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, Darren Cepoulis, 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)
   • ARMv8, Darren Cepulis, ARM Holdings
   • Intel (awaiting confirmation)
   • AMD, Jay Owen
   • Power 9 plus Open CAPI, Jeff Stuecheli, IBM
   • 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
  •  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
  •  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
  •  Final speaker (awaiting confirmation)
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