HPC User Forum Agenda
48th HPC User Forum
September 17 - 19, 2012 -- Dearborn, Michigan
"Emerging Trends in HPC"

Monday, September 17, 2012
5:00pm  Registration Starts, Including a Special Car Exhibit
6:30pm  Welcome Dinner Reception and Short Vendor Technology Updates: Altair, Appro, Boston Ltd., Cray, Parallel Scientific, Nvidiab, Mellanox, Panasas, SGI and Xyratex

Tuesday, September 18, 2012
7:15am  Networking Breakfast
8:00am  Meeting Welcome and Announcements, Steve Finn, Jim Kasdorf, Rupak Biswas, New IDC HPC Research, Earl Joseph and Steve Conway  
**Morning Session Chair: Jim Kasdorf**

8:05am  **HPC Topic #1: The Economic Value of HPC and the Industrial Use of HPC**  
- The Computational Center for Nanotechnology Innovations at RPI, James Myers (25 min)
- Industrial Engagement at the San Diego Supercomputer Center, Ron Hawkins, San Diego Supercomputer Center (25 min)
- Data Analysis and Visualization for the DoD HPCMP, Paul Adams, ERDC (25 min)
- Manufacturing Extension Program (MEP), Dan Luria, The Michigan Manufacturing Technology Center (10 min)

9:30am  Sequoia System Update, Terri Quinn, Lawrence Livermore National Laboratory (25 min)
9:55am  Break  
10:15am  **HPC Topic #1: The Economic Value of HPC and the Industrial Use of HPC (cont.)**  
- Computational Research for Engineering and Science - Ground Vehicle" (CRES-GV) Program, Daniel Kedziorek and Robert Smith, US Army RDECOM-TARDEC (25 min)
- The "Missing Middle" Initiative at Intel, Debra Goldfarb, Intel (15 min)
- Energy Efficiency Issues, Greg Rottman, ERDC (25 min)
- Meet the Middle: Changing the Way America Builds, Jon Riley, NCMS (25 min)

12:00pm  Networking Lunch  
**Afternoon Session Chair: Rupak Biswas**

1:00pm  **Technology Panel: Emerging and Potentially Disruptive Technologies: 3 Minute Technical Overviews, Panel Moderator: Earl Joseph**  
- HP Moonshot Update  Convey, John Leidel  Intel PHI, Stephen Wheat
- Parallel Scientific  DDN, Jeff Denworth  Altair
- SGI, Eng Lim Goh  Cray, Barry Bolding  ETI
- Dell, Tim Carroll  CloudFuzion, Mike Duffy

2:00pm  ORNL Industrial Partnership Project with Ford Motor Company: Automotive Large Scale Powertrain Cooling Optimization, Dr. Burkhard Hupertz, Ford (25 min)
2:30pm  Vendor Technology Update: Intel
2:45pm  Vendor Technology Update: ISVs and Using GPUs: Altair and ANSYS
3:00pm  Why HPCs Hate Biologists, and What We're Doing About It, Titus Brown, Michigan State University (25 min)
3:25pm  Break
3:50pm  IDC HPC Market Update, Earl Joseph, Steve Conway and Chirag Dekate (15 min)
4:05pm  NOAA HPC Site Update, Leslie Hart, NOAA (25 min)
4:30pm  HPC & Future Workforce Development: The Wheeling Program, Debra Goldfarb, Intel (15 min)
4:45pm  Update on HPC in the UK, Andy Jones, NAG (25 min)
5:10pm  Networking Break and Time for 1-on-1 Meetings and mid-range market BOF
6:10pm  Bus Leaves for the Reception and Special Dinner Event
Wednesday, September 19, 2012

7:15am    Networking Breakfast
8:00am    Meeting Starts

Morning Session Chair: Merle Giles

8:05am    Advances in Energy-Efficient Packaging/Cooling:
8:05am    Experience with Containerized HPC, Dick Boyd, University of Michigan (25 min)
8:30am    Data Center Sustainability Energy + Carbon + Water, Nicolas Dube, The Green Grid, HP (25 min)
8:55am    Panel: Vendor Technologies for Energy-Efficient Packaging/Cooling (10 minute summaries)
          • IBM SuperMUC and iDataplex, Vinod Karmath
          • Cray, Barry Bolding
          • SGI, Eng Lim Goh
9:45am    Design and Installation of Sequoia's 55PB Lustre+ZFS File System, Marc Stearman, LLNL (30 min)
10:15am   Vendor Technology Updates: HP
10:30am   Break

11:00am   Technology Topic #2: Big Data and Analytics in HPC: The National Library of Medicine's Visible Human Project, Brian Athey, University of Michigan (25 min)
11:30am   The New NASA Earth Exchange (NEX) Data Access Facility, Tsengdar Lee, NASA (25 min)
12:00pm   Networking Lunch

Afternoon Session Chair: Steve Finn

1:00pm    Special Keynote: Scalable Data Mining and Archiving in the Era of the Square Kilometre Array, the Square Kilometre Array Telescope Project, Chris Mattmann, NASA/JPL (30 min)
1:30pm    Technology Topic #2: Big Data and Analytics in HPC: Leveraging HPC and Enterprise Architectures for Large Scale Inline Transactional Analytics in Fraud Detection at PayPal, Arno Kolster, PayPal, an eBay Company (30 min)
2:00pm    Baseline Configuration - Establishing Consistency Across HPC Centers, Jeff Graham, AFRL (30 min)
2:30pm    Break
2:45pm    Big Data and Analytics Vendor Panel: How Vendors See Big Data Impacting the Market and Their Products/Services, Panel Moderator: Chirag Dekate
          • IBM/Platform, Rahit Valia
          • YarcData, Ramesh Menon
          • NetApp, Dave Ellis
          • DDN, Keith Miller
          • SGI, Eng Lim Goh
          • Dell, Tim Carroll
          • Altair, Ravi Kunju
          • AMD, Rick Indyke
          • Appro, Giri Chukkapalli
          • Panasas, Brent Welch
3:45pm    What Industry Requires to Move Their Science and R&D Forward, Merle Giles, NCSA (25 min)
4:10pm    Data Analysis and Visualization of Very Large Data, David Pugmire, ORNL (25 min)
5:00pm    Meeting Wrap-Up

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