

# 5<sup>th</sup> IEEE/ACM International Workshop on Grid Computing Grid 2004



**Microsoft**

**November 8, 2004, Pittsburgh, USA**

<http://www.gridbus.org/grid2004> OR <http://www.gridcomputing.org>  
(held in conjunction with the [SC 2004](#) Conference, Nov. 6-12, 2004)

**Workshop Venue:** Westin Hotel Ballroom

(There is a bridge connecting the Pittsburgh Convention Center and the Westin)

## Grid 2004 Program Schedule

8.00-8.10: Opening (M. Baker and R. Buyya)	
8:10-8:50 Keynote Presentation: Frederica Darema, NSF	
9.00-10.40: Session IA: <b>Grid Computing Environments</b>	Session IB: <b>Grid Resource Management</b>
<b>Chair:</b> Mark Baker (Portsmouth Univ.)	<b>Chair:</b> Craig Lee (Aerospace Corp.)
<ul style="list-style-type: none"> <li>• <i>BOINC: A System for Public-Resource Computing and Storage</i>, David Anderson</li> <li>• <i>VGE - A Service-Oriented Grid Environment for On-Demand Supercomputing</i>, Siegfried Benkner, Brandic, Engelbrecht, Schmidt</li> <li>• <i>DIRAC: A Scalable Lightweight Architecture for High Throughput Computing</i>, Ian Stokes-Rees, Andrei Tsaregorodtsev, Vincent Garonne</li> <li>• <i>An Enabling Environment for Distributed Simulation and Visualization</i>, Yao Zheng, Guanghua Song, Jifa Zhang, Jianjun Chen</li> <li>• <i>From Sandbox to Playground: Dynamic Virtual Environments in the Grid</i>, Kate Keahey, Karl Doering, Ian Foster</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Dynamic Reconfiguration for Grid Fabrics</i>, Edmund Smith, Paul Anderson</li> <li>• <i>Resource Management and Knapsack Formulations in the Grid</i>, Daniel Vanderster, Rafael Parra-Hernandez, Nikitas Dimopoulos</li> <li>• <i>Walden: A Scalable Solution for Grid Account Management</i>, Beth Kirschner, Thomas Hacker, William Adamson, Brian Athey</li> <li>• <i>MARS: A Metascheduler for Distributed Resources in Campus Grids</i>, Abhijit Bose, Brian Wickman, Cameron Wood</li> <li>• <i>A Novel Architecture for Realizing Grid Workflow using Tuple Spaces</i>, Jia Yu, Rajkumar Buyya</li> </ul>
10.40-11.10: Tea Break	Tea Break

<p>11.10-12:50: Session 2A: <b>Virtual Organizations and Resource Discovery</b>  <b>Chair:</b> Bharadwaj Veeravalli, National University of Singapore.</p> <ul style="list-style-type: none"> <li>• <i>Failure Detection and Membership Management in Grid Environments</i>, Amit Jain, R.K. Shyamasundar</li> <li>• <i>Usage Policy-based CPU Sharing in Virtual Organizations</i>, Catalin Dumitrescu, Ian Foster</li> <li>• <i>A Network Topology Description Model for Grid Application Deployment</i>, Sebastien Lacour, Christian Perez, Thierry Priol</li> <li>• <i>A Web based Conversational Case-Based Recommender System for Ontology aided Metadata Discovery</i>, Mehmet Aktas, David Leake, Marlon Pierce, and Geoffrey Fox</li> <li>• <i>Towards Ontology-Driven P2P Grid Resource Discovery</i>, Felix Heine, Matthias Hovestadt</li> </ul>	<p>Session 2B: <b>Grid Scheduling</b>  <b>Chair:</b> Jon Weissman (U. Minnesota)</p> <ul style="list-style-type: none"> <li>• <i>Hybrid Preemptive Scheduling of MPI Applications on the Grids</i>, Pierre Lemarinier, Aurélien Bouteiller, Hinde-Lilia Bouziane, Thomas Herault, Franck Cappello</li> <li>• <i>Memory Conscious Task Partition and Scheduling in Heterogeneous Environments</i>, MING WU, XIAN-HE SUN</li> <li>• <i>Application-Specific Scheduling for the Organic Grid</i>, Gerald Baumgartner, Arjav Chakravarti, Mario Lauria</li> <li>• <i>Partitioning and Mapping of Mesh-Based Applications onto Computational Grids</i>, Eric Aubanel, Renaud Wanschoor</li> <li>• <i>Design &amp; Analysis of a Dynamic Scheduling Strategy with Resource Estimation for Large-Scale Grid Systems</i>, Sivakumar Viswanathan, Bharadwaj Veeravalli, Dantong Yu, Thomas G Robertazzi</li> </ul>
<p>12.50-2.30pm: <b>Poster Session with Lunch</b></p> <p>* Lunch Sponsored by:  Microsoft Corporation</p>	<p>- Short Papers presented in this poster session are listed at the end.  - For each poster Grid 2004/SC 2004 provides a panel's that is 4' x 6' - landscape (landscape A0 for the Web).</p>
<p>2.30-4.10pm: Session 3A: <b>Grid Services and Security</b>  <b>Chair:</b> Yoshio Tanaka (AIST, Japan)</p> <ul style="list-style-type: none"> <li>• <i>An Early Evaluation of WSRF and WS-Notification via WSRF.NET</i>, Marty Humphrey, Glenn Wasson, Mark Morgan, Norm Beekwilder</li> <li>• <i>Mobile OGS.NET: Grid Computing on Mobile Devices</i>, David Chu, Marty Humphrey</li> <li>• <i>A Stochastic Control Model for Deployment of Dynamic Grid Services</i>, Darin England, Jon</li> </ul>	<p>Session 3B: <b>Data Grids</b>  <b>Chair:</b> Rajkumar Buyya (Melbourne Uni.)</p> <ul style="list-style-type: none"> <li>• <i>Implementation and Evaluation of a ReplicaSet Grid Service</i>, Mary Manohar, Ann Chervenak, Ben Clifford, Carl Kesselman</li> <li>• <i>Flexible Control of Data Transfers between Parallel Programs</i>, Joe Shang-chieh Wu, Alan Sussman</li> <li>• <i>Use of PVFS for Efficient Execution of Jobs with Pipeline-</i></li> </ul>

<p>Weissman</p> <ul style="list-style-type: none"> <li>• <b><i>An Efficient Anonymity Protocol for Grid Computing</i></b>, Souvik Ray and Zhao Zhang</li> <li>• <b><i>Grid-Enabled Virtual Organization Based Dynamic Firewall</i></b>, Mark L. Green, Steven M Gallo, Russ Miller</li> </ul>	<p><b><i>Shared I/O</i></b>, Tahsin Kurc, Nagavijayalakshmi Vydyanathan, Gaurav Khanna, Joel Saltz, P. Sadayappan</p> <ul style="list-style-type: none"> <li>• <b><i>High Performance Threaded Data Streaming for Large Scale Simulations</i></b>, Viraj Bhat, Scott Klasky, Scott Atchley, Micah Beck, Doug McCune and Manish Parashar</li> <li>• <b><i>Making Data-intensive Grid Applications Fault-tolerant</i></b>, George Kola, Tevfik Kosar, Miron Livny</li> </ul>
<p>4.10-4.40: Tea Break</p>	<p>Tea Break</p>
<p>4.40-6.20: Session 4A: <b>Grid Tools</b></p> <p><b><i>Chair:</i></b> Junseok Hwang (Seoul N. Univ.)</p> <ul style="list-style-type: none"> <li>• <b><i>PDB: Pervasive Debugging With Xen</i></b>, Alex Ho, Steven Hand, Tim Harris</li> <li>• <b><i>glogin - A Multifunctional, Interactive Tunnel into the Grid</i></b>, Dieter Kranzlmüller</li> <li>• <b><i>A Unified Framework for Periodic, On-Demand, and User-Specified Software Information</i></b>, Paul Kolano</li> <li>• <b><i>Checkpoint and Restart for Distributed Components in XCAT3</i></b>, Sriram Krishnan, Dennis Gannon</li> <li>• <b><i>DiPerF: Automated Distributed PERFORMANCE testing Framework</i></b>, Catalin Dumitrescu, Ioan Raicu, Matei Ripeanu, Ian Foster</li> </ul>	<p>Session 4B: <b>Programming Environments and Grid Applications</b></p> <p><b><i>Chair:</i></b> Manish Parashar (Rutgers Univ.)</p> <ul style="list-style-type: none"> <li>• <b><i>Design, implementation and performance evaluation of GridRPC programming middleware</i></b>, Yoshio Tanaka, Hiroshi Takemiya, Hidemoto Nakada, Satoshi Sekiguchi</li> <li>• <b><i>Experimentations and Programming Paradigms for Matrix Computing on Peer to Peer Grid</i></b>, Lamine Aouad, Serge Petiton</li> <li>• <b><i>On the Feasibility of Running Entity-Level Simulations on Grid Platforms</i></b>, Alan Su, Fran Berman, Henri Casanova</li> <li>• <b><i>Grid-based Indexing of a Newswire Corpus</i></b>, Baden Hughes, Srikumar Venugopal, Rajkumar Buyya</li> <li>• <b><i>A global grid analysis of arthropod evolution</i></b>, Craig Stewart, Rainer Keller, Richard Repasky, Matthias Hess, David Hart</li> </ul>
<p>The End</p>	

## Short Papers for Presentation Poster Session

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**Poster Size:** For each poster Grid 2004/SC 2004 provides a panel's that is 4' x 6' - landscape (landscape A0 for the Web). Please prepare your poster accordingly.

### Grid Networking and Performance Evaluation

- High-Performance Reliable Multicasting for Grid Applications, Marinho Barcellos, Maziar Nekovee, Michael Daw
- On Translating Grid Requirements to Network Configurations through Policy-Based Management, Ricardo Neisse, Lisandro Zambenedetti Granville, Maria Janilce, Bosquiroli Almeida Liane Margarida, Rockenbach Tarouco
- Dynamic Measurement Scenarios in the Virtual Laboratory system, Marcin Lawenda, Norbert Meyer, Marcin Okoń, Tomasz Rajtar, Dominik Stokosa, Damian Kaliszczak, Maciej Stroiński
- Performance Comparison of Security Mechanisms for Grid Services, Satoshi Shirasuna Aleksander Slominski, Liang Fang, Dennis Gannon
- Toward Characterizing the Performance of SOAP Toolkits, Madhusudhan Govindaraju, Aleksander Slominski, Kenneth Chiu, Pu Liu, Rober van Engelen and Michael J. Lewis

### Resource Management and Scheduling

- Benefits of Global Grid Computing for Job Scheduling, Carsten Ernemann, Volker Hamscher, Ramin Yahypour
- User-driven Scheduling of Interactive Virtual Machines, Bin Lin, Peter A. Dinda, Dong Lu
- Self-Organizing Agents for Grid Load Balancing, Junwei Cao
- Resource Scheduling for Parallel Query Processing on Computational Grids, Anastasios Gounaris, Rizos Sakellariou, Norman W. Paton, Alvaro A.A. Fernandes
- Dynamic Scheduling of Parallel Jobs with QoS Demands in Multiclusters and Grids, Ligang He, DP Spooner, SA Jarvis, X Chen, GR Nudd
- Deadline Scheduling with Priority for Client-Server Systems on the Grid, Pushpinder Chouhan, Eddy Caron, Frederic Desprez
- Scheduling Proxy: Enabling Adaptive-Grained Scheduling for Global Computing System, Jaesun Han
- Dynamic Allocation of Servers in a Grid Hosting Environment, Mike Fisher, Charles Kubicek, Paul McKee, Isi Mitrani, Jennie Palmer and Rob Smith

### Grid Application Deployment Environments

- Grid Application Environment to Use Legacy Codes as OGSA Grid Services, Thierry DELAITRE, P. Kacsuk, A. Goyeneche, T. Kiss, Z. Farkas

- Distributed Ant: A System to Support Application Deployment in the Grid, Wojtek Goscinski, David Abramson
  - Dynamic Service Evolution for Open Languages in the Grid and Service Oriented Architecture, Thomas Weishäupl, Erich Schikuta
  - Integration of NetSolve with Globus-based Grids, Maciej Brzezniak, Makiela Meyer
  - Schema Mediation for Database Grid, Huajun Chen, Zhaohui Wu, Guozhou Zheng, Yuxing Mao
  - Parallel and Distributed Astronomical Data Analysis on Grid Datafarm, Naotaka YAMAMOTO, Osamu TATEBE, Satoshi SEKIGUCHI
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**Registration:**

- All participants (including those registered for SC 2004) need to register for the Grid 2004 workshop.
- All registered participants will get a copy of the Grid 2004 proceedings published by the IEEE Computer Society Press.
- You need pick up a copy of workshop proceedings (including entry permission badge and payment receipt) from the SC 2004 registration booth.

**For Grid 2004 and SC 2004 registration information, please see:**

- <http://www.sc-conference.org/sc2004/registration.html>
  - You can register for both SC 2004 and Grid 2004 together or workshop alone. Please see SC 2004 web for all information on registration fee and how to register including hotel and venue information.
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