

EU-US HPC Summer School 2011
South Lake Tahoe, Aug 7-12, 2011
Proposed Agenda
Draft July 11, 2011

Sun Aug 7

18:00 – 20:00 – Welcome Reception

Mon Aug 8

7:30 – 8:30 Full Breakfast and Registration

8:30 – 9:00 - HPC Challenges and Technology

- **PRACE Overview – <TBN>**
- XD Overview – John Towns, NCSA

9:00 – 10:30 – Introduction of Participants (1 minute per person to say name, institution, field of research, and favorite hobby) – follow order of book

10:30 – Break

11:00 – 12:00 – Exascale Software Project

David Keyes, Columbia University and KAUST

12:00-13:30 – Lunch and Team Building

13:30 – 17:00 Programming

- Overview on Mixed MPI/OpenMP Programming, UPC, CAF, StarSs Model
Alejandro Duran, Polytechnical University of Catalunya, Barcelona
David Henty, EPCC, University of Edinburgh, UK

18:00 – 20:00 – Poster Session and Buffet Dinner

Tue Aug 9

7:30 – 8:30 Full Breakfast

8:30 – 9:30 - Challenges by Scientific Disciplines I

- Parallel track 1: Materials Science
Thomas Schulthess, ETHZ, Zurich, & CSCS, Switzerland
- Parallel track 2: Plasma Physics
Frank Jenko, Max Planck Institute for Plasma Physics, Garching

9:30 – 10:30 - Challenges by Scientific Disciplines II

- Parallel track 1: Life Sciences
Amber: Thomas Cheatham, Univ. Utah, US
- Parallel track 2: CFD / Engineering
Ulrich Rist, University of Stuttgart

10:30 – 11:00 - Break

11:00 – 12:00 – Challenges by Scientific Disciplines II

- Parallel track 1: Cosmology
Britton Smith, Michigan State University
- Parallel track 2: Metagenomics
Earthmicrobiome Project - *Folker Meyer, University of Chicago*

12:00-13:30 – Lunch and Team Building

13:30 – 17:00 - Performance Analysis & Profiling (hands-on)

- Points package, Scalasca, etc.
Philip Blood, PSC, Pittsburgh, US
Bernd Mohr, FZJ, Juelich, Germany

17:00 – Dinner on Own

Wed Aug 10

7:30 – 8:30 Full Breakfast

8:30 – 9:30 - Challenges by Scientific Disciplines III

- Parallel track 1: Life Sciences
GROMACS – *Erik Lindahl, University of Stockholm*
- Parallel track 2: Engineering
Hans-Joachim Bungartz, Technical University of Munich

9:30 – 10:30 – Numerical Algorithms & Parallel I/O

- Parallel track 1: Numerical Algorithms
Scalable fast algorithms for Coulomb interactions
Olaf Lenz, University of Stuttgart Parallel track
- 2: Parallel I/O
Lonnie Crosby, National Institute of Computational Sciences (NICS)

10:30 – 11:00 - Break

11:00 – 12:00 – Open Community Building Time

12:00-13:30 – Lunch and Team Building

13:30 – 17:00 – Parallel Programming (hands-on)

- GPU/CUDA programming
Wen-Mei Hwu, NCSA

17:00 – Dinner on Own

Thu Aug 11

7:30 – 8:30 Full Breakfast

8:30 – 9:30 – Challenges by Scientific Disciplines IV

- Parallel track 1: Numerical Libraries
Tony Drummond, LBNL, Berkeley, US
- Parallel track 2: Workflow Tools
Scott Callaghan, Southern California Earthquake Center, USC

9:30 – 12:00 - Data Intensive Computing (hands-on)

John R Johnson, Pacific Northwest Laboratory
12:00-13:30 – Lunch and Team Building
13:30 – 16:30 Scientific Visualization (hands-on)
Amy Szczepański, University of Tennessee/NICS
16:30 – 17:00 Wrap-up Session
17:00 – Dinner on Own

Fri Aug 12

Coordinate rides to airport(s)