
CALL FOR PAPERS



HPCS 2008

**HPCS 2008: HIGH PERFORMANCE COMPUTING
AND SIMULATION SYMPOSIUM**
Part of the SCS Spring Simulation Multiconference (SMC'08)
In collaboration with ACM/SIGSIM



A joint symposium of DEVS Integrative M&S (DEVS) and
High Performance Computing (HPC)



April 14-16, 2008, Ottawa, Ontario
<http://www.cs.vt.edu/hpcs2008/>

IMPORTANT DATES

Paper submission due: November 30, 2007
Notification of acceptance: January 7, 2008
Revised manuscript due: January 28, 2008
Symposium: April 14-16, 2008

GENERAL INFORMATION

The 2008 Spring Simulation Multiconference will feature the High Performance Computing and Simulation Symposium (HPCS 2008), the 16th special symposium devoted to the impact of high performance computing and communications on computer simulations.

Advances in networking, high-end computers, large data stores, and middleware capabilities are ushering in a new era of high-performance parallel and distributed simulations. Along with these new capabilities come new challenges in computing and system modeling. The goal of HPCS 2008 is to encourage innovation in high performance computing and communication technologies and to promote synergistic advances in modeling methodologies and simulation. It will promote the exchange of ideas and information between universities, industry, and national laboratories about new developments in system modeling, high performance computing and communication, and scientific computing and simulation. Topics of interest include

- High Performance/Large Scale Simulation
- High Performance Applications and Case Studies
- Distributed and Grid Computing
- Asynchronous numerical methods.
- Hybrid system modeling and simulation
- Discrete event system modeling methodologies
- Visualization and Data Management
- Modeling Methodologies and Environments
- Advanced Simulation Frameworks
- Problem Solving Environments
- Parallel Algorithms and Architectures
- High Performance Software Tools
- Tools and Environments for Coupling Parallel Codes
- Component Technologies for High Performance Computing

PAPER SUBMISSIONS

Prospective authors are invited to submit full papers (up to 6 pages, double column) on topics related to the areas listed above. Submissions will be evaluated on relevance, technical quality, and exposition. Papers must not have appeared before (or be pending) in a journal or conference with published proceedings, nor may they be under review or submitted to another forum during the HPCS 2008 review process. All accepted papers will be published in the proceedings as regular papers. Papers should be submitted electronically at <http://www.softconf.com/scs/HPCS08/>. For more information about submission, see: <http://www.cs.vt.edu/hpcs2008/submission.php>

Papers must use SCS format. Formatting instructions are available at <http://www.scs.org/confernc/formattingkit.pdf>

At least one author of an accepted paper must register for the symposium and must present the paper at the symposium.

TUTORIALS

The following tutorials are scheduled for HPCS 2008. These tutorials will only be offered if a sufficient number of people register to attend the tutorial. For information on registration, see our website at: <http://www.cs.vt.edu/hpcs2008/program.php>.

An Introduction to DEVS and Distributed DEVS
Ming Zhang, University of Ottawa, Canada

This tutorial presents fundamental DEVS concepts and applications of DEVS-based modeling and simulation in industry and research. We will discuss how DEVS is well suited to modern software infrastructures and how it compares to non-DEVS modeling and simulation methodologies. In particular, this tutorial will focus on distributed DEVS tools for solving large-scale modeling and simulation problems.

The Deterministic Global Optimization Algorithm DIRECT
Layne T. Watson, Virginia Polytechnic Institute and State University

The deterministic direct search algorithm DIRECT of D. Jones has proven surprisingly practical for engineering design, especially when coupled with a local pattern search algorithm such as MADS by Audet and Dennis. Massively parallel implementations of these algorithms, necessary for realistic engineering and scientific problems, are highly nontrivial. This tutorial will cover the serial DIRECT and MADS algorithms, their parallel implementations, place them in the context of global optimization, and describe recent applications in multidisciplinary design optimization and systems biology.

PANEL AND SPECIAL SESSION

The following panel and special session are planned for HPCS 2008. If you wish for your paper to appear in the special session, we suggest that you contact the session organizer in advance.

Panel: Large Scale Scientific Computing in Canada
Peter Kropf, University of Neuchâtel, Switzerland <peter.kropf@unine.ch>

Special Session: Earth Sciences Simulation
Adrian Sandu, Virginia Tech <asandu7@cs.vt.edu>

PUBLICATION

The symposium proceedings will be published through the ACM on CD-ROM and in the ACM Digital Library.

BEST PAPER AWARD

At least one paper will be chosen for the Best Paper Award, which will be recognized as such in the final program.

FURTHER INFORMATION

For further information please visit the conference website at <http://www.cs.vt.edu/hpcs2008/> or contact the symposium chairs.

SPONSORS

Society for Modeling and Simulation International (SCS) (<http://www.scs.org/>) and Association for Computing Machinery (ACM) (<http://www.acm.org/>).

SYMPOSIUM ORGANIZERS

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