DSD'2005
8th EUROMICRO CONFERENCE ON
DIGITAL SYSTEM DESIGN
Architectures, Methods and Tools
Porto, Portugal, August 30th - September 3rd, 2005
Call for Papers

Universidade do Porto
Faculdade de Engenharia
FEUP

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The **Euromicro Conference on Digital System Design (DSD)** addresses all aspects of (embedded) digital and mixed hardware/software system engineering.

It is a discussion forum for researchers and engineers working on state-of-the-art investigations, development, and applications.

It focuses on advanced system, design, and design automation concepts, paradigms, methods and tools, as well as, modern implementation technologies that enable effective and efficient development of high-quality (embedded) systems for important and demanding applications in fields such as (wireless) communication and networking; measurement and instrumentation; health-care and medicine; military, space, avionic and automotive systems; security; multi-media and ambient intelligence.

The main areas of interest are the following:

1. **Systems-on-a-chip/in-a-package:** generic system platforms and platform-based design; network on chip; multi-processors; system on re-configurable chip; system FPGAs and structured ASICs; rapid prototyping; asynchronous systems; power, energy, timing, predictability and other quality issues; intellectual property, virtual components and design reuse.

2. **Programmable/re-configurable architectures:** processor, communication, memory and software architectures with focus on application specific and/or embedded computing, co-processors; processing arrays; programmable fabrics; embedded software; arithmetic, logic and special-operator units.

3. **System, hardware and embedded software specification, modeling and validation:** design languages; functional, structural and parametric specification and modeling; simulation, emulation, prototyping, and testing at the system, register-transfer, logic and physical levels; co-simulation and co-verification.

4. **System, hardware and embedded software synthesis:** system, hardware/software and embedded software synthesis; behavioral, register-transfer, logic and physical circuit synthesis; multi-objective optimization observing power, performance, communication, interconnections, layout, technology, reliability, robustness, security, testability and other issues; (dynamic) management of computational resources, power, energy etc.; design environments for embedded systems and re-configurable computing.

5. **Emerging technologies, system paradigms and design methodologies:** optical, bio, nano and quantum technologies and computing; self-organizing and self-adapting (wireless) systems; wireless sensor networks; ambient intelligence and augmented reality; ubiquitous, wearable and implanted systems; deep sub-micron design issues.

6. **Applications of (embedded) digital systems with emphasis on demanding and new applications in fields such as:** (wireless) communication and networking; measurement and instrumentation; health-care and medicine; military, space, avionic and automotive systems; security; multi-media, instrumentation and ambient intelligence; health-care and medicine; military, space, avionic and automotive systems; security; multi-media and ambient intelligence.

Important Dates:
- Submission of papers: March 1st, 2005
- Notification of acceptance: May 3rd, 2005
- Deadline for final version: June 9th, 2005
- Submission of Special Sessions: January 15, 2005
- Acceptance of Special Sessions: January 31, 2005

DSD'05 web page:
http://dsd2005.univ-rennes1.fr
Euromicro web page:
http://www.euromicro.org
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SUBMISSION OF PAPERS

Regular Papers: Submissions can be made that describe innovative work in the scope of the Conference, and especially, in any of the above main areas of interest (*please indicate the topic area*). Prospective authors are encouraged to submit their manuscripts for review electronically to the Program Chair via email (dsd05-papers@listes.univ-rennes1.fr) before the deadline for submission. Each manuscript should include the complete paper text, all illustrations, and references. The manuscript should conform to the required format single-spaced, double column, A4/US letter page size, 10-point size Times Roman font, up to 8 pages. In order to conduct a blind review, no indication of the authors' names should appear in the submitted manuscript. A separate sheet should be added containing the paper title, topic area, the authors' names and affiliations, and the contact author's name, address and email address.

Case Study and Application Papers: Submissions can be made which report on state-of-the-art digital systems, design methods and/or tools, and (embedded) applications. Papers discussing lessons learned from practical experience, demanding or new applications, and experimental research are particularly encouraged. Manuscripts may be submitted in the same way as regular papers.

Special (Invited) Sessions: Proposals for panel sessions, hot topic sessions, embedded tutorials and other invited sessions are especially welcome. The session organizer(s) should discuss with the Program Chair a single page abstract outlining the session or tutorial topic, together with a list of possible contributors, by the deadline for submission.

The Program Committee will decide if papers will be accepted for a long presentation (30 minutes), short presentation (15 minutes), or as a poster. For long and short presentations, 8 pages will be assigned in the published proceedings. A poster presentation will be assigned 4 pages. Papers exceeding the page limit will be charged 50 Euro per page in excess. If the paper is accepted, at least one of the authors must pre-register and pay the conference fee before the deadline for submitting the camera-ready paper. Otherwise the paper will not be published in the proceedings.

The Proceedings of DSD'2005 will be published by the IEEE Computer Society.