



HPC User Forum Agenda

41st HPC User Forum -- April 5-7, 2011 -- Houston, Texas

"Using HPC to Drive Economic and Scientific Competitiveness"

Tuesday, April 5, 2011

- 10:00am HP Factory Tour (users only), and BP tour. Buses return to the hotel around 12:30pm
- 1:00pm Buses Leave for the NASA Tour
- 5:00pm Registration desk opens
- 6:30pm Special Dinner Event, With 10 Minute Vendor Updates: Altair, Appro, BlueArc, Bright Computing, Dell, General Atomics, LSI, Panasas, Platform, Mellanox, and Virident

Wednesday, April 6, 2010

- 7:15am Networking Breakfast
 - 8:00am Welcome and HPC Market Update, Steve Finn, Sharan Kalwani and Earl Joseph
Morning Session Chair: Steve Finn
 - 8:15am HPC in Healthcare/Medicine and in the Life Sciences
 - Semantic Web Technologies on HPC for Life Sciences and Other Domains, Sean Martin, Cambridge Semantics
 - The Anton Project at the National Resource for Biomedical Supercomputing, Jim Kasdorf, Pittsburgh Supercomputing Center
 - Public cloud computing in Healthcare, John Considine
 - Gates Foundation Work: Global Risk Informatics: The Intersection of HPC and Public Health, Debra Goldfarb
 - 10:00am Break
 - 10:15am uHPC Program Research Plans:
 - John Gustafson, Intel Labs
 - Steve Keckler, Nvidia
 - Saman Amarasinghe, MIT
 - Arun Rodrigues, Sandia
 - 12:00am Vendor technology update: Adaptive Computing
 - 12:15pm Networking Lunch
Afternoon Session Chair: Rupak Biswas
 - 1:00pm HPC in Healthcare/Medicine and in the Life Sciences (continued):
 - Generating Petabytes of Medical Data, Keith Cheng, Penn State - Hershey Medical Center
 - Dr Newhauser, MD Anderson
 - 2:00pm Technical Issues and Concerns in Getting to Exascale, Steve Pawlowski, Intel
 - 2:30pm IBM Technology Update, David Turek
 - 2:45pm Panel and Updates on Industry Outreach Programs, Panel Chair: Merle Giles
 - Merle Giles, NCSA
 - Ashok Krisnamurthy, OSC
 - Melyssa Fratkin, TACC
 - Suzy Tichenor, ORNL
 - Council on Competitiveness
 - 3:45pm Break
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- 4:00pm Alternative Energy Research
- Consortium for Advanced Simulation of Light-water Reactors, Tom Evans, ORNL
 - Fusion Simulation: The Problem; the Successes; the Challenges, Lee Berry, ORNL
 - HPC and the U.S. Burning Plasma Organization, Dylan Brennan, University of Tulsa
- 5:15pm Networking Break and Time for 1-on-1 Meetings
- 6:30pm Special Reception and Dinner Event, The Exploration of Mars and the Search for Life, Dr. Everett Gibson, NASA Johnson

Thursday, April 7, 2010

- 7:15am Networking Breakfast
- 8:10am Welcome, Earl Joseph and Steve Finn
Morning Session Chair: Paul Muzio
- 8:15am High-end Supercomputing at NASA AMES, Rupak Biswas, NASA Ames
- 8:45am Invited Vendor Technology Updates: Intel and HP
- 9:15am The Road to Multi-Petaflop/Exaflop Computing:
- Large-Scale HPC at HLRS and Invitation to the HLRS fall meeting, Stefan Wesner, HLRS
 - High-End Supercomputing in China, Liang Yuan, Institute of Software, Chinese Academy of Sciences
 - Lennart Johnsson, University of Houston
- 10:45am Break
- 11:00am Utilities Servers, Center-wide File Systems and Storage Lifecycle Management, Stephen Scherr, DOD HPC Modernization Program Office
- 11:30am HPC Use and Future Directions at BP, Keith Gray
- 12:00pm Networking Lunch
Afternoon Session Chair: Sharan Kalwani
- 1:00pm Panel on: "HPC in Oil & Gas: Best Practices in Managing HPC Resources"
Moderated by Bill Nitzberg, Altair
- Dave Glover, ConocoPhillips
 - Phil Crawford, Chevron
 - Richard Rowbatham, FairfieldNodal
 - Kevin Hayes, Schlumberger
- 2:00pm Environmental Modeling
- How HPC Has Transformed EQM, including Deepwater Horizon, Dr. Gaurav Savant, U.S. Army Engineer R&D Center
 - Environmental Quality Modeling of the Deepwater Horizon Oil Spill, Patrick Hogan, Naval Research Laboratory
- 3:00pm Break
- 3:15pm Panel on HPC Cloud Developments, Moderator: Sharan Kalwani
- Key Panel Questions: Examples of successful uses of clouds in HPC today, which HPC workload/workflow profiles fit well on clouds?
 - Invited panelists include: Raymond O'Brien (NASA), Nitin Narkhede (WIPRO), Bill Bryce (UNIVA), Shane Canon (LBNL), Chris Porter (Platform), John Considine (CloudSwitch), and Jason Stowe Cycle Computing
- 4:30pm HPC and the NASA Shuttle Program, Ray Gomez, NASA Johnson Space Center
- 5:00pm Meeting Wrap-Up, Steve Finn, Sharan Kalwani, Steve Conway, and Earl Joseph