



www.codes-iss.org

Fifth IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis

October 11-16, 2009, Grenoble, France

CALL FOR PAPERS

The IEEE/ACM/IFIP International Conference on Hardware-Software Codesign and System Synthesis is one of the premier events in design of embedded systems hardware, software, and tools. The conference proudly continues the tradition of being a high-quality forum for active discussion on current and innovative topics. The program will bring together the latest in academic and industrial research and development. High-quality original papers will be accepted for oral presentation followed by interactive poster sessions. Selected papers from the conference proceedings will be targeted for journal publication.

AREAS OF INTEREST

The Conference invites papers on all aspects of the design and architecture of embedded computing systems, from application specific to heterogeneous systems, from custom to FPGA implementations, from handheld to high-performance systems. Topics of interest include, but are not limited to:

1) High-level, architectural and system-level synthesis

Synthesis algorithms and tools, integration and design flow, specification and modeling, design representation, partitioning, estimation.

2) Hardware-software co-design

Co-design methodologies, interaction between architecture and software design, HW/SW partitioning, design space exploration, HW/SW interface.

3) Specification languages and models

System-level models and semantics, requirements engineering, formal properties, heterogeneous systems and components, design flow.

4) Simulation and verification

Hardware-software co-simulation, verification methodology, formal verification, HW acceleration, test methodology, design for testability

5) Power-aware design methodology

Power and performance modeling, analysis and estimation techniques, power management approaches, low-power design methodologies

6) Embedded systems architecture

Architecture optimization, application-specific architectures, memory and communication architecture exploration, architecture optimization

7) Embedded software

Compilers, memory management, virtual machines, scheduling, power-aware OS, real-time support and middleware. multi- and manycore, multiprocessor programming models for SoCs and NoCs, profiling techniques and trace generation

8) Application-specific architectures and algorithms

Application-specific processor architectures and tools, hardware accelerators and/or processors for network, media and security applications, reconfigurable processors.

9) Industrial practices and case studies and emerging techniques

Design experiences of high interest to the community. Applications of new state-of-the-art methodologies and tools to real-life problems in various application areas: e.g. wireless, networking, multimedia, automotive, medical systems and sensor networks. New challenges for next generation embedded computing systems, arising from increased heterogeneity, new technologies or new applications.

10) Multiprocessors and MPSoC

Multi- and many-core systems for embedded and general purpose application, design space exploration, MPSoC.

11) Network-on-chip

On-chip communication architectures and protocols, switching, routers and communications space exploration

PAPER SUBMISSION

Papers should represent original work, not published or submitted for publication in other forums. Formal proceedings will be published on CD-ROM and web page forms (copyright by ACM and IEEE). Papers should be submitted electronically on the web. A blind review process will be enforced, thus AUTHORS SHOULD NOT REVEAL AUTHORSHIP DIRECTLY OR INDIRECTLY THROUGH REFERENCES. Papers must be in PDF format and should not exceed 10 pages in ACM two-column format (9pt on 8.5"x11" letter size paper). **For formatting instructions and templates, visit www.acm.org/sigs/pubs/proceed/template.html.**

Proposals for special sessions and panels are also invited. These should be single page, succinctly outlining the topic, positioning and likely participants.

IMPORTANT DATES

Deadlines for submission

Abstract submission:	Friday, May 1, 2009
Full paper submission:	Friday, May 8, 2009
Notification of acceptance:	Monday, July 27, 2009
Deadline for final version:	Sunday, Aug. 09, 2009

CHAIRS

Program Co-Chairs for CODES+ISSS 2009:

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Embedded Systems Week - www.esweek.org

CODES+ISSS 2009 will be colocated with EMSOFT (www.emsoft.org), CASES (www.casesconference.org) and other events including workshops and tutorials. Together they will represent an exciting event called [Embedded Systems Week](http://www.esweek.org) from October 11-16, 2009.

One Registration Three Conferences: registered attendees to either CODES+ISSS, CASES, or EMSOFT will be allowed to attend sessions in the other conference as well for free! (Associated workshops may require separate registration).