



**INTERNATIONAL
SUPERCOMPUTING CONFERENCE**

Europe's Premier HPC Event

CONFERENCE GUIDE

June 17–20, 2008 | Dresden, Germany



Premier Sponsor



Schedule

Pre-Conference & Conference

Tuesday, June 17

9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
			HPC Requirements for the Automotive Industry						Research Poster Session			
			Efficient Operation of Clusters in Computing Centers						Exhibition			
			Scientific Sessions I & II						Exhibition Opening Party			

Wednesday, June 18

9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
	Session I			Session II			S. III			Microsoft HPC++ Get Together Party		
				Exhibitor Forum Sessions 1-3				BoFs 1-12				
Research Poster Session												
Exhibition												

Schedule Conference

Thursday, June 19

9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
Session IV		Session V			Sessions VI & VII					Vendor Parties		
Exhibitor Forum Sessions 4-6												
Research Poster Session												
Exhibition												

Friday, June 20

9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	7 pm	8 pm	9 pm
Session VIII		Session IX		S. X	Farewell Lunch							



HPC Requirements for the Automotive Industry

Chair: Prof. Dr. Michael Resch, HLRS Stuttgart, Germany

12:00 pm–6:00 pm | Conference Room 1, Level 4

12:00 pm	Top20 Auto – Overview of HPC Trends in Automotive Christian Tanasescu, SGI, Germany
12:30 pm	HPC Requirements for Globalization for Effective Use of Compute Power Swamy Akasapu, General Motors, USA
1:00 pm	THE Supercomputer at BMW Group Thomas Hagauer, BMW, Austria
1:30 pm	Driving The Virtual Vehicle – Aspects of Our New Compute Cluster Thomas Hörmann, The Virtual Vehicle, Austria
2:00 pm	High Performance Computing at AUDI AG Hans-Ulrik von Bülow, AUDI, Germany
2:30 pm	Automotive Research and Development in Cooperation between University and Industry Prof. Dr.-Ing. Hans-Christian Reuss, FKFS, Germany
3:00 pm	Coffee & Conversation Break Foyer, Level 4
3:30 pm	MAGNA STEYR GridPortal – The Flexible and Secure Multi Solver HPC Solution Heinz Hauck, MAGNA STEYR Fahrzeugtechnik, Austria
4:00 pm	ANSYS Workbench – Integrated Platform for Advanced Simulations Gerhard Zelder, CADFEM, Germany
4:30 pm	High Performance Computing – the Key for Virtual Performance in Product Lifecycle Management Peter Ullrich, ESI Group, Germany
5:00 pm	HPC for Next-Generation Fuel Cell Systems in Automotive Applications Jörg Höninger, NuCellSys, Germany
5:30 pm	Multi-Disciplinary Simulation through Code Coupling Klaus Wolf, FHI-SCAI, Germany



Efficient Operation of Clusters in Computing Centers

Chair: Prof. Dr. Wilfried Juling, SCC & KIT, Germany

12:00 pm–6:00 pm | Conference Room 6, Level 4

-
- 12:00 pm **The Idea of Computing Clusters from 1997 to 2018**
Prof. Dr. Thomas Sterling, Louisiana State University, USA
-
- 12:30 pm **Four Important Concepts to Consider when Using Computing Clusters**
Prof. Dr. Jack Dongarra, University of Tennessee, USA
-
- 1:00 pm **Cluster Certification – Why and How**
Prof. Thomas Lehmann, VXTECH, USA
-
- 1:30 pm **Architecture and Performance Characteristics of Modern Compute Clusters:
Tales from the Trenches**
Dr. Gerhard Wellein, Regionales RechenZentrum Erlangen (RRZE), Germany
-
- 2:00 pm **Cluster File-Systems and the Next 1000 Human Genomes**
Dr. Guy Coates, Wellcome Trust Sanger Institute, UK
-
- 2:30 pm **Virtualization to Manage Heterogeneity**
Prof. Dr. Rudolf Lohner, SCC & KIT, Germany
-
- 3:00 pm Coffee & Conversation Break | Foyer, Level 4
-
- 3:30 pm **Cluster & Security: Separating Application Environments**
Tilman Koschnick, Zürcher Kantonalbank, Switzerland
-
- 4:00 pm **Management of HPC Clusters in Mixed Industrial and Scientific Environments**
Dr. habil. Alfred Geiger & Rolf Page,
T-Systems Solutions for Research, Germany
-
- 4:30 pm **Computing Center Transformation and “Green Clusters”**
Heinz-Hubert Weusthof, IBM, Germany
-
- 5:00 pm **Large-Scale Data Center Operations**
Markus Winter, SAP Hosting, Germany
-
- 5:30 pm **The Killer Micros II: The Software Strikes Back**
Dr. Burton Smith, Microsoft, USA
-



Scientific Session I

Chair: Prof. Dr. Thomas Ludwig, University of Heidelberg, Germany

1:00 pm – 6:00 pm | Conference Room 4, Level 4

1:00 pm	Optimizing DDA Code on a POWER5 Processor A. Jundt, USA
1:30 pm	Extreme Scalability Challenges in Micro-Finite Element Simulations of Human Bone C. Bekas, A. Curioni, P. Arbenz, C. Flaig, G. H. van Lenthe, R. Mueller, A. J. Wirth, Switzerland
2:00 pm	An Accelerated, Computer Assisted Molecular Modeling Method for Drug Design A. R. Clarke, E. L. R. Compton, J. Crisp, D. Kidger, R. McConnell, <u>S. McIntosh-Smith</u> , S. R. Smith, <u>R. B. Sessions</u> , UK
2:30 pm	A BioMoby-Based Workflow for Gene Detection Using Sequence Homology R. Royo, J. López, D. Torrents, <u>J. L. Gelpí</u> , Spain
3:00 pm	Coffee & Conversation Break Foyer, Level 4
3:30 pm	Prace Award Winning Paper UCHPC – UnConventional High Performance Computing for Finite Element Simulations <u>S. Turek</u> , D. Göddeke, C. Becker, S. H. M. Buijssen, H. Wobker, Germany
4:00 pm	ISC'o8 Award Winning Paper Distributed I/O with ParaMEDIC: Experiences with a Worldwide Supercomputer <u>P. Balaji</u> , W. Feng, H. Lin, J. Archuleta, S. Matsuoka, A. Warren, J. Setubal, E. Lusk, R. Thakur, I. Foster, D. S. Katz, S. Jha, K. Shinpaugh, S. Coghlan, D. Reed, USA
4:30 pm	A Service-Clustering-Based Dynamic Scheduling Algorithm <u>Zhoujun Hu</u> , Zhigang Hu, Z. Liu, China
5:00 pm	Fine-Grained Metascheduling of QosCosGrid-OpenMPI Using Platform LSF <u>B. Schott</u> , G. Mecheneau, Y. Langlois, Germany
5:30 pm	Towards Performance and Portability through Runtime Adaption for High Performance Computing Applications <u>E. Gabriel</u> , S. Feki, K. Benkert, M. M. Resch, USA



Scientific Session II

Chair: Prof. Dr. Wolfgang E. Nagel, Technische Universität Dresden, Germany

1:00 pm – 6:00 pm | Conference Room 3, Level 4

-
- 1:00 pm **Service-Oriented Middleware for Distributed Financial Monte-Carlo Simulations on the Cell Broadband Engine**
T. Rotaru, M. Dalheimer, F.-J. Pfreundt, Germany
-
- 1:30 pm **ISC'o8 Award Winning Paper**
Performance Measurement and Analysis Tools for Extremely Scalable Systems
B. Mohr, B. Wylie, F. Wolf, Germany
-
- 2:00 pm **Redesigning the Message Logging Model for High Performance**
A. Bouteiller, G. Bosilca, J. Dongarra, USA
-
- 2:30 pm **Performance Comparison of SGI Altix 4700 with IBM POWER5+ and POWER5 Clusters**
S. Saini, D. Talcott, T. Sandstrom, D. C. Jespersen, J. Djomehri, R. Biswas, USA
-
- 3:00 pm Coffee & Conversation Break | Foyer, Level 4
-
- 3:30 pm **Throughput Enhancements by Load Adaptation on SUN Niagara II**
M. Hilbrich, W. E. Nagel, B. Trenkler, M. Müller, Germany
-
- 4:00 pm **Towards Node Architecture Designs for Realizing High Productivity Supercomputers**
V. Nagarajan, D. Srinivasan, K. Chandrasekar, M. Manivannan, R. Thumbavanam
Padmanabhan, S. Gopalakrishnan, V. Elangovan, The Netherlands
-
- 4:30 pm **FPGA Based High Performance Computing**
D. Bennett, E. Dellinger, J. Mason, P. Sundararajan, A. Putnam, O. Storaasli, USA
-
- 5:00 pm **Re-Thinking Supercomputing for Data Intensive Problems**
T. Damkroger, T. Eliassi-Rad, M. Gokhale, J. Grosh, S. Kohn, USA
-
- 5:30 pm **Datacenters with Direct Energy Re-Use**
T. Brunschwiler, B. Smith, E. Ruetsche, B. Michel, Switzerland
-



Research Poster Session

6:00 pm–10:00 pm | Exhibition Hall, Upper Galleries 1–3, Level 1

-
1. **Coupling FPGAs in a Clustered Computing System**
Volker Hampel, University of Lübeck, Germany

 2. **A Reconfigurable Accelerator Card for High Performance Computing**
Michael Aitken, University of Cape Town, South Africa

 3. **GPU Stream Computing inside a CRAY XT3**
Jason Tan, The University of Western Australia, Australia

 4. **Reconfigurable Computing Implementation of an Astronomy Accelerator**
Andrew Woods, University of Cape Town, South Africa

 5. **An Approach for Supporting a Network-Level APN in UCLP**
Wontaek Hong, KISTI, South Korea

 6. **InfiniBand-over-Distance Transport Demonstrator Using Low-Latency WDM Transponders and IB Credit Buffering**
Christian Illmer, ADVA Optical Networking, Germany

 7. **Architecture and Performance of the CRESCO HPC System**
Giovanni Bracco, ENEA FIM, Italy

 8. **ACCFS – Accelerator File System**
Andreas Heinig, Technical University Chemnitz, Germany

 9. **Purely Massive Parallel MD Simulation of Long Polymers and its Application**
Katsumi Hagita, National Defense Academy of Japan, Japan

 10. **Large-Scale Simulation of Flow and Mass Transfer in Random Porous Media**
Siarhei Khirevich, Philipps-University Marburg, Germany
-

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11. **HPC of Boundary Element Method with GPU**
Toru Takahashi, Graduate School of Engineering, Nagoya University, Japan
-
12. **A Grid Problem Solving Environment for Climatology**
Italo Epicoco, University of Salento, Italy
-
13. **Large Scale Particle Simulation Using LBM**
Jan Götz, University Erlangen-Nürnberg, Germany
-
14. **Binomial Option Pricing on a Multicore System**
Mohammad Zubair, Old Dominion University, USA
-
15. **Parallel Text Mining Very Large Text Documents**
F. Tekiner, Y. Tsuruoka, S. Ananiadou, National Centre for Text Mining, UK
-
16. **Impacts of the IBM Cell Processor on Supporting Climate Models**
Shujia Zhou, NASA GSFC, USA
-
17. **Design and Implementation Job Management Service on TIGRIS**
Hun Joo Myung, KISTI, South Korea
-
18. **MM5 Grid Portal: A Grid-Based Web Portal Supporting a Numerical Simulation Environment for a Weather Forecasting Model MM5**
Oh-kyoung Kwon, KISTI, South Korea
-
19. **PHOSPHORUS: A European Optical Grid Test-Bed**
Wolfgang Ziegler, Fraunhofer Institute SCAI, Germany
-
20. **IANOS: Mapping HPC Applications to HPC Resources**
Wolfgang Ziegler, Fraunhofer Institute SCAI, Germany
-

9:30 am

Welcome Coffee | Exhibition Hall, Level 1



I. Opening Session

Chair: Prof. Dr. Hans Meuer, ISC'o8 General Chair,
Prometheus & University of Mannheim, Germany

10:00 am–12:00 pm | Lecture Hall, Level 1

Welcome & Introduction

Prof. Dr. Hans Meuer, Prometheus & University of Mannheim, Germany

Welcome Address

Wolfgang Schmid, Silicon Saxony & Qimonda Dresden, Germany

Awarding of the Two ISC Award Winners

Prof. Dr. Michael Resch, HLRS Stuttgart, Germany

Stephan Gillich, Intel, Germany

Awarding of the PRACE Award Winner

Prof. Dr. Michael Resch, HLRS Stuttgart, Germany

Prof. Dr. Achim Bachem, Research Centre Jülich, Germany

Highlights of the 31st TOP500 List

Dr. Erich Strohmaier, Lawrence Berkeley National Laboratory, USA



ISC'o8 Keynote Presentation

Everybody Supercomputes in the Next Generation Cyber-Science Infrastructure

Prof. Dr. Satoshi Matsuoka, Tokyo Institute of Technology, Japan

12:00 pm

Lunch Break | Foyer & Restaurant, Level 1



II. HPC & Next-Generation Climate Modeling

Chair: Walter Zwiefelhofer, ECMWF, UK

1:30 pm–3:00 pm | Lecture Hall, Level 1

The Grid as One Enabling Technology for Advanced Computing in Climate Research

Prof. Dr. Wolfgang Hiller, AWI for Polar & Marine Research, Germany

French Experiments on the Earth Simulator: Small-Scale Phenomena and Large-Scale Ocean and Climate Modeling

Dr. Sébastien Masson, University Pierre & Marie Curie, France

Computational Challenges for Dynamic Earth System Models

Prof. Dr. William Collins, LBNL & University of California at Berkeley, USA

3:00 pm

Coffee & Conversation Break | Exhibition Hall, Level 1



III. Thomas Sterling Puts the Past Year in Perspective

Chair: Dr. Kimmo Koski, CSC, the Finnish IT Center for Science, Finland

4:00 pm–5:00 pm | Lecture Hall, Level 1

HPC Achievement and Impact – 2008

Prof. Dr. Thomas Sterling, Louisiana State University, USA



Exhibitor Forum Session 1

1:30 pm–4:30 pm | Conference Room 2, Level 4

-
- 1:30 pm **Panasas: Dr. Brent Welch**
Panasas & pNFS: Parallel Storage that Maximizes HPC Application Performance
-
- 2:00 pm **Isilon Systems: Jeff Alsford**
Clustered Storage in High Performance Computing
-
- 2:30 pm **Sun Microsystems: Chris Wood**
HPC Storage: A Study in Contradictions
-
- 3:00 pm **HMK Computer: Dr. Klaus Heihoff**
Innovative Storage Solutions
-
- 3:30 pm **Fujitsu Systems Europe: Dr. Matthijs van Waveren**
Using SynfiniWay to Scale Workflow and Dataflow across the Enterprise and Extended Enterprise
-
- 4:00 pm **Bull: Jean-Marc Denis**
The Challenges of Production-Ready HPC Systems
-



Exhibitor Forum Session 2

1:30 pm–4:30 pm | Conference Room 3, Level 4

-
- 1:30 pm **ADVA Optical Networking: Ulrich Schlegel**
Distance Extension/Interconnection of Infiniband-Based Computing Clusters over Optical Networks
-
- 2:00 pm **Cisco: Dr. Walter Dey**
Data Center Ethernet – The Framework for I/O Consolidation and Unified Fabric
-
- 2:30 pm **Cisco: Renaud Larsen**
Open MPI Open Fabrics Update
-

Wednesday, June 18

Special Activities

-
- 3:00 pm **Blade Network Technologies: Patrice Duffort**
High Performance Computing (HPC) in 2008: 10GbE and InfiniBand Go Head-to-Head
-
- 3:30 pm **Blade Network Technologies: Charles Ferland**
Rackonomics of Building New Data Centers
-
- 4:00 pm **Force10 Networks: Thomas Friedel**
HPC and an Energy Efficient Network – a Contradiction?
-



Exhibitor Forum Session 3

1:30 pm–4:30 pm | Conference Room 4, Level 4

-
- 1:30 pm **Intel: Stephan Gillich & Richard Dracott**
News Update: Intel® Powering High Performance Computing Everywhere – Today and Tomorrow
-
- 2:00 pm **AMD: Jeff Underhill**
AMD Quad-Core Opteron™ Processor Performance and Feature Advantages
-
- 2:30 pm **NVIDIA: Andy Keane**
Solutions for High Performance Computing
-
- 3:00 pm **LSI: Dave Ellis**
LSI: Enabling PetaScale Computing
-
- 3:30 pm **Qlogic: Phil Murphy**
Overcoming the Challenges of Scaling HPC Environments
-
- 4:00 pm **ClearSpeed Technology: Simon McIntosh-Smith**
The Future HPC: Heterogeneous Parallel Computing
-



BoF Sessions 1 & 2

5:15 pm–6:45 pm | Conference Room 1, Level 4

5:15 pm

Lustre File System

Organizers: Peter Braam & Peter Bojanic, Sun Microsystems, USA

6:00 pm

Future Routing Schemes in Petascale Clusters

Organizers: Gilad Shainer, Mellanox, USA, Ola Torudbakken, Sun Microsystems, Norway & Richard Graham, Oak Ridge National Laboratory, USA



BoF Sessions 3 & 4

5:15 pm–6:45 pm | Conference Room 2, Level 4

5:15 pm

Optimizing Applications for Multicore in the ParMA Project

Organizers: Jean-Marc Morel, Bull, France & Denis Barthou, Université de Versailles Saint Quentin en Yvelines, France

6:00 pm

Building the HPC Ecosystem

Organizer: Dr. Kimmo Koski, CSC, the Finnish IT Center for Science, Finland



BoF Sessions 5 & 6

5:15 pm–6:45 pm | Conference Room 3, Level 4

5:15 pm

The MPI Forum: Towards an MPI 3.0 Standard

Organizers: Richard Graham, Oak Ridge National Laboratory, USA & George Bosilca, University of Tennessee, USA

6:00 pm

Towards More Efficient Use of HPC Resources

Organizers: Wolfgang Ziegler, Fraunhofer Institute SCAI, Germany & Ralf Gruber, EPFL, Germany



BoF Sessions 7 & 8

5:15 pm–6:45 pm | Conference Room 4, Level 4

5:15 pm

Advancing Technologies – HPC in Asia

Organizers: Xiaoxin Zhang, SSC, China & Dr. Fang-Pang Lin, NCHC, Taiwan

6:00 pm

Remote Visualization Needs for the Future

Organizers: Thomas Reed & Doug Trail, SGI, USA



BoF Sessions 9 & 10

5:15 pm–6:45 pm | Conference Room 5, Level 4

5:15 pm

First Experiences with 40 GB/s Infiniband Clusters

Organizers: Rick Layden, Intel, USA & Maria McLaughlin, Appro, USA

6:00 pm

Programming on Hybrid and Heterogeneous Architectures

Organizer: Nikolay Piskun, TotalView Technologies, USA



BoF Sessions 11 & 12

5:15 pm–6:45 pm | Conference Room 6, Level 4

5:15 pm

Efficient Operations for Heterogeneous Clusters: Are We There Yet?

Organizer: Steven Newhouse, Microsoft, USA

6:00 pm

The Green500 List: Past, Present, and Future

Organizers: Prof. Dr. Wu-chun Feng & Kirk Cameron, Virginia Tech, USA



Research Poster Session

9:30 am – 6:00 pm | Exhibition Hall, Upper Galleries 1–3, Level 1

For detailed information, see Chapter 2, “Special Activities”, “Research Poster Session”.



Exhibition

9:30 am – 6:00 pm | Exhibition Hall, Level 1

Please refer to chapter 6 “Exhibition” for detailed information such as general Exhibition opening hours, floorplan, exhibitors/co-exhibitors list and company profiles.



Microsoft HPC++ Get Together Party

7:00 pm – 10:00 pm | Congress Center Terraces, Level 3

You are invited by Microsoft to enjoy a fun and entertaining dinner on Wednesday, June 18, 2008. This memorable dinner at the International Congress Center will help you prepare for productive and informative meetings, exchanges and conversations at ISC’08. Great food, great entertainment and great friendships await you! Please come join us.

The HPC++ Get Together Party is sponsored by: **Microsoft**





IV. The European HPC Projects PRACE, PROSPECT and TALOS

Chair: Francesc Subirada, Barcelona Supercomputing Center (BSC), Spain
9:00 am–10:30 am | Lecture Hall, Level 1

PRACE: An Initiative for the Future European Supercomputing Infrastructure
Prof. Dr. Achim Bachem, Research Centre Jülich, Germany

PROSPECT: A European Alliance
Prof. Dr. Dr. Thomas Lippert, Jülich Supercomputing Centre (JSC), Germany
Dr. Giovanni Trezza, Quadrics, Italy

Strengthening European HPC through Cooperative Projects, Talos
Dr. Jean Gonnord, CEA, France
Jean-François Lavignon, Bull, France

10:30 am Coffee & Conversation Break | Exhibition Hall, Level 1



V. Harnessing the Potential of Multicore/ Manycore Processors

Chair: Prof. Dr. Per Stenström, Chalmers University of Technology, Sweden
11:00 am–12:40 pm | Lecture Hall, Level 1



Thursday Keynote Presentation

Multicore/Manycore Platforms Bring Supercomputing to the Masses

Justin R. Rattner, Intel, USA

The Challenges of Multicore and Specialized Accelerators for Mathematical Software
Prof. Dr. Jack Dongarra, University of Tennessee, USA

Parallel FEM Solvers on Multicore Xeon Clusters: Do We Need OpenMP?
Prof. Dr. Lutz Gross, University of Queensland, Australia

12:40 pm Lunch Break | Foyer & Restaurant, Level 1



VI. On the Hot Seat: Grilling the Leading HPC Vendors with Tough Questions, Part 1

Co-Chairs:

Prof. Dr. Arndt Bode, Technical University Munich, Germany

Prof. Dr. Hans Meuer, Prometheus & University of Mannheim, Germany

Inquisitors:

Prof. Dr. Satoshi Matsuoka, Tokyo Institute of Technology, Japan

Addison Snell, Tabor Research, USA

Prof. Dr. Thomas Sterling, Louisiana State University, USA

Dr. Gerhard Wellein, Regionales RechenZentrum Erlangen (RRZE), Germany

2:00 pm – 4:15 pm | Lecture Hall, Level 1

2:00 pm **Intel Delivering Leadership HPC Technology – Everywhere, Today and Tomorrow**
Richard Dracott, Intel, USA

2:15 pm **Architecting the Future: Petascale Systems and Beyond**
Andreas von Bechtolsheim, Sun Microsystems, USA

2:30 pm **Milestones in Multicore Computing**
Dr. Don Grice, IBM, USA

2:45 pm **New Challenges and Trends in High Performance Computing**
Dr. Frank Baetke, Hewlett-Packard, Germany

3:00 pm **Scaling with QLogic InfiniBand**
Lloyd Dickman, Qlogic, USA

3:15 pm **How Moab Cluster Suite Can Improve Workload Processing by 10-30% and Apply Green Computing Policies to Achieve 50% Power Savings on Underutilized Nodes**
Michael A. Jackson, Cluster Resources, USA

3:30 pm **Parallel Storage & pNFS: The Future of HPC Storage**
Len Rosenthal, Panasas, USA

3:45 pm **ParaStation Cluster Suite**
Dr. Ralph Krotz, ParTec Cluster Competence Center, Germany

4:00 pm **Tackling the Most Challenging HPC Workloads with Windows HPC Server 2008**
Kyril Faenov, Microsoft, USA

4:15 pm Coffee & Conversation Break | Exhibition Hall, Level 1



VII. On the Hot Seat: Grilling the Leading HPC Vendors with Tough Questions, Part 2

Co-Chairs:

Prof. Dr. Thomas Ludwig, University of Heidelberg, Germany

Dr. Erich Strohmaier, Lawrence Berkeley National Laboratory, USA

Inquisitors:

Prof. Dr. Frank Behrendt, Berlin University of Technology, Germany

Prof. Dr. Jack Dongarra, University of Tennessee, USA

Dr. Fang-Pang Lin, National Center for High-Performance Computing (NCHC), Taiwan

Francesc Subirada, Barcelona Supercomputing Center (BSC), Spain

4:45 pm–7:00 pm | Lecture Hall, Level 1

4:45 pm

Achieving Optimal Performance per Watt

Dr. Tau Leng, Supermicro, USA

5:00 pm

Data Center Ethernet – the Framework for I/O Consolidation and Unified Fabric

Dr. Walter Dey, Cisco, USA

5:15 pm

Driving Interconnect Technology to Petascale Computing and Beyond

Michael Kagan, Mellanox, USA

5:30 pm

QsNetIII, an HPC Interconnect for PetaScale Systems

Duncan Roweth, Quadrics, UK

5:45 pm

Ethernet, the Ultimate Network for HPC

Dr. Charles L. Seitz, Myricom, USA

6:00 pm

Future Challenges for HPC

Dr. Rudolf Fischer, NEC, Germany

6:15 pm

A New Era in High Performance Computing

Bill Mannel, SGI, USA

6:30 pm

Fujitsu Solutions and Vision for Petascale Computing

Dr. Motoi Okuda, Fujitsu, Japan

6:45 pm

Effective Scalable Computing

Dr. Steve Scott, Cray, USA



Exhibitor Forum Session 4

9:30 am–12:30 pm | Conference Room 2, Level 4

-
- 9:30 am **IBM: Dr. Don Grice**
The Impact of Multicore Computing on Business and Society
-
- 10:00 am **Hewlett-Packard: Ed Turkel**
Extreme Scale-Out Powering HPC
-
- 10:30 am **Hewlett-Packard: Scott Misage**
Overcoming Thermal Challenges at System or Data Center Level
-
- 11:00 am **Cray: Dr. Steve Scott**
Cray's Roadmap to Sustained Petascale Computing and Beyond
-
- 11:30 am **SiCortex: Dr. Matthew Reilly**
High-Processor Count Computing: The View from 5832
-
- 12:00 pm **NEC: Dr. Andreas Findling**
NECs Product Offensive
-



Exhibitor Forum Session 5

9:30 am–12:30 pm | Conference Room 3, Level 4

-
- 9:30 am **Altair Engineering: Dr. Jochen Krebs**
GridWorks Analytics
-
- 10:00 am **Quadrics: Dr. Daniel Kidger**
Third Generation QsNet Enables Petaflop Architectures
-
- 10:30 am **arastra: Mansour Karam**
10Gigabit Ethernet Goes Mainstream
-
- 11:00 am **Force10 Networks: Thomas Friedel**
High Performance and Energy Efficient Ethernet Solutions from Force10 Networks for High Performance Computing Applications
-
- 11:30 am **Knürr: Heiko Ebermann**
Energy-Efficient Cooling of Supercomputers
-
- 12:00 pm **Screenlogix: Eng. Emilio Billi**
A Revolution in Supercomputing. Is It Still a Possibility Today?
-



Exhibitor Forum Session 6

9:30 am–12:30 pm | Conference Room 4, Level 4

9:30 am

Microsoft: Steve Teixeira & Keith Yedlin

The Microsoft Parallel Computing Initiative: Bringing Concurrency to the Masses

10:00 am

TotalView Technologies: Nikolay Piskun

Parallel Development Tools for HPC Architectures

10:30 am

Acumem: Erik Hagersten

Automatic Multicore Software Diagnosis and Recommended Treatment

11:00 am

Visual Numerics Int.: Sorin Serban

The IMSL® C# Numerical Library for Microsoft® .NET Applications

11:30 am

OptimaNumerics: Dr. C. J. Kenneth Tan

Efficient Linear Algebra for Next Generation HPC

12:00 pm

Allinea: David Lecomber

Taming the Architectural Jungle – Intuitive Development Tools for a Complex World



Research Poster Session

9:30 am–6:00 pm | Exhibition Hall, Upper Galleries 1–3, Level 1

For detailed information, see Chapter 2, “Special Activities”, “Research Poster Session”.



Exhibition

9:30 am – 6:00 pm | Exhibition Hall, Level 1

Please refer to chapter 6 “Exhibition” for detailed information such as general Exhibition opening hours, floorplan, exhibitors/co-exhibitors list and company profiles.



Vendor Parties

In the evening, attendees will have the choice between different Vendor Parties (participation requires individual invitation by vendors).



VIII. Panel Discussion “Is HPC Going Green?”

Chair: Prof. Dr. Horst Simon, Lawrence Berkeley National Laboratory, USA

9:00 am–10:30 am | Lecture Hall, Level 1

Panelists:

Prof. Dr. Wu-chun Feng, Virginia Tech, USA

Dr. John Gustafson, Massively Parallel Technologies, USA

Prof. Dr. Satoshi Matsuoka, Tokyo Institute of Technology, Japan

Dr. Franz-Josef Pfreundt, Fraunhofer-ITWM, Germany

John Shalf, Lawrence Berkeley National Laboratory, USA

10:30 am

Coffee & Conversation Break | Foyer & Restaurant, Level 1



IX. HPC Challenges & Opportunities in the Petaflop/s Era

Chair: Prof. Dr. Thomas Sterling, Louisiana State University, USA

11:00 am–12:45 pm | Lecture Hall, Level 1

Supercomputers or Grids: That is the Question!

Prof. Dr. Wolfgang Gentzsch, EU Project DEISA, Germany

Prof. Dr. Dieter Kranzlmüller, University of Linz, Austria



Friday Keynote Presentation

Toward Millisecond-Scale Molecular Dynamics Simulation of Proteins

Dr. John Salmon, D. E. Shaw Research, USA

From Petaflops to Exaflops

Prof. Dr. Peter M. Kogge, University of Notre Dame, USA



X. Closing Session – Thanks & “Auf Wiedersehen” & ISC’09

Chair: Prof. Dr. Hans Meuer, Prometheus & University of Mannheim, Germany
12:45 pm–1:15 pm | Lecture Hall, Level 1

Prof. Dr. Wolfgang E. Nagel, Technische Universität Dresden, Germany

ISC’09 Platinum Sponsors:

Sun Microsystems: Marc Hamilton, Americas System Practice, USA

Supermicro: Don Clegg, Supermicro, USA

Microsoft: Kyril Faenov, Microsoft, USA

Intel: Stephan Gillich, Intel, Germany



Farewell Lunch

1:15 pm–3:00 pm | Foyer & Restaurant, Level 1



Accompanying Events

The below events accompanying ISC'08 are organized independently by third parties. For more details, please visit the organizers' website or contact them directly. (Information below as of May 2008.)

Sun HPC Consortium 2008

Sunday, June 15	12:30 pm–5:20 pm
Monday, June 16	9:00 am–5:30 pm
Tuesday, June 17	9:00 am–12:15 pm

The Westin Bellevue Dresden | Große Meißner Straße 15 | 01097 Dresden

NVIDIA Tutorial Session

Monday, June 16	9:00 am–5:00 pm
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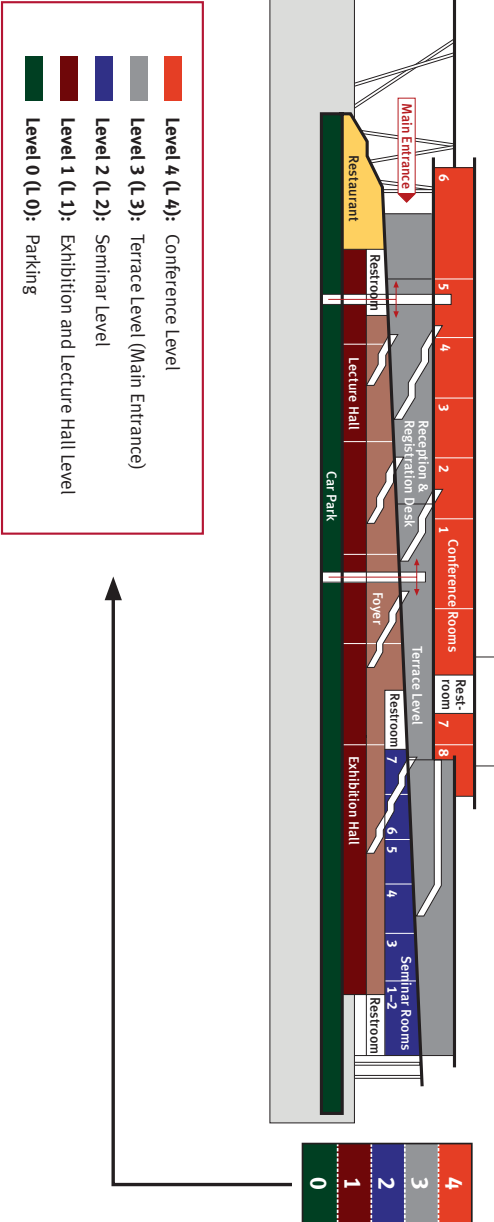
Congress Center | Conference Room 6, Level 4

IDC Breakfast Briefing

Wednesday, June 18	8:00 am–9:45 am
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Congress Center | Conference Room 6, Level 4

International Congress Center Overview



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