HPSS 2011

PROGRAM

9:30-10:30 Workshop Opening & Keynote Lecture 1

Chair: **Pasqua D'Ambra**

Title: **European Exascale Software Initiative. Numerical Libraries, Solvers and Algorithms**
Names & Affiliation: ***Iain Duff*** **-** Rutherford Appleton Laboratory, UK and CERFACS, FR

10:30-11:00 Paper Session 1
Chair: **Pasqua D'Ambra**

10:30-11:00 On Reducing I/O Overheads in Large-Scale Invariant Subspace Projections
Hasan Metin Aktulga, Chao Yang, Ümit V. Çatalyürek, Pieter Maris, James P. Vary, and Esmond G. Ng

11:00-11:30 Break

11:30-13:00 Paper Session 2
Chair**: Daniela di Serafino**

11:30-12:00 Enabling Next-Generation Parallel Circuit Simulation with Trilinos
Chris Baker, Erik Boman, Mike Heroux, Eric Keiter, Siva Rajamanickam, Rich Schiek, and Heidi Thornquist

12:00-12:30 DAG-Based Software Frameworks for PDEs
Martin Berzins, Qingyu Meng, John Schmidt, and James C. Sutherland

12:30-13:00 On Partitioning Problems with Complex Objectives
Kamer Kaya, François-Henry Rouet, and Bora Uçar

13:00-14:30 Lunch

14:30-15:30 Keynote Lecture 2
Chair: **Stefania Corsaro**

Title: **Communication Avoiding Algorithms for Linear Algebra**
Name & Affiliation: ***Laura Grigori*** **-** INRIA, FR

15:30-16:00 Paper Session 3
Chair: **Stefania Corsaro**

15:30-16:00 A Communication-avoiding Thick-restart Lanczos Method on a Multicore Cluster System
Ichitaro Yamazaki and Kesheng Wu

16:00-16:30 Break

16:30-18:00 Paper Session 4
Chair: **Francesca Perla**

16:30-17:00 Spherical Harmonic Transform with GPUs
Ioan Ovidiu Hupca, Joel Falcou, Laura Grigori, and Radek Stompor

17:00-17:30 Design Patterns for Scientific Computations on Sparse Matrices
Davide Barbieri, Valeria Cardellini, Salvatore Filippone, and Damian Rouson

17:30-18:00 High-Performance Matrix-Vector Multiplication on the GPU
Hans Henrik Brandenborg Sørensen

18:00-19:00 Paper Session 5
Chair: **Mario R. Guarracino**

18:00-18:30 Relaxed Synchronization with Ordered Read-Write Locks
Jens Gustedt and Emmanuel Jeanvoine

18:30-19:00 The Parallel C++ Statistical Library 'QUESO': Quantification of Uncertainty for Estimation, Simulation and Optimization
Ernesto E. Prudencio and Karl W. Schulz

19:00-19:10 Workshop Closing