

**SPECIAL ISSUE OF THE JOURNAL
“COMPUTERS & ELECTRICAL ENGINEERING”**

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Issue Title: Emerging Computing Architectures and Systems

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Theme:

This special issue attempts to create a platform to foster new ideas and technical insights in the design and analysis of emerging computing architectures and systems and their scientific, engineering, and commercial applications. In particular, we would like to focus on issues on multi-core/many-core computing and programming, system-on-chip architectures/systems, cloud computing, file systems and storage systems, and next generation computing systems. We invite submissions of regular papers with unpublished original results and, by invitation, the revised and extended version of the papers presented in the High-Performance Computing Architectures (HPCA) Track at the 8th International Conference on Information Technology: New Generation (ITNG).

Specific Topics:

Topics of interest include, but are not limited to, the following:

- System-on-chip (SoC) and network-on-chip (NoC) architectures
- Multi-core processor architecture
- Application modeling and mapping schemes for multi-core/SoC systems
- Multi-core computing and programming techniques
- Power-efficient architectures and techniques for multi-core/SoC systems
- Microarchitecture design techniques: instruction-level parallelism, pipelining, caching, branch prediction, multithreading
- Embedded and reconfigurable architectures
- Secure and reliable processor designs
- Advanced computer architectures for general and application-specific enhancement
- Parallel computer architectures
- Application-specific processor/architecture designs
- Cache and memory systems
- High-performance I/O systems
- File systems and storage systems
- Cloud computing
- Scheduling issues in parallel computing systems
- Interconnect and network interface architectures
- Modeling and performance analysis of parallel computing systems
- Tools and methodology for architecture designs
- Verification and testing techniques

Journal Guide for Authors:

All submitted papers will be *peer-reviewed*. Accepted manuscripts must conform to the

journal guide for Authors on:

http://www.elsevier.com/wps/find/journaldescription.cws_home/367/description

Important Deadlines

Special issue advertisement: Oct. 30, 2010

Submission of special issue manuscript: Mar. 1, 2011

Notification of special issue acceptance: Jun. 1, 2011

Submission of final journal version: Jul. 1, 2011

Special Issue Publication: Nov. 2011