



SAC 2013 28th ACM Symposium on Applied Computing

Coimbra, Portugal, March 18-22 2013

<http://www.acm.org/conferences/sac/sac2013>



Important Dates

Sept. 21st 2012 - Paper Submission

Nov. 10th, 2012 - Author Notification

Nov. 30th, 2012 - Camera-Ready Copies

Track Chairs

A. Bechini and C. A. Prete - Univ. of Pisa, Italy

Program Committee

Peter Altenbernd - Univ. of Applied Sciences
Darmstadt - Germany

Eric Altman - IBM T.J. Watson Research Center - USA

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Frank Hannig - U. of Erlangen-Nuremberg - Germany

Niraj K. Jha - Princeton University - USA

Per Gunnar Kjeldsberg - NTNU Trondheim - Norway

Andreas Krall - TU Wien - Austria

Ákos Lédeczi - Vanderbilt Univ. - USA

Arindam Mallik - IMEC - Belgium

Claire Pagetti - ONERA - France

Andy D. Pimentel - Univ. of Amsterdam - The Netherlands

Binoy Ravindran - VirginiaTech - USA

Christine Rochange - IRIT - France

Bastian Schlich - ABB Corp. Research - Germany

Martin Schoeberl - DTU - Denmark

Henk Sips - TU Delft - The Netherlands

Jean-Pierre Talpin - INRIA/IRISA - France

Hiroaki Tomiyama - Ritsumeikan Univ. - Japan

Miroslav Velev - Aries Design Automation - USA

Ning Weng - Southern Illinois U. Carbondale - USA

I-Ling Yen - Univ. of Texas at Dallas - USA

Wang Yi - Uppsala Univ. - Sweden

SPECIAL TRACK

Embedded Systems

Advances along the Hardware/Software Borderline

High performance embedded computing has recently become more and more present in devices used in everyday life. A wide variety of applications, from consumer electronics to biomedical systems, require building up powerful yet cheap embedded devices. In this context, embedded software has turned out to be more and more complex, posing new challenging issues. New efficient solutions to problems emerging in this setting can be put into action by means of a joint effort of academia and industry.

Design of embedded systems must take into account a wide variety of constraints: performance, code size, power consumption, presence of real-time tasks, robustness, maintainability, security, and possibly scalability. The more convenient trade-off has to be found, often operating on a large number of different parameters. In this scenario, solutions can be proposed at different levels of abstraction, making use of an assortment of tools and methodologies: researchers and practitioners have a chance to propose new ideas and to compare experimentations.

The focus of this conference track is on the application of both novel and well-known techniques to the embedded systems development. Particular attention is paid to solutions that require expertise in different fields (e.g. computer architecture, OS, compilers, security, software engineering, simulation). The track will benefit also from direct experiences in the employment of embedded devices in "unconventional" application areas, so to show up new challenges in the system design/development process. In this setting, researchers and practitioners from academia and industry will get a chance to keep in touch with problems, open issues and future directions in the field of development of dedicated applications for embedded systems.

This year, ACM SAC will include a Student Research Competition (SRC) program, dedicated to graduate students seeking feedback from the scientific community on their research ideas. Further details are available on the track website and on the main SAC website as well.

Topics of Interest

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| <ul style="list-style-type: none">• Methodologies and tools for design-space exploration• System-level design and simulation techniques for ES• OS & Real-Time support for ES• Verification, validation, testing, debugging, and performance analysis of ES• Cyber physical systems and networked sensor devices• Multicore, SoC-based, and heterogeneous ES and applications• Time-predictable computer architecture• GPU computing in ES applications• Memory/storage management for ES• Power-aware design and computing• Runtime adaptability in ES | <ul style="list-style-type: none">• Middleware and virtual machines in ES• Multithreading in ES design & development• Compilation strategies, code transformation and parallelization for ES• Java embedded computing• Software architectures and SOA for ES• Data management in ES• ES as components in Information Systems• Multimedia in ES• Reliability in Embedded Computing and Systems• Security within ES and ES for security• Safety-critical ES• Special-purpose appliances and applications• Case studies |
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Submissions

Accepted papers will be published in the ACM SAC 2013 Proceedings.
Instructions on the submission and reviewing procedures
are available on the track web site:

<http://www.ing.unipi.it/sac13>

