



CALL FOR PAPERS

2008 ACM International Conference on Computing Frontiers



May 5 - 7, 2008, Ischia, Italy



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The increasing needs of present and future computation-intensive applications have stimulated research in new and innovative approaches to the design and implementation of high-performance computing systems. These boundaries between state of the art and revolutionary innovation constitute the computing frontiers that must be pushed forward to provide the computational support required for the advancement of all science domains and applications. This conference focuses on a wide spectrum of advanced technologies and radically new solutions; it is designed to foster communication among many scientific and technological disciplines.

Authors are invited to submit papers on all areas of innovative computing systems that extend the current frontiers of computer science and engineering and that will provide advanced systems for current and future applications.

Papers are sought on theory, methodologies, technologies, and implementations concerned with innovations in computing paradigms, computational models, architectural paradigms, computer architectures, development environments, compilers, and operating environments. Papers are solicited in, but not limited to, the following areas:

- Non-conventional computing
- Next-generation high performance computing, esp. novel high-performance systems (including Cell, GPGPU and custom accelerators)
- Applications, programming models and performance analysis of parallel architectures and novel high-performance systems
- Virtualization and virtual machines
- Grid computing
- Compilers and operating systems
- Workload characterization of emerging applications
- Service oriented architecture (SOA) and system impact
- Supercomputing
- SOC architectures, embedded systems and special-purpose architectures
- Temperature, energy, and variability-aware designs
- Fault tolerance and reliability
- System management and security
- Quantum and nanoscale computing
- Computational biology
- Reconfigurable computing and architecture prototyping
- Autonomic and organic computing
- Computation intelligence frontiers: theory and industrial applications

All papers will be published in the conference proceedings and will be made available in the ACM Digital Library. In addition, selected papers will be invited to appear in a special issue of the HiPEAC journal.

Submitted manuscripts should not exceed 20 double-spaced, single-column pages, including figures, tables, and references. Submission implies that at least one author will register for the conference and present the paper, if accepted. Submissions must be made electronically as Adobe PDF files through the conference web-site, and must not be simultaneously submitted to any other publication outlet.

Important Dates

Paper submission deadline:
December 7, 2007

Author notification:
January 18, 2008

Final papers due:
February 22, 2008