:15pm-4:45pm - MC4.2 - Investigating the Limits of Semiconductor Laser Based Optical Frequency Combs (Invited)

» [Prof. Peter Delfyett](#)

4:45pm-5:00pm - MC4.3 - Optically Coupled Mode-Locked Laser Array for Spectroscopy in InP Generic Integration

» Dr. Mu-Chieh Lo, Mr. Christoph Weber, Mr. Dominik Auth, Mr. Patrick Fiala, [Dr. Stefan Breuer](#), Prof. Guillermo Carpintero

3:30pm

ME4: Turning the Knobs and Dials

Atlantic Ballroom V

Chaired by: Prof. Wim Bogaerts

3:30pm-4:00pm - ME4.1 - Automatic Monitor-Based Tuning of Silicon Photonic Filters and Beamforming Networks (Invited)

» [Prof. Samuel Palermo](#), Dr. Gihoon Choo, Prof. Kamran Entesari, Prof. Christi Madsen

4:00pm-4:30pm - ME4.2 - Driving and Control Approaches for Large Scale Silicon Photonics Circuits (Invited)

» [Mr. Antonio Ribeiro](#), Dr. Umar Khan, Mr. Lukas Van Iseghem, Ms. Mi Wang, Mr. Sibert Declercq, Prof. Wim Bogaerts



Continued from **Monday, 8 July**

4:30pm-5:00pm - ME4.3 - Photoconductive Heaters for Configuring and Stabilizing Silicon Photonic Circuits (Invited)

» [Dr. Hasitha Jayatilleka](#)

3:30pm

MF4: Platforms for Quantum Information

Atlantic Ballroom VI

Chaired by: Dr. Shayan Mookherjea

3:30pm-4:00pm - MF4.1 - Integrated AlN Microresonators for Quantum Optical Frequency Conversion (Invited)

» [Prof. Hong Tang](#)

4:00pm-4:30pm - MF4.2 - Electro-optic Quantum Transducers on Integrated Photonic Platforms (Invited)

» [Dr. Mohammad Soltani](#)

4:30pm-5:00pm - MF4.3 - An Integrated Quantum Photonic Platform by Femtosecond Laser Micromachining (Invited)

» [Dr. Roberto Osellame](#)

7pm

MP: Welcome Reception & Poster Session

Sky Terrace

MP1 - GeSn Mid-infrared Nanophotonic Resonant Absorbers

» [Dr. Siying Peng](#), Mr. Michael Braun, Mr. Andrew Meng, Ms. Zhengrong Shang, Prof. Alberto Salleo, Prof. Paul McIntyre

MP2 - Photoluminescence From GeSn Layers Fabricated Using Ion Implantation and Pulsed Laser Melting

» Prof. Jay Mathews, Dr. Tuan Tran, [Ms. Yining Liu](#), Dr. Quentin Hudspeth, Dr. Buguo Wang, Dr. Lachlan Smillie, Mr. Renaud Bruce, Dr. Jeffrey Warrender, Prof. James Williams

MP3 - Growth of GeSn/Ge Superlattices by Remote Plasma-Enhanced Chemical Vapor Deposition

» [Dr. Bruce Claflin](#), Dr. Gordon Grzybowski, Dr. Arnold Kiefer

MP4 - Si-compatible Mid-infrared Photodetectors Based on 2D Materials

» [Dr. Ekaterina Ponizovskaya-Devine](#), Dr. Hossein Rabiee Godir, Mr. Soroush Ghandiparsi, Dr. Ahmed Mayet, Dr. Cesar Perez, Dr. M. Saif Islam

MP5 - Yagi-Uda Nanoantenna Structures for Infrared Detection Using Silicon

» [Mr. William Rieger](#), Dr. Jean J. Heremans, Dr. Hang Ruan, Dr. Yuhong Kang, Dr. Richard Claus

MP6 - Discretization Effects of Digital Control of Thermally Tunable 2x2 MZI Couplers

» Mr. Iman Zand, [Prof. Wim Bogaerts](#)

MP7 - Integrated Photonic Outcoupling Array for Imaging-based Beam Steering

» Dr. CHRISTOPHER KYLE RENSCHAW, [Mr. Sajad Saghaye Polkoo](#)

MP8 - A Tunable Optical Filter Based on the Electrowetting Controlled Sagging Effect of a Liquid Droplet on a Superhydrophobic Substrate Embedding a Waveguide Bragg Grating

» Mr. Meng Zhang, Mr. Weifeng Cheng, [Prof. Jiantao Cheng](#), Mr. Zheng Zheng, Mr. Jiansheng Liu

Tuesday, 9 July

8am

Breakfast

Atlantic Foyer Ballroom

8:30am

TuA1: Plenary + Emerging Technologies

Atlantic Ballroom I

Chaired by: Donguk Nam



Continued from **Tuesday, 9 July**

8:30am-9:00am - TuA1.1 - Future Roads for Group-IV Defect-enhanced Quantum Dot Light-emitters for Silicon Photonics (Invited)

» [Dr. Moritz Brehm](#), Mr. Lukas Spindlberger, Mr. Johannes Aberl, Prof. Mark Lusk

9:00am-9:45am - TuA1.2 - Brillouin Integrated Photonics (Plenary)

» [Prof. Benjamin Eggleton](#)

9:45am-10:15am - TuA1.3 - Novel Integrated Platforms for Mid-infrared Photonics (Invited)

» Mr. Marcin Malinowski, Mr. Jeffrey Chiles, [Prof. Sasan Fathpour](#)

8:30am **TuB1: Mobile X-haul for Access Networks**

Atlantic Ballroom II

Chaired by: Vincent Houtsma

8:30am-9:00am - TuB1.1 - Technical Trends in Access Network Accommodating Mobile Systems of 5G and Beyond (Invited)

» [Dr. KOSUKE NISHIMURA](#), Mr. Haruhisa Hirayama, Mr. Yu Tsukamoto, Dr. Shinobu Nanba, Mr. Shota Ishimura, Dr. Abdelmoula Bekkali, Mr. Kazuki Tanaka, Mr. Ryo Inohara, Dr. Masatoshi Suzuki

9:00am-9:45am - 9:00am-9:45am - TuB1.2 - Ultra-Low-Latency Fronthaul Transport Over Optical Access (Plenary)

» [Dr. Thomas Pfeiffer](#)

8:30am **TuC1: Quantum Dot Lasers**

Atlantic Ballroom III

Chaired by: Prof. Marek Osinski and Prof. Kerry Vahala

8:30am-9:00am - TuC1.1 - Coherent Effects in Room Temperature InP-based Quantum Dot Amplifiers (Invited)

» [Prof. Gadi Eisenstein](#)

9:00am-9:30am - TuC1.2 - Quantum Dot Tunable Photonic Oscillators (Invited)

» [Prof. Luke Lester](#), Prof. Vassilios Kovanis

9:30am-10:00am - TuC1.3 - InP-based Quantum Dot Lasers for High Capacity Optical Links (Invited)

» [Prof. Johann Peter Reithmaier](#), Prof. Gadi Eisenstein

8:30am **TuD1: Intelligent Integrated Photonic Components II**

Atlantic Ballroom IV

Chaired by: Xingjun Wang

8:30am-9:15am - TuD1.1 - High Performance Metasurface Flat Optics: from Components to Systems (Keynote)

» [Mr. Federico Capasso](#), Mr. Wei-Ting Chen

9:15am-9:45am - TuD1.2 - Silicon Nitride Nanophotonic Integrated Circuits for Spiking Neural Network (Invited)

» [Dr. Yu Zhang](#)

9:45am-10:00am - TuD1.3 - Photodetectors with Photon-trapping Surface Nanostructures for Short Range LIDAR Systems

» [Mr. Cesar Bartolo Perez](#), Mr. Soroush Ghandiparsi, Mr. Ahmed Surrati Mayet, Dr. Hilal Cansizoglu, Dr. Yang Gao, Dr. Ekaterina Ponizovskaya-Devine, Dr. Nibir Dhar, Dr. Shih-Yuan Wang, Dr. M. Saif Islam

8:30am **TuE1: Programmable Circuits - From Electrons to Photons**

Atlantic Ballroom V

Chaired by: Prof. Graham Reed

8:30am-9:15am - TuE1.1 - Programmable Electronics and Silicon Photonics (Tutorial)

» [Prof. Peter Wilson](#), Dr. Ke Li, Dr. David Thomson, Dr. Fan Meng

9:15am-9:30am - TuE1.2 - Reversible Gates for Programmable Photonics

» [Prof. José Capmany](#), Dr. Daniel Pérez



Continued from **Tuesday, 9 July**

9:30am-10:00am - TuE1.3 - Silicon Photonic Large-Scale Integration (Invited)

» [Mr. Michael Hochberg](#)

8:30am TuF1: Quantum Computation and Coupling to Single-atoms

Atlantic Ballroom VI

Chaired by: Prof. Zetian Mi

8:30am-9:00am - TuF1.1 - Progress in Trapped Ion Quantum Computing (Invited)

» [Prof. Jungsang Kim](#)

9:00am-9:30am - TuF1.2 - Integrated Quantum Photonics for Secure Quantum Computing and Novel Communication Tasks (Invited)

» [Prof. Philip Walther](#)

9:30am-10:00am - TuF1.3 - Quantum Leap and the National Science Foundation (Invited)

» [Ms. Dominique Dagenais](#)

10am Coffee Break

Atlantic Foyer Ballroom

10:30am TuA2: Hybrid III-V on Si

Atlantic Ballroom I

Chaired by: MITSURU TAKENAKA

10:30am-11:00am - TuA2.1 - Nanowire and Superlattice Mid-Infrared Emitters on Silicon (Invited)

» [Prof. John Prineas](#), Ms. Xinxin Li, Ms. Kailing Zhang, Mr. Aaron Muhowski, Prof. Fatima Toor

11:00am-11:30am - TuA2.2 - Hybrid Lasers and Detectors for Communications and Sensing (Invited)

» [Prof. Il-Sug Chung](#)

11:30am-11:45am - TuA2.3 - Narrow-Gap HgTe Colloidal Quantum Dot Infrared Photodetectors

» [Mr. Matthew Ackerman](#), Dr. Xin Tang, Prof. Philippe Guyot-Sionnest

10:30am TuB2: 5G Transport Access Networks

Atlantic Ballroom II

Chaired by: Vincent Houtsma

10:30am-11:00am - TuB2.1 - Planning and Dimensioning of Optical Transport Networks for 5G and Beyond (Invited)

» [Dr. Chathurika Ranaweera](#), Prof. Christina Lim, Prof. Elaine Wong, Prof. Ampalavanapillai Nirmalathas

11:00am-11:30am - TuB2.2 - Optical Access Technologies for Time-Sensitive Fronthaul (Invited)

» [Dr. Jim Zou](#), Dr. Michael Eiselt, Dr. Jörg-Peter Elbers

11:30am-12:00pm - TuB2.3 - High Speed and Low Latency PON for 5G Networks (Invited)

» [Dr. HwanSeok Chung](#)

10:30am TuC2: Microresonator Combs

Atlantic Ballroom III

Chaired by: Mr. Chee Wei Wong and Prof. Paolo Bardella

10:30am-11:15am - TuC2.1 - Soliton Microcombs and the Miniaturization of Optical Clocks and Frequency Synthesizers (Keynote)

» [Prof. Kerry Vahala](#)

11:15am-12:00pm - TuC2.2 - Chip-Based Microresonator Combs (Keynote)

» [Prof. Alexander Gaeta](#)

10:30am TuD2: Intelligent Integrated Photonic Components III

Atlantic Ballroom IV

Chaired by: Prof. Boon Ooi



Continued from **Tuesday, 9 July**

10:30am-11:00am - TuD2.1 - Smart Nanofabrication with Engineered Vectorial Optical Fields (Invited)

» [Prof. Qiwen Zhan](#)

11:00am-11:30am - TuD2.2 - Multi Tone Continuous Wave Lidar (Invited)

» [Prof. Ozdal Boyraz](#), Mr. Mustafa M. Bayer, Mr. Rasul Torun, Mr. Imam-Uz Zaman

11:30am-12:00pm - TuD2.3 - On-chip Intelligent Photonic Devices (Invited)

» [Prof. Alex Yasha Yi](#)

10:30am

TuE2: I Like to Move It- Move It

Atlantic Ballroom V

Chaired by: Mr. Andrea Ivano Melloni

10:30am-11:00am - TuE2.1 - Ultra-large Silicon Photonic Switches with MEMS (Invited)

» [Prof. Tae Ioon Seok](#), Dr. Kyungmok Kwon, Prof. Ming C. Wu

11:00am-11:15am - TuE2.2 - Intensity Spread Analysis of Programmable Photonic Circuits with Parasitics

» Mr. Iman Zand, Dr. Banafsheh Abasahl, [Prof. Wim Bogaerts](#)

11:15am-11:30am - TuE2.3 - Integrated Nanophotonics Enabled Residue Number System (RNS) Arithmetic

» Ms. Jiaxin Peng, Mr. Shuai Sun, Dr. Vikram Narayana, Dr. Tarek El-Ghazawi, [Prof. Volker Sorger](#)

11:30am-12:00pm - TuE2.4 - Photonic MEMS: Exploiting Mechanics at the Micro- and Nanoscale for Efficient Reconfiguration of Photonic Integrated Circuits (Invited)

» [Prof. Niels Quack](#), Dr. Hamed Sattari, Mr. Alain Yuji Takabayashi, Ms. Yu Zhang, Dr. Carlos Errando-Herranz, Mr. Pierre Edinger, Prof. Kristinn B. Gylfason

10:30am

TuF2: Silicon Nitride and Silicon-on-insulator Platforms for Quantum Information

Atlantic Ballroom VI

Chaired by: Mario Dagenais

10:30am-11:00am - TuF2.1 - Quantum Device Technologies Based on Silicon Nitride Nanophotonics (Invited)

» [Dr. Kartik Srinivasan](#)

11:00am-11:30am - TuF2.2 - High-performance Quantum Optical Source and Detector Applications Using Integrated Photonics (Invited)

» [Dr. Shayan Mookherjee](#)

11:30am-12:00pm - TuF2.3 - Integrated Silicon Nitride Time-bin Entanglement Circuits (Invited)

» [Prof. Benjamin Eggleton](#)

12pm

Lunch (on own)

1:30pm

TuA3: Group IV Optoelectronics I

Atlantic Ballroom I

Chaired by: Donguk Nam

1:30pm-2:00pm - TuA3.1 - Direct Bandgap GeSn on Insulators for Monolithic 3D Photonic Integration (Invited)

» [Prof. JIFENG LIU](#), Ms. Alejandra Cuervo Covian, Dr. Xiaoxin Wang, Ms. Lisa Je

2:00pm-2:30pm - TuA3.2 - Intrasubband and Interband Transitions in n-type Ge/SiGe MQW (Invited)

» [Prof. Giovanni Capellini](#)

2:30pm-3:00pm - TuA3.3 - Analysis of Franz-Keldysh Effect in GeSn Alloys (Invited)

» [Prof. Guo-En Chang](#)



Continued from **Tuesday, 9 July**

1:30pm **TuB3: Wireless Networks and Photonics for Access**
Atlantic Ballroom II
 Chaired by: Vincent Houtsma

1:30pm-2:15pm - TuB3.1 - Ultra-high Capacity Wireless Communication Enabled by Photonic Technologies (Plenary)
 » [Prof. Ton Koonen](#), Dr. Ketema Mekonnen, Dr. Pang Cao, Mr. Frans Huijskens, Dr. Eduward Tangdionga

2:15pm-2:45pm - TuB3.2 - On Ethernet-based Time Sensitive Networking for Converged 5G XHaul (Invited)
 » Dr. RAIMENA VEISLLARI, [Dr. Jim Zou](#)

1:30pm **TuC3: Applications of Laser Dynamics**
Atlantic Ballroom III
 Chaired by: Mr. Kent Choquette and Prof. Vassilios Kovanis

1:30pm-2:15pm - TuC3.1 - Physical Layer Security Based on Optical Chaotic Carriers (Keynote)
 » [Prof. Dimitris Syvridis](#)

2:15pm-2:45pm - TuC3.2 - Nonlinear Dynamics of Semiconductor Lasers for Photonic Microwave Applications (Invited)
 » [Prof. Sheng-Kwang Hwang](#)

1:30pm **TuD3: Joint PAI & PP: Artificial Intelligent Photonics**
Atlantic Ballroom IV
 Chaired by: Prof. Ozdal Boyraz

1:30pm-2:00pm - TuD3.1 - Diffractive Optical Neural Networks (Invited)
 » [Prof. Aydogan Ozcan](#), Mr. Deniz Mengu

2:00pm-2:30pm - TuD3.2 - Neuromorphic Silicon Photonics on Foundry and Cryogenic Platforms (Invited)

» [Dr. Alexander Tait](#), Mr. Thomas Ferreira de Lima, Dr. Jeffrey Shainline, Ms. Sonia Buckley, Mr. Adam McCaughan, Mr. Mitchell Nahmias, Mr. Jeffrey Chiles, Mr. Hsuan-Tung Peng, Mr. Heidi Miller, Mr. Saewoo Nam, Mr. Richard Mirin, Prof. Bhavin Shastri, Prof. Paul Prucnal

2:30pm-3:00pm - TuD3.3 - Neuromorphic Photonic Processor Applications (Invited)

» [Prof. Bhavin Shastri](#), Dr. Alexander Tait, Mr. Mitchell Nahmias, Mr. Thomas Ferreira de Lima, Mr. Hsuan-Tung Peng, Prof. Paul Prucnal

1:30pm **TuF3: Lithium Niobate and Diamond Platform for Quantum Information**
Atlantic Ballroom VI
 Chaired by: Prof. Pascale SENELLART

1:30pm-2:00pm - TuF3.1 - Integrated Quantum Photonics with Diamond and Lithium-Niobate (Invited)
 » [Prof. Marko Loncar](#)

2:00pm-2:15pm - TuF3.2 - Quantum Photonics in Lithium Niobate (Invited)
 » [Dr. Mirko Lobino](#)

2:15pm-2:45pm - TuF3.3 - Experimental Quantum Process Tomography of Controlled-phase Gate for Time-bin Qubits
 » [Dr. Hsin-Pin Lo](#), Mr. Takuya Ikuta, Dr. Nobuyuki Matsuda, Dr. Toshimori Honjo, Dr. William J. Munro, Dr. Hiroki Takesue

2:45pm-3:00pm - TuF3.4 - Realization of High-Q Microring Resonators with Single Crystal Aluminum Nitride
 » [Dr. Yi Sun](#), Mr. David Laleyan, Mr. Eric Reid, Dr. Ping Wang, Dr. Xianhe Liu, Mr. Ayush Pandey, Dr. Mohammad Soltani, Prof. Zetian Mi

3pm **Coffee Break**
Atlantic Foyer Ballroom



Continued from **Tuesday, 9 July**

3:30pm TuA4: Group IV Optoelectronics II
Atlantic Ballroom I
 Chaired by: MITSURU TAKENAKA

3:30pm-4:00pm - TuA4.1 - Mid-infrared Sensing with Ge on Si Waveguides (Invited)
 » Dr. Kevin Gallacher, [Dr. Ross Millar](#), Ms. Ugne Griskeviciute, Dr. Leonetta Baldassarre, Prof. Marc Sorel, Prof. Michele Ortolani, Prof. Douglas Paul

4:00pm-4:30pm - TuA4.2 - Tensile Strained GeSn Laser (Invited)
 » [Mr. Moustafa El Kurdj](#), Dr. Dan Buca, Dr. Anas Elbaz, Dr. Nils von den Driesch, Dr. Konstantinos Pantzas, Dr. Etienne Herth, Dr. Sebastien Sauvage, Prof. Xavier Checoury, Dr. Gilles Patriarche, Dr. Isabelle Sagnes, Dr. Frederic Boeuf, Dr. Philippe Boucaud, Prof. Detlev Grützmacher, Dr. Jean-Michel Hartmann

4:30pm-5:00pm - TuA4.3 - Mid-IR GeSn Lasers, LEDs and Photodiodes in Progress (Invited)
 » [Dr. Alexei Chelnokov](#), Mr. Mathieu Bertrand, Mr. Quang Minh Thai, Mr. Jeremie Chretien, Mrs. Lara Casiez, Dr. Rami Khazaka, Mr. Francesco Armand Pilon, Dr. Hans Sigg, Dr. Nicolas Pauc, Dr. Jean-Michel Hartmann, Dr. Vincent Calvo, Dr. Vincent Reboud

3:30pm TuB4: Photonics for Access
Atlantic Ballroom II
 Chaired by: Dr. Pang Cao

3:30pm-4:00pm - TuB4.1 - Chip Based THz Emitter for Ultra-high Speed THz Wireless Communication (Invited)
 » [Dr. Hao Hu](#), Dr. Shi Jia, Dr. Mu-Chieh Lo, Mr. Lu Zhang, Dr. Oskars Ozolins, Dr. Aleksejs Udalcovs, Dr. Deming Kong, Dr. Xiaodan Pang, Prof. Xianbin Yu, Prof. Shilin Xiao, Prof. Sergei Popov, Prof. Jiajia Chen, Prof. Guillermo Carpintero, Prof. Toshio Morioka, Prof. Leif Oxenløwe

4:00pm-4:30pm - TuB4.2 - Low-cost and High-speed Nanophotonic Integrated Circuits for Access Networks (Invited)
 » Dr. Yuqing Jiao, [Dr. Jos van der Tol](#), Dr. Weiming Yao, Prof. Kevin Williams

3:30pm TuC4: Quantum Cascade Lasers
Atlantic Ballroom III
 Chaired by: Prof. Gadi Eisenstein and Dr. Lorenzo Columbo

3:30pm-4:15pm - TuC4.1 - Interband Cascade Frequency Comb Devices (Keynote)
 » [Mr. Mahmood Bagheri](#)

4:15pm-4:45pm - TuC4.2 - Interband and Quantum Cascade Laser Frequency Combs: From Physics to Monolithic Integration (Invited)
 » [Dr. Benedikt Schwarz](#), Mr. Johannes Hillbrand, Mr. Maximilian Beiser, Dr. Aaron Maxwell Andrews, Prof. Gottfried Strasser, Dr. Hermann Detz, Ms. Anne Schade, Dr. Robert Weih, Prof. Sven Höfling

4:45pm-5:00pm - TuC4.3 - Enhanced Chaotic Performance with Optically Injected Quantum Cascade Lasers
 » [Mr. Olivier Spitz](#), Mr. Andreas Herdt, Dr. Mathieu Carras, Prof. Wolfgang Elsaesser, Prof. Frédéric Grillot

3:30pm TuD4: Joint PAI & PP AI with Programmable Photonics
Atlantic Ballroom IV
 Chaired by: Prof. Paul Prucnal

3:30pm-4:00pm - TuD4.1 - Towards Photonic Compute Accelerators (Invited)
 » [Mr. Nick Harris](#)

4:00pm-4:30pm - TuD4.2 - Monolithically Integrated 3D Silicon Photonics (Invited)
 » [Ms. Joyce Poon](#)



Continued from **Tuesday, 9 July**

4:30pm-5:00pm - TuD4.3 - Photonic Neural Networks: Real-time Information Processing (Invited)

» [Prof. Volker Sorger](#)

3:30pm TuF4: Single and Indistinguishable Photon Sources

Atlantic Ballroom VI

Chaired by: Dr. Kartik Srinivasan

3:30pm-4:00pm - TuF4.1 - Quantum Dot Single Photon Sources for Quantum Integrated Optical Circuit (Invited)

» [Mr. Yasuhiko Arakawa](#)

4:00pm-4:30pm - TuF4.2 - Generation of Pure Quantum Light with Semiconductor Devices (Invited)

» [Prof. Pascale SENELLART](#)

4:30pm-5:00pm - TuF4.3 - Semiconductor Entangled Sources for Target Detection Applications (Invited)

» [Prof. Amr Helmy](#)

5:00pm-5:30pm - TuF4.4 - Quantum Photonics in the Frequency Domain (Invited)

» [Prof. Alexander Gaeta](#)

Wednesday, 10 July

8am Breakfast

Atlantic Foyer Ballroom

8:30am WA1: Special Session for Richard Soref I

Atlantic Ballroom I

Chaired by: Dr. Dan Buca

8:30am-8:45am - WA1.1 - The Progress of Silicon Photonics (Invited)

» [Prof. Graham Reed](#)

8:45am-9:15am - WA1.2 - Mid-IR Silicon and Germanium Photonic Circuits for Communications and Sensing (Invited)

» [Prof. Goran Mashanovich](#), Dr. Jordi Soler Penades, Mr. Yangbo Wu, Dr. Vinita Mittal, Mr. Ahmed Osman, Mr. Wei Cao, Mr. Zhibo Qu, Ms. Yanli Qi, Mr. Callum Stirling, Dr. Milan Milosevic, Ms. Lauren Reid, Dr. David Rowe, Dr. David Thomson, Dr. Milos Nedeljkovic

9:15am-10:00am - WA1.3 - Mid-infrared Applications of SiGeSn Optoelectronic Chips (Plenary)

» [Prof. Richard Soref](#)

10:00am-10:15am - WA1.4 - Road Toward Integrated Silicon Photonics (Invited)

» [Mr. Gernot Pomrenke](#)

8:30am WB1: Low Latency and Converged Access

Atlantic Ballroom II

Chaired by: Dr. Pang Cao

8:30am-9:00am - WB1.1 - FTT-5G Networks: Low-Latency FiWi Enhanced Mobile Networks With Edge Intelligence (Invited)

» [Mr. Martin Maier](#)

9:00am-9:45am - WB1.2 - Cable Operator's Access Architecture from Aggregation to Disaggregation and Distributed (Plenary)

» [Mr. Mike Emmendorfer](#)

8:30am WC1: Laser Dynamics I

Atlantic Ballroom III

Chaired by: Prof. Jesper Mork and Prof. Kathy Lüdge

8:30am-9:00am - WC1.1 - Modulation Properties of 2x1 Coherently Coupled VCSEL Arrays (Invited)

» [Mr. Kent Choquette](#), Mr. Harshil Dave, Mr. Zihe Gao



Continued from **Wednesday, 10 July**

9:00am-9:30am - WC1.2 - Strongly Injection-Locked Whistle-Geometry Microring Lasers for Optical Communications at 100 GHz and Beyond (Invited)

» [Prof. Marek Osinski](#), Mr. Sami A. Nazib, Mr. Troy A. Hutchins-Delgado, Dr. Nathan J. Withers, Dr. Gennady A. Smolyakov

9:30am-10:00am - WC1.3 - Antiresonances, Ultrafast Resonances and Exceptional Points in Twin Photonic Oscillators (Invited)

» [Prof. Vassilios Kovanis](#)

8:30am

WE1: Photonics a la Mode

Atlantic Ballroom V

Chaired by: Prof. Volker Sorger

8:30am-9:00am - WE1.1 - Manipulating Free-space Optical Beams with a Silicon Photonic Mesh (Invited)

» Mr. Maziyar Milanizadeh, Mr. Piero Borga, Mr. Francesco Morichetti, Mr. David Miller, [Mr. Andrea Ivano Melloni](#)

9:00am-9:15am - WE1.2 - Photontorch: Simulation and Optimization of Large Photonic Circuits Using the Deep Learning Framework PyTorch

» [Mr. Floris Laporte](#), Prof. Joni Dambre, Prof. Peter Bienstman

9:15am-9:30am - WE1.3 - Multimode Fiber Based Single-shot Full-field Temporal Measurement

» [Ms. Wen Xiong](#), Mr. Shai Gertler, Mr. Hasan Yilmaz, Dr. Hui Cao

9:30am-10:00am - WE1.4 - Mach-Zehnder Mesh Adaptation Methods for Direct-Detection Mode-Division Multiplexing (Invited)

» [Mr. Karthik Choutagunta](#), Dr. Ian Roberts, Prof. Joseph Kahn, Prof. David Miller

8:30am

WF1: Valleytronics and Single and Entangled Photons

Atlantic Ballroom VI

Chaired by: Prof. Zetian Mi

8:30am-9:00am - WF1.1- Lightwave Flipped Valleytronic Qubits (Invited)

» [Prof. Mack Kira](#)

9:00am-9:30am - WF1.2 - Semiconductor Quantum-dot Single Photon Sources (Invited)

» [Mr. Tobias Huber](#)

9:30am-9:45am - WF1.3 - Quantum Walks in Quasi-Periodic Photonics Lattices

» [Dr. Dan Nguyen](#), Dr. Daniel Nolan, Dr. Nicholas Borrelli

9:45am-10:00am - WF1.4 - On-chip Scalable Integrated Quantum Photonic Networks based on Quantum Dot Single Photon Source Array Integrated with Dielectric Light Manipulating Circuits

» [Mr. Swarnabha Chattaraj](#), Dr. Jiefei Zhang, Dr. Siyuan Lu, Prof. Anupam Madhukar

10:00am-10:15am - WF1.5 - Long-range Distribution of Multiphoton Entanglement

» Ms. Monika Mycroft, [Dr. Magdalena Stobinska](#), Dr. Adam Buraczewski, Prof. Stefanie Barz

10:15am-10:45am - WF1.6 - Efficient Coupling to a Single Atom in Free Space (Invited)

» [Dr. Gerd Leuchs](#)

10am

Coffee Break

Atlantic Foyer Ballroom

10:30am

WA2: Special Session for Richard Soref II

Atlantic Ballroom I

Chaired by: Prof. Oussama Moutanabbir

10:30am-11:00am - WA2.1 - Reflections on the Career of Dr. Richard Soref (Invited)

» [Dr. Brian Bennett](#)



Continued from **Wednesday, 10 July**

11:00am-11:30am - WA2.2 - Prospect of Group-IV Quantum Cascade Lasers – Circumventing the Indirect Bandgap (Invited)

» [Prof. Greg Sun](#)

11:30am-12:00pm - WA2.3 - Development of GeSn Emitters and Detectors towards Integrated Mid-Infrared Photonics Applications (Invited)

» Mr. Yiyin Zhou, Ms. Huong Tran, Prof. Wei Du, [Prof. Shui-Qing Yu](#), Prof. Seyed Ghetmiri, Prof. Aboozar Mosleh, Prof. Mansour Mortazavi, Dr. Joe Margetis, Dr. John Tolle, Prof. Greg Sun, Prof. Richard Soref, Dr. Baohua Li

10:30am **WB2: Network Planning and Security**

Atlantic Ballroom II

Chaired by: Junwen Zhang

10:30am-11:00am - WB2.1 - Chaotic Encryption Schemes for Secure OFDM-PONs (Invited)

» [Prof. Calvin C.K. Chan](#), Mr. Zhouyi Hu

11:00am-11:30am - WB2.2 - Photonic-neuromorphic Signal Processing for Dynamic and Flexible RF Communication Systems (Invited)

» [Prof. Mable Fok](#)

11:30am-12:00pm - WB2.3 - Cross-Layer Network Planning with Multi-Dimensional SLOs (Invited)

» [Mr. Hongqiang Liu](#)

10:30am **WC2: Laser Dynamics II**

Atlantic Ballroom III

Chaired by: Prof. Dimitris Syvridis and Prof. Sheng-Kwang Hwang

10:30am-11:00am - WC2.1 - Photon Statistics of Lasers Under External Perturbations: Impact of Nonlinear Dynamics (Invited)

» Dr. Benjamin Lingnau, Mr. Christoph Redlich, [Prof. Kathy Lüdge](#)

11:00am-11:30am - WC2.2 - Neuromorphic Photonics with Laser Dynamics (Invited)

» [Dr. Antonio Hurtado](#), Mr. Joshua Robertson, Mr. Ewan Wade

11:30am-12:00pm - WC2.3 - Probing Ultrafast Switch-on Dynamics of Frequency Tuneable Semiconductor Lasers Using Terahertz Time-domain Spectroscopy (Invited)

» [Dr. Iman Kundu](#), Dr. Feihu Wang, Dr. Xiaoqiong Qi, Dr. Hanond Nong, Dr. Paul Dean, Dr. Joshua R. Freeman, Dr. Alexander Valavanis, Dr. Gary Agnew, Dr. Andrew T. Grier, Dr. Thomas Taimre, Dr. Lianhe Li, Dr. Dragan Indjin, Dr. Juliette Mangeney, Prof. Jérôme Tignon, Dr. Sukhdeep S. Dhillon, Prof. Aleksandar D. Rakić, Prof. John E. Cunningham, Prof. Edmund H. Linfield, Prof. A. Giles Davies

10:30am **WE2: Free-space Programmable Photonics**

Atlantic Ballroom V

Chaired by: Dr. Daniel Pérez

10:30am-11:00am - WE2.1 - Multi-plane Light Conversion of High Spatial Mode Count (Invited)

» [Dr. Joel Carpenter](#), Dr. Nicolas Fontaine, Dr. Haoshuo Chen, Dr. Roland Ryf, Dr. David Neilson, Dr. Kwangwoong Kim

11:00am-11:30am - WE2.2 - Optical MIMO and Spatial Mode Multiplexers (Invited)

» [Dr. Nicolas Fontaine](#)

11:30am-12:00pm - WE2.3 - Performing Linear Operations Using Optical Complex Media (Invited)

» [Mr. Maxime Matthes](#), Mr. Philipp del Hougne, Mr. Julien de Rosny, Mr. Geoffroy Lerosey, Mr. Sébastien Popoff

12pm **Lunch (on own)**

1:30pm **WB3: Network Planning, Optimization and Services**

Atlantic Ballroom II

Chaired by: Dora Van Veen



Continued from **Wednesday, 10 July**

1:30pm-2:15pm - WB3.1 - End-To-End Network and Service Automation (Plenary)

» [Ms. Marina Thottan](#)

2:15pm-2:45pm - WB3.2 - Exploiting Programmable and Reconfigurable Hardware in 5G (Invited)

» [Mr. Federico Civerchia](#), Prof. Maxime Pelcat, Prof. Piero Castoldi, Mr. Luca Valcarengi

2:45pm-3:00pm - WB3.3 - Efficient Power-Division NOMA for Intelligent Optical Access Network Enabled by Deep Learning

» Dr. Qi Zhou, [Ms. Shuang Yao](#), Ms. Shuyi Shen, Dr. You-Wei Chen, Mr. Jiale He, Prof. Gee-Kung Chang

1:30pm

WC3: QD Lasers on Silicon

Atlantic Ballroom III

Chaired by: Prof. Johann Peter Reithmaier and Prof. Luke Lester

1:30pm-2:00pm - WC3.1 - Dynamics of Quantum Dot Lasers on Silicon (Invited)

» [Mrs. Constanze Hantschmann](#), Prof. Peter Vasil'ev, Mr. Siming Chen, Ms. Mengya Liao, Prof. Alwyn Seeds, Prof. Huiyun Liu, Prof. Richard Penty, Prof. Ian White

2:00pm-2:30pm - WC3.2 - Epitaxial Quantum Dot Mode-Locked Lasers on Silicon (Invited)

» [Dr. Justin Norman](#), Dr. Songtao Liu, Dr. Xinru Wu, Dr. Daehwan Jung, Prof. John Bowers

1:30pm

WE3: Shift the Phase, Couple the Light

Atlantic Ballroom V

Chaired by: Prof. Tae Joon Seok

1:30pm-2:00pm - WE3.1 - A Strong Pockels Effect in Integrated Photonic Circuits (Invited)

» [Dr. Stefan Abel](#)

2:00pm-2:15pm - WE3.2 - Dual-Drive Directional Couplers for Programmable Integrated Photonics

» [Dr. Daniel Pérez](#), Dr. Ana M. Gutierrez, Ms. Erica Sánchez, Dr. Prometheus Dasmahapatra, Prof. José Capmany

2:15pm-2:30pm - WE3.3 - Tolerant, Broadband Tunable 2 × 2 Coupler Circuit

» [Ms. Mi Wang](#), Mr. Antonio Ribeiro, Mr. Yufei Xing, Prof. Wim Bogaerts

2:30pm-3:00pm - WE3.4 - Facilitation of Applications From Wafer Scale Testing to Programmable Photonics (Invited)

» [Prof. Graham Reed](#)

3pm

Coffee Break

Atlantic Foyer Ballroom

3:30pm

WB4: Panel Discussion

Atlantic Ballroom II

Chaired by: Vincent Houtsma

3:30pm

WE4: Don't Leave Yet. This is Really Cool!

Atlantic Ballroom V

Chaired by: Prof. José Capmany

3:30pm-4:00pm - WE4.1 - Nanophotonic Inverse Design (Invited)

» [Prof. Jelena Vuckovic](#)

4:00pm-4:30pm - WE4.2 - Programmable Photonic Integrated Circuits for Quantum Information Processing and Machine Learning (Invited)

» [Mr. Dirk Englund](#)