

# CCGrid2002

## 2<sup>nd</sup> IEEE/ACM International Symposium on Cluster-Computing and the Grid

### Sponsors



21 - 24 May 2002, Berlin-Brandenburg Academy of Sciences and Humanities, Berlin, Germany

### Supporting Organizations



## **Symposium Information**

CCGrid2002 is organized by ZIB Berlin, Freie Universität Berlin, and Humboldt-Universität zu Berlin. It is held at the *Berlin-Brandenburg Academy of Sciences and Humanities (BBAW)*. All sessions will be held in the plenary and in rooms 1 to 6, located on the first floor of the BBAW.

Please note that there is no acoustic 'firewall' between the hall and the plenary! When walking to the rooms 4 to 6 please be quiet to respect the speakers and audience in the plenary room.

### ***Registration***

The registration desk is located in the foyer.

### ***Coffee Breaks***

Tea and coffee will be available in the Casino area during coffee breaks.

### ***Industry Exhibit***

A small industry exhibit of the CCGrid2002 sponsors with posters, presentations and brochures can be found in the hall near the registration area.

### ***E-mail, Web, WLAN***

Internet connections are available in room 2. Our staff will help you if you have problems with setup. WLAN is available in all rooms, via DHCP. WLAN adapters can be rented out at the registration desk (deposit of 150 € required).

### ***Official Language***

English is the official language of the conference. Announcements, correspondence, and all other business matters will be carried out in English.

### ***Speakers***

Speakers should make themselves known to the session chairs well in advance of their presentation. Overhead projectors and data projectors are available in all rooms.

### ***Proceedings***

Additional copies of the conference proceedings can be purchased at the registration desk for 50 € per copy.

### ***Lunches***

Lunch is served on the fifth level of the building ('5. OG'). There is a nice old-style paternoster to this floor. The way to this room will be guided by signposts 'CCGrid2002 Lunch'.

### ***Conference Dinner***

The conference dinner on Thursday evening is hosted by IBM. It will be held in the restaurant 'Alte Pumpe' (Old Pump). A shuttle bus will collect

participants at main conference hotels (Astron and others) and at BBAW.

The restaurant is located in Lützowstraße 42. Subway U1 station Kurfürstenstrasse or U1/U2 station Nollendorfplatz are nearby. Buses 100, 129, 148, 187, 341, 348 until Lützowplatz can also be used to reach the restaurant.

More detailed information about the shuttle service will be given during the conference.

### ***Message Board***

A message board will be located next to the registration desk. Please advise all potential callers to attention their message on the message board. All delegates are asked to check the message board regularly. No guarantee can be given that messages will be received in a timely manner or delivered personally.

### ***Postal Mail, Faxes***

The symposium secretariat does not accept responsibility for personal mail or faxes. Please have all correspondence sent to your accommodation address.

### **About Berlin**

#### ***Public Transport***

Public transport in Berlin is served by the BVG (<http://www.bvg.de>). When travelling within city limits use the AB zone tickets. There are three different kinds of tickets for zone AB:

Short trip of up to 3 train stations:	1.20 €
Single fare ticket (valid for two hours):	2.10 €
Single day ticket (for one day):	6.10 €

Available at every train station and in all busses.

Welcome Card: 18.00 €  
(valid for three days, including price reductions of up to 50 % for many tourist attractions and cultural highlights)

Available at

- Europa-Center  
Entrance Budapester Straße  
Mon-Sat 8.30 a.m. - 8.30 p.m.  
Sun 10 a.m. - 6.30 p.m.
- Brandenburger Tor  
Pariser Platz  
South wing  
9.30 a.m. - 6 p.m. daily
- Fernsehturm Info Café  
at Alexanderplatz

#### ***Shopping Hours***

Shopping hours are from 9:00 a.m. to 8:00 p.m. Monday to Friday, and from 9:00 a.m. to 4:00 p.m. on Saturdays. Most shops are closed on Sundays.

### ***Exchange Rate***

1 Euro (€) is approximately 0.91 US \$. Up-to-date information can be found with the Universal Currency Converter™ (<http://www.xe.net/ucc/>).

### ***Voltage***

The voltage is 230 V (50 Hz). Please note that adapters may be necessary.

### ***Climate & Clothing***

The conference will take place during spring where the temperature ranges from 13° C (55° F) at night to 23° C (73° F) at daytime. It may be useful to bring a sweater and a raincoat. For actual Berlin weather information see <http://www.weathersite.com>.

### ***Attractions Nearby***

Gendarmenmarkt is one of the most beautiful public places in Europe – a must for every tourist. Here the Deutscher Dom (German Cathedral), the

Französischer Dom (French Cathedral) and the Konzerthaus create a beautiful architectural ensemble.

The square was laid out from 1688 after the plans of J.A. Nering; it was originally known as Linden Markt, then Friedrichstädtischer Markt or Neuer Markt. Because the square was used by a curassier regiment "gens d'arms," from 1736–82, complete with sentry boxes and stables, the name Gendarmenmarkt arose. From 1777, the square was developed according to unified plans drawn up by Georg Christian Unger. It was badly damaged in the Second World War; on the occasion of the 250th anniversary of the Prussian Academy of Sciences (Akademie der Wissenschaften), it was renamed "Platz der Akademie", but its previous name was restored in 1991.

# Symposium Schedule

Tuesday, May 21<sup>st</sup>

1:00	<b>Registration</b>
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	<b>Tutorials</b>		
	<i>room 1</i>	<i>room 4</i>	<i>room 6</i>
2:00	<b>Jini and the Grid</b> <i>Mark Baker</i> <i>(Univ. of Portsmouth, UK),</i> <i>Zoltan Juhasz</i> <i>(Univ. Veszprem, Hungary)</i>	<b>LDAP and the Grid</b> <i>Peter Gietz</i> <i>(DAASI International GmbH, Tübingen,</i> <i>Germany)</i>	<b>Cluster Tools</b> <i>Stephen Scott</i> <i>(ORNL, USA)</i>

**6:00 end**

## Wednesday, May 22<sup>nd</sup>

8:00	<b>Registration</b>
	<i>plenary</i>
9:00	<b>Opening</b>
9:15	<p><b>Keynote Address</b></p> <p><b>“The Philosophy of TeraGrid: Building an Open, Extensible, Distributed TeraScale Facility”</b></p> <p><b><i>Charlie Catlett, Argonne National Lab.</i></b></p> <p><i>Session Chair: Henri E. Bal</i></p>

### 10:15 – 10:45 coffee break

	<i>plenary</i>	<i>room 6</i>	<i>room 4</i>
10:45	<p><b>Scheduling</b></p> <p><i>Session Chair: Henri E. Bal</i></p> <p><b>Best Paper Award:</b> Adaptive Scheduling under Memory Pressure on Multiprogrammed Clusters <i>Dimitrios Nikolopoulos, Constantine Polychronopoulos (Univ. of Illinois at Urbana-Champaign)</i></p> <p><b>Regular Papers:</b> User-Centric Performance Analysis of Market-based Cluster Batch Schedulers</p>	<p><b>Workshop “DSM2002: Distributed Shared Memory on Clusters”</b></p> <p><i>Chair: Laurent Lefèvre (RESAM/INRIA, Lyon)</i></p> <p>Workshop Opening <i>Laurent Lefèvre</i></p> <p>Towards Compliant Distributed Shared Memory <i>Katrina E. Falkner, Henry Detmold, David S. Munro and Travis Olds (Univ. of Adelaide, Australia)</i></p> <p>The Virtual Shared Memory Performance of a Parallel Graph Reducer <i>Hans-Wolfgang Loidl (Heriot-Watt Univ.,</i></p>	<p><b>Workshop “Agent-Based Cluster and Grid Computing”</b></p> <p><i>Chair: Omer Rana (Cardiff Univ., UK)</i></p> <p>Overview and Introduction <i>Omer Rana</i></p> <p>Towards an Economy-Based Optimisation of File Access and Replication on a Data Grid <i>Mark Carman, Floriano Zini, Luciano Serafini (ITC, Italy), Kurt Stockinger (CERN, Switzerland)</i></p> <p>Scalability Analysis of the Contract Net Protocol <i>Zoltan Juhasz (University of Veszprem,</i></p>

	<p><i>Brent Chun, David E. Culler (Univ. of California at Berkeley)</i></p> <p>On Advantages of Grid Computing for Parallel Job Scheduling  <i>Carsten Ernemann, Volker Hamscher, Uwe Schwiegelshohn, Achim Streit, Ramin Yahyapour (Univ. Dortmund / Paderborn Center f. Parallel Computing)</i></p>	<p><i>Edinburgh, UK)</i></p> <p>Overcoming the Problems Associated with the Existence of Too Many DSM API's  <i>Martin Schultz (TU München, Germany)</i></p>	<p><i>Hungary),</i></p> <p><i>Prasenjit Paul (Univ. of Exeter, UK)</i></p> <p>Monitoring and Controlling Distributed Applications with Relocatable Objects  <i>Stephen Gilmore (Univ. of Edinburgh, UK), Marco A. Palomino (Univ. of Cambridge, UK)</i></p> <p>Agent Based Resource Management for Grid Computing  <i>Junwei Cao, Daniel P. Spooner, James D. Turner, Stephen A. Jarvis, Darren R. Kerbyson, Subhash Saini, and Graham R. Nudd (Univ. of Warwick, UK; Los Alamos National Lab, US; NASA Ames, US)</i></p> <p>Using Mobile Agents for Software Distribution and Maintenance: Autonomous Stations Capable of Securely Executing Dynamically Uploaded Applications  <i>Walter Binder (CoCo Software Engineering GmbH, Austria)</i></p> <p>Invited Talk: The AgentCities Project  <i>Steven Willmott (EPFL, Switzerland)</i></p>
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**12:35 – 2:00 lunch break**

2:00	<p style="text-align: center;"><i>plenary</i></p> <p style="text-align: center;"><b>Keynote Address</b></p> <p style="text-align: center;"><b>“Distributed Computing Technologies and their Application to Drug Discovery”</b></p> <p style="text-align: center;"><b><i>Andrew Chien, Entropia, Inc.</i></b></p> <p style="text-align: center;"><i>Session Chair: Klaus-Peter Löhrr</i></p>
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Wednesday, May 22<sup>nd</sup>

3:00 – 3:30 coffee break

	<i>plenary</i>	<i>room 6</i>	<i>room 4</i>
3:30	<p><b>Performance Monitoring</b></p> <p><i>Session Chair: Dick Epema</i></p> <p>Representing Dynamic Performance Information in Grid Environments with the Network Weather Service <i>Martin Swamy, Rich Wolski (Univ. of California Santa Barbara)</i></p> <p>Neptune: A Dynamic Resource Allocation and Planning System for a Cluster Computing Utility <i>Donald Pazel, Tamar Eilam, Liana L. Fong, Michael Kalantar, Karen Appleby, German Goldszmidt (IBM Watson Research Center)</i></p> <p>Tracing a Large-Scale Peer to Peer System: An Hour in the Life of Gnutella <i>Evangelos Markatos (ICS-FORTH, Heraklion, Crete)</i></p> <p>RVision: An Open and High Configurable Tool for Cluster Monitoring <i>Tiago Ferreto, César A. F. De Rose, Luiz De Rose (CPAD Research Center / Catholic Univ. of Rio Grande do Sul / IBM Watson Research Center)</i></p>	<p><b>Applications</b></p> <p><i>Session Chair: Craig A. Lee</i></p> <p>Implementing Data Cube Construction using a Cluster Middleware: Algorithms, Implementation Experience, and Performance Evaluation <i>Ge Yang, Ruoming Jin, Gagan Agrawal (The Ohio State Univ.)</i></p> <p>On the Migration of the Scientific Code Dyana from SMPs to Clusters of PCs and on to the Grid <i>Michela Taufer, Thomas Stricker, Gérard Roos, Peter Guentert (ETH Zurich)</i></p> <p>Grid Datafarm Architecture for Petascale Data Intensive Computing <i>Osamu Tatebe, Youhei Morita, Satoshi Matsuoka, Noriyuki Soda, Satoshi Sekiguchi (AIST / KEK / Tokyo Institute of Technology / Software Research Associates)</i></p> <p>A Grid Application for an Evaluation of Brain Function using Independent Component Analysis (ICA) <i>Yuko Mizuno-Matsumoto, Susumu Date, Takeshi Kaishima, Youki Kadobayashi, Shinji Shimojo (Osaka Univ.)</i></p>	<p><b>Workshop “Agent-Based Cluster and Grid Computing” (cont.)</b></p> <p>Agent based Load Balancing with Component Distribution Functionality <i>Sasa Desic, Darko Huljenic (Ericsson, Croatia)</i></p> <p>Self-Organising Control in Planetary Scale Computing <i>Artur Andrzejak, Sven Graupner, Vadim Kotov, Holger Trinks (Hewlett-Packard Labs, USA)</i></p> <p><b>Workshop “DSM2002: Distributed Shared Memory on Clusters” (cont.)</b></p> <p>Process Migration Based on Gobelins Distributed Shared Memory <i>G. Vallée, C. Morin, J.Y. Berthou, Y. D. Malen, R. Lottiaux (IRISA, France)</i></p> <p>Optimistic Synchronization and Transactional Consistency <i>M. Wende, M. Schoettner, R. Goeckelmann, T. Bindhammer, P. Schulthess (Univ. Ulm, Germany)</i></p>

5:30 – 6:00 break

	<i>plenary</i>	
6:00	<b>Introduction to the Poster Session</b>	
6:15	<b>Reception</b> <i>Hans Jürgen Prömel, Vice President Research, Humboldt-Universität zu Berlin</i>	
	<i>room 4/5/6</i>	<i>room 1</i>
6:30	<b>CCGrid2002 Poster Session</b>	<b>GGF BOF</b>
	<p>MAPFS_MAS: A Model of Interaction among Information Retrieval Agents <i>María S. Pérez, Felix García, Jesús Carretero</i></p> <p>Scheduling Co-Reservations with Priorities in Grid Computing Systems <i>Muthucumaru Maheswaran, Rui Min</i></p> <p>Study of Load Balancing Issues Based on Intramovie Skewness for Parallel Video Servers <i>Hai Jin, Song Wu</i></p> <p>Brain Activity Detection in Functional Magnetic Resonance Imaging on Heterogeneous Cluster <i>Juan A. Hernandez, Jose L. Bosque, J. Canto</i></p> <p>Exploiting Web Technologies for Grid Architecture <i>Gang Xue, Matthew J. Fairman, Simon J. Cox</i></p> <p>A Novel Architecture for Grid Information Systems <i>Zoltan Balaton, Gabor Gombás, Zsolt Németh</i></p> <p>Load Balancing by Remote Execution of Short Processes on Linux Clusters <i>Pavel Tvrdík, Martin Kačer</i></p>	<p>The Virtual Laboratory: Enabling On-Demand Drug Design with the World Wide Grid <i>Rajkumar Buyya, Kim Branson, Jon Giddy, David Abramson</i></p> <p>Nomadic Migration: Fault Tolerance in a Disruptive Grid Environment <i>Gerd Lanfermann, Ed Seidel, Gabrielle Allen, Thomas Radke</i></p> <p>PVM Emulation in the Harness Metacomputing Framework - Design and Performance Evaluation <i>Dawid Kurzyniec, Vaidy Sunderam, Mauro Migliardi</i></p> <p>Accounting and Accountability for Distributed and Grid Systems <i>Laura F. McGinnis, William Thigpen, Thomas J. Hacker</i></p> <p>Scalable Algorithms for Complete Exchange on Multi-Cluster Networks <i>Alfredo Goldman</i></p> <p><b>Global Grid Forum - Progress Made and Plans for the Future</b> <i>Charlie Catlett and Mary E. Spada</i></p>

*8:00 end of reception*

Thursday, May 23<sup>rd</sup>

	<i>plenary</i>
9:00	<p><b>Keynote Address</b></p> <p><b>“From the Higgs Particle to Technology, from the Web to the Grid”</b></p> <p><b>Hans-Falk Hoffmann, CERN</b></p> <p><i>Session Chair: Alexander Reinefeld</i></p>

10:00 – 10:30 coffee break

	<i>plenary</i>	<i>room 6</i>	<i>room 1</i>
10:30	<p><b>Programming Environments for Grids</b></p> <p><i>Session Chair: Evangelos Markatos</i></p> <p>Using TOP-C and AMPIC to Port Large Parallel Applications to the Computational Grid <i>Gene Cooperman, Henri Casanova, Jim Hayes, Thomas Witzel (Northeastern Univ. / Univ. of California at San Diego / San Diego Supercomputer Center)</i></p> <p>The gSOAP Toolkit for Web Services and Peer-To-Peer Computing Networks <i>Robert A. van Engelen and Kyle A. Gallivan (Florida State Univ.)</i></p> <p>Symphony - A Java-Based Composition and Manipulation Framework for Computational Grids <i>Markus Lorch, Dennis Kafura (Virginia</i></p>	<p><b>Workshop “Global and Peer-to-Peer Computing on Large Scale Distributed Systems”</b></p> <p><i>Chairs: Franck Cappello (Univ. Paris Sud), Spyros Lalis (CS, Foundation for Research and Technology Hellas)</i></p> <p>Workshop Opening <i>Franck Capello, Spyros Lalis</i></p> <p>A Framework for Classifying Peer to Peer Technologies <i>Krishna Kant, Ravi Iyer (Enterprise Architecture Lab, Intel Corporation), Vijay Tewari (E-Business Solutions Lab, Intel Corporation)</i></p> <p>Improving Data Availability through Dynamic Model-Driven Replication in Large Peer-to-Peer Communities</p>	<p><b>GridDemo 2002</b></p> <p><i>Chairs: Peter Kacsuk (MTA SZTAKI), Rajkumar Buyya (Monash U., Australia)</i></p> <p>Opening Remarks <i>Peter Kacsuk , Rajkumar Buyya</i></p> <p><b>Session 1: Grid Applications</b></p> <p>Accessing a Life Sciences Application on a Grid via Web Services <i>Tony Gargya, Werner Kriechbaum, Steffen Rost, Gerhard Stenzel (IBM Germany)</i></p> <p>The Nimrod-G and Virtual Laboratory Toolset for Service Oriented Grid Computing Application – A Case Study in Molecular Modelling for Drug Design <i>R. Buyya, K. Branson, J. Giddy and D. Abramson (Monash Univ., Australia)</i></p>

	<p><i>Polytechnic Institute and State Univ.)</i></p> <p>PadicoTM: An Open Integration Framework for Communication Middleware and Runtimes  <i>Alexandre Denis, Christian Pérez, Thierry Priol (IRISA-IFSIC / IRISA-INRIA)</i></p>	<p><i>Adriana Iamnitchi, Kavitha Ranganathan, Ian Foster (Dept. of Computer Science, Chicago)</i></p> <p>NEVRLATE: Scalable Resource Discovery  <i>Ajay Chander (Computer Science Dept., Stanford Univ.) Steven Dawson, Patrick Lincoln, David Stringer-Calvert (Computer Science Laboratory, SRI International)</i></p> <p>Maintaining Connectivity in a Scalable and Robust Distributed Environment  <i>Mark Jelasity (Dept. of Artificial Intelligence, Free Univ. of Amsterdam), Mike Preuss (Dept. of Computer Science, Univ. of Dortmund), Marten van Seen (Free Univ. of Amsterdam), Ben Paechter (Napier Univ.)</i></p>	<p>EUROGRID - Grid Computing in Europe  <i>Piotr Bala (Copernicus Univ., Poland), Mirosław Nazaruk (Warsaw Univ., Poland), Victor Alessandrini, Denis Girou, Gilles Grasseau (IDRIS, France), Dietmar Erwin, Daniel Mallmann (Research Center Jülich, Germany), Jon MacLaren, John Brooke (Univ. of Manchester, UK), Jan-Frode Myklebust (Univ. of Bergen, Norway)</i></p> <p>INFN Grid Project  <i>G. Andronico (Istituto Nazionale di Fisica Nucleare, Italy), R. Barbera (INFN and Università' di Catania, Italy), A. Falzone, S. Maccarone, A. Rodolico (NICE s.r.l., Camerano Casasco, Italy)</i></p>
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**12:30 – 2:00 lunch break**

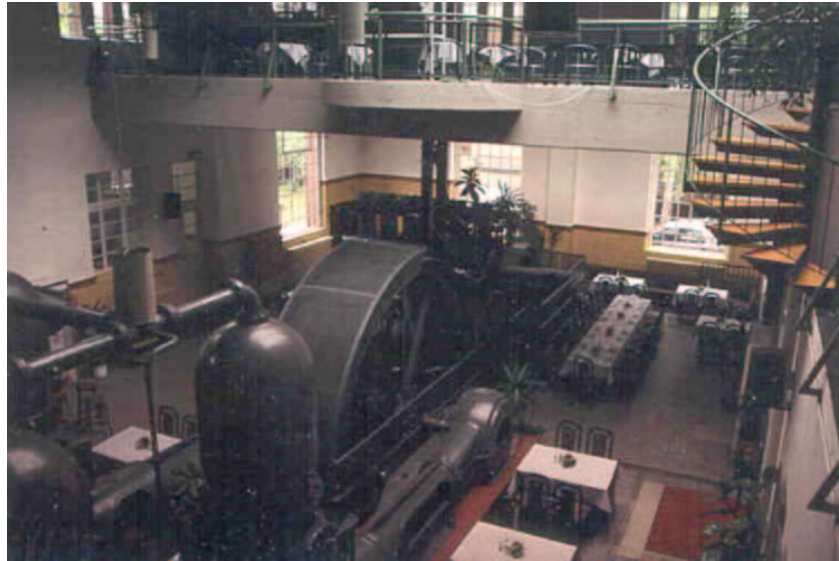
2:00	<p style="text-align: center;"><i>plenary</i></p> <p style="text-align: center;"><b>Keynote Address</b></p> <p style="text-align: center;"><b>“Drug Discovery on Cluster Farms”</b></p> <p style="text-align: center;"><b><i>Reinhard Schneider, LION bioscience</i></b></p> <p style="text-align: center;"><i>Session Chair: Thomas Ludwig</i></p>
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**3:00 – 3:30 coffee break**

Thursday, May 23<sup>rd</sup>

	<i>plenary</i>	<i>room 6</i>	<i>room 1</i>
3:30	<p><b>I/O and File Systems</b></p> <p><i>Session Chair: Satoshi Matsuoka</i></p> <p>Multiple Query Optimization for Data Analysis Applications on Clusters of SMPs <i>Henrique Andrade, Tahsin Kurc, Alan Sussman, Joel Saltz (Univ. of Maryland / Ohio State Univ.)</i></p> <p>MS-I/O: A Distributed Multi-Storage I/O System <i>Xiaohui Shen (Core Technology Dept., Motorola Inc.), Alok Choudhary (Northwestern University)</i></p> <p>The Cluster File System: Integration of High Performance Communication and I/O in Clusters <i>Rosario Cristaldi, Giulio Iannello, Francesco Delfino (Università di Napoli Federico II / Laboratorio Nazionale CIN)</i></p> <p>Sensitivity of Cluster File System Access to I/O Server Selection <i>Amy Apon, Pawel Wolinski, Greg Amerson (Univ. of Arkansas)</i></p>	<p><b>Workshop “Global and Peer-to-Peer Computing on Large Scale Distributed Systems” (cont.)</b></p> <p>JM: A Jini Framework for Global Computing <i>Zoltan Juhasz (Dept. of Information Systems, Univ. of Veszprem and Dept. of Computer Science, Univ. of Exeter), Arpad Andics, Szabolcs Pota (Dept. of Information Systems, Univ. of Veszprem)</i></p> <p><b>Short papers</b></p> <p>Java Coglets <i>Darren Webb, Andrew L. Wendelborn (Computer Science Dept., Univ. Adelaide)</i></p> <p>Bayanihan Computing .NET: Grid Computing with XML Web Services <i>Luis F. G. Sarmenta, Sandra Jean Chua, Paul Echevarria, Jose Mari Mendoza, Rene-Russelle Santos, Stanley Tan (Ateneo de Manila Univ.), Richard Lozada (Microsoft Philippines)</i></p> <p>Negotiating Agents in a Market-Oriented Grid <i>K-M Chao, R. Anane, J-H Chen, R. Gatward (School of Mathematical and Information Sciences, Coventry Univ.)</i></p> <p>Handling Multimedia Streams in a Peer-to-Peer Network <i>Vana Kalogeraki (HP Labs), Alex Delis (Univ. of Athens), Dimitrios Gunopulos (Univ. of California)</i></p>	<p><b>GridDemo 2002</b></p> <p><b>Session 2: Grid Technology and Grid Application Development</b></p> <p>Grid Tools for Applications <i>Gabrielle Allen, Thomas Dramlitsch, Ian Kelley, Gerd Lanfermann, Thomas Radke, Oliver Wehrens (Max Planck Institute, Germany), Michael Russell (Univ. of Chicago, USA), Ed Seidel (Max Planck Institute, Germany and NCSA, USA), John Shalf (Lawrence Berkeley National Laboratory, USA and Max Planck Institute, Germany)</i></p> <p>Océano - Policy Based Management of a Computing Utility <i>Tamar Eilam, Liana Fong, German Goldszmidt, Michael Kalantar (Advanced Cluster Technologies IBM Research, Hawthorne, USA)</i></p> <p>Condor/P-GRADE <i>Miron Livny (Univ. of Wisconsin-Madison, USA), Peter Kacsuk (MTA SZTAKI, Hungary and Univ. of Westminster, UK), J. Kovács (MTA SZTAKI, Hungary)</i></p> <p>Campus Grid and PAGIS Application Builder <i>Darren Webb, Andrew L. Wendelborn (Univ. of Adelaide, Australia)</i></p>

*5:30 end*



7:30

**Conference Dinner hosted by IBM at 'Alte Pumpe'**

*Dinner Speech: David Turek, IBM*

Friday, May 24<sup>th</sup>

	<i>plenary</i>
9:00	<p><b>Keynote Address</b>  <b>“Visualization and VR for the Grid”</b>  <b>Chris Johnson, University of Utah</b></p> <p><i>Session Chair: Klaus-Peter Löhr</i></p>

*10:00 – 10:30 coffee break*

	<i>plenary</i>	<i>room 6</i>	<i>room 1</i>	<i>room 4</i>
10:30	<p><b>Grid Computing</b></p> <p><i>Session Chair: Thilo Kielmann</i></p> <p>The Internet Backplane Protocol: A Study in Resource Sharing  <i>Alessandro Bassi, Micah Beck, Graham Fagg, Terry Moore, James Plank, Martin Swany, Rich Wolski (Univ. of Tennessee / Univ. of California Santa Barbara)</i></p> <p>A Formal Framework for Defining Grid Systems  <i>Zsolt Németh, Vaidy Sunderam (MTA SZTAKI, Hungary / Emory Univ.)</i></p>	<p><b>Workshop “Global and Peer-to-Peer Computing on Large Scale Distributed Systems” (cont.)</b></p> <p>Motivating Computational Grids  <i>D. Skillicorn (Computer Science Department, Queens University)</i></p> <p>Latency Performance of SOAP Implementations  <i>Dan Davis, Manish Parashar (Dept. of Electrical and Computer Engineering, Center for Advanced Information Processing, Rutgers State Univ.)</i></p>	<p><b>GridDemo 2002</b>  <b>Session3: Grid &amp; Networking</b></p> <p>Grid Network Monitoring Tools deployment in the DataGRID project  <i>F. Bonnassieux, P. Clarke, R. Harakaly, R. Hughes-Jones, P. D. Meador, P. Primet, R. Tasker, Y.T. Li (ENS-Lyon, France)</i></p> <p>A P2P service platform with ad-hoc and secure communities  <i>Yuji Wada, Tadashige Iwao, Shigeichirou Yamasaki, Masatoshi Shiouchi, Makoto</i></p>	<p><b>Industry Session</b></p> <p>hpcLine – Integrated Linux Cluster for Technical/Scientific Applications – Successes and Outlook  <i>Eric Schnepf (Fujitsu-Siemens, Germany)</i></p> <p>MEGWARE and TU-Chemnitz - Advancing Cluster Technology  <i>N.N. (MEGWARE Computer GmbH Chemnitz, Techn. Univ. Chemnitz)</i></p> <p>Delivering Services on the Grid  <i>N.N. (T-Systems, Germany)</i></p>

	<p>Virtual Private Grid: A Command Shell for Utilizing Hundreds of Machines Efficiently <i>Kenji Kaneda, Kenjiro Taura, Akinori Yonezawa (Univ. of Tokyo)</i></p> <p>Agents for the Grid: A Comparison with Web Services (Part I: Transport Layer) <i>Luc Moreau (Univ. of Southampton)</i></p>	<p>Experiments of Network Throughput Measurement and Forecasting Using the Network Weather Service <i>Pascale Primet (INRIA-RESO), Robert Harakaly, Franck Bonnassieux (CNRS - UREC), ENS Lyon</i></p> <p>End-Host Multicast Communication Using Switch-Trees Protocols <i>David A. Helder, Sugih Jamin (Univ. of Michigan)</i></p>	<p><i>Okada (Fujitsu Laboratories Ltd., Japan)</i></p> <p>NewsToYou <i>Mark Morgan (Silvertip Technologies, Inc., USA)</i></p> <p>TRASC Demo <i>David Bannon (Victorial Partnership for Advanced Computing, Australia)</i></p>	<p>Grid Computing, A Vendor's Vision <i>Wolf-Dieter Brandt (SUN Microsystems Inc.)</i></p> <p>Advanced Scheduling Policies for The Grid <i>Ming Xu (Platform Computing Corporation)</i></p> <p>The Emerging Information Power Grid: From Distributed P2P Computing to e-Utilities <i>Juan José Porta (IBM Life Sciences Solutions, Böblingen, Germany)</i></p>
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**12:30 – 1:30 lunch break**

	<i>plenary</i>
1:30	<p>Invited Talks on EU and US CS-Funding Strategies</p> <p><b>“A Report from the US NSF Blue Ribbon Panel on Cyberinfrastructure”</b> <i>Daniel E. Atkins, U. Michigan and Chair, NSF Panel on Cyberinfrastructure</i></p> <p><b>“Grids Deployment at the Crossroads - An Update on the EU-Funded Research Efforts”</b> <i>Kyriakos Baxevanidis, European Commission</i></p> <p><i>Session Chair: Alexander Reinefeld</i></p>

**3:00 – 3:30 coffee break**

Friday, May 24<sup>th</sup>

	<i>plenary</i>	<i>room 6</i>	<i>room 4</i>
3:30	<p><b>Programming Environments for Clusters</b></p> <p><i>Session Chair: Thomas M. Stricker</i></p> <p>A Malleable-Job System for Timeshared Parallel Machines <i>Lexmikant Kale, Sameer Kumar, Jayant DeSouza (Univ. of Illinois at Urbana-Champaign)</i></p> <p>Efficient Utilization of Memory Mapped NICs onto Clusters using Pipelined Schedules <i>Aristidis Sotiropoulos, Georgios Tsoukalas, Nectarios Koziris (National Technical Univ. of Athens)</i></p> <p>SMiLE: An Integrated, Multi-Paradigm Software Infrastructure for SCI-based Clusters <i>Martin Schulz, Jie Tao, Carsten Trinitis, Wolfgang Karl (TU-Munich)</i></p> <p>M-JavaMPI: A Java-MPI Binding with Process Migration Support <i>Cho-Li Wang, Richy Ka Kui Ma, Francis Lau (The Univ. of Hong Kong)</i></p>	<p><b>Workshop “Global and Peer-to-Peer Computing on Large Scale Distributed Systems” (cont.)</b></p> <p>evolution@home: Experiences with Work Units that Span More than 7 Orders of Magnitude, <i>Laurence Loewe (Dept. of Biosciences, TU Munich)</i></p> <p><b>Short papers</b></p> <p>Developing Distributed Data Mining Implementations for a Grid Environment <i>Wei Du, Gagan Agrawal (Ohio State Univ.)</i></p> <p>CatNet: Catalactic Mechanisms for Service Control and Resource Allocation in Large-Scale Application-Layer Networks <i>Oscar Ardaiz Villanueva, Felix Freitag, Leandro Navarro (Polytechnic Univ. of Catalonia), Torsten Eymann, Michael Reinicke (Albert-Ludwigs Univ.)</i></p> <p>A Study of Discovery Mechanisms for Peer-to-Peer Applications <i>Mandar Kelaskar, Vincent Matossian, Preeti Mehra, Dennis Paul, Anand Vaidhyanathan, Manish Parashar (Rutgers Univ.)</i></p> <p>Logistical Networking: When Institutions Peer <i>Micah Beck, Terry Moore (U. Tennessee)</i></p>	<p><b>Workshop “Security”</b></p> <p><i>Chairs: Barton Miller (Univ. of Wisconsin), Thomas Ludwig (Univ., Heidelberg)</i></p> <p>Towards Trust-Aware Resource Management in Grid Computing Systems <i>Muthucumaru Maheswaran (Univ. of Manitoba, Canada)</i></p> <p>IPSec and DNSSEC to support GRID Application Security <i>Van Le (Worldcom Inc.)</i></p> <p><b>Workshop “Invisible Computing”</b></p> <p><i>Chair: Seng Loke (RMIT U., Melbourne)</i></p> <p><i>Session Chair: Michael Beigl</i></p> <p>Invisible Network: Concepts and Architecture <i>Muthucumaru Maheswaran, Balasubramaneyam Maniyamaran, Paul Card, Farag Azzedin (TRLabs, Canada)</i></p> <p>The iDorm - A Practical Deployment of Grid Technology <i>Anthony Punds-Cornish, Arran Holmes (Univ. of Essex, UK)</i></p>

5:30 end of symposium

