

# DOE Computer Graphics Forum 2019

**Tuesday, April 23**

7:30–8:30 *Breakfast*

**8:30–10:00 Open and Site Reports I**

**Chair: Rob Sisneros**

8:30 Opening Remarks

Matt Larsen

8:45 Argonne National Lab

Rob Sisneros

9:00 Brookhaven National Lab

Joe Insley

9:15 Lawrence Berkeley National Lab

Mike McGuigan

9:30 Lawrence Livermore National Lab

Wes Bethel

9:45 Los Alamos National Lab

Eric Brugger

Jennifer Green

10:00–10:30 *Break*

**10:30–12:00 Site Reports II**

**Wes Bethel**

10:30 National Center for Atmospheric Research

John Clyne

10:45 National Center for Supercomputing Applications

Rob Sisneros

11:00 National Renewable Energy Lab

Kenny Gruchalla

11:15 Oak Ridge National Lab

Dave Pugmire

11:30 Sandia National Lab

Ken Moreland

11:45 University of Oregon

Hank Childs

12:00–1:00 *Lunch*

**1:00–2:30 Software Updates I and Bonus**

**John Clyne**

1:00 ADIOS

Dave Pugmire

1:20 ASCENT

Matt Larsen

1:40 MACSio: A Multi-purpose, Application-Centric  
Scalable I/O Proxy Application and Benchmarking Tool

Mark Miller

2:00 SENSEI

Burlen Loring

2:20 DOE at SC19

John Patchett

2:30–3:00 *Break*

**3:00–4:20 Software Updates II**

**Dave Pugmire**

3:00 ParaView

Ken Moreland

3:20 VisIt

Eric Brugger

3:40 ~~Vulkan: Insert Star Trek Pun Here~~

~~Nicholas Brunhart-Lupo~~

3:40 VTK-m

Ken Moreland

## Wednesday, April 24

7:30–8:30 *Breakfast*

### 8:30–10:00 **Research Talks I**

- 8:30 Visualization of Quantum Computations in High Energy, Nuclear and Condensed Matter Physics
- 9:00 Visualizing Electrical Power Systems as Flow Fields
- 9:30 Data Analysis and Visualization for Cosmology

**Chair: Rob Sisneros**

Mike McGuigan

Kenny Gruchalla

Pascal Grosset

10:00–10:30 *Break*

### 10:30–12:00 **Research Talks II**

- 10:30 Efficient Point Merging Using Data Parallel Techniques
- 11:00 VTK-m and Jupyter Notebook
- 11:30 GPU Accelerated Curvilinear Grid Rendering

**Ken Moreland**

Abhishek Yenpure

Mark Kim

Stanislaw Jaroszynski

12:00–1:00 *Lunch*

### 1:00–2:30 **Research Talks III**

- 1:00 Impactful Visualization with Paraview, Houdini FX and VR
- 1:30 Recent Research Results from the CDUX Group
- 2:00 The Conduit Mesh Blueprint: Drafting a New Way to Share Simulation Meshes

**Kenny Gruchalla**

Brad Carvey

Hank Childs

Cyrus Harrison

2:30–3:00 *Break*

### 3:00–4:30 **Research Talks IV**

- 3:00 Intelligent In Situ Sampling Algorithms for Data Reduction
- 3:30 Fast Mesh Validation in Combustion Simulations through In-Situ Visualization
- 4:00 Recent In Situ Work

**Hank Childs**

Ayan Biswas

Sergei Shudler

James Kress

## Thursday, April 25

7:30–8:30 *Breakfast*

### 8:30–10:00 **Industry Updates**

- 8:30 ParaView and Beyond
- 9:00 Intel Rendering Framework Update
- 9:30 A Survey of In Situ Activities at Intelligent Light

**Chair: Rob Sisneros**

Scott Wittenburg

Greg Johnson

Jeff Amstutz

Brad Whitlock

10:00–10:30 *Break*

### 10:30–12:00 **Panel**

- 10:30 VTK-m at Scale

**Hank Childs**