Argonne National Laboratory at SC17
Conference Dates: November 12-17, 2017 • Exhibition Dates: November 13-16, 2017

SC17 area leads
- Emerging Technologies – Franck Cappello (chair)
- Panels – Lois Curfman McInnes (vice chair)
- Awards – Paul Hovland (vice chair)

Technical papers committee
- Applications track – Anshu Dubey (chair), Stefan Wild, Hal Finkel
- Cloud computing track – Kate Keahey (chair)
- Data analytics, visualization and storage track – Tom Peterka
- State of the Practice track – Daniel Katz (chair, MCS faculty guest)
- Programming systems track – Pavan Balaji

Full Schedule

Pre-Conference
Saturday, November 11

Tutorial:
In Situ Software Defined Visualization Hands-On Lab: Using OSGRay API with Data-Distributed Applications
TIME: 10:15AM – 11:45AM • LOCATION: Intel HPC Developer Conference; Sheraton Denver Downtown (Colorado Room)
PRESENTERS: Will Usher, Jefferson Amstutz, Silvio Rizzi, Jim Jeffers

Technical Lectures:
Benefits of Intel Memory Drive Technology for Scientific Applications
TIME: 3:15PM– 3:45PM • LOCATION: Intel HPC Developer Conference; Sheraton Denver Downtown (Silver Room)
PRESENTER: Vladimir Mironov, Yuri Alexeev, Andrey Kudryavtsev, Igor Chernykh

Interactive In Situ Visualization of LAMMPS simulations with OSGRay
TIME: 3:45PM– 4:15PM • LOCATION: Intel HPC Developer Conference; Sheraton Denver Downtown (Tower Court A)
PRESENTERS: Silvio Rizzi, Will Usher, and Joseph A. Insley

Poster:
MPI/OpenMP Parallelization of the Hartree-Fock Method for the Intel Xeon Phi Processor
TIME: 5:30PM– 7:30PM • LOCATION: Intel HPC Developer Conference; Sheraton Denver Downtown (South Convention Lobby)
PRESENTER: Vladimir Mironov, Yuri Alexeev

Sunday, November 12

Workshop Papers:
Paper: Scalable In Situ Analysis of Molecular Dynamics Simulations
Workshop: In Situ Infrastructures for Enabling Extreme-Scale Analysis and Visualization (ISAV 2017)
TIME: 10:30AM –10:55AM • LOCATION: 605
AUTHORS: Preeti Malakar, Christopher Knight, Todd Munson, Venkatram Vishwanath, and Michael E. Papka

Paper: In Situ Workflows at Exascale: System Software to the Rescue
Workshop: In Situ Infrastructures for Enabling Extreme-Scale Analysis and Visualization (ISAV 2017)
TIME: 1:55PM–2:20PM • LOCATION: 605
AUTHORS: Matthieu Dreher, Swann Perarnau, Tom Peterka, Kamil Iskra, and Pete Beckman

Paper: Position paper - Proposal for a Scientific Software Lifecycle Model
TIME: 2:00PM – 5:30PM • LOCATION: 501
AUTHORS: Anshu Dubey and Lois Curfman McInnes

Paper: Towards Self-Verification in Finite Difference Code Generation
Workshop: First International Workshop on Software Correctness for HPC Applications (Correctness 2017)
TIME: 12:12PM – 12:29PM • LOCATION: 702
AUTHORS: Jan Hueckelheim, Ziqing Luo, Fabio Luporini, Navjot Kukreja, Michael Lange, Gerard Gorman, Stephen Siegel, Matthew Dwyer, Paul Hovland

Workshop Lightning Talks:
Topic: Flexible In Situ Visualization of LAMMPS Simulations
Workshop: In Situ Infrastructures for Enabling Extreme-Scale Analysis and Visualization (ISAV 2017)
TIME: 11:45AM – 11:50AM • LOCATION: 605
AUTHORS: Will Usher, Jefferson Amstutz, Joseph Insley, Aaron Knoll, Michael Papka, Valerio Pascucci, Silvio Rizzi and Venkatram Vishwanath

Topic: Parallel Streaming for In Transit Analysis with Heterogeneous Data Layout
Workshop: In Situ Infrastructures for Enabling Extreme-Scale Analysis and Visualization (ISAV 2017)
TIME: 2:50PM – 2:55PM • LOCATION: 605
AUTHORS: Thomas Marrinan, Greg Eisenhauer, Matthew Wolf, Joseph Insley, Silvio Rizzi and Michael Papka

Workshops:
Eighth Annual Workshop for the Energy Efficient HPC Working Group (EE HPC WG)
TIME: 9:00AM – 5:30PM • LOCATION: 704-706
ORGANIZERS: Michael Patterson, Torsten Wilde, Natalie Bates, Anna Maria Bailey, David Martinez, David Grant, James H. Laros, James Rogers, Ramkumar Nagappan, Michael J. Ellsworth, Steven Martin, Dale Sartor, Bilel Hadri, Andres Marquez, Nicolas Dubé, Josip Loncaric, Susan Coghlan, Greg Koenig, Ladina Gilly, Daniel Hackenberg, Fumiyoshi Shoji, Thomas Durbin, and Wu Feng

Seventh Workshop on Python for High-Performance and Scientific Computing (PyHPC 2017)
TIME: 9:00AM – 5:30PM • LOCATION: 710-712
ORGANIZERS: Andreas Schreiber, William Scullin, Bill Spotz, and Rollin Thomas

In Situ Infrastructures for Enabling Extreme-Scale Analysis and Visualization (ISAV 2017)
TIME: 9:00AM – 5:30PM • LOCATION: 605
ORGANIZERS: Wes Bethel, Patrick O’Leary, Gunther Weber, Nicola Ferrier, Matthew Wolf, Earl Duque

Women in HPC: Diversifying the HPC Community
TIME: 9:00AM – 5:30PM • LOCATION: 503-504
ORGANIZERS: Toni Collis, Alison Kennedy, Sunita Chandrasekaran, Patricia Damkroger, Kelly Gaither, Rebecca Hartman-Baker, Daniel Holmes, Adrian Jackson, Kim McMahan, Misbah Mubarak, and Lorna Rivera

Workshop on Exascale MPI (ExaMPI)
TIME: 9:00AM – 5:30PM • LOCATION: 603
ORGANIZERS: Ryan Gran, Patrick Bridges, Anthony Skjellum, Purushotham Bangalorre, Ron Brightwell, Pavan Balaji, Masamichi Takagi, and Geoffroy Valleé

Fourth SC Workshop on Best Practices for HPC Training
TIME: 2:00PM – 5:30PM • LOCATION: 601
ORGANIZERS: Scott Lathrop, Jay Alameda, Carl Albing, Nia Alexandrov, Maxim Belkin, Dana Brunson, Richard Coffey, Fernanda Foerter, Richard Gerber, Bilel Hadri, Rebecca Hartman-Baker, Susan Mehringer, Julia Mullen, Henry Neeman, Maria-Ribera Sancho, Gowtham Shankara, Nitin Sukhija, Robert Whitten, and Vassil Alexandrov

The 2017 International Workshop on Software Engineering for High Performance Computing in Computational and Data-Enabled Science and Engineering (SE-CoDeSE 2017)
TIME: 2:00PM – 5:30PM • LOCATION: 501
ORGANIZERS: Jeffrey C. Carver, Neil Chue Hong, Selim Ciraci, and Daniel S. Katz (MCS faculty guest)
Network Research Exhibition:

**Topic:** Orchestrating Intercontinental Advance Reservations with Software-Defined Exchanges  
**Workshop:** The 4th International Workshop on Innovating the Network for Data Intensive Science (INDIS)  
**TIME:** 2:30PM – 2:50PM • **LOCATION:** 607  
**SPEAKERS:** Joaquin Chung, Rajkumar Kettimuthu, Nam Pho, Russ Clark and Henry Owen

**Topic:** Calibers: A Bandwidth Calendaring Paradigm for Science Workflows  
**Workshop:** The 4th International Workshop on Innovating the Network for Data Intensive Science (INDIS)  
**TIME:** 2:50PM – 3:10PM • **LOCATION:** 607  
**SPEAKERS:** Eric Pouyoul, Mariam Kiran, Nathan Hanford, Dipak Ghosal, Fatemah Alali, Raj Kettimuthu, and Ben Mackcrane

**Topic:** Towards a Smart Data Transfer Node  
**Workshop:** The 4th International Workshop on Innovating the Network for Data Intensive Science (INDIS)  
**TIME:** 4:40PM – 5:00PM • **LOCATION:** 607  
**SPEAKERS:** Zhengchun Liu, Rajkumar Kettimuthu, Ian Foster, and Peter Beckman

**Topic:** Transferring a Petabyte in a Day  
**Workshop:** The 4th International Workshop on Innovating the Network for Data Intensive Science (INDIS)  
**TIME:** 5:00PM – 5:20PM • **LOCATION:** 607  
**SPEAKERS:** Rajkumar Kettimuthu, Zhengchun Liu, Ian Foster, Katrin Heitmann, and Franck Cappello

**Tutorials:**
- [Compression of Scientific Data](#)  
  **TIME:** 8:30AM – 12:00PM • **LOCATION:** 401  
  **PRESENTERS:** Franck Cappello and Peter Lindstrom
- [Large Scale Visualization with ParaView](#)  
  **TIME:** 8:30AM – 5:00PM • **LOCATION:** 403  
  **PRESENTERS:** Kenneth Moreland, W. Alan Scott, David E. DeMarle, Joseph A. Insley, John Patchett, and Jon Woodring
- [Cloud Computing for Science and Engineering](#)  
  **TIME:** 8:30AM – 5:00PM • **LOCATION:** 203  
  **PRESENTERS:** Ian Foster, Dennis Gannon, and Vani Mandava

**Monday, November 13**

**Invited Talk:**  
[The U.S. D.O.E. Exascale Computing Project – Goals and Challenges](#)  
**TIME:** 10:30AM – 11:15PM • **LOCATION:** Mile High Ballroom  
**SPEAKER:** Paul Messina

**Plenary Panel:**  
[HPC Connects Plenary: The Century of the City](#)  
**TIME:** 5:30PM – 6:30PM • **LOCATION:** Mile High Ballroom  
**PARTICIPANTS:** Pete Beckman, Charlie Catlett, more

**Workshop Papers:**
- **Paper:** PoLiMeR: An Energy Monitoring and Power Limiting Interface for HPC Applications  
  **Workshop:** Fifth International Workshop on Energy Efficient Supercomputing (E2SC)  
  **TIME:** 8:00AM – 0:00PM • **LOCATION:** 506 – check [http://hpc.pnl.gov/conf/e2sc/2017/program.html](http://hpc.pnl.gov/conf/e2sc/2017/program.html)  
  **AUTHORS:** Ivana Marinic, Venkatram Vishwanath, and Henry Hoffmann

- **Paper:** Performance and Power Characteristics and Optimizations of Hybrid MPI/OpenMP LULESH Miniapps under Various Workloads  
  **Workshop:** Fifth International Workshop on Energy Efficient Supercomputing (E2SC)  
  **TIME:** 8:00AM – 0:00PM • **LOCATION:** 506 – check [http://hpc.pnl.gov/conf/e2sc/2017/program.html](http://hpc.pnl.gov/conf/e2sc/2017/program.html)  
  **AUTHORS:** Xingfu Wu, Valerie Taylor, Jeanine Cook, and Tanner Juedeman
Paper: Launching MPI Applications inside MPI Applications
Workshop: 12th Workshop on Workflows in Support of Large-Scale Science (WORKS 2017)
TIME: 0:00AM – 0:00PM • LOCATION: 501 – check http://works.cs.cardiff.ac.uk/
AUTHORS: Matthieu Dorier, Justin M. Wozniak, and Robert Ross

Paper: UMAMI: A Recipe for Generating Meaningful Metrics through Holistic I/O Performance Analysis
Workshop: 2nd Joint International Workshop on Parallel Data Storage and Data Intensive Scalable Computing Systems (PDSW-DISCS)
TIME: 0:00AM – 0:00PM • LOCATION: 601 – check www.pdsw.org
AUTHORS: Glenn K. Lockwood, Shane Snyder, Wucherl Yoo, Kevin Harms, Zachary Nault, Suren Byna, Philip Carns, and Nicholas J. Wright

Paper: CoSS: Proposing a Contract-Based Storage System for HPC
Workshop: 2nd Joint International Workshop on Parallel Data Storage and Data Intensive Scalable Computing Systems (PDSW-DISCS)
TIME: 0:00AM – 0:00PM • LOCATION: 601 – check www.pdsw.org
AUTHORS: Matthieu Dorier, Matthieu Dreher, Tom Peterka, and Robert Ross

Paper: Toward Scalable Monitoring on Large-Scale Storage for Software Defined Cyberinfrastructure
Workshop: 2nd Joint International Workshop on Parallel Data Storage and Data Intensive Scalable Computing Systems (PDSW-DISCS)
TIME: 0:00AM – 0:00PM • LOCATION: 601 – check www.pdsw.org
AUTHORS: Arnab K. Paul, Ryan Chard, Kyle Chard, Steven Tucke, Ali R. Butt, Ian Foster

Workshops:
LLVM-HPC2017: Fourth Workshop on the LLVM Compiler Infrastructure in HPC
TIME: 9:00AM – 5:30PM • LOCATION: 502
ORGANIZER: Hal Finkel

HPC Systems Professional Workshop
TIME: 9:00AM – 5:30PM • LOCATION: 603
ORGANIZERS: Randy Herban, Isaax Traxler, Jenett Tillotson, William Scullin, Paul Peltz, David Clifton, and Alex Younts

Tutorials:
In Situ Analysis and Visualization with SENSEI
TIME: 8:30AM – 12:00PM • LOCATION: 406
PRESENTERS: E. Wes Bethel, Andrew C. Bauer, Brad Whitlock, Matthew Wolf, Burlen Loring, and Silvio Rizzi

Better Scientific Software
TIME: 8:30AM – 12:00PM • LOCATION: 303
PRESENTERS: David E. Bernholldt, Anshu Dubey, Michael A. Heroux, and Alicia Klinvex

Advanced MPI Programming
TIME: 8:30AM – 5:00PM • LOCATION: 404
PRESENTERS: Pavan Balaji, William Gropp, Torsten Hoefler, and Rajeev Thakur

Parallel I/O in Practice
TIME: 8:30AM – 5:00PM • LOCATION: 403
PRESENTERS: Rob Latham, Rob Ross, Brent Welch, and Katie Antypas

Exhibition Hall

Technical Talks:
Data-Driven Scientific Discoveries on the ALCF Theta Supercomputing System
TIME: 7:15PM – 8:00PM • LOCATION: Intel Booth
SPEAKER: Venkat Vishwanath

Early Results on the Argonne Xeon Phi Cray XC-40 System Theta
TIME: 8:00PM – 9:00PM • LOCATION: Intel Booth
SPEAKER: Scott Parker
Tuesday, November 14

Papers:

Probabilistic Guarantees of Execution Duration for Amazon Spot Instances
TIME: 4:30PM – 5:00PM • LOCATION: 405-406-407
AUTHORS: Rich Wolski, John Brevik, Ryan Chard, Kyle Chard

HPC Impact Showcase:

Impact of the DOE and NCI Partnership on Precision Oncology
TIME: 10:30AM – 11:00AM • LOCATION: 501-502
SPEAKER: Rick Stevens

Birds of a Feather:

LLVM in HPC: Uses and Desires
TIME: 12:15PM – 1:15PM • LOCATION: 601
SESSION LEADERS: Jim Cownie and Hal Finkel

Software Engineers: Careers in Research
TIME: 12:15PM – 1:15PM • LOCATION: 603
SESSION LEADERS: Neil Chue Hong, Daniel Katz (MCS faculty guest), Jay Jay Billings, Alys Brett, Jeffrey Carver, Catherine Jones, Lauren Michael, David Perez-Suarez, and Andrew Turner

PowerAPI, GEOPM and Redfish: Open Interfaces for Power/Energy Measurement and Control
TIME: 5:15PM – 7:00PM • LOCATION: 710-712
SESSION LEADERS: Ryan Grant, Jonathan Eastep, Jeff Autor, Nicolas Dube, Vitali Morozov, Todd Rosedahl, Steve Martin, James Laros, III, Stephen Oliver, Ramkumar Nagappan, and Vinanti Phadke

Software Engineering and Reuse in Computational Science and Engineering
TIME: 5:15PM – 7:00PM • LOCATION: 601
SESSION LEADERS: David Bernholdt (lead), Maxim Belkin, Alys Brett, Jeffrey Carver, Neil Chue Hong, Mike Folk, Gerard Gorman, William Gropp, Michael Heroux, Daniel Katz (MCS faculty guest), David Keyes, Scott Lathrop, Randall LeVeque, James Lin, Lois Curfman McInnes, and Kengo Nakajima

Reconfigurable Computing in Exascale
TIME: 5:15PM – 7:00PM • LOCATION: 405-406-407
SESSION LEADERS: Sven Karlsson, David Donofrio, John Leidel, Hans-Christian Hoppe, Marie-Christine Sawley, Kazutomo Yoshii, Kentaro Sano, and Franck Cappello

Cross-Layer Allocation and Management of Hardware Resources in Shared Memory Nodes
TIME: 5:15PM – 7:00PM • LOCATION: 607
SESSION LEADERS: Emmanuel Jeannot, Pete Beckman, and Brice Goglin

Scientific Visualization & Data Analytics Showcase:

Visualizing Silicene Growth Through Island Migration and Coalescence
TIME: 8:30AM – 5:00PM • LOCATION: Mile High Prefunction
AUTHORS: Joseph A. Insley, Mathew J. Cherukara, Badri Narayanan, Henry Chan, and Subramanian Sankaranarayanan

Posters:
MPI/OpenMP Parallelization of the Hartree-Fock Method for the Second Generation Intel Xeon Phi
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Vladimir Mironov, Alexander Moskovsky, Kristopher Keipert, Michael D’Mello, Mark Gordon, and Yuri Alexeev
[NOTE: SC17 Best Poster Nominee]

PaSTRI: A Novel Data Compression Algorithm for Two-Electron Integrals in Quantum Chemistry
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Ali Murat Gok, Dingwen Tao, Sheng Di, Vladimir Mironov, Yuri Alexeev, and Franck Cappello

TRIP: An Ultra-Low Latency, TeraOps/s Reconfigurable Inference Processor for Multi-Layer Perceptrons
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Ahmed Sanaullah, Chen Yang, Yuri Alexeev, Kazutomo Yoshii, and Martin C. Herbordt

Understanding How OpenCL Parameters Impact on Off-Chip Memory Performance of FPGA Platforms
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Yingyi Luo, Zheming Jin, Kazutomo Yoshii, and Seda Ogren-Memik

Exploring the Performance of Electron Correlation Method Implementations on Kove XPDs
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Colleen Bertoni, Brian Toonen, William Alcock, Spencer Pruitt, and Mark Gordon

ACM Student Research Competition:
Applying Image Feature Extraction to Cluttered Scientific Repositories
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Emily Herron, Tyler Skluzacek, Ian Foster, Kyle Chard

Finding a Needle in a Field of Haystacks: Metadata Search for Distributed Research Repositories
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Anna Blue Keleher, Kyle Chard, Ian Foster, Ioan Raicu, Alex Orhean

Exhibition Hall

Talks:
Interactive In Situ Visualization of LAMMPS simulations with OSPRay
TIME: 2:00PM – 2:15PM; Table Topic 2:15 – 4:00PM • LOCATION: Intel Booth Nerve Center
 SPEAKER: Silvio Rizzi

Where Optane Fits in HPC
TIME: 12:00PM – 1:00PM (includes table discussion) • LOCATION: Intel Booth
 SPEAKERS: Vladimir Mironov, Yuri Alexeev, Andrey Kudryavtsev

Wednesday, November 15

Papers:
Embracing a New Era of Highly Efficient and Productive Quantum Monte Carlo Simulations
TIME: 3:30PM – 4:00PM • LOCATION: 402-403-404

An Efficient MPI/OpenMP Parallelization of the Hartree-Fock Method for the Second Generation of Intel Xeon Phi
TIME: 4:00PM – 4:30PM • LOCATION: 402-403-404
AUTHORS: Vladimir Mironov, Alexander Moskovsky, Kristopher Keipert, Michael D’Mello, Mark Gordon, and Yuri Alexeev

Birds of a Feather:
The Internet of Things and HPC: Are They Teaming Up to Work Together?
TIME: 12:15PM – 1:15PM • LOCATION: 701
SESSION LEADERS: Pete Beckman and Nicolás Erdödy

Contemporary Design of Supercomputer Experiments
TIME: 12:15PM – 1:15PM • LOCATION: 710-712
SESSION LEADERS: Dmitry Duplyakin, Jed Brown, Stefan Wild, Prasanna Balaprakash, Paul Constantine, Jeffrey Hokanson, and Felix Wolf

Distributed and Heterogeneous Programming in C++ for HPC
TIME: 12:15PM – 1:15PM • LOCATION: 405-406-407
SESSION LEADERS: Hal Finkel and Michael Wong

Practical Reproducibility by Managing Experiments Like Software
TIME: 12:15PM – 1:15PM • LOCATION: 601
SESSION LEADERS: Ivo Jimenez, Carlos Maltzahn, Jay Lofstead, Michael Heroux, and Kate Keahey

Modeling and Simulation of Communication in HPC Systems
TIME: 12:15PM – 1:15PM • LOCATION: 402-403-404
SESSION LEADERS: Misbah Mubarak, Nikhil Jain, and Jeremiah Wilke

High Performance Computing Education in US Data Science
TIME: 5:15PM – 7:00PM • LOCATION: 703
SESSION LEADERS: Weijia Zu, Kelly Gaither, Daniel Katz (MCS faculty guest), Ann Stapleton, Gopalan Oppiliappan, Mark Speck, Hui Zhang, and Rosalia Gomez

Big Data and Exascale Computing (BDEC) Community Report
TIME: 5:15PM – 7:00PM • LOCATION: 710-712
SESSION LEADERS: Jack Dongarra, Mark Asch, and Pete Beckman

Scientific Visualization & Data Analytics Showcase:
Visualizing Silicene Growth Through Island Migration and Coalescence
TIME: 8:30AM – 5:00PM • LOCATION: Mile High Prefunction
AUTHORS: Joseph A. Insley, Mathew J. Cherukara, Badri Narayan, Henry Chan, and Subramanian Sankaranarayanan

Posters:
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TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom

PaSTRI: A Novel Data Compression Algorithm for Two-Electron Integrals in Quantum Chemistry
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
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TRIP: An Ultra-Low Latency, TeraOps/s Reconfigurable Inference Processor for Multi-Layer Perceptrons
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Ahmed Sanaullah, Chen Yang, Yuri Alexeev, Kazutomo Yoshii, and Martin C. Herbordt

Understanding How OpenCL Parameters Impact on Off-Chip Memory Performance of FPGA Platforms
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
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Exploring the Performance of Electron Correlation Method Implementations on Kove XPDs
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
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ACM Student Research Competition:
Applying Image Feature Extraction to Cluttered Scientific Repositories
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Emily Herron, Tyler Skluzacek, Ian Foster, Kyle Chard

Finding a Needle in a Field of Haystacks: Metadata Search for Distributed Research Repositories
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Anna Blue Keleher, Kyle Chard, Ian Foster, Ioan Raicu, Alex Orhean
Thursday, November 16

Papers:

Predicting the Performance Impact of Different Fat-Tree Configurations
TIME: 10:30AM – 11:00AM • LOCATION: 402-403-404
AUTHORS: Nikhil Jain, Abhinav Bhatele, Louis Howell, David Boehme, Ian Karlin, Edgar A. Leon, Misbah Mubarak, Noah Wolfe, Todd Gamblin, and Matthew Leininger

Run-to-Run Variability on Xeon Phi Based Cray XC Systems
TIME: 11:30AM – 12:00PM • LOCATION: 402-403-404
AUTHORS: Sudheer Chunduri, Kevin Harms, Scott Parker, Vitali Morozov, Samuel Oshin, Naveen Cherukuri, and Kalyan Kumaran

Why is MPI So Slow? Analyzing the Fundamental Limits in Implementing MPI-3.1
TIME: 3:30PM – 4:00PM • LOCATION: 405-406-407
AUTHORS: Ken Raffenetti, Abdelhalim Amer, Lena Oden, Charles Archer, Wesley Bland, Hajime Fujita, Yanfei Guo, Tomislav Janjusic, Dmitry Durnov, Michael Blocksome, Min Si, Sangmin Seo, Akhil Langer, Gengbin Zheng, Masamichi Takagi, Paul Coffman, Jithin Jose, Sayantan Sur, Alexander Sannikov, Sergey Oblomov, Michael Chuvelev, Masayuki Hatanaka, Xin Zhao, Paul Fischer, Thilina Rathnayake, Matt Otten, Misun Min, and Pavan Balaji

Panel:

Common Big Data Challenges in Bio, Geo, Climate, and Social Sciences
TIME: 10:30AM – 12:00PM • LOCATION: 201-203
PANELISTS: Sushil Prasad, Joel Saltz, Vishin Kumar, Chaitanya Baru, E. Lynn Usery, Daniel Reed, Pete Beckman, and Sangram Ganguly

Birds of a Feather:

Analyzing Parallel I/O
TIME: 12:15PM – 1:15PM • LOCATION: 402-403-404
SESSION LEADERS: Philip Carns and Julian Kunke

HPC Education: Meeting of the SIGHPC Education Chapter
TIME: 12:15PM – 1:15PM • LOCATION: 205-207
SESSION LEADERS: Richard Coffey, Fernanda Foertter, and Steve Gordon

MPICH: A High-Performance Open-Source MPI Implementation
TIME: 12:15PM – 1:15PM • LOCATION: 701
SESSION LEADERS: Ken Raffenetti, Pavan Balaji, Abdelhalim Amer, Yanfei Guo, Neelima Bayyapu, and Kavitha Madhu

Scientific Visualization & Data Analytics Showcase:

Visualizing Silicene Growth Through Island Migration and Coalescence
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Finding a Needle in a Field of Haystacks: Metadata Search for Distributed Research Repositories
TIME: 8:30AM – 5:00PM • LOCATION: Four Seasons Ballroom
AUTHORS: Anna Blue Keleher, Kyle Chard, Ian Foster, Ioan Raicu, Alex Orhean

Friday, November 17

Workshop Papers:
Paper: High-Throughput Cancer Hypothesis Testing with an Integrated PhysiCell-EMEWS Workflow
Workshop: Computational Approaches for Cancer
AUTHORS: Jonathan Ozik, Nicholas Collier, Justin M. Wozniak, Charles Macal, Chase Cockrell, Samuel H. Friedman, Ahmadreza Ghaffarizadeh, Randy Heiland, Gary An, and Paul Macklin

Workshop: Computational Approaches for Cancer
AUTHORS: Justin M. Wozniak, Rajeev Jain, Prasanna Balaprakash, Jonathan Ozik, Nicholson Collier, John Bauer, Fangfang Xia, Thomas Brettin, Rick Stevens, Jamaludin Mohd-Yusof, Cristina, Garcia Cardona, Brian Van Essen, and Matthew Baughman

Paper: Boosting Curative Surgery Success Rates using FPGAs
Workshop: Computational Approaches for Cancer
TIME: 10:45AM – 11:05AM • LOCATION: 406-407
AUTHORS: Ahmed Sanaullah, Martin Herbordt, Chen Yang, Yuri Alexeev, and Kazutomo Yoshii

Workshops:
H2RC: Third International Workshop on Heterogeneous Computing with Reconfigurable Logic
TIME: 12:00PM • LOCATION: 402-403
ORGANIZERS: Michaela Blott, Jason Bakos, Torsten Hoefler, Michael Lysaght, and Franck Cappello

The 2nd International Workshop on Data Reduction for Big Scientific Data (DRBSD-2)
TIME: 12:00PM • LOCATION: 302-303
ORGANIZERS: Scott Klasky, Qing Gary Liu, Mark Ainsworth, and Ian Foster