



The Second International Conference on High Performance Computing and Applications (HPCA 2009)

Shanghai University, Shanghai, China

August 10-12, 2009

<http://hpca.shu.edu.cn>

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The Second International Conference on High Performance Computing and Applications 2009 (HPCA2009) will serve as a forum to present current work by researchers and software developers from around the world as well as to highlight activities in the high performance computing area. It aims to bring together research scientists, application pioneers, and software developers to discuss problems and solutions and to identify new issues in this area. The conference will emphasize both design and analysis of high performance computing algorithms, tools, platforms, and their scientific, engineering, medical and industrial applications.

Topic of Interests

1. Numerical Algorithms and Solutions

- * Numerical ODEs, PDEs, integral equations, linear algebra
- * Finite difference, volume, and element methods
- * Boundary element methods, multi-scale methods, Monte Carlo methods and lattice Boltzmann methods
- * Treatment of uncertainty

2. Parallel Computing

- * Parallel solvers
- * Multigrid and multilevel methods
- * Domain decomposition methods
- * Parallel computing strategies

3. High performance and grid computing

- * High performance computing architecture and platform
- * Grid computing architecture and platform
- * Toolkits, development environments, and programming languages
- * Performance evaluation models and tools

4. Novel approaches to high performance computing

- * Multi/many core architecture, programming, compiling and scheduling
- * Cloud computing architecture, platform and tools

5. Mass data storage and processing

- * Mass data storage architecture
- * Meta-data and data grid
- * Data mining

6. Applications

- * Scientific computing for physical problems
- * Computational fluid dynamics
- * Mathematical modeling
- * Numerical simulation
- * Computer visualization
- * Engineering and industrial applications
- * Computational grid applications
- * Bio-medical information and bio-informatics
- * Mass data based applications

PAPER SUBMISSION

Proceedings of presented and refereed papers will be published with Springer as a volume of LNCS (<http://www.springer.com/lncs>). And selected papers will be asked to be revised and extended for publication in Springer's Computing (<http://www.springer.com/springerwiennewyork/mathematics/journal/607>) and International Journal of Numerical Analysis and Modeling (<http://www.math.ualberta.ca/ijnam>). Participants wishing to present a paper in a field related to the conference themes are invited to submit no more than 6-pages in English to sc@department.shu.edu.cn. Please include the address, telephone, fax, and e-mail address of the primary contact person. All accepted papers must meet the strict requirements imposed by the publisher before final submission, especially the English should reach a satisfactory level. For the updated or more information, please visit the conference web page <http://hpca.shu.edu.cn> or email the secretariat at sc@department.shu.edu.cn.

CONFERENCE PROCEEDINGS

Proceedings of presented and refereed papers will be published with Springer as a volume of LNCS (<http://www.springer.com/lncs>). Some of the selected papers will be invited to be revised further for publication in journals:

Springer's Computing <http://www.springer.com/springerwiennewyork/mathematics/journal/607>

and International Journal of Numerical Analysis and Modeling <http://www.math.ualberta.ca/ijnam/>

IMPORTANT DATES

Paper submission	April 30, 2009
Acceptance	May 20, 2009
Final paper submission	June 10, 2009

