

2015 ECI PM/E Workshop

Dates: March 9 – 11, 2015

Location: Rockville Hilton, Rockville, MD

Agenda:

	Topic	Speaker
Monday, March 9, 2015		
7:30 am - 8:15am	Continental Breakfast	
8:15am – 8:45am	<i>Welcome and Introduction – DOE PM/E (ECI)</i>	<i>William Harrod Director of Research, Advanced Scientific Computing Research (ASCR)</i>
	<i>NNSA ASC Perspective</i>	<i>Thuc Hoang Program Manager, Advanced Simulation and Computing (ASC)</i>
8:45am – 9:10am	<i>Implications of Hardware Trends on Programming Models</i>	<i>John Shalf Lawrence Berkeley National Laboratory (LBNL)</i>
9:10am – 9:40am	<i>ASC Program Needs for Future PM/E</i>	<i>Rob Neely Lawrence Livermore National Laboratory (LLNL)</i>
9:40am – 10:00am	<i>Fusion Applications Requirements for PM/E(s) in the Exascale Era</i>	<i>Stéphane Ethier Princeton Plasma Physics Laboratory (PPPL)</i>
10:00am – 10:20am	<i>Break</i>	
10:20am – 10:40am	<i>Genomic Applications Requirements for PM/E(s) in the Exascale Era</i>	<i>Rob Egan LBNL and Joint Genome Institute (JGI)</i>
10:40am – 11:00am	<i>Climate Application Requirements for Programming Models and Environments in the Exascale Era</i>	<i>Rob Jacob Argonne National Laboratory (ANL)</i>
11:00am – 11:20am	<i>FASTMath Library use of Programming Models and Tools</i>	<i>Lori Diachin LLNL</i>
11:40am – 12:00pm	<i>Application (Code/Development) Requirements for PM/E(s)</i>	<i>Jim Belak LLNL</i>
12:00pm – 12:40pm	<i>Lunch</i>	

	Topic	Speaker
12:40pm – 2:40pm	<i>Parallel Session I: Application Requirements for Exascale PM/E(s)</i>	<i>Chair: Rob Hoekstra Sandia National Laboratories (SNL)</i>
	<i>Parallel Session II: Methods for Evaluating PM/E(s)</i>	<i>Chair: Armando Solar-Lezama Massachusetts Institute of Technology (MIT)</i>
2:40pm – 3:00pm	<i>ExMatEx Co-Design PM/E Efforts</i>	<i>Jim Belak LLNL</i>
3:00pm – 3:20pm	<i>Break</i>	
3:20pm – 3:40pm	<i>ExaCT Programming Models/Environment Activities</i>	<i>Pat McCormick Los Alamos National Laboratory (LANL)</i>
3:40pm – 4:00pm	<i>Kokkos: Enabling Performance, Portability, and Productivity for C++ Applications and Libraries</i>	<i>Carter Edwards SNL</i>
4:00pm – 4:30pm	<i>The Future of MPI</i>	<i>Rajeev Thakur ANL</i>
4:30pm – 5:00pm	<i>The Future of OpenMP</i>	<i>Barbara Chapman University of Houston</i>
5:00pm	Adjourn	

Tuesday, March 10, 2015

8:00am – 8:20am	<i>Continental Breakfast</i>	
8:20am – 8:30am	<i>2015 ECI Programming Models and Environments Workshop</i>	<i>Sonia R. Sachs ASCR</i>
8:30am – 8:45am	<i>Parallel Session I report Application Requirements for Exascale PM/E(s)</i>	<i>Rob Hoekstra SNL</i>
8:45am – 9:00am	<i>Parallel Session II report Methods for Evaluating PM/E(s)</i>	<i>Armando Solar-Lezama MIT</i>
9:00am – 9:40am	<i>Domain Specific Languages (DSLs) for the Exascale Era</i>	<i>Dan Quinlan LLNL</i>
9:40am – 10:20am	<i>X-Stack Traleika Glacier Programming Environment</i>	<i>Wilf Pinfeld Intel</i>
10:20am – 10:40am	<i>Break</i>	
10:40am – 11:20am	<i>DEGAS_Dynamic Exascale Global Address Space</i>	<i>Kathy Yelick LBNL</i>
11:20am – 11:40am	<i>The “Tlearchy” Programming Model</i>	<i>Charles Ferenbaugh LANL</i>
11:40am – 12:00pm	<i>The RAJA Portability Layer</i>	<i>Rich Hornung LLNL</i>
12:00pm – 1:00pm	<i>Lunch</i>	
1:00pm – 1:20pm	<i>ASCR Programming Environments Summit Report Summary</i>	<i>Armando Solar-Lezama MIT</i>
1:20pm – 3:00pm	<i>Parallel Session III: Characteristics of PM/PE(s) (set 1)</i>	<i>Chair: Dave Richards LLNL</i>
	<i>Parallel Session IV: Characteristics of PM/PE(s)(set 2)</i>	<i>Chair: John Shalf LBNL</i>
3:00pm – 3:15pm	<i>Coffee Break</i>	
3:15pm – 4:30pm	<i>Continue Parallel Session III: Characteristics of PM/PE(s) (set 1)</i>	<i>Chair: Mary Hall University of Utah</i>
	<i>Continue Parallel Session IV: Characteristics of PM/PE(s) (set 2)</i>	<i>Chair: Kathy Yelick LBNL</i>
4:30pm – 4:45pm	<i>Report Back of Session III Characteristics of Programming Models</i>	<i>Dave Richards LLNL</i>
4:45pm – 5:00pm	<i>Report Back of Session IV Programming Models Break-Out 2</i>	<i>John Shalf LBNL</i>
5:00pm	<i>Adjourn</i>	

Wed, March 11, 2015

7:30am – 8:15am	<i>Continental Breakfast</i>	
8:15am – 8:30am	<i>Report Back of Second Session Characteristics of PM/PE(s) (set 1)</i>	<i>Mary Hall University of Utah</i>
8:30am – 8:45am	<i>Report Back of Second Session IV Programming Environments</i>	<i>Kathy Yelick LLNL</i>
8:45am – 10:15am	<i>Parallel Session V Breakout: PM/E Research Questions Working Group</i>	<i>Chair: Thomas Sterling Indiana University</i>
	<i>Parallel Session VI Breakout: Research Questions for Programming Environments</i>	<i>Chair: Martin Schulz LLNL</i>
10:15am – 10:30am	<i>Coffee Break</i>	
10:30am – 10:45am	<i>Report Back of Session V</i>	<i>Thomas Sterling Indiana University</i>
10:45am – 11:00am	<i>Report Back of Session VI Research Questions for Programming Environments</i>	<i>Martin Schulz LLNL</i>
11:00am – 11:30am	<i>Summary of Workshop</i>	<i>Pete Beckman ANL Rob Neely LLNL</i>
11:30pm – 12:30pm	<i>Lunch</i>	
12:30pm	<i>Adjourn</i>	