**Wednesday, 26 February 2020**

12:00  Lunch & Networking  
OSA Headquarters, 2010 Massachusetts Ave NW

13:30  Welcome  
Elizabeth Rogan, CEO, The Optical Society

13:45  Welcome, Goals, and General Information  
*Federico Capasso, Harvard University, United States  
Paulo Dainese, Corning Inc., United States  
Wei Ting Chen, Harvard University, United States*

14:00  Session 1: Flat Optics from Components to Systems I  
Flat Optics Based on Metasurfaces  
*Federico Capasso, Harvard University, United States*

Machine-Learning Assisted Photonics: From Metasurface Device Design to Quantum Measurements  
*Alexandra Boltasseva, Purdue University, United States*

Flat Imaging Optics  
*Xiangang Luo, Chinese Academy of Sciences, China*

15:30  Discussion Session  
*Thomas Krauss, University of York, United Kingdom*

15:45  Coffee Break
16:15  **Session 2: Flat Optics from Components to Systems II**

After 50 Years in the Making, Have Diffractives Finally Captured the Attention of Mainstream Industry?
*Bernard Kress, Microsoft, United States*

Flat Optics for Active Wavefront Manipulation and AR/VR
*Mark Brongersma, Stanford University, United States*

Inverse Design of Large Area Metasurfaces
*Rahul Trivedi, Stanford University, United States*

17:45  **Discussion Session**
*Wouter Woestenborghs, PlanOpSim, Belgium*

18:00  **Information & Goals for Day 2**

18:15  Welcome Dinner
*Del Sur Café, 2016 P Street NW*

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**Thursday, 27 February 2020**

8:00  Breakfast

8:30  **Session 3: Simulation and Optimization for Large Metasurfaces**

Global Topology Optimization of Metasurfaces Based on Machine Learning
*Jonathan Fan, Stanford University, United States*

3D-Printable Multi-Layered Meta-Optics by Inverse Design
*Zin Lin, Massachusetts Institute of Technology, United States*

Reaching the Limits of Light-Matter Interactions
*Owen Miller, Yale University, United States*

10:00  **Discussion Session**
*Douglas Werner, Pennsylvania State University, United States*

10:15  Coffee Break

10:45  **Session 4: Tunable and multifunctional flat optical devices**

Active Metasurfaces – Device Concepts and Inverse Design
*Harry Atwater, California Institute of Technology, United States*
Solid-State Lidar with Dynamic Optical Metasurfaces  
*Gleb Akselrod, Lumotive, United States*

Tunable Nanophotonics Devices  
*Debashis Chanda, University of Central Florida, United States*

**12:15 Discussion Session**  
*Owen Miller, Yale University, United States*

**12:30 Lunch**

**13:30 Rapid-Fire Oral Presentations**

Metasurface enabled integrated nanophotonic interfaces to quantum systems  
*Amit Agrawal, National Institutes of Standards and Technology, United States*

Cascaded Metasurface Optics  
*Amir Arbabi, University of Massachusetts Amherst, United States*

Photonic Inverse Design for 3D Color Splitting Applications  
*Gregory Roberts, California Institute of Technology, United States*

Two Metasurface Layers for Phase Gradient Imaging  
*Hyounghan Kwon, California Institute of Technology, United States*

Computational Imaging with Dielectric Metasurfaces  
*Shane Colburn, University of Washington, United States*

RGB-Achromatic Metalenses for a VR/AR System  
*Zhaoyi Li, Harvard University, United States*

Infrared Metasurfaces  
*Clara Rivero-Baleine, Lockheed Martin Corporation, United States*

Multiscale Inverse Design for Systems of Metasurface Optics  
*Adam Backer, Sandia National Laboratories, United States*

**14:30 Session 5: Advanced Nanofabrication for Large-Scale Flat Optics**

Large-area fabrication of flat optical components by immersion DUV Lithography  
*Dim Lee Kwong, A*STAR, Singapore*
Towards High-Volume Manufacturing Of Near-Infrared Metasurface Optical Devices
   Robert Visser, Applied Materials, United States

Flat Optics Beyond the Wafer: Progress Towards Large Area Nanopatterned Optical Films
   Martin Wolk, 3M, United States

High Volume Serial Production of Nanostructured Functional Surfaces by Roller Imprint and Injection Molding
   Mike Bülters, Temicon GmbH, Germany

16:30   Discussion Session
   Paulo Dainese, Corning Inc., United States

16:45   Coffee Break

17:15   Session 6: Flat Optics for AR/VR and Displays

   Metasurfaces for Waveguide AR Displays: A Case Study
      Pierre St. Hilaire, Magic Leap, United States

   Practicality Issues Of Metalens and Meta-Hologram
      Hwi Kim, Korea University, South Korea

18:15   Discussion Session
   Giuseppe Calafiore, Facebook Reality Labs, United States

18:30   Networking Dinner
   La Tomate, 1701 Connecticut Ave NW

Friday, 28 February 2020

8:00   Breakfast

8:30   Session 7: Emerging Applications I

   Manufacturing and Applications of Wafer-Level Optics
      Reinhard Völkel, SUSS MicroOptics, Switzerland

   Meta Resonant Waveguide-Gratings: Flatter Optics Providing Selective Diffraction
      Guillaume Basset, CSEM SA, Switzerland

   Aberrations and Efficiency of High-End Metalenses
      Wei-Ting Chen, Harvard University, United States
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<td><strong>Discussion Session</strong></td>
<td><em>Martin Wolk, 3M, United States</em></td>
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<td>Coffee Break</td>
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<td>10:45</td>
<td><strong>Session 8: Emerging Applications II</strong></td>
<td>Spatial-Division Multiplexing with Metasurfaces</td>
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<td><em>Paulo Dainese, Corning Inc., United States</em></td>
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<td>Optical metasurfaces: from lab to product</td>
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<td><em>Pawel Latawiec, Metalenz, United States</em></td>
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<td>11:45</td>
<td><strong>Discussion Session</strong></td>
<td><em>Siavash Yazdanfar, Corning Inc., United States</em></td>
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<td>12:00</td>
<td><strong>Summary, Conclusions &amp; Next Steps</strong></td>
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<td>12:15</td>
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<td>13:30</td>
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