



RTAS'14, the twentieth in a series of annual conferences sponsored by the IEEE, will be held in Berlin, Germany, as part of the Cyber-Physical Systems Week ([CPSWeek](#)) in April, 2014. CPS Week 2014 will bring together leading conferences, including the International Conference on Information Processing in Sensor Networks (IPSN'14), the International Conference on Hybrid Systems (HSCC'14), the International Conference on Cyber-Physical Systems (ICCPS'14), the International Conference on High Confidence Networked Systems (HiCoNS'14) and RTAS'14. RTAS'14 invites papers describing original systems and applications, case studies, methodologies and applied algorithms that contribute to the state of practice in the broad field of embedded and open real-time systems and computing. The scope of RTAS'14 will consist of three tracks: (1) Applications, Systems, RTOSs and Tools, (2) Applied Methodologies and Foundations, and (3) Hardware/Software Integration and Co-design.

**Track 1: Applications, Systems, RTOSs and Tools.** Papers submitted to this track are aimed at presenting specific systems and implementations. They must introduce the application context and clearly define motivating application examples. Authors must introduce the related research challenges and illustrate the theoretical foundations of the methodology adopted in the considered application/tool/RTOS, with applicability. Papers in this session must include a section on experimental results with a real implementation of the proposed system or applicability to an industrial case study or working system. The experiment/use case discussion must highlight problems/bottlenecks encountered in the implementation and show the measurements/evaluations on the prototype. Simulation-based results are acceptable when the authors motivate the impossibility of an actual system development.

**Track 2: Applied Methodologies and Foundations.** Papers submitted to this track are aimed at basic methodologies and algorithms that are applicable to real systems to solve specific problems. Authors must introduce the application context and clearly define motivating application examples. The system models and any assumptions used in the derivation of the results must be applicable to real systems and reflect actual needs. Papers must also include a section on experimental results, preferably on real case studies or models of real systems, although the use of synthetic workloads and models is acceptable if motivated. Papers failing to address applicability as defined in the previous guidelines are not considered as acceptable.

**Track 3: Hardware-Software Co-design.** This track focuses on design methodologies and tools for hardware/software integration and co-design of modern embedded systems for real-time applications. General topics relevant to this track include, but are not limited to, architecture description languages and tools, WCET analysis, software architectures, design space exploration, synthesis and optimization. Of special interest are SoC design for real-time applications, special purpose functional units, specialized memory structures, multi-core chips and communication aspects, FPGA simulation and prototyping, software simulation and compilation for novel architectures and applications, as well as power, timing and predictability analyses.

## SUBMISSION OF PAPERS

All papers must be submitted electronically in PDF format, following the IEEE conference proceedings [IEEE conference proceedings format](#) and must describe original work not previously published or concurrently submitted elsewhere. The main body of each submitted paper is limited to 10 pages. Additionally, each submission may include an optional appendix with supplemental material that will be read at the discretion of the program committee; this appendix is limited to two pages (for 12 pages total). Authors of accepted papers that exceed 10 pages (due to the inclusion of an optional appendix) will be required to pay a fee of \$50 for each page beyond the tenth. A submission based on previous work presented in a workshop with no digital object identifier (DOI) is eligible for acceptance. Submissions based on a previous paper published in a workshop proceedings having a D.O.I. are eligible for acceptance, provided they contain at least 30% of new material.

## IMPORTANT DATES

Submission Deadline - **October 14<sup>th</sup>, 2013**  
Acceptance Notification - **December 13<sup>th</sup>, 2013**  
Camera-ready version - **January 17<sup>th</sup>, 2014**  
Conference - **April 15<sup>th</sup>-17<sup>th</sup>, 2014**

## ORGANIZERS

### General Chair:

Eduardo Tovar, Polytechnic Institute of Porto, Portugal

### Program Chair:

Richard West, Boston University, USA

### Track Chairs:

- (1) *Applications, Systems, RTOSs and Tools*: Richard West, Boston University, USA
- (2) *Applied Methodologies and Foundations*: James Anderson, University of North Carolina at Chapel Hill, USA
- (3) *Hardware/Software Integration and Co-design*: Samarjit Chakraborty, TU Munich, Germany

### Industrial Session Chair:

Frank Mueller, North Carolina State University, USA

### Work-in-Progress Chair:

Björn Brandenburg, Max Planck Institute for Software Systems, Germany

### Webmaster:

Harini Ramaprasad, Southern Illinois University Carbondale, USA