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Journal of Real-Time Image Processing

Special Issue on Design and Architectures for

Real-Time Image Processing in Embedded Systems

Guest Editors:
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Aims and Scope:

The design of embedded systems for image and video processing is a key challenge due to the growing complexity of applications and architectures. In particular, the execution platforms are evolving towards very complex System-on-Chips solutions with a large number of execution resources. In addition, applications demand higher and higher performances but also flexibility to adapt to their environments. These evolutions cannot be considered independently and thus appropriate methods and tools need to be developed in order to obtain best tradeoffs between performances and specific constraints of embedded systems.

The Conference on Design and Architectures for Signal and Image Processing (DASIP) has provided an inspiring international forum for latest innovations and developments in this field of leading edge embedded signal and image processing systems. This special issue is offering a forum for the authors of the selected papers from the DASIP Conference to publish expanded versions of their papers as journal papers. This special issue is not restricted to the above conference papers and other authors are also encouraged to submit papers. The theme of this special issue is focused on real-time image and video processing with specialization on:

Design Methods and Tools
- Design verification and fault tolerance
- Embedded system security and security validation
- System-level design and hardware/software co-design
- Communication synthesis, architectural and logic synthesis
- Embedded real-time systems and real-time operating systems
- Rapid system prototyping, performance analysis and estimation
- Formal models, transformations, algorithm transformations and metrics

Development Platforms, Architectures and Technologies
- Embedded platforms for multimedia and telecom
- Many-core and multi-processor systems, SoCs, and NoCs
- Reconfigurable ASIPs, FPGAs, and dynamically reconfigurable systems
- Asynchronous (self-timed) circuits and analog and mixed-signal circuits
- Biologically based and/or inspired systems

Use-Cases and Applications
- Ambient intelligence, ubiquitous and wearable computing
- Global navigation satellite systems, smart cameras, and PDAs
- Security systems, cryptography, object recognition and tracking
- Embedded systems for automotive, aerospace, and health applications

Smart Sensing Systems
- Sensor networks, environmental and system monitoring
- Vision sensors
- Structurally-embedded, distributed, and multiplexed sensors
- Sensing for active control systems, adaptive and evolutionary sensors

Authors from academia and industry working in the above research areas are requested to submit original papers, previously unpublished and not currently under review by other journals. If the work has been published in the above conference proceedings, the journal version is required to include additional material and results beyond the conference version. The authors of the selected papers will be asked to participate in the peer-review process of this special issue.

Prospective authors should submit an electronic copy of their complete manuscript through the Manuscript Tracking System of the JRTIP at http://www.editorialmanager.com/jrtip/ according to the following timetable:

SPECIAL ISSUE TIMELINE:
Papers due: January 31, 2012
First round review completed: April 30, 2012
Revision and second round review completed: June 30, 2012
SUBMISSION:
The guidelines for authors and reviewers are available for download from the JRTIP webpage: http://www.springer.com/
Submissions can be uploaded via http://www.editorialmanager.com/jrtip/ and should be indicated for consideration in the Special Issue on Design & Architectures for Image Processing in Embedded Systems.

Prior to sending full paper submissions, it is highly recommended to query the appropriateness of submissions with a 100-200 word abstract by contacting one of the guest editors with the following contact information:

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