

Program

June 25

08:00-09:15 Registration
09:15-09:30 Opening (chairs: Jon Weissman, U Minnesota, Manish Parashar, Rutgers)
09:30-10:30 Keynote (chair: Jon Weissman, University of Minnesota)
Clouds and ManyCore: The Revolution
Daniel A. Reed, Microsoft Research
10:30-11:00 Coffee
11:00-12:30 Fault Tolerance and Security Session (chair: Thomas Stricker, Google European Engineering Centre, Switzerland)

"FaTLease: Fault-Tolerant Lease Negotiation for High-Volume Distributed Computing"
Felix Hupfeld, Bjoern Kolbeck, Jan Stender, Mikael Hoegqvist, Toni Cortes, Jonathan Marti, Jesus Malo

"Securing Stateful Grid Servers through Virtual Server Rotation"
Matthew Smith, Christian Schridde, Bernd Freisleben

"Performability Modeling for Scheduling and Fault Tolerance Strategies for Scientific Workflows"
Lavanya Ramakrishnan, Daniel A. Reed

12:30-02:00 Lunch
02:00-04:00 Cloud panel chair: Geoffrey Fox, University of Indiana
Participants:
Ian Foster, University of Chicago
Dan Reed, Microsoft
Randy Bryant, CMU
Dennis Quan, IBM
Greg Pfister, Consultant

04:00-04:30 Break

04:30-06:00 Data Intensive Computing Session (chair: Renato Figueiredo, University of Florida)

"Evaluating the Usefulness of Content Addressable Storage for High-Performance Data Intensive Applications"
Partho Nath, Bhuvan Uргаonkar, Anand Sivasubramaniam

"File Grouping for Scientific Data Management: Lessons from Experimenting with Real Traces"
Shyamala Doraimani, Adriana Iamnitchi

"Eliminating the Middle Man: Distributing Dataflow in Scientific Workflows"
Adam Barker, Jon B. Weissman, and Jano van Hemert

06:30-08:00 Posters, Demonstrations, and Reception

June 26

09:00-10:00 Keynote (chair: Manish Parashar, Rutgers)
Web-scale Computing: The Power of Infrastructure as a Service
Peter Vossall, Amazon

10:00-10:30 Coffee

10:30-12:30 Reservations, Leasing, and Scheduling Session (chair: Matei Ripeanu, UBC)

"Scheduling Mixed-Parallel Applications with Advance Reservations"
Henri Casanova, Kento Aida

"VARQ: Virtual Advance Reservations for Queues"
Daniel Nurmi, Rich Wolski, John Brevik

"Combining Batch Execution and Leasing Using Virtual Machines"
Borja Sotomayor, Kate Keahey, Ian Foster

"The Performance of Bags-Of-Tasks in Large-Scale Distributed Computing Systems"
Alexandru Iosup, Ozan Sonmez, Shanny Anoop, Dick Epema

12:30-02:00 Lunch

02:00-03:30 Hot topic session (chair: Doug Thain, Notre Dame)

Facilitating the Deployment of Ad-hoc Virtual Organizations with Integrated Social and Overlay Networks

Renato Figueiredo, P. Oscar Boykin, Pierre St Juste, and David Wolinsky

Ontological Framework for a Free-Form Query Based Grid Search Engine

Chaitali Gupta, Rajdeep Bhowmik, and Madhusudhan Govindaraju

An Unstructured Peer-to-Peer Approach to Aggregate Node Selection

Imran Rao

Beyond Search and Navigability: Custom Metadata Can Enable Cross-Layer Optimizations in Storage Systems

Elizeu Santos-Neto, Samer Al-Kiswany, Sathish Gopalakrishnan, and Matei Ripeanu

Harmony: Runtime Techniques for Dynamic Concurrency Inference, Hierarchical Scheduling, and Online Optimization in Heterogeneous Multiprocessor Systems

Gregory F Diamos and Sudhakar Yalamanchili

03:30-04:00 break

04:00-06:00 Virtual Machines Session (chair: Dick Epema, Delft University of Technology)

"XenLoop: A Transparent High Performance Inter-VM Network Loopback"

Jian Wang, Kartik Gopalan

"VPM Tokens: Virtual Machine-Aware Power Budgeting in Datacenters"

Ripal Nathuji, Karsten Schwan

"Improving Peer Connectivity in Wide-area Overlays of Virtual Workstations"

Arijit Ganguly, P. Oscar Boykin, David I. Wolinsky, Renato J. Figueiredo

"The Impact of Paravirtualized Memory Hierarchy on Linear Algebra Computational Kernels and Software"

Lamia Youseff, Keith Seymour, Haihang You, Jack Dongarra, Rich Wolski

06:30-09:30 Banquet

June 27

09:00-10:00 Keynote (chair: Mike Lewis, SUNY Binghamton)
Why Grids Have Failed to Cross the Chasm?
Andrew Grimshaw, University of Virginia and the Open Grid Forum

10:00-10:30 Coffee

10:30-12:30 Storage and I/O Session (chair: Allen Downey, Olin College)

"Toward Automatic Parallelization of Spatial Computation for Computing Clusters"
Baoqiang Yan, Philip Rhodes

"StoreGPU: Exploiting Graphics Processing Units to Accelerate Distributed Storage Systems"
Samer Al-Kiswany, Abdullah Gharaibeh, Elizeu Santos-Neto, George Yuan, Matei Ripeanu

"Semantic-Based Distributed I/O with the ParaMEDIC Framework"
Pavan Balaji, Wu-chun Feng, Heshan Lin

"A Novel Approach to File Access coRelation Mining and Evaluation Reference model for Optimizing Peta-Scale File Systems Performance"
Peng Xia, Dan Feng, Lei Tian, Hong Jiang, Fang Wang

12:30-02:00 Lunch

02:00-03:00 Future of HPDC session (chair: Manish Parashar, Rutgers)