

2019 IEEE Photonics Conference (IPC) Program-At-A-Glance

SUNDAY, 29 September 2019

Registration & Speaker Check-in Hours: 8:00 AM – 6:00 PM *La Vista Pre-function*

1:00 PM – 3:00 PM
Photonics in Texas

La Vista A/B/C

Session Chairs: Weidong Zhou, *University of Texas at Arlington, USA* & Christina Lim, *University of Melbourne, Australia*

This session showcases the various photonics activities in Texas, featuring presentations by local experts from academic and industry to discuss their research and vision. This will be followed by a panel-based discussion on emerging opportunities and challenges of photonics research and development.

Speakers:

Ray Chen, *University of Texas at Austin, USA* Tomasz Tkaczyk, *Rice University, USA*
Jim Coleman, *University of Texas at Dallas, USA* Paul Pinsukanjana, *Intelliepi, USA*
Jason Tan, *Finisar, USA*

3:00 PM – 3:30 PM Coffee Break *La Vista Foyer*

3:30 PM – 5:30 PM

La Vista A/B/C

Panel Session: Getting Familiar with the Peer Review Process

Session Organizers: Amol Choudhary, *IIT Delhi, India*, David Marpaung, *University of Twente, Netherlands*
& Christina Lim, *University of Melbourne, Australia*

Session Chair: Chennupati Jagadish, *Australian National University, Australia*

Have you ever wondered what constitutes a good review? This educational session provides a comprehensive coverage of paper review skills and the opportunity to network with our editors and top reviewers. We aim to bring together editors, reviewers, early career researchers and students to discuss and learn the best practices in the peer review process.

Panelists:

Carmen Menoni, *Colorado State University, USA* Jianping Yao, *Ottawa University, Canada*
Nikola Alic, *University of California San Diego, USA* Aaron Hawkins, *Brigham Young University, USA*
Thas A. Nirmalathas, *University of Melbourne, Australia*

6:00 PM – 8:00 PM

La Vista D/E

Sunday Evening Social

Session Chair: Nick Fontaine, *Nokia Bell Labs, USA*

Conference attendees and Mentor Matches are all encouraged to attend this social. There will be stations/demos, each staffed with a researcher experienced in lab automation, ranging from simple remote control of optical instrumentation, data processing and photonic design simulations. Great opportunity to network and kickoff the week!

MONDAY, 30 SEPTEMBER 2019

Registration & Speaker Check-in Hours: 7:30 AM - 5:00 PM *La Vista Pre-function*

8:00 AM - 4:00 PM IEEE Member Appreciation Lounge *Salon Pre-function & La Corona*

Session Chairs: Stanley Ikpe, *NASA Langley Research Center, USA* & Niamh Kavanagh, *Tyndall National Institute, Ireland*

IEEE members are welcome to visit this lounge all day Monday. Come to the IEEE members lounge to relax, grab a snack and connect with peers. Members are welcome to bring a friend or companion who is interested in learning more about the Society! Throughout the day, there will also be special meet-ups for the Society's Young Professionals, Women in Photonics and STEM Outreach programs.

El Mirador A	El Mirador B	El Mirador C East	El Mirador C West	La Vista A/B	La Vista C	La Vista D/E <i>Industry Day</i>	La Vista F
	8:30am-10:00am MB1 Hybrid Materials and Devices <i>Chair: G. Grosso</i>	8:30am-9:15am MC1 OC TUT Submarine Transmission Systems <i>Chair: H. Batshon</i>	8:30am-10:00am MD1 Silicon Photonics <i>Chair: S. Dwivedi</i>	8:30am-9:45am ME1 Frequency Combs and Nonlinear Processes in Microresonators <i>Chair: F. Raineri</i>			8:30am-10:00am MH1 Remote Sensing <i>Chair: M. Bagheri</i>
EXHIBITS & COFFEE BREAK 10:00 AM - 10:30 AM <i>La Vista & El Mirador Foyers</i>							
	10:30am-12:00pm MB2 NANO TUT Metamaterials <i>Chair: A. Majumdar</i>	10:30am-12:00pm MC2 Utilizing and Compensating Transmission Effects <i>Chair: A. Ghazisaeidi</i>	10:30am-12:00pm MD2 Emerging PIC Technologies & Applications <i>Chair: S. Arafin</i>	10:30am-11:45am ME2 Nonlinear and High Q-Factor Microresonator Structures <i>Chair: D. Skryabin</i>	10:30am-12:00pm MF2 Classical and Quantum Optical Fiber Communication <i>Chair: G. Milione</i>	10:30am-12:00pm MG2 Photonics for 5G – How Industry is Addressing the Challenge <i>Chair: R. Waterhouse</i>	10:30am-12:00pm MH2 From Sensing to Imaging <i>Chair: S. Mallidi</i>
12:00 PM – 1:30 PM LUNCH (on own)							
	1:30pm-3:00pm MB3 2D Materials <i>Chair: P. Deotare</i>	1:30pm-3:00pm MC3 High Speed Photodetectors and Systems <i>Chair: A. Sarangan</i>	1:30pm-3:00pm MD3 PIP TUT - Photonic Integration for Large Capacity Optical Communication <i>Chair: S. Liu</i>	1:30pm-3:00pm ME3 Metamaterial and Non-Reciprocal Nanophotonic Devices <i>Chair: S. Combrié</i>	1:30pm-3:00pm MF3 Optical Fiber Sensors <i>Chair: G. Milione</i>	1:30pm-3:00pm MG3 University Photonics Technology Transfer for Successful Start-ups – A Global Perspective <i>Chair: TBD</i>	1:30pm-2:45pm MH3 Frontiers in Biophotonics <i>Chair: B. Applegate</i>
EXHIBITS & COFFEE BREAK 3:00 PM – 3:30 PM <i>La Vista & El Mirador Foyers</i>							
	3:30pm-5:00pm MB4 Sensing & Imaging <i>Chair: C. Giebink</i>	3:30pm-5:00pm MC4 High Power and UTC Detectors, Optics and Electronics <i>Chair: N. Dhar</i>	3:30pm-5:00pm MD4 Novel Photonic Materials <i>Chair: H. Bhaskaran</i>	3:30pm-4:30pm ME4 Lasing Microdevices <i>Chair: P. Cheben</i>	3:30pm-5:00pm MF4 Optical Fiber Nonlinearities and Devices <i>Chair: G. Milione</i>	3:30pm-5:30pm MG4 Photonics in Government Labs – The Interface between Industry and University <i>Chair: D. Novak</i>	3:30pm-5:00pm MH4 BIO TUT Photonic and Microfluidic Devices <i>Chair: M. Villiger</i>

7:00 PM - 9:00 PM IEEE Photonics Society Welcome and Awards Banquet Dinner

Session Chairs: Carmen Menoni, *Colorado State University, USA*
& Nikola Alic, *University of California San Diego, USA*

Off-Site:

Venue Villita

401 Villita St. San Antonio, TX 78205

TUESDAY, 1 OCTOBER 2019

Registration & Speaker Check-in Hours: 7:30 AM - 5:00 PM *La Vista Pre-function*

El Mirador A	El Mirador B	El Mirador C East	El Mirador C West	La Vista A/B	La Vista C	La Vista D/E	La Vista F
8:30am-9:30am TuA1 Optical Coherence Tomography <i>Chair: P. Munro</i>	8:30am-10:00am TuB1 Award Winning Photonics Science and Technology I <i>Chair: Z. Mi</i>	8:30am-9:45am TuC1 Optical Computing Microdevices <i>Chair: A. Alu</i>	8:30am-9:45am TuD1 Semiconductor-Based Emitters and Detectors <i>Chair: M. Fox</i>	8:30am-10:00am TuE1 Avalanche Photodetectors <i>Chair: J. Campbell</i>	8:30am-10:00am TuF1 Photonic Approaches to Quantum information Processing <i>Chair: M. Brodsky</i>	8:30am-10:00am TuG1 Photonics and Hybrid Integrations <i>Chair: P. Morton</i>	8:30am-9:45am TuH1 Passive Integrated Optics <i>Chair: J.D. Ryckman</i>

EXHIBITS & COFFEE BREAK 10:00 AM - 10:30 AM *La Vista & El Mirador Foyers*

10:30am-12:00pm TuA2 Computational Imaging <i>Chair: D. Kang</i>	10:30am-12:00pm TuB2 Award Winning Photonics Science and Technology II <i>Chair: Z. Mi</i>	10:30am-12:00pm TuC2 Access Networks <i>Chair: I. Roudas</i>	10:30am-11:45am TuD2 Metamaterials, Metasurfaces, and Chiral Materials <i>Chair: J. Campbell</i>	10:30am-11:30am TuE2 Nonlinear Processes in Photonic Crystal Fibers <i>Chair: C-S Bres</i>	10:30am-12:00pm TuF2 QPIT TUT The Art of Disturbing Quantum Information <i>Chair: W. Munro</i>	10:30am-12:00pm TuG2 Low Noise and Telecom Lasers <i>Chair: M. Mashanovitch</i>	10:30am-11:45am TuH2 Novel Interconnect Architectures <i>Chair: J.D. Ryckman</i>
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12:00 PM – 1:30 PM Photonics Pro Luncheon: Researchers Round-table **Registration Required The Stetson*

Session Chair: Rene Essiambre, *Nokia Bell Labs, USA*

This special professional development program, for IEEE Photonics Society members-only, is designed to connect students as well as young to mid-career professionals with top researchers and fellows. In a fire-side chat style, researchers will speak on ‘hot topics’ in photonics and conduct direct Q&A in a welcoming, informal setting.

Buffet lunch will be provided.

1:30pm-3:00pm TuA3 Structural Color Displays, Perovskite Materials and Light Guides <i>Chair: N. Laurand</i>		1:30pm-2:45pm TuC3 Networks Architecture and Transmission <i>Chair: I. Roudas</i>	1:30pm-3:00pm TuD3 Signal Generation and Manipulation <i>Chair: R. DeSalvo</i>	1:30pm-3:00pm TuE3 Nonlinear in Waveguides <i>Chair: P. Kuo</i>	1:30pm-3:00pm TuF3 Dreams and Reality of Quantum Networking <i>Chair: M. Brodsky</i>	1:30pm-2:45pm TuG3 Wide Bandgap Semiconductor Lasers <i>Chair: S. Kamiyama</i>	1:30pm-2:45pm TuH3 Silicon Photonic Interconnect Solutions <i>Chair: J.D. Ryckman</i>
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EXHIBITS & COFFEE BREAK 3:00 PM – 3:30 PM *La Vista & El Mirador Foyers*

3:30 PM - 5:00 PM Plenary Session I - TuI4

Salon del Rey

Session Chair: Nikola Alic, *University of California San Diego, USA*

3:30 PM – 4:15 PM Franco Nori, *Chief Scientist at RIKEN (the Japanese National Laboratory) & University of Michigan, USA*

4:15 PM – 5:00 PM Stephen Grubb, *Facebook, USA*

WEDNESDAY, 2 OCTOBER 2019

Registration & Speaker Check-in Hours: 7:30 AM - 5:00 PM *La Vista Pre-function*

El Mirador A	El Mirador B	El Mirador C East	El Mirador C West	La Vista A/B	La Vista C	La Vista D/E	La Vista F
8:30am-10:00am WA1 Microdisplays and Quantum Dot Integration <i>Chair: D. Feezell</i>	8:30am-10:00am WB1 VLC and Short Reach Systems <i>Chair: J. Kahn</i>	8:30am-10:00am WC1 High Average and Peak Power Ytterbium Laser Sources <i>Chair: F. Légaré</i>	8:30am-10:00am WD1 Analog and Digital Networks and Links <i>Chair: J. Kalkavage</i>	8:30am-10:00am WE1 Novel Photodetectors <i>Chair: C. Scheutz</i>	8:30am-10:00am WF1 Active Metasurfaced Photonics <i>Chair: G. Wang</i>	8:30am-10:00am WG1 SL TUT High Power Quantum Cascade Lasers <i>Chair: M. Belkin</i>	8:30am-10:00am WH1 Imaging Spectrometers <i>Chair: D. Ting</i>

EXHIBITS & COFFEE BREAK 10:00 AM - 10:30 AM *La Vista & El Mirador Foyers*

10:30am-11:30am WA2 Development of MicroLEDs and Their Multi-Functionalities <i>Chair: D. Feezell</i>	10:30am-11:45am WB2 Coding and Security <i>Chair: H. Haas</i>	10:30am-12:00pm WC2 Nonlinear Mid-Infrared Laser Science <i>Chair: F. Légaré</i>	10:30am-12:00pm WD2 MWP TUT Optical Frequency Sources for MWP <i>Chair: M.N. Hutchinson</i>	10:30am-12:00pm WE2 Low Dimensional Photodetectors <i>Chair: C. Grein</i>	10:30am-12:00pm WF2 Nanostructured Light Absorbers <i>Chair: M. Gerhold</i>	10:30am-12:00pm WG2 Nanostructure and Grating Lasers <i>Chair: Z. Sitar</i>	10:30am-12:00pm WH2 Laser Technology <i>Chair: S. Gunapala</i>
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12:00 PM – 1:30 PM Student Chapter Leadership Forum **Registration Required The Stetson*

Session Chair: Rene Essiambre, VP of Membership & Naresh Chand, AVP of Chapter Relations

This forum will provide our student chapter leaders and outreach volunteers with a unique opportunity to exchange information and discuss areas of common interest or concern in the photonics community. Chapters' best practices will be shared along with experiences, methods and strategies for chapter development.

Buffet lunch will be provided.

1:30pm-2:45pm WA3 Applications Beyond Displays and Novel Nanomaterials for MicroLEDs <i>Chair: N. Laurand</i>	1:30pm-3:00pm WB3 Coherent Transmission and Switches <i>Chair: I. Djordjevic</i>	1:30pm-3:00pm WC3 Quasi-Phase-matched Nonlinear Devices <i>Chair: H. Tang</i>		1:30pm-3:00pm WE3 PSSI TUT <i>Chair: S. Krishnamurthy</i>	1:30pm-3:00pm WF3 Highly Resonant Photonics <i>Chair: C-Z Ning</i>	1:30pm-3:00pm WG3 Comb Based Lasers and Waveguides <i>Chair: C. Tan</i>	1:30pm-2:30pm WH3 Optical Communications <i>Chair: R. Briggs</i>
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EXHIBITS & COFFEE BREAK 3:00 PM – 3:30 PM *La Vista & El Mirador Foyers*

3:30 PM - 5:00 PM Plenary Session II - WI4

Salon del Rey

Session Chair: Carmen Menoni, *Colorado State University, USA*

3:30 PM – 4:15 Jelena Vuckovic, *Stanford University, USA*

4:15 PM – 5:00 PM David Reitze, *California Institute of Technology & University of Florida, USA*

6:00 PM - 8:00 PM Poster Session / Student Poster Competition

Pavilion, Upper Level

Session Chair: Zetian Mi, *University of Michigan, Ann Arbor, USA*

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Student & Young Professionals Job Fair

Free events for registered attendees. Complimentary food & beverages will be served.

THURSDAY, 3 OCTOBER 2019

Registration & Speaker Check-in Hours: 7:30 AM - 10:00 AM *Salon Del Rey Pre-function*

El Mirador A	El Mirador B	El Mirador C East	El Mirador C West	La Vista A/B	La Vista C	La Vista D/E	La Vista F
8:30am-9:45am ThA1 Color Microdisplays, Quantum Dots and Instrumentation <i>Chair: S. Garner</i>	8:30am-9:45am ThB1 Spatial Division Multiplexing <i>Chair: M. Paskov</i>	8:30am-10:00am ThC1 High Power Laser Sources and Free Electron Laser Technologies <i>Chair: G. Vampa</i>		8:30am-9:45am ThE1 Graphene-Based Detectors <i>Chair: A. Ciani</i>	8:30am-10:00am ThF1 Low Dimensional Light Emitters <i>Chair: M. Gerhold</i>	8:30am-10:00am ThG1 New Applications in Lasers <i>Chair: L. Yang</i>	8:30am-9:15am ThH1 Metrology/ Navigation <i>Chair: R. Briggs</i>

EXHIBITS & COFFEE BREAK 10:00 AM - 10:30 AM La Vista & El Mirador Foyers

10:30 AM - 12:00 PM IPC CLOSING CEREMONY

Salon del Rey C

BEST STUDENT PAPER & POSTER AWARDS

POST-DEADLINE SESSION

Session Chair: Zetian Mi, *University of Michigan, Ann Arbor, USA*

SEE YOU IN 2020!

27 SEPTEMBER – 1 OCTOBER

33rd ANNUAL IEEE PHOTONICS CONFERENCE

HYATT REGENCY VANCOUVER, CANADA