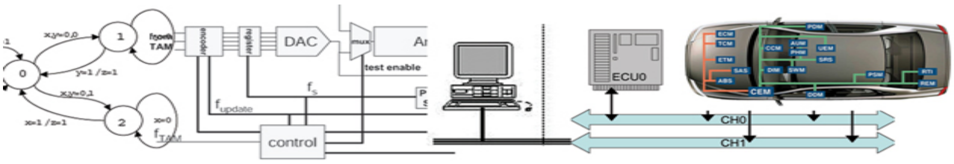

CfP

IEEE Symposium on Industrial Embedded Systems – SIES'2009

July 8-10, 2009
Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

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IEEE Council on Electronic Design Automation (requested)

Background: Application domains have had a considerable impact on the evolution of embedded systems, in terms of required methodologies and supporting tools and resulting technologies. SoCs are slowly making inroads in to the area of industrial automation to implement complex field-area intelligent devices which integrate the intelligent sensor/actuator functionality by providing on-chip signal conversion, data processing, and communication functions. There is a growing tendency to network field-area intelligent devices around industrial type of communication networks. Similar trends appear in the automotive electronic systems where the Electronic Control Units (ECUs), typically implemented as heterogeneous system-on-chip, are networked by means of one of safety-critical communication protocols such as FlexRay, for instance, for the purpose of controlling one of vehicle functions; electronic engine control, ABS, active suspension, etc. The design of this kind of networked embedded systems (this includes also hard real-time industrial control systems) is a challenge in itself due to the distributed nature of processing elements, sharing common communication medium, and safety-critical requirements, to mention some.

Aim: The aim of the symposium is to bring together researchers and practitioners from industry and academia and provide them with a platform to report on recent developments, deployments, technology trends and research results, as well as initiatives related to embedded systems and their applications in a variety of industrial environments.

Topics within the scope of the workshop will include, but are not limited to:

Embedded Systems: Design and Validation of Embedded Systems; Real-Time Issues; Models of Embedded Computation; Design and Verification Languages; Operating Systems and Quasi-Static Scheduling; Timing and Performance Analysis; Power Aware Embedded Computing; Adaptive Embedded Systems; Security in Embedded Systems

System-on-Chip and Network-on-Chip Design & Testing: Design of Application-Specific Instruction-Set Processors; Design and Programming of Embedded Multiprocessors; SoC Communication and Architectures; NoC Communication and Architectures; Design of SoC/NoC; Platform-Based Design for Embedded Systems; Reconfigurable Platforms; Multiprocessor SoC Platforms and Tools; Testing of Embedded Core-based Integrated Circuits.

Networked Embedded Systems: Design Issues for Networked Embedded; Middleware Design and Implementation for Networked Embedded Systems; Self Adaptive Networked Entity Sensor, Networks: Architectures, Energy-Efficient Medium Access Control, Time Synchronization Issues, Distributed Localization Algorithms, Routing, Distributed Signal Processing, Security.

Embedded Applications: Industrial Automation and Controls; Automotive Applications; Industrial Building Automation and Control; Power (sub-) Station Automation and Control; Intelligent Sensors, etc. – design, maintenance, fault tolerance & dependability, networks, infrastructure, safety and security.

Author's Information

Submission of Papers: The working language of the conference is English. Two types of submissions are solicited. Long Papers - limited to 20 double-space pages. Work-in-Progress – limited to 4 double column pages. Manuscripts must be submitted electronically in PDF format, according to the instructions contained in the Conference web site.

Paper Acceptance: Each accepted paper must be presented at the conference by one of the authors. The final manuscript must be accompanied by a registration form and a registration fee payment proof. All conference attendees, including authors and session chairpersons, must pay the conference registration fee, and their travel expenses.

Author's Schedule:

Submission deadline for long papers: ***March 20, 2009***
Notification for acceptance of long papers: ***May 22, 2009***
Deadline for final manuscript of long papers: ***June 12, 2009***

Submission deadline for WIP papers: ***April 24, 2009***
Notification for acceptance for WIP papers: ***May 29, 2009***
Deadline for final manuscript of WIP papers: ***June 12, 2009***

Further information
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