Message from the Chairs
ECRTS 2014

On behalf of the Euromicro Technical Committee on Real-Time Systems, it is our pleasure to welcome you to the 26th Euromicro Conference on Real-Time Systems (ECRTS 2014) in Madrid, Spain. ECRTS is one of the top conferences in the world focusing on real-time systems research.

This year, ECRTS received 114 full paper submissions with authors from 25 countries, 53 papers (46%) from non-European countries. From these submissions, the program committee selected 27 high quality papers for publication and presentation, corresponding to an acceptance rate of 24%. In a following process, two of these papers were named Outstanding Papers and marked as such in the table of contents.

The selected papers will be presented in 10 paper sessions with 30 min time slots giving sufficient time to elaborate and discuss the ideas. Paper topics and session structure reflect the broad scope and variety that real-time systems have reached today. There are sessions on multicore analysis and scheduling, a topic that has gained tremendous practical importance with the use of multicore architectures throughout the embedded systems industry. Papers with new approaches for single core systems demonstrate that this is still a very active research field with new inspiring ideas, such as for adaptive and harmonic task systems. Communication is another important area for real-time research. The more recent topic of mixed criticality extends real-time systems by safety and security aspects. Two sessions specifically address these topics. Three further sessions cover important platform aspects, memory scheduling and analysis, run time environments (RTE), and power aware real-time systems. Finally, there is a growing number of papers on probabilistic methods, both in architectures and related scheduling and analysis which were combined in a session. The Work-in-Progress (WIP) session is a well-established place at ECRTS to present ongoing work and first results to the community. It is organized by a separate committee chaired by Marko Bertogna, University of Modena, Italy.

ECRTS will include two keynotes, one from industry and one from academia. The industrial keynote “High integration ECU in automotive environment” will be given by Markus Buhlmann, Audi. The keynote will discuss the challenges when integrating and maintaining many different applications on an automotive platform under real-time and safety requirements. This integration task addresses many of the ECRTS topics. The academic keynote “Model-based design of real-time systems” by Lothar Thiele, ETH Zürich, will elaborate the relation between application models, as used in model-based design, and platform models that describe execution platform behavior. The latter are the main scope of ECRTS. This relation is theoretically challenging and of high practical relevance because model-based techniques for application development become commonplace in industry while, at the same time, models for platform scheduling and analysis become increasingly divers and complex.

The day before the main conference is dedicated to workshops, RTSOPS, WCET, OSPERT, WATERS, RTN which are detailed on the Workshops Overview page.

This conference would not be possible without the help of many people. First, we would like to thank the members of the Program Committee who carefully reviewed numerous papers and attended the program committee meeting in Dresden to make the final paper selection. The Program Committee was supported by many further reviewers who were instrumental to come to the best result. A small Outstanding Paper Award Committee selected 2 outstanding papers which are marked in the program. Alexander Tschiene, TU Braunschweig, spent much time supporting the program chair in the many tasks
that were necessary to prepare a successful event. Hermann Härtig, TU Dresden, did a great job organizing the program committee meeting. The Real-Time Technical Committee Chair, Gerhard Fohler, TU Kaiserslautern, gave very helpful advice in many instances. Finally, the members of the organizing team in Madrid, especially Alejandro Alonso, UP Madrid, devoted many hours to setting up all the details of the conference.

So, please, have a great time at the conference!

Rolf Ernst  
TU Braunschweig, Germany  
Program Chair ECRTS 2014

Juan de la Puente  
Universidad Politécnica de Madrid, Spain  
General Chair ECRTS 2014