

**18TH ANNUAL PHOTONICS CENTER SYMPOSIUM
ADVANCED MATERIALS BY DESIGN FOR THE 21ST CENTURY**

Time	Thursday, December 4, 2014
8:00 - 8:30 a.m.	Registration and Continental Breakfast
8:30 - 8:45 a.m.	Gloria Waters, Ph.D., Vice President and Associate Provost for Research, Boston University, <i>University Greeting</i>
8:45 - 9:00 a.m.	Thomas Bifano, Ph.D., Professor and Director, Photonics Center, <i>Photonics Center and Advanced Materials by Design for the 21st Century Overview</i>
9:00 - 9:40 a.m.	Martin Berzins, Ph.D., Professor, SCI Institute, University of Utah, <i>Progress Towards Exascale: Computer Architecture Innovations and Software Extinction</i>
9:40 - 10:20 a.m.	William Mattson, Ph.D., Research Physicist, WMRD, Army Research Laboratory <i>Large Scale DFT Simulation of Materials Under Extreme Conditions</i>
10:20 - 10:35 a.m.	Coffee Break
10:35 - 11:15 a.m.	Martin Berzins, Ph.D., Professor, SCI Institute, University of Utah, <i>Developing Software for Multiscale Multi-Physics Modelling with Applications in Materials by Design</i>
11:15 - 11:55 a.m.	Thomas Reinecke, Ph.D., Senior Scientist for Nanoelectronics, Naval Research Laboratory, <i>Optical Quantum Dots for Quantum Information</i>
12:00 - 1:20 p.m.	Lunch - Theodore Moustakas, Ph.D., Professor, Electrical and Computer Engineering, Boston University, <i>Fundamental Differences Between Traditional III-V Compounds and Nitride Semiconductors: The Formation and Role of Extended Defects</i>
1:20 - 2:00 p.m.	Sahar Sharifzadeh, Ph.D., Assistant Professor, Electrical and Computer Engineering, Boston University, <i>Beyond Density Functional Theory Excited - State Tools for Materials Design</i>
2:00 - 2:40 p.m.	Habib Najm, Ph.D., Technical Staff, Sandia National Laboratory, <i>Uncertainty Quantification in Computational Models</i>
2:40 - 2:55 p.m.	Coffee Break
2:55 - 3:35 p.m.	Dmitry Bedrov, Ph.D., Associate Professor, Department of Materials Science and Engineering, University of Utah, <i>Molecular Modeling of Interfaces in Energy Storage Devices</i>
3:35 - 4:15 p.m.	Luca Dal Negro, Ph.D., Associate Professor, Electrical and Computer Engineering Department, Boston University, <i>Predictive Design of Nanoscale Electromagnetic Fields for Optical Device Applications</i>
4:15 - 4:55 p.m.	Matthew Glaser, Ph.D., Professor, Department of Physics, University of Colorado <i>Ferroelectric and Ferromagnetic Fluids</i>
4:55 - 5:10 p.m.	Thomas Bifano, Ph.D., Professor and Director, Photonics Center, Boston University, <i>Closing Remarks</i>
5:10 - 6:30 p.m.	Reception