



ACM Symposium on Applied Computing
SAC 2004
March 14-17, 2004, Nicosia, Cyprus



Important dates

Sept. 6th, 2003:

Paper Submission

Oct. 18, 2003:

Author Notification

Nov. 8, 2003:

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Special Track

Embedded Systems: Applications, Solutions, and Techniques

<http://www.ing.unipi.it/sac04> (not active yet)

Track Chairs

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Program Committee (to be announced)

CALL FOR PAPERS

In the last few years a large number of products embedding small-sized computer systems has gained a wide variety of market niches. Moreover, current issues in development of embedded software are becoming very attracting to a larger and larger number of researchers both from industry and from academia.

Requirements for embedded systems are very stringent and sometimes conflicting. The prime is the system cost. For obtaining a low-cost device, only the indispensable resources are employed, and they must be exploited as much as possible to improve the user-perceived quality of the final system. Moreover, some applications (especially on hand-held devices) require low power consumption.

Up to few years ago, embedded systems have not provided the proper platform for computing-intensive programs. The use of sophisticated, colorful graphical interfaces, the integration of communication devices of any kind, the access to simple databases is becoming common also for this kind of products. Thus, the capabilities of embedded systems have been improved, in order to make them suitable to host this kind of applications.

Software development in the field of embedded systems, taking into account performance issues, is becoming more and more difficult and considerable investigation is required on supporting methodologies and tools. Moreover, nowadays the use of COTS contracts time-to-market, but it also contributes to make the designer operate mostly at the architectural level, tackling performance problems following new approaches.

The focus of this conference track is on the application of both novel and well-known techniques to the development of state-of-the-art embedded systems. Particular attention is devoted to all those solutions that require operating upon the borderline between hardware and software (i.e. both at OS and application level). 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.

Topics of interest

Tools for supporting design-space exploration of embedded systems - Techniques for optimal use of SoC platforms - Application development for platform-based systems - Support for heterogeneous parallel embedded systems - OS & RTOS for embedded systems - Use of COTS in dedicated applications development - Programming models tailored to embedded applications - Software architectures of embedded systems - I/O management techniques in embedded systems - Management of complex/distributed sensor devices - Techniques for support and analysis of real-time applications - Development of software for wireless devices - Hardware/software power-aware design techniques - Techniques and solutions for improving performance and/or power consumption - Code manipulation techniques for embedded applications - Testing, debugging, profiling and performance analysis of embedded systems - Automotive applications - Special-purpose devices and applications - Case studies

Submission Guidelines

Original papers addressing the listed topics of interest will be considered. Each submitted paper will be fully refereed and undergo a blind review process.

The accepted papers in all categories will be published in the ACM SAC 2004 proceedings.

Selected papers from the track will be considered for journal publication.

Details about paper submission are available on the track home page at <http://www.ing.unipi.it/sac04>. (not active yet)