

IET Computers & Digital Techniques Call for Papers

SPECIAL ISSUE ON: High-Performance Computing System Architectures: Design and Performance

High-performance computing systems continue to dominate the design of next generation System-on-Chip (SoC) architectures. These systems require specialized hardware and software features in order to take advantage of billions of available transistors. This special issue is dedicated to research on high-performance computing, architecture, design methods and applications, bringing together research efforts of scientists and engineers working on SoC innovations from related research communities, including parallel computer architecture, networking, and embedded systems. Original papers describing new and previously unpublished results are solicited on all aspects of high-performance computing.

Topics:

- Cache architectures
- Fault-tolerance and reliability
- Processor algorithms and mapping onto MPSoC
- Low power techniques for embedded systems
- Reconfigurable computing
- Computer arithmetic
- Performance and power issues
- Metrics, benchmarks, and trace analysis
- Multi/many-core workload characterization & evaluation
- Modeling and simulation of on-chip parallel and networked systems
- Synthesis, verification, debug & test of SoCs
- SoC design methodologies and tools Network support for SoC Quality of Service (QoS)
- On-chip systems for FPGAs and structured ASICs
- Memory system design and optimizations for SoCs
- Early reports on system prototypes details
- SIMD parallel VLSI computing
- I/O interconnects and support for SoCs
- and other related topics...

All papers must be submitted through the journal's Manuscript Central system:
<http://mc.manuscriptcentral.com/iet-cdt>

Proposed publication schedule:

Submission Deadline:

28 April 2011

Notification of Interim Decision:

28 July 2011

Revised Paper Submission:

28 August 2011

Final Decision:

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Final Paper:

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