

SDM Center All-Hands-Meeting Agenda

Davis, California

Day 1: Tuesday, October 13

8:20 Breakfast buffet

8:50 – 9:00 Introductory remarks -- Arie Shoshani

9:00 – 9:25 Overview of recent accomplishments in high-performance I/O systems
Presenter: Alok Choudhary (NWU)

9:25 – 9:50 Recent improvements of FIESTA (Workflow, ADIOS, Dashboard, etc.)
Presenter: Scott Klasky (ORNL)

9:50 – 10:05 Front tracking
Presenter: Nagiza Samatova (NCSU + ORNL)

10:05 – 10:20 Progress in data analysis projects
Presenter: Chandrika Kamath (LLNL)

10:20 – 10:30 Efficiently Extracting Regions of Interest on Toroidal Meshes
Presenter: John Wu (LBNL)

Break

11:00 – 11:30 Experience with preparation workflows and using FIESTA
Ray Grout, Jackie Chen (Sandia)

11:30 – 12:00 Plans for parallel computing at ORNL and use of parallel R
Eric Wang, Bill Nevins (LLNL)

12:00 – 12:30 – Experience in using PnetCDF for climate modeling
Karen Schuchardt (PNNL)

Lunch

2:00 – 2:30 Using Kepler to collect provenance in climate databases
Kathy Saint (UCAR)

2:30 – 3:00 Experience with using FIESTA for fusion simulations in the CPES project
Seung-Hoe Ku (NYU) and Julian Cummings (Caltech)

3:00 – 3:30 Data requirements in quantum simulations
Giulia Galli (UCD)

Break

4:00 – 4:30 Subsurface Simulation & Meta-Modeling Environment -- *Karen Schuchardt (PNNL)*

4:30 – 6:00 **Panel:** Scientific data management in the Extreme Scale, an application requirements perspective -- panelists: all application scientists (moderator: Nagiza Samatova)

Day 2: Wednesday, October 14

8:20 Breakfast buffet

Session 8:50 – 10:00

Panel: Scientific data management at the extreme scale, a technology perspective – panelists: Terence Critchlow, Nagiza Samatova, Alok Choudhary, Ekow Otoo (moderator: Arie Shoshani)

Break

Session 10:30 – 12:00 update/new talks (15 min each):

- 1) pR: High Performance Computing Through R
Presenter: Guruprasad Kora (ORNL)
- 2) Using ADIOS as the I/O backend for the CHOMBO AMR simulation framework
Presenter: Alex Romosan (LBNL)
- 3) Optimizing MPI collective I/O for Lustre
Presenter: Wei-keng Liao (NWU)
- 4) Developments on Efficient Access to Lustre Storage and its Sharing Within and Across Centers
Presenter: Weikuan (Auburn U.)
- 5) MPI on a Million Cores
Presenter: Rajeev Thakur (ANL)
- 6) Advances in the workflow and dashboard infrastructures in FIESTA
Presenter: Norbert Podhorszki (ORNL)

Lunch

Session 1:30 – 3:00 update/new talks (15 min each):

- 1) Generic actors
Presenter: George Chin (PNNL)
- 2) An Integrative Fault Tolerance Architecture for Using Kepler Scientific Workflows in Distributed Environments
Presenter: Ilkay Altintas (SDSC)
- 3) S3D Preparations Workflows/Scientific Workflow Patterns
Presenter: Ustun Yildiz (UCD)
- 4) Recent Improvements to Dashboard Software Engineering & Visualization
Presenter: Ayla Khan (UUtah)
- 5) Provenance Management for Scientific Workflows
Presenter: Pierre Moullem (NCSU)

6) The impact of Cloud Computing on Scientific Workflows

Presenter: Mladen Vouk (NCSU)

Break

Session 3:30 – 5:00

Panel: How to accelerate SDM center technology synergy? – panelists: Bertram Ludaescher, Mladen Vouk, Chandrika Kamath, Scott Klasky (moderator: Doron Rotem)