SDAV All Hands Meeting

Agenda

<u>Tue., March 3</u>

8:00-8:45: Registration and continental breakfast

8:45 – 9:00 Opening remarks

Morning (9:00 – 12:30)

9:00 – 10:30 Session 1: Visualization frameworks and related work

(Talks are 5 minutes each + posters)

moderator – Wes Bethel

- Kenneth Moreland: XVis: Visualization for the Extreme-Scale Scientific-Computation Ecosystem
- Utkarsh Ayachit (Kitware): In Situ Data Analysis and Visualization with Catalyst
- Eric Brugger: Progress readying VisIt for VTKm
- David Camp: Porting VisIt to Intel phi
- Jeremy Meredith: Update on EAVL
- Oliver Ruebel: Scalable Visualization, Query, and I/O for Particle Accelerator Simulations using Warp

- Posters for the talks in this session (45 minutes)

10:30 – 11:00 Break

11:00 – 12:30 Session 2: Analysis tools and methods

(Talks are 5 minutes each + posters)

moderator – Alok Choudhary

- Timo Bremer: Topological Analysis in Practice
- Valerio Pascucci: Fast I/O and streaming of large scale simulations
- John (Kesheng) Wu: Parallel Feature Extraction from Large Science Data Sets
- Dmitry Morozov: DIY2: out-of-core data parallel library
- Kwan-Liu Ma: Visual Analysis Methods for Joint Particle/Field Data
- Guest talk (SUPER): Paul Hovland – multi-optimization activities within SUPER

- Posters for the talks in this session (45 minutes)

12:30 – 1:30 Working Lunch (lunch box provided)

Afternoon (1:30 – 5:30)

1:30-2:00 Special short session (30 minutes)

- Upcoming architectures and their features
  1. Hank Childs: Cori at NERSC
  2. Scott Klasky: Summit at ORNL

2:00 – 3:30 Session 3: Data management tools and frameworks

(Talks are 5 minutes each + posters)

moderator – Matt Wolf

- Drew Boyuka: Octrees for Not-Spatial Indexing and Access-driven Layout Optimization
- Suren Byna: Automatic tuning parallel read and write performance
- Scott Klasky: ADIOS 1.8.0
- Qing (Gary) Liu: Understanding and Improving Read Performance on Shared Storage Systems
- Wei-Keng Liao: New PnetCDF Features for Supporting Climate Applications
- Venkat Vishwanath: Recent data movement advances in GLEAN to support extreme scale I/O

- Posters for the talks in this session (45 minutes)

3:30 – 4:00 Break

4:00 – 5:30 Session 4: Visualization methods (volume rendering, flow analysis, uncertainty, …) (Talks are 5 minutes each + posters)

moderator – Jim Ahrens

- Hank Childs: Improved Post Hoc Flow Analysis Via Lagrangian
- Joe Insley: Recent Advancements in vl3, and Visualization Support at the ALCF
- Chris Johnson: Challenges in Uncertaity Visualization
- Ken Joy: On Flow and Ensembles
- Han-Wei Shen: Uncertainty flow particle tracing and feature extraction

- Posters for the talks in this session (45 minutes)

<u>Wed, March 4</u>

8:00 – 8:30 Pre-session Continental Breakfast

Morning (8:30 – 12:00)

8:30 – 10:00 Session 5: Tools usage in applications

(Talks are 5 minutes each + posters)

moderator – Rob Ross

- Manish Parashar: Towards Staging as a Service: Experiments with Coupled Simulation Workflows in Fusion
- Tom Peterka: DIY Applications
- Chris Sewell: Data-Parallel Cosmology Analysis on Titan
- Dave Pugmire: SDAV activities on Leadership Class facilities (15 min)
- Guest talk (QUEST): James Gattiker - QUEST Institute research, tools, and partnerships (15 minutes)

- Posters for the talks in this session (30 minutes, continue during break)

10:00 – 10:30 Break

10:30 – 12:00: panel – Adaptation/restructuring of SDAV tools/libraries for taking advantage of new architectures: current, ongoing, and future progress

moderator – Arie Shoshani

- Taking advantage of new architecture: current, ongoing, and future progress (30 Minutes)
  1. Data Management: Rob Ross/Scott Klasky (10 minutes)
  2. Analysis: Kwan-Liu Ma/Valerio Pascucci (10 minutes)
  3. Visualization: Jim Ahrens/Wes Bethel (10 minutes)
- FastMath Guest: Esmond Ng: use of upcoming architecture features in FastMath libraries and tools (10 minutes)
- Pat McCormick: A Unified Data-Driven Approach for Programming In Situ Analysis and Visualization (10 minutes)
- Questions/answers and discussions (40 minutes)

12:00 noon: Meeting ends