HPC User Forum Agenda
69th HPC User Forum
April 16-18, 2018 -- Tucson, Arizona

Monday, April 16, 2018
5:00pm  Registration Starts
6:30pm  Welcome and Special Dinner Reception Event

Tuesday, April 17, 2018
7:15am  Networking Breakfast
8:15am  Meeting Welcome and Announcements: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway
8:25am  HPC Market Update, Earl Joseph and Steve Conway:
• Updated HPC Market Forecast
• The AI Transparency Issue
8:45am  Addressing Key Science Challenges With Adversarial Neural Networks, Wahid Bhimji, NERSC
9:15am  Session: HPC and the Environment. Chair: Paul Muzio, HPC User Forum Steering Committee
• HPC Use for Earthquake Research, Christine Goul, Southern California Earthquake Center
• Exploiting Exascale Platforms for Regional-Scale Earthquake Hazard and Risk Assessment, David McCallen, Lawrence Berkeley National Laboratory
10:15am  Break
10:45am  HPC and the Environment (continued)
• The Use of HPC to Model the California Wildfires, Ilkay Altintas, San Diego Supercomputer Center
• Using ORNL Titan to Develop 50,000 Years of Flood Risk Scenarios for the National Flood Insurance Program, Dag Lohmann, KatRisk
11:45am  HPE Vendor Technology Update
12:00pm  Networking Lunch
1:00pm  End User Site Update: University of Bristol, Simon Burbidge, University of Bristol
1:15pm  Update on AMRv8, Srinath Vadlamani, ARM Holdings
1:30pm  HPC and the Environment (continued)
• Weather Prediction Using the K Computer and Himwari-B Satellite, Miyoshi Takemasa, RIKEN
• The Julia Programming Language for Cosmological Research, Alan Edelman, MIT
• The Galactos Project: Using HPC To Run One of Cosmology's Hardest Challenges, Deborah Bard, NERSC
3:00pm  Intel Technology Update
3:15pm  Networking Break
3:45pm  Session: Technical Updates on Processors (15-minute updates)
• AMD, Jay Owen
• ARM, ARMv8, Srinath Vadlamani
• IBM, Power 9 plus Open CAPI, Jeff Stuecheli
• Intel, Mark Kachmarek
• NVIDIA, (awaiting confirmation)
5:00pm  Networking Break
6:30pm  Special Dinner Event and Speaker: "The Threat of Asteroids and What We Are Doing About It", by Dr. Donovan Mathias, acting deputy chief of NASA's NAS Division

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7:15am Networking Breakfast
8:00am Welcome: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway
8:05am HPC in Canada's Largest Province: Chris Locken, Compute Ontario
8:35am Session: Quantum Computing. Chair: Bob Sorensen, Hyperion Research
   • John Martinis, Google
   • T.R. Govindan, NASA
   • Jim Held, Intel
10:00am Networking Break
10:15am Session: Quantum Computing (continued)
   • Jay Gambetta, IBM
   • Steve Reinhardt, Dwave
11:00am Understanding AI for HPC and HPC for AI: Lessons, Gaps and Challenges,
   Rangan Sukumar, Cray
11:15am Innovative Technologies Panel: Short 4 minute presentations of HPC-enabled
   innovations
   • Robert Brumfield, Liqid Inc.
   • Ian Campbell, OnScale
   • Sid Mair, Penguin Computing
   • Curtis Anderson, Panasas
   • Strageworks
   • Cray
12:00pm Dell EMC Technology Update
12:15pm Networking Lunch
1:00pm Session: Quantum Computing (continued)
   • Matthias Troyer, Microsoft
   • Chad Rigetti, Rigetti Computing
   • Carl Williams, NIST
   • Will Oliver or Jaime Kerman, MIT Lincoln Laboratory
   • Xiaobo Zhu, Division of Quantum Physics and Quantum Information at
     China’s University of Science and Technology
3:30pm Networking Break
3:45pm Panel: HPC and Quantum Computing. Chair: Bob Sorensen, Hyperion Research
4:45pm HPC Innovation Excellence Winner: HPC Simulations of the Impact of Drug-
   induced Arrhythmias in Living Hearts, Wolfgang Gentzsch, UberCloud
5:15pm Meeting Wrap-Up, Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway