

2016 Annual Program Review Agenda

Monday, July 25 – Thursday, July 28
Crystal Gateway Marriott Hotel, Arlington, VA

Updated Monday, August 15, 2016

Monday, July 25

10:30am – 6:00pm	Registration — <i>Grand Registration Desk</i>
11:00am – 12:00pm	New Fellow Orientation — <i>Salons F & G</i>
12:00 – 1:30pm	New Fellow Luncheon — <i>Salon H</i>
2:00 – 3:30pm	Practicum Session — <i>Salons A, B & C</i> <i>Intended for incoming fellows and those yet to complete a practicum. Practicum coordinators are also encouraged to attend and provide a general introduction to their laboratory as it relates to potential practicum experiences.</i>
4:30 – 6:00pm	Making Fellow & Alumni Connections — <i>Salons H & J</i> <i>All conference attendees who have arrived in D.C. are encouraged to attend.</i>

Tuesday, July 26

7:30am – 6:00pm	Registration — <i>Grand Registration Desk</i>
7:30 – 9:00am	Continental Breakfast — <i>Salons H & J</i>
8:00 – 8:45am	Photo Session: Incoming Fellows (Head Shots & Group Photo) — <i>Salon E</i>
9:00 – 9:15am	Welcome — <i>Salons A, B & C</i> Robert Voigt — <i>Krell Institute</i>
9:15 – 9:30am	Welcome Franklin (Lynn) M. Orr — <i>Under Secretary for Science and Energy, Office of Science, U.S. Department of Energy</i>
9:30 – 9:45am	Welcome Kathleen B. Alexander — <i>Assistant Deputy Administrator for the Office of Research, Development, Test, and Evaluation; National Nuclear Security Administration, U.S. Department of Energy</i>
9:45 – 10:30am	Alumni Keynote Leslie Dewan — <i>Co-founder and Chief Executive Officer, Transatomic Power; DOE CSGF Alumna</i> <i>“Save the World with Nuclear Waste: New Approaches to Nuclear Power”</i>
10:30 – 10:45am	Break — <i>Foyer, Salons A, B & C</i>

Session I — *Salons A, B & C* Moderator: **Michael Martin** — *Office of Science, U.S. Department of Energy*

10:45 – 11:05am	Andrew Stershic — <i>Duke University</i> <i>“Application of Numerical Methods to Study Arrangement and Failure of Lithium-Ion Microstructure”</i>
11:05 – 11:25am	Eric Isaacs — <i>Columbia University</i> <i>“Strongly Correlated Electrons in Rechargeable Battery Cathodes”</i>
11:25 – 11:45am	Eileen Martin — <i>Stanford University</i> <i>“Continuous Near-surface Monitoring With Ambient Noise Collected by Distributed Acoustic Sensing”</i>

- 11:45am – 1:15pm **25th Anniversary Luncheon** — *Salons H & J*
- 1:20 – 1:30pm **Announcement of 2016 Frederick Howes Scholars**
Jeffrey Hittinger — Acting Deputy Division Leader and Group Leader, Scientific Computing Group, Center for Applied Scientific Computing, Lawrence Livermore National Laboratory; DOE CSGF Alumnus
- 1:30 – 2:15pm **Howes Scholar Presentation**
Aurora Pribram-Jones — Lawrence Postdoctoral Fellow, Lawrence Livermore National Laboratory; President's Postdoctoral Fellow, University of California, Berkeley; DOE CSGF Alumna
"Improving Density Functional Theory for Warm Dense Matter"
- 2:15 – 3:00pm **Howes Scholar Presentation**
Alexander S. Rattner — Assistant Professor, Department of Mechanical and Nuclear Engineering, Pennsylvania State University; DOE CSGF Alumnus
"Phase-change Heat Transfer in Energy Systems: Outlook for Simulation Enabled Advances"
- 3:00 – 3:15pm **Break** — *Foyer, Salons A, B & C*

Session II — *Salons A, B & C*
Moderator: Christine Chalk — Office of Science, U.S. Department of Energy

- 3:15 – 3:35pm **Brenhin Keller** — Princeton University
"Geochemistry in the Age of Open Data: New Insights Into the Formation and Evolution of Earth's Continental Crust"
- 3:35 – 3:55pm **Sherwood Richers** — California Institute of Technology
"Insights Into Exotic Core-collapse Supernovae"
- 3:55 – 4:15pm **Jesse Lopez** — Oregon Health and Science University
"Sediment Dynamics in an Energetic Estuary"
- 4:15 – 4:45pm **Fellows' Poster Session Set-Up** — *Salons H, J & K*
- 4:45 – 7:00pm **Fellows' Poster Session** — *Salons H, J & K*
Welcome & Remarks (4:45pm)
Steve Binkley — Associate Director of Advanced Scientific Computing Research, Office of Science, U.S. Department of Energy

Wednesday, July 27

- 7:30am – 6:00pm **Registration** — *Grand Registration Desk*
- 7:30 – 9:00am **Continental Breakfast** — *Salons H & J*
- 8:00 – 8:45am **Photo Session: Fellow/Alumni Retakes (Head Shots)** — *Salon E*
- 9:00 – 9:15am **Announcements** — *Salons A, B & C*
CYSE Contest Award Presentation

Session III — *Salons A, B & C*
Moderator: Adam Boyd — National Nuclear Security Administration, U.S. Department of Energy

- 9:15 – 10:00am **Invited Speaker**
Rick Stevens — Associate Laboratory Director for the Computing, Environment and Life Sciences Directorate, Argonne National Laboratory; Professor, Department of Computer Science, University of Chicago
"DOE and NIH Partnerships -- Cancer and Brain"
- 10:00 – 10:20am **Sarah Middleton** — University of Pennsylvania
"A Novel Motif Discovery Tool for RNA Secondary Structures"
- 10:20 – 10:40am **Dragos Velicanu** — Massachusetts Institute of Technology
"Probing Trillion Degree Matter"

- 10:40 – 11:00am **Break** — *Foyer, Salons A, B & C*
- 11:00 – 11:20am **Andrew Till** — Texas A&M University
“Discretization by Machine Learning (and its Application to Nuclear Reactor Simulations)”
- 11:20 – 11:40am **Derek Macklin** — Stanford University
“Towards a Whole-cell Model of Escherichia coli”
- 11:40am – 12:00pm **Melissa Yeung** — California Institute of Technology
“Topological Braids and Material Coherence”
- 12:00 – 1:15pm **Luncheon** — *Salons H & J*
Michael L. Telson — Vice President for Energy Programs, General Atomics
“Who’s Your Audience? Communication Between Scientists/Engineers and Public Officials”
- 1:30 – 3:00pm **HPC Track I Intermediate Hands-On Session A** — *Salons A, B & C*
“GPU-accelerated Computing”
- **Adam Simpson** — HPC User Support Specialist, Oak Ridge Leadership Computing Facility, Oak Ridge National Laboratory
 - **Verónica G. Vergara Larrea** — HPC User Support Specialist, Oak Ridge Leadership Computing Facility, Oak Ridge National Laboratory
- 1:30 – 3:00pm **HPC Track I Intermediate Hands-On Session B** — *Salons F & G*
“Troubleshooting the Trouble Out of Your Networking Experience”
- **Sowmya Balasubramanian** — Software Engineer, Energy Sciences Network, Lawrence Berkeley National Laboratory
 - **Elizabeth Bautista** — Group Lead, Operations Technology Group, National Energy Research Scientific Computing Center, Lawrence Berkeley National Laboratory
- 1:30 – 3:00pm **Fourth-Year/Outgoing Fellow Session & Head Shots** — *Jefferson*
- 3:00 – 3:15pm **Break** — *Foyer, Salons A, B & C*
- 3:15 – 4:45pm **HPC Track II Advanced Hands-On Session A** — *Salons A, B & C*
“Optimizing Your Code for HPC”
- **Hal Finkel** — Assistant Computational Scientist, Argonne Leadership Computing Facility, Argonne National Laboratory; DOE CSGF Alumnus
- 3:15 – 4:45pm **HPC Track II Advanced Hands-On Session B** — *Salons F & G*
“Parallel Algorithm Design”
- **Rebecca Hartman-Baker** — Computational Scientist, National Energy Research Scientific Computing Center, Lawrence Berkeley National Laboratory
- 4:00 – 5:00pm **DOE Laboratory Poster Session Set Up** — *Salons H, J & K*
- 5:00 – 7:00pm **DOE Laboratory Poster Session** — *Salons H, J & K*

Thursday, July 28

- 7:30am – 12:00pm **Registration** — *Grand Registration Desk*
- 7:30 – 9:00am **Continental Breakfast** — *Salons H & J*
- 9:00 – 9:10am **Announcements** — *Salons A, B & C*

Session IV — *Salons A, B & C*
Moderator: Carolyn Lauzon — Office of Science, U.S. Department of Energy

- 9:10 – 9:30am **Miles Lubin** — Massachusetts Institute of Technology
“JuMP: A Modeling Language for Mathematical Optimization”

9:30 – 9:50am	Samuel Blau — Harvard University <i>“Exciton Dynamics of Biliproteins”</i>
9:50 – 10:10am	Britni Crocker — Massachusetts Institute of Technology <i>“Effects of Electrical Stimulation on the Human Brain”</i>
10:10 – 10:30am	Daniel Strouse — Princeton University <i>“Compression and Clustering With the Information Bottleneck Method”</i>
10:30 – 10:45am	Break & Hotel Check Out — <i>Foyer, Salons A, B & C</i>
10:45 – 11:05am	Victor Minden — Stanford University <i>“Fast Spatial Gaussian Process Maximum Likelihood Estimation Via Skeletonization Factorizations”</i>
11:05 – 11:25am	Justin Lee — Massachusetts Institute of Technology <i>“Computational Imaging and Analysis in Breast Cancer”</i>
11:25 – 11:45am	Thomas Catanach — California Institute of Technology <i>“Second-order Langevin Markov Chain Monte Carlo”</i>
11:45am – 12:45pm	Luncheon — <i>Salons H & J</i> <i>Buffet-style with grab-and-go options for those with afternoon departures.</i>

