

The Biggest
HPC Event in Europe

Invitation

19th International Supercomputer Conference ISC2004

Heidelberg, Germany
June 22 - 25



www.isc2004.org

ISC2004 Contact Information

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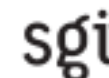
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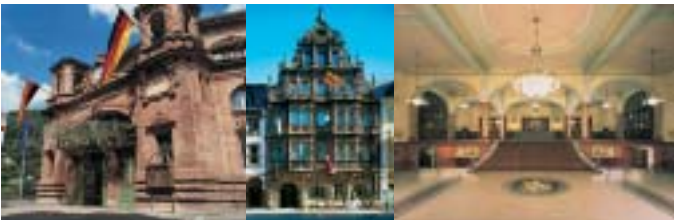
ISC2004 is sponsored by:



ISC2004: Where the HPC World Meets

The International Supercomputer Conference, the leading supercomputing event in Europe, is the premier venue for gaining an international perspective in the field of HPC. ISC presents state of the art applications, architectures and trends in supercomputing. Fascinating Heidelberg with the world-famous castle and picturesque Old Town, with one of the oldest universities and modern research facilities, hosts this year's ISC. The splendid Heidelberg Convention Center is the perfect setting for this event.

The conference includes a one-day tutorial, followed by a three-day conference and paralleled by a huge HPC exhibition throughout.



Tutorial, June 22nd, 2004

Performance in HPC: Evaluation, Modeling, Benchmarking and Prediction

The widening divergence between advertised peak performances and actual achieved application performances is of special concern to the HPC community. An analysis of this performance disparity is often quite difficult due to the large variety of HPC architectures and the strongly varying performance requirements of modern scientific algorithms. This tutorial addresses these issues by providing up to date introductions and overviews.

Conference, June 23rd-25th, 2004

Applications, Architectures, Trends

Three days of intensive lead sessions, plenty of networking and interaction will give a comprehensive and compact overview on HPC topics presented by leading, world renowned scientists and experts. They will share their insights into the challenges and opportunities of the HPC business. The conference delivers the highest level of senior executive thought and leadership on the subject of HPC applications, architectures and trends. Participants will benefit greatly from the conference due to the well-founded, precise and up-to-date information presented.

The program is conducted in English.

HPC Exhibition, June 23rd-25th, 2004

With more than 50 booths and 30 exhibition hours the ISC exhibition ranks as the number one European HPC event. Get informed about the latest trends in HPC. Exhibitions presented by leading international manufacturers and research centers, showcasing their new products and HPC-solutions. The ISC exhibition is an international meeting place for doing HPC business.

ISC2004 Award

The ISC Award has been created out of the initiative of ISC2004's main sponsor AMD. Innovative supercomputing researchers have been invited to submit projects in any of the following three fields of high performance computing:

- Requirements for HPC systems software
- Innovative supercomputing architectures
- Integrated data and information management

The selected winning authors on each subject will present their papers during the Conference Program and will each receive the first ever ISC award during the conference, sponsored by AMD.

Social Program

The traditional evening events of the International Supercomputer Conference offer not only culinary pleasures, but a unique opportunity for the exchange of information and ideas. On Wednesday, June 23rd, you are invited to our legendary Get-Together-Party at the Heidelberg Convention Center – the most distinctive landmark in the Old Town district.

Heidelberg Castle, one of the world's best known monuments – an absolute must see for all visitors of Heidelberg – is this year's most impressive setting for our main social event, the Heidelberg Castle Party on Thursday, June 24th, sponsored by AMD.



Tuesday, June 22nd

Tutorial

Chairman: *Erich Strohmaier, Computer Scientist, CRD, Lawrence Berkeley National Laboratory, Berkeley, CA, USA*

8:30 Welcome and Introduction

Erich Strohmaier, Computer Scientist, CRD, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

9:00 Experimental Performance Measurement and Analysis of Parallel Programs: Resources and Tools

Bernd Mohr, Senior Scientist, Research Center Jülich, Jülich, Germany

11:30 Tools to Help with Performance Measurement

Jack Dongarra, University Distinguished Professor, University of Tennessee, Knoxville, TN, USA

13:30 Standard HPC Benchmarks

Jack Dongarra, University Distinguished Professor, University of Tennessee, Knoxville, TN, USA

14:00 Benchmarking for Architectural Knowledge: How to Get to Know a Machine

Aad van der Steen, Head of HPCG, Utrecht University, Utrecht, The Netherlands

16:30 The IPACS Project – A New Benchmarking Environment

*Franz-Josef Pfreundt, Division Director, Fraunhofer ITWM, Kaiserslautern, Germany
Matthias Merz, Research Assistant, University of Mannheim, Mannheim, Germany*

17:30 End of Tutorial

Registration Fees*

Advance Registration: until 07.05.2004
Late Registration: 08.05.2004 - 21.06.2004
Onsite Registration: 22.06.2004

Tutorial	Advance	Late	Onsite
Regular Participant	EUR 500	EUR 600	EUR 650
University Personnel	EUR 350	EUR 420	EUR 470
Government Employee	EUR 400	EUR 480	EUR 530
Student/Retired	EUR 250	EUR 300	EUR 350

* A 16% government-mandated Value-Added-Tax (VAT) is charged in addition to the stated fee. Fees include conference proceedings, full working material, coffee breaks, lunches and social events.

Online Registration and Hotel Reservation at:
www.isc2004.org (Site Navigation: Registration)

Wednesday, June 23rd Conference

10:00 Opening Session

Chairman: *Hans Meuer, Managing Director Prometheus GmbH, Daisbach, Germany*

Welcome Address

*Hans-Wolfgang Arndt, President, University of Mannheim, Mannheim, Germany
Andreas Reuter, Director European Media Laboratory, Heidelberg, Germany*

Highlights of the 23rd Top500 List

Awards for the #1 System worldwide and the #1 System in Europe
*Erich Strohmaier, Computer Scientist, CRD, Lawrence Berkeley National Laboratory, Berkeley, CA, USA
Jack Dongarra, University Distinguished Professor, University of Tennessee, Knoxville, TN, USA*

ISC2004 Keynote Presentation

The Search for the Softron – Will we be able to develop software for Petaflop/s Computing?
Steven J. Wallach, Vice President and Chief Technology Officer, Chiaro Networks, Richardson, Tx, USA

14:00 Key Applications

Chairman: *Steven J. Wallach, Vice President and Chief Technology Officer, Chiaro Networks, Richardson, Tx, USA*

Out of the Big Bang: Simulating the Growths of Structure in the Universe

Simon D. White, Director, Max-Planck-Institute for Astrophysics, Garching, Germany

High Performance Computing at BP

Keith Gray, Manager, High Performance Computing, BP London, UK

SAP Business Solution and Supercomputing – Vision or Reality

*Wolfgang Becker, Chief Architect, SAP AG, Walldorf, Germany
Bernd F. Lober, Vice President, SAP AG, Walldorf, Germany*

Physical Infrastructure Assessment and Protection to Mitigate Natural and Man-made Disasters

Frieder Seible, Eric and Johanna Reissner Professor, University of California, San Diego, CA, USA

17:00 HPC Retrospect

Chairman: *Hans Meuer, Managing Director Prometheus GmbH, Daisbach, Germany*

Looking Back Over the Last Year in HPC

Thomas Sterling, Senior Staff Scientist, Caltech., Pasadena, CA, USA

18:00 Get-Together-Party within the Exhibition Area

Thursday, June 24th

Conference

8:15 Requirements for HPC Systems Software
Chairman: Michael Resch, Director HLRS, University of Stuttgart, Stuttgart, Germany

Parallel File Systems

Peter W. Haas, Staff Computer Scientist, HLRS, University of Stuttgart, Stuttgart, Germany

User Experience with Windows as an HPC Operating System

Gerd Heber, Senior Research Associate, Cornell Theory Center, Ithaca, NY, USA

Experiences with the Operating Environment on System X

Srinidhi Varadarajan, Director, Terascale Computing Facility, Virginia Polytechnic Institute and State University, Blacksburg, VA, USA

10:45 Innovative Supercomputer Architectures

Chairman: Thomas Sterling, Senior Staff Scientist, Caltech., Pasadena, CA, USA

Present and Future Supercomputer Architectures and their Interconnects

Jack Dongarra, University Distinguished Professor, University of Tennessee, Knoxville, TN, USA

A Streaming Supercomputer: Capability and Capacity

William J. Dally, Professor, Stanford University, Stanford, CA, USA

Keynote Presentation Thursday

The Red Storm Project – History and Anatomy of a Supercomputer

William J. Camp, Director of Computers, Sandia National Laboratories, Albuquerque, NM, USA
Fred Weber, Vice President and Chief Technology Officer, AMD, Sunnyvale, CA, USA

14:30 Hot Seat Session

Chairman: Arndt Bode, Vice President and CIO, Technical University of Munich, Munich, Germany
Thomas Ludwig, Professor, University of Heidelberg, Heidelberg, Germany
Hans Meuer, Managing Director Prometheus GmbH, Daisbach, Germany
Erich Strohmaier, Computer Scientist, CRD, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

20:00 Castle Party

Friday, June 25th

Conference

8:30 Integrated Data and Information Management

Chairman: Alfred Geiger, Senior Research Associate, T-Systems, Stuttgart, Germany

Scientific Software Integration and Data Management with TENT and DataFinder

Rolf Hempel, Co-Leader of SISTEC, German Aerospace Center (DLR), Cologne, Germany

Keynote Presentation Friday

Integrating Data and Information Management

Reagan W. Moore, Co-Program Director, San Diego Supercomputer Center, San Diego, CA, USA

10:45 Future Trends

Chairman: Thomas Lippert, Director Central Institute for Applied Mathematics, Research Center Jülich, Jülich, Germany

Twelve Ways to Fool the Masses: 10 Years Later

David H. Bailey, Chief Technologist, NERSC/LBNL, Berkeley, CA, USA

The Future of Networking

Otto Spaniol, Professor University of Technology, Aachen, Germany

DEISA: Motivations, Strategies, Technologies

Victor Alessandrini, Director IDRIS, Paris, France

The Processor in 2014: What are the Challenges, how do we meet them?

Yale Patt, Professor, The University of Texas at Austin, Austin, TX, USA

14:00 End of ISC2004

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Conference	Advance	Late	Onsite
Regular Participant	EUR 990	EUR 1.100	EUR 1.200
University Personnel	EUR 590	EUR 700	EUR 800
Government Employee	EUR 690	EUR 800	EUR 900
Student/Retired	EUR 290	EUR 400	EUR 500
Social Events for accompanying person	EUR 100	EUR 100	EUR 100

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