

29th Euromicro Conference on Real-Time Systems

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Edited by

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■ Preface

Message from the Chairs

It is our pleasure to welcome you to the **29th Euromicro Conference on Real-Time Systems** (ECRTS 2017) in Dubrovnik, Croatia. ECRTS is the premier European venue for presenting research in the broad area of real-time and embedded systems. Along with RTSS and RTAS, ECRTS ranks as one of the three top international conferences on real-time systems.

We received **79 submissions** this year with authors from 22 countries, 36 (46%) from outside Europe. Each paper was reviewed by at least three active researchers in our community. Then, the program committee met in person and discussed each paper. From that discussion, 26 high-quality submissions were selected for publication and a 30 minute presentation. Three of these papers have been recognized as **Outstanding Papers** and will be presented in a dedicated session. Among the three, one is going to be selected as the Best Paper, based on the scientific contribution and the presentation clarity. Authors of accepted papers had the possibility to submit a replication package. An artifact evaluation committee validated the artifacts and included a seal of approval for those who passed the replication test. Six of the papers in the proceedings are marked with this seal.

In addition to full-length paper sessions, a **Work-In-Progress session** for short papers has been organized. Papers submitted to the Work-In-Progress session were evaluated separately by a second committee, chaired by **Patrick Meumeu Yomsi**, and are not part of these published proceedings.

The first conference days feature an opening plenary session with industrial keynote speakers. The keynotes are a great occasion to identify important, unsolved, challenges faced by real-time systems practitioners. The first keynote talk will be given by **Giulio Corradi**, from Xilinx, presenting architectural insights to address the predictability and safety challenges brought by next-generation system on chip and hardware programmable heterogeneous architectures. The second will be given by **Peter Zijlstra**, from Intel, outlining the current state of Real-Time scheduling supported by the Linux kernel, and highlighting current shortcomings and proposed ways of addressing them.

ECRTS 2017 is the first real-time conference introducing an **Open Access** publication model in collaboration with LIPIcs – Leibniz International Proceedings in Informatics established in cooperation with Schloss Dagstuhl, Leibniz Center for Informatics. Paper selection procedures and quality control remained unchanged, but from this year on accepted papers are made available to the public without cost.

The day before the main conference is dedicated to five outstanding international workshops: the workshop on Operating Systems Platforms for Embedded Real-Time Applications (OSPERT), the workshop on Real-Time Networks (RTN), the Real-Time Scheduling Open Problems Seminar (RTSOPS), the workshop on Analysis Tools and Methodologies for Embedded and Real-Time Systems (WATERS), and the workshop on Worst-Case Execution Time Analysis (WCET).

ECRTS 2017 was made possible by the hard work of many people. We are especially grateful for the contributions of the following people: the **Program Committee** and reviewers, who are listed in subsequent pages; Patrick Meumeu Yomsi as Work-In-Progress

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Chair; Marcus Völp and Heechul Yun, as **OSPERT** Workshop Chairs; Jean-Luc Scharbag and Mathieu Jan as **RTN** Workshop Chairs; Vincent Nelis and Thidapat (Tam) Chantem as **RTSOPS** Workshop Chairs; Sophie Quinton and Arne Hamann as **WATERS** Workshop Chairs; Jan Reineke as **WCET** Workshop Chair; Sebastian Altmeyer and Martina Maggio as Artifact Evaluation co-Chairs. A special thanks to Marc Herbstritt of Dagstuhl Publishing and Björn Brandenburg as Publication Chair, who did an outstanding job in collecting and properly formatting the camera-ready versions of the papers appearing in these proceedings, and to Gerhard Fohler for his unwavering support and contributions as the Euromicro Real-Time Technical Committee Chair.

Congratulations to all of the authors for their exceptional work. ECRTS 2017 would not exist without the contributions of the authors that submitted their work for review and critique. We are very pleased with the quality, depth, and breadth of this year's technical program. We hope you enjoy yourself at ECRTS 2017!

Martina Maggio
General Chair, ECRTS 2017

Marko Bertogna
Program Chair, ECRTS 2017

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