Second IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis
CALL FOR PAPERS

CODES+ISSS Merged Conference
Sept. 8-10, 2004, Stockholm, Sweden
http://www.ida.liu.se/codes/

PREMIER EVENT IN SYSTEM LEVEL DESIGN

The IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis is the premier event in design of embedded systems hardware, software and tools. We are proud to continue the tradition of upholding high quality in an open forum for promoting active discussion on innovative topics. The program actively seeks industry participation. High-quality original papers will be accepted for oral presentation followed by interactive poster sessions. Proceedings are published by ACM SIGDA, and selected papers from the conference proceedings will be targeted for journal publication in a special issue.

AREAS OF INTEREST

The International Conference on Hardware/Software Codesign and System Synthesis invites papers on all aspects of the design and architecture of semi-custom heterogeneous embedded computing systems – such as medical devices, cell phones, network processors, handheld computers, automotive and multimedia systems, systems-on-a-chip (SoCs). Topics of interest include, but are not limited to:

1) High-level, architectural and system-level synthesis
Specification and modeling, design representation, synthesis, partitioning, estimation, design space exploration, codesign for reliable systems.

2) Hardware/software codesign
Codesign methodologies, test and debug strategies, interaction between architecture and software design, design space exploration beyond traditional hw/sw boundary, theory and algorithms.

3) Specification languages
System level models and semantics, timing, power, formal properties, heterogeneous systems and components.

4) Embedded systems software
Compilers, memory management, virtual machines, scheduling, concurrent software for SoCs, distributed/resource aware OS, OS and middleware support for application specific processors.

5) Embedded systems architecture
Heterogeneous multiprocessors, reconfigurable platforms, memory management support, communication, protocols, network-on-chip.

6) Application-specific processor architectures and synthesis
Network processors, media processors, app-specific HW accelerators, reconfigurable processors, low power embedded processors, bio/fluidic processors.

7) Synthesis, modeling, and analysis
Low power, power-aware, testable, reliable, verifiable systems, performance modeling, validation and cosimulation, security issues.

8) Industrial practices and benchmark suites
System design, processor design, software, tools, case studies, trends, emerging technologies, experience maintaining benchmark suites, representation, interchange format, tools, copyrights, maintenance, reference implementations, and metrics.

9) New topics
New challenges for next generation semi-custom heterogeneous computing systems, arising from new technologies (e.g., nanotechnology) or new applications (e.g., ubiquitous computing). Studies of how technology and applications interact to motivate new solutions and design approaches, e.g., on-chip heterogeneous multiprocessing and user-friendly HCI leading to new programmer's views in system-level design and resulting in new benchmarks, models, architectures, design tools and methodologies.

New for 2004!

10) Design track: new solutions for the design of embedded systems
This track will be devoted to contributions that highlight design experiences of great interest to the community, by demonstrating the application of new theoretical approaches as well as state-of-the-art methodologies and tools to real-life problems.

PAPER SUBMISSION

Papers should represent original work not published or submitted for publication in other forums. Formal proceedings will be published by ACM SIGDA in hardcopy, web page, and a CD-ROM forms. Papers should be submitted electronically over the web. By Mar.15 the conference website will open its paper submission page that will guide the authors through the submission process. The paper must be in PDF and should not exceed 6 pages. It should follow the ACM two-column proceedings format at a minimum of 9pt on 8.5"x11", letter-sized page (no A4 please). For the purpose of anonymous review, DO NOT REVEAL AUTHORSHIP DIRECTLY OR INDIRECTLY THROUGH REFERENCES. LaTeX users: please make sure your PDF uses vectored fonts, not bitmapped fonts.

By submitting a paper, the authors agree to prepare the final camera ready version and to present the paper in person at the conference if the paper is accepted.

Proposals for group discussions and special sessions are also invited. These should be single page proposals succinctly outlining the topic, problem(s) addressed, positioning and likely participants. Attention must be paid to audience participation in such discussions. While all technical topics within the areas of interest are welcome, we are especially interested in emerging technical areas.

IMPORTANT DATES

Deadline for submission: Monday, April 12, 2004
Notification of acceptance: Friday, June 11, 2004
Deadline for final version: Monday, July 5, 2004

Papers submitted after the deadline, exceeding the page limit, or unveiling the authorship will automatically be rejected.

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