



HPC User Forum Agenda

60th HPC User Forum

April 11-13, 2016 – Tucson, Arizona

Meeting Sponsors:

Altair, AMD, Dell, HPE, IBM, Intel, Nimbix, Ryft, and SGI

Monday, April 11, 2016

5:00pm Registration Starts

6:30pm Welcome Dinner Reception and Short Vendor Technology Updates

Tuesday, April 12, 2016

7:15am Networking Breakfast

8:15am Meeting Welcome: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway

8:30am HPC Market Update and IDC's Top Growth Areas: Earl Joseph, Steve Conway and Bob Sorensen

Session Chair: Arno Kolster, PayPal

8:45am **Focus Area: Advanced Analytics/Machine Learning/Deep Learning**

- Machine Learning, Prabhat (NERSC)
- Computing and Networking for Big Data: Mosharaf Chowdhury (University of Michigan)
- Data Analytics for Multi-Scale Biology: Arvind Ramanathan (Oak Ridge National Laboratory)

10:15am Break

10:45am Challenges Deploying Advanced Analytics Using SPARK in a Shared Infrastructure: Nick Werstiuk (IBM)

11:15am ORIGAMI: Advanced Data and Workflow: Rangan Sukumar (ORNL)

11:45am Intel Technology Update: R&D Plans for HPC Going Forward

12:00pm **Networking Lunch**

Session Chair: Paul Muzio, City University of New York

1:00pm **Focus Area: HPC in the Cloud**

- Jetstream: Adding Cloud-based Computing to the National Cyberinfrastructure: Matt Vaughn (TACC)
- Use Cases and Best Practices for Cloud-based Enterprise HPC: David Pellerin (Amazon Web Services)
- Trends in HPC Cloud Computing: Tejas Karmarkar (Microsoft Azure)
- Managing Large Production Cloud Deployments: Jason Stowe (Cycle Computing)

3:00pm Update on HPC and AMD and FirePro: Greg Stoner (AMD)

3:15pm Break

3:45pm OpenHPC: Community Building Blocks for HPC Software, Karl Schulz, Intel

4:00pm **Focus Area: HPC in the Cloud**

- Status of the "Missing Middle": Clouds and Classes of Service: Leo Reiter (Nimbix)
 - Performing Simulation Based, Real Time Decision Making With Cloud HPC: Zack Smocha (Rescale)
- Risk Analytics in the Cloud: Jeffrey Smart (SunAmerica)

5:15pm Networking Break

6:30pm Special Dinner Event: Southwestern Food and Live Music; Astronomers and Telescopes



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Wednesday, April 13, 2016

7:15am Networking Breakfast

8:10am Welcome: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway

8:15am IDC Research Update on Cyber Security Issues: Bob Sorensen

Session Chair: Michael Resch, High Performance Computing Center Stuttgart

8:30am **HPC in Europe**

- Europe's Fastest Supercomputer and the World Around It: Michael Resch (HLRS)
- HPC at Imperial College London: Simon Burbidge
- HPC and SMEs: The Fortissimo Initiative: Bastien Koller (HLRS)

10:00am Break

10:30am DOE's HPC4mfg Initiative: Peg Folta (Lawrence Livermore National Lab)

11:00am **Disruptive Technologies:** Brief vendor overviews of new/emerging technologies that may have a disruptive impact on the HPC market

11:45am HPE Vendor Update: Bill Mannell

12:00pm **Networking Lunch**

1:00pm Coupled Models for Water Resources Research, Ruth Cheng (ERDC)

1:30pm Fostering Innovation at AFRL: Lloyd Slonaker

2:00pm Simulating the Global Climate and Carbon Cycle: Joellen Russell (University of Arizona)

2:30pm The National Supercomputing Center for Energy and the Environment: Joseph Lombardo

3:00pm Break

3:30pm Graph Analysis Using GPUs, with Real-World Examples at the British Museum: Brad Bebee (Blazegraph)

4:00pm **Keynote:** Update on the NSCI Initiative: Saul Gonzalez Martirena (White House Office of Science and Technology Policy)

- Followed by a discussion of ideas to help make the NSCI initiative succeed (led by Bob Sorensen)

5:00pm Meeting Wrap-Up, Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway