Los Alamos NATIONAL LABORATORY — EST.1943

at

SC15 Austin, TX | hpc transforms.

Los Alamos National Laboratory (LANL) Participation at SC15. LANL staff are listed with their events - see the SC15 program for a complete list of authors and presenters.

PAPERS

Large-Scale Compute-Intensive Analysis via a Combined In-Situ and Co-Scheduling Workflow Approach
Wednesday, 11/18, 15:30-17:00, Room 18CD
Christopher Sewell (LANL), Katrin Heitmann, Hal Finkel, George Zagaris, Suzanne T. Parete-Koon, Patricia K. Fasel (LANL), Adrian Pope, Nicholas Frontiere, Ollie (Li-ta) Lo (LANL), Bronson Messer, Salman Habib, James Ahrens (LANL)

TUTORIALS

Large Scale Visualization with ParaView - Sunday, 11/15, 08:30-12:00, Room 13AB
Kenneth Moreland, W. Alan Scott, David E. DeMarle, Ollie (Li-ta) Lo (LANL), Joe Insley, Rich Cook

Getting Started with In Situ Analysis and Visualization Using ParaView Catalyst - Monday, 11/16, 08:30-12:00, Room 16AB
Andrew C. Bauer, David Rogers (LANL), Jeffrey A. Mauldin

Practical Fault Tolerance on Today's HPC Systems - Monday, 11/16, 08:30-12:00, Room 18D
Nathan DeBardeleben (LANL), et al.

An Introduction to the OpenFabrics Interface API - Monday, 11/16, 13:30-17:00, Room 12B
Sean Hefty, Dave Goodell, Robert D. Russell, Howard Pritchard (LANL), Paul Grun

POSTERS - Tuesday, 11/17, 17:15-19:00, Level 4 - Concourse

Nominated for Best Poster Award **Performance, Power, and Energy of In-Situ and Post-Processing Visualization: A Case Study in Climate Simulation**
Vignesh Adhinarayanan, Scott Pakin (LANL), David Rogers (LANL), Wu-chun Feng, James Ahrens (LANL)

Task-Based Parallel Computation of the Density Matrix in Quantum-Based Molecular Dynamics Using Graph Partitioning
Sergio Pino, Matthew Kroonblawd, Purnima Ghale, Georg Hahn, Vivek Sardeshmukh, Guangjie Shi, Hristo Djidjev, Christian Negre, Robert Pavel, Benjamin Bergen, Susan Mniszewski, Christoph Junghans (all LANL)

Transition to Trinity: Preparing a Next-Generation Network
Kathryn S. Protin, Susan K. Coulter, Jesse E. Martinez, Alex F. Montaño, Charles D. Wilder (all LANL)

Virtualizing File Transfer Agents for Increased Throughput on a Single Host
Thomas Stitt, Amanda Bonnie (LANL), Zach Fuerst

STUDENTS@SC

Student Cluster Competition - Monday, 11/16, 17:00 — Thursday, 11/18, 15:00, Palazzo 1st Floor
Chair: Hai Ah Nam (LANL)

Mentor-Protégé Program and Mentor-Protégé Mixer - Monday, 11/16, 15:30-17:00
Chair: Christine Sweeney (LANL)

Student-Postdoc Job & Opportunity Fair - Wednesday, 11/18, 10:00-15:00, Room 9ABC
Josephine Kilde, Ryan Braithwaite, AnnMarie Cutler, Gloria Montoya-Rivera, Bob Robey, Scott Pakin, Christine Sweeney, Howard Pritchard, Jon Woodring, Carolyn Connor (all LANL)

EXHIBIT BOOTH

Department of Energy Booth Demos, Displays, Booth Duty
U.S. Department of Energy, Booth 502 — Parks Fields (LANL), Dave Modl (LANL), Ryan Braithwaite (LANL), et. al

SCinet

Commodity Network Team - Monday, 11/9 - Saturday, 11/21
Ryan Braithwaite (LANL), Parks Fields (LANL), Dave Modl (LANL), et al.

VISUALIZATION & DATA ANALYTICS SHOWCASE

Visualization of Ocean Currents and Eddies in a High-Resolution Ocean Model - Wednesday, 11/18, 10:30-12:00, Ballroom E
Francesca Samsel, Mark Petersen (LANL), Terece Turton, Gregory Abram, James Ahrens (LANL), David Rogers (LANL)

PANELS

Intel Community Hub Panel Accelerating Science with Storage Systems
Research Moderator: Brad Settlemyer (LANL)
Panelists: Gary Grider (LANL), Eric Bartion, Robert Ross, Quincey Koziol

Birds of a Feather

OpenSHMEM: User Experience, Tool Ecosystem, Version 1.2 and Beyond - Tuesday, 11/17, 12:15-13:15, Room 13B
Panel member: Jeff Kuehn (LANL)

Fresco: An Open Failure Data Repository for Dependability Research and Practice - Wednesday, 11/18, 12:15-13:15, Ballroom G
Saurabh Bagchi, Ravishankar Iyer, Nathan Debardeleben (LANL), Xiaohui Song, Zbigniew Kalbarczyk

Migrating Legacy Applications to Emerging Hardware - Wednesday, 11/18, 12:15-13:15, Room 16AB
Sriram Swaminarayan (LANL), Andy Herdman, Michael W. Glass

Monitoring Large-Scale HPC Systems: Data Analytics and Insights - Wednesday, 11/18, 15:30-19:00, Ballroom E
Jim Brandt, Hans-Christian Hoppe, Mike Mason (LANL), Mark Parsons, Marie-Christine Sawley, Mike Showerman

Two Tiers Scalable Storage: Building POSIX-Like Namespaces with Object Stores - Wednesday, 11/18, 15:30-19:00, Hilton Salon A
Sorin Faibish, Gary Grider (LANL), John Bent

Charm++ and AMPI: Adaptive and Asynchronous Parallel Programming - Thursday, 11/19, 12:15-13:15, Room 13B
Tabasco: Task-based scale-bridging code - Tim Germann (LANL)

Workshops

Third Workshop on Energy Efficient Supercomputing (E2SC) - Sunday, 11/15, Hilton Salon B
Experimental Design and Comparative Testing of a Hybrid Cooled Computer Cluster - 11:30-12:00
Amanda Bonnie (LANL)

Measurement and Characterization of Haswell Power and Energy Consumption - 14:00-14:30
Song Huang, Michael Lang (LANL), Scott Pakin (LANL), and Song Fu

Early Experiences with Node-Level Power Capping on the Cray XC40 Platform - 15:30-16:00
Kevin Pedretti, Stephen Olivier, Kurt Ferreira, Galen Shipman (LANL), and Wei Shu

Second Workshop on the LLVM Compiler Infrastructure in HPC - Sunday, 11/15, 09:00-17:30
SKA - Static Kernel Analysis using LLVM IR - 16:00
Kartik Ramkrishnan, Ben Bergen (LANL), Justin Tripp (LANL)

Second International Workshop on Hardware-Software Co-Design for High Performance Computing (Co-HPC 2015) - Monday, 11/16, 09:00-17:30, Hilton Salon B
Database Assisted Distribution to Improve Fault Tolerance for Multiphysics Applications
Robert Pavel, Allen McPherson, Timothy Germann, Christoph Junghans (all LANL)

Sixth Annual Workshop for the Energy Efficient HPC Working Group (EE HPC WG) - Monday, 11/16, 09:00-17:30, Hilton Salon A
Organizing committee: Josip Loncaric (LANL), et. al

Trinity: Early Experience, Successes, Lessons Learned - Monday, Nov. 16, 15:30-16:25
Carolyn Connor (LANL)

Liquid Cooling Facility Hook-up Standards - 12:00-12:30
Josip Loncaric (LANL), Anna Maria Bailey, David Martinez

EduHPC-15: Workshop on Education for High-Performance Computing - Monday, 11/16, Hilton Salon E
Student Cluster Competition: A Multi-disciplinary Undergraduate HPC Educational Tool - 14:20-14:35
Stephen Harrell, Hai Ah Nam (LANL), Veronica Vergara, Kurt Keville and Dan Kamalic

In Situ Analysis and Visualization (ISAV) 2015 Workshop held at SC15 - Monday, 11/16, Hilton Salon D
Exploring a Unified Task-Based Approach for In Situ Analysis and Visualization - 14:45-15:00
Christine Sweeney (LANL), Patrick McCormick (LANL), Ian Sohl and Xin Tong.

pdsw2015: 10th parallel data storage workshop - Monday, 11/16, Hilton Salon D
Automatic and Transparent I/O Optimization With Storage Integrated Application Runtime Support - 15:30-17:00
Noah Watkins, Zhihao Jia, Galen Shipman (LANL), Carlos Maltzahn, Alex Aiken, Pat McCormick (LANL)

BAD-Check: Bulk Asynchronous Distributed Checkpointing - 13:30-15:00
John Bent, Brad Settlemyer (LANL), Haiyun Bao, Sorin Faibish, Jeremy Sauer (LANL), Jingwang Zhang

DeltaFS: Exascale File Systems Scale Better Without Dedicated Servers - 10:30-12:00
Qing Zheng, Kai Ren, Garth Gibson, Bradley W. Settlemyer (LANL), Gary Grider (LANL)

Workshop for Runtime Systems for Extreme Scale Programming Models and Architectures - Monday, 11/16
Analysis of Application Sensitivity to System Performance Variability in a Dynamic Task Based Runtime
G. Shipman (LANL), P. McCormick (LANL), K. Pedretti, S. Olivier, K. Ferreira, R. Sankaran, S. Treichler, A. Aiken, M. Bauer

NRE2015: Numerical Reproducibility at Exascale Workshop - Friday, 11/20
Computational Reproducibility in Production Physics Applications
Robert W. Robey (LANL)