AGENDA

Day 1: Wednesday, 14 May 2014

18:00 Welcome Dinner
    Ezme, 2016 P Street, NW

Day 2: Thursday, 15 May 2014

8:00 Breakfast
    OSA Headquarters, 2010 Massachusetts Ave., NW

8:30 Welcome, Goals, and General Information
    Volker Sorger, The George Washington University, United States

8:45 Welcome, & Update on National Photonics Initiative
    Elizabeth Rogan, Chief Executive Officer, OSA, United States

Session A: Understanding & Determination of Device Limits

9:00 General Opto-electronic Device Limits & Integration
    Thomas Koch, University of Arizona, United States

9:30 Limits of Modulators
    Juejun Hu, University of Delaware, United States

10:00 Limits of Lasers
    Rupert Oulton, Imperial College of London, United Kingdom

10:30 Coffee Break

10:50 Valleytronics: The Promise of Layered Materials
    Xiaodong Xu, University of Washington, United States

11:20 Session A: Q&A
Day 2: Thursday, 15 May 2014 (continued)

11:30 Breakout Session 1: Fundamental Limits and Solutions for Opto-electronic Devices
- Group A: Electro-optic Modulators
  Chairs: Juejun Hu, University of Delaware, United States; Hong Tang, Yale University, United States
- Group B: On-Chip Light Sources and Lasers
  Chairs: Rupert Oulton, Imperial College London, United Kingdom; Cun-Zheng Ning, Arizona State University, United States
- Group C: Emerging Materials for Opto-electronics
  Chairs: Ritesh Argawal, University of Pennsylvania, United States; Han Wang, IBM Watson Research Center, United States

13:00 Lunch (provided on-site)

Session B: Solutions & Approaches to Address Limitations

14:00 Emerging Materials and Applications in Nanophotonics
Fengnian Xia, Yale University, United States

14:30 The Case for Plasmonics
Volker Sorger, The George Washington University, United States

15:00 2D Photonic Crystals for Optoelectronic Devices: Lasers & Quantum Photonics
Pablo Postigo, Consejo Superior de Investigaciones Cientificas, Spain

15:30 Coffee Break

16:00 Limits & Opportunities of Electrical & Optical Interconnects
David A. B. Miller, Stanford University, United States

16:30 Advances in Hybrid Integration
Ping Ma, ETH Zurich, Switzerland

17:00 Breakout Session 2: Methods and Materials to Address Fundamental Challenges
- Group D: Hybrid Photonic Integration
  Chairs: Jung Park, Intel Corporation, United States; Fengnian Xia, Yale University, United States
- Group E: Plasmonics Enhanced Devices
  Chairs: Ganapathi Subramania, Sandia National Laboratories, United States; Yuebing Zheng, University of Texas Austin, United States
- Group F: Optical Interconnects & Device Limits
  Chair: David A. B. Miller, Stanford University, United States
Day 2: Thursday, 15 May 2014 (continued)

18:30  Summary of Day, Next Up
       Hosts

19:00  Dinner
       Grillfish, 1200 New Hampshire Ave., NW

Day 3: Friday, 16 May 2014

8:00   Breakfast
       OSA Headquarters, 2010 Massachusetts Ave., NW

Session C: Industry & Government Perspective

8:30  Panel Session 1: Current Trends & Future Bottlenecks
      •  Speakers: Frederick Kish, Infinera Corporation, United States; Hughes Martes, CEA-LETI, France; Jung Park, Intel Corporation, United States
         ○  Moderator: Nadir Dagli, University of California, Santa Barbara, United States

9:30  Panel Session 2: Mission Critical Requirements & Vision
      •  Speakers: Richard Carlson, Department of Energy, Office of Science, United States; Dimitris Pavlidis, National Science Foundation, United States
         ○  Moderator: Ganapathi Subramania, Sandia National Laboratories, United States

10:30 Coffee Break

Session D: Merging Nanophotonics with Classical Photonics

11:00 Panel Session 3: Merging Current Device Solutions with Emerging Trends
      •  Speakers: Rajeev Jagga Ram, Massachusetts Institute of Technology, United States; Marc Savanier, University of California San Diego, United States; Luke Sweatlock, Northrop Grumman Corporation, United States
         ○  Moderator: David A. B. Miller, Stanford University

12:00 Working Lunch
       Breakout Groups Finalize Notes/Reports
Day 3: Friday, 16 May 2014 (continued)

13:30  Breakout Group Presentations
   • Breakout Session 1: Devices
     o Group A: Electro-optic Modulators
     o Group B: On-Chip Light Sources and Lasers
     o Group C: Emerging Materials for Opto-electronics
   • Breakout Session 2: Solutions
     o Group D: Hybrid Photonic Integration
     o Group E: Plasmonics Enhanced Devices
     o Group F: Optical Interconnects & Device Limits

14:30  Summary, Conclusion & Next Steps
   Hosts of Incubator

15:00  Adjourn