Monday, April 1, 2019
5:00 PM  Registration Starts
6:30 PM  Welcome and Special Dinner Reception Event, A history of Santa Fe, Peter Weiss

Tuesday, April 2, 2019
7:15 AM  Networking Breakfast
8:15 AM  Welcome: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway
8:20 AM  HPC Global Market Update, Earl Joseph and Bob Sorensen

Morning Session Chair: Rupak Biswas
8:30 AM  Thermodynamics of Computation: Far More Than Counting Bit Erasure, David Wolpert, Santa Fe Institute
9:00 AM  Session: Exascale Computing
- Exascale Computing in Europe, Leonardo Flores, European Commission
- Exascale Computing Project Software Activities, Mike Heroux, Sandia National Laboratories
10:00 AM  Networking Break
10:30 AM  Session: Exascale Computing
- CoMet Comparative Genomics Code: Gordon Bell Prize Winner, Wayne Joubert, Oak Ridge National Laboratory
- Exascale Computing in the Life Sciences: Gordon Bell Prize Winner, Daniel Jacobson, Oak Ridge National Laboratory
11:30 AM  Vendor Technical Update: HPE
11:45 AM  Vendor Technical Update: Intel
12:00 PM  Networking Lunch
1:00 PM  Session: Exascale Computing
- ECP Co-Design Center for Machine Learning, Frank Alexander, Brookhaven National Laboratory
- Accelerating Therapeutics for Opportunities in Medicine (ATOM), Amanda Minnich, Lawrence Livermore National Laboratory

Session Chair: Paul Muzio and Henry Newman
2:00 PM  Session: Metadata and Archiving at Scale: User Perspectives
- Security of Data at Rest, NIST standards, and NIAP/Common Criteria, Henry Newman, Seagate Government Solutions
- Moving from Extreme Scale Data to Extreme Scale Metadata Concerns: It’s About Time! Gary Grider, Los Alamos National Laboratory
3:00 PM  Vendor Technical Update: Penguin Computing
3:15 PM  Vendor Technical Update: Dell
3:30 PM  Networking Break
3:45 PM  Session: Metadata and Archiving at Scale: User Perspectives
- Amanda Tumminello, Navy DoD Shared Resource Center
4:15 PM  Quantum Computing Research at ORNL, Travis Humble, Oak Ridge National Laboratory
4:45 PM  Innovative Technologies Panel #1 (5 minute presentations on new technologies)
- Red Hat, Xtreme-D, AMD, Cray, Altair and DDC/ScaleMatrix
5:15 PM  Meeting Ends
6:30 PM  Special Dinner Event, A history of LANL Terry Wallace, Director Emeritus for Los Alamos National

HPC User Forum Agenda
72nd HPC User Forum
April 1-3, 2019 – Santa Fe, New Mexico

Wednesday, April 3, 2019
7:15 AM Networking Breakfast
8:10 AM Welcome: Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway
8:15 AM New AI Hardware Products and Trends, Alex Norton
  **Morning Session Chair: Paul Muzio and Henry Newman**
8:30 AM Personalized Healthcare with High Performance Computing in the Cloud, Wolfgang Gentzsch, UberCloud
8:45 AM **Session: Metadata and Archiving at Scale: User Perspectives**
  • Evolving NASA’s Data and Information Systems for Earth Science, Rahul Ramachandran, NASA
9:15 AM Vendor Technical Update: AMD
9:30 AM Networking Break
10:00 AM **Session: Metadata and Archiving at Scale: Technology providers (15 minutes each)**
  • Data Movement and Tiering with DMF 7, Kirill Malkin, HPE
  • MetaOcean: Handling Massive and Sensitive Metadata from Precision Medicine, Frank Lee, IBM
  • iRODS Open Source Data Management Software, Terrell Russell, RENCI
  • Dealing with Extreme Requirements in HPC, Frank Herold, Thinkparq/BeeGFS
11:00 AM Panel Session: Metadata and Archiving at Scale: Users will discuss vendor strategies and plans
11:30 AM Vendor Technical Update: ARM
11:45 AM Future High End Computing in Japan, Satoshi Matsuoka
12:15 PM Networking Lunch
  **Afternoon Session Chair: Keith Gray**
1:15 PM Innovative Technologies Panel #2 (5 minute presentations on new technologies)
  • CPC, D-Wave, Tachyum (the first universal processor), ARM, IBM, and Panasas
2:15 PM **Session: Finding and Developing the Future HPC Workforce: STEM and HPC Workforce Issues**
  • Education and Training for HPC, Keith Gray, BP and Melyssa Fratkin, Texas Advanced Computing Center
  • The Computing4Change Program, Kelly Gaither, Texas Advanced Computing Center
3:15 PM Networking Break
3:30 PM **Session: STEM and HPC Workforce Issues**
  • Computational Sciences and Educational Initiatives at the University of New Mexico, Patrick Bridges
  • DoD STEM Activities Kevin Newmeyer, DoD HPCMP
4:30 PM **Panel Discussion: STEM and HPC Workforce Issues**
5:15 PM Meeting Wrap-Up, Paul Muzio, Rupak Biswas, Earl Joseph and Steve Conway