32nd Euromicro Conference on Real-Time Systems

ECRTS 2020, July 7–10, 2020, Virtual Conference

Edited by

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Preface

Message from the Chairs

Welcome to the **32nd Euromicro Conference on Real-Time Systems (ECRTS 2020)** in . . . , well this year we are everywhere on earth, in all our homes to fight SARS-COV-2. ECRTS is the premier European venue for presenting research into the broad area of real-time systems. Along with RTSS and RTAS, ECRTS ranks as one of the top three international conferences on this topic. ECRTS has been at the forefront of recent innovations in the real-time community such as artifact evaluation and open access proceedings.

For ECRTS 2020, we received submissions from 20 countries, a majority of 67% of which are from or with contributions of authors from outside Europe. Each submission was reviewed by at least three members of the program committee – all active researchers and experts in their field – with the help of 60 external reviewers. The submissions were evaluated according to their contribution, originality, technical correctness and writing quality. The program committee selected in a virtual meeting 24 excellent works for publication in the proceedings and presentation at the conference. This accounts for an acceptance rate of 34%.

From the 24 accepted papers, three have been recognized as **outstanding papers** by the program committee and will be presented in the final session. One of these three papers will be selected as **best paper** by a dedicated committee, based on both the contribution of the paper and the presentation at the conference.

In 2016, ECRTS was the first conference on real-time systems to introduce an **artifact evaluation**, with the aim to promote reproducibility of research results. An artifact evaluation committee reviews the artifacts submitted by the authors of accepted papers who choose to do so. In 2020, 6 papers (25% of the accepted papers) are marked in the proceedings with a seal indicating that their artifact has passed the repeatability test.

In 2017, ECRTS was the first conference on real-time systems to introduce an **open access publication model**, while retaining the existing quality-control measures. The open access model uses LIPIcs – Leibniz International Proceedings in Informatics, a series of high-quality conference proceedings established in cooperation with Schloss Dagstuhl, Leibniz Center for Informatics. The conference serves the research community and the public best when results are accessible to the largest audience, i.e., the research community and the public. This year again, the proceedings will be accessible free of charge for everyone.

Unfortunately, due to the difficulties imposed by COVID 19, we had to postpone all workshops to ECRTS 2021. A special thanks goes to the organizers of the workshops, who already spent a lot of time organizing their respective events. We hope to see you all at ECRTS 2021 in Modena.

For the same reasons as described above, we had to pospone the ECRTS 2020 work-in-progress session, journal-to-conference presentations, the industrial challenge and, unfortunately also the keynote speaches to ECRTS 2021. Thanks a lot to all those starting to organize these sessions and a special thanks to our keynote speakers. Now people will be even more ancious to hear your talks in 2021.

Being a virtual conference, we had the unique opportunity to learn what defines our conference. Hopefully we found replacements for what is most precious to you about ECRTS, and maybe we will keep some parts also when we all can meet again, for example at ECRTS 2021 in Modena, Italy. Our thoughts are with all those suffering from the pandemic and our gratitude with those that keep our societies operational. We all felt humbled when we

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realized that in most parts its not the scientific and industrial elite, which brings us through such hard times, but the tellers in the supermarkets, the nurses and many others.

ECRTS 2020 is the result of the hard work of many people, whose names are listed in the following pages. We are especially grateful for the contributions of the **program committee** and the **external reviewers** for carefully reviewing the submitted papers and helping us build the high-quality program of ECRTS 2020; the **artifact evaluation chairs** and the **artifact evaluators** who help this conference pave the way for reproducible research; the **workshop chairs** most of which had to postpone their events after putting a lot of effort in preparation; and Dagstuhl Publishing for their support in publishing these proceedings. Many thanks to the organization committee for their help in turning ECRTS 2020 into a virtual conference. We also thank **Sophie Quinton** for sharing her experience as the ECRTS 2019 program chair, and **Gerhard Fohler** for his steady guidance and support as the Euromicro Real-Time Technical Committee Chair.

Last, but not least, we thank all the authors who submitted their work to ECRTS 2020. This conference would not exist without you and we are proud of the high quality and scientific relevance of this year's program. Let us now enjoy ECRTS 2020!

Marko Bertogna
General Chairs, ECRTS 2020

Marcus Völp
Program Chair, ECRTS 2020

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OSPERT - Operating Systems Platforms for Embedded Real-Time Applications
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RT-Cloud - Real-Time Cloud
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RTSOPS - Real-Time Scheduling Open Problems Seminar
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WCET - Worst-Case Execution Time Analysis
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