CALL FOR PAPERS
2006 ACM International Conference on Computing Frontiers

May 2-5, 2006, 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 challenging boundaries between state of the art and innovation constitute the computing frontiers, which must push forward and 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, and is designed to foster communication between the various scientific areas and disciplines involved.

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 should be submitted to one of the following areas:

- Non-conventional computing
- Next generation high performance computing
- Grid computing
- Reconfigurable computing
- Special purpose architectures
- Compilers and operating systems
- Supercomputing
- SOC architectures
- High performance embedded architectures
- Pervasive computing

- Temperature, energy, and complexity-aware designs
- Quantum computing
- Autonomic and organic computing
- Architectures and devices for emerging nanotechnologies
- Workload characterization of emerging applications
- Computations intelligence frontiers: theory and industrial applications
- Computational biology
- System management and security
- Open topics

Selected papers will be published in special issues of the *ACM Journal of Emerging Technology in Computing Systems* or the *Journal of Instruction Level Parallelism*. 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. Submissions must be made electronically as Adobe PDF files through the conference website.

Important Dates
Abstract submission deadline: December 9, 2005
Full paper submission deadline: December 16, 2005
Author notification: January 24, 2006
Full paper submission deadline: February 24, 2006

For more information, visit the conference web site at
http://www.computingfrontiers.org

GENERAL CO-CHAIRS
Monica Alderighi, INAF– IASF, IT
monica@mi.iasf.cnr.it
Valentina Salapura, IBM, US
salapura@us.ibm.com

PROGRAM CHAIR
Sally A. McKee, Cornell University, US
sam@csl.cornell.edu

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