Message from the Chairs

RTAS 2024

The IEEE Technical Committee on Real-Time Systems (TCRTS) welcomes you to the 30th edition of the IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2024). Over the past three decades, RTAS has established itself as a premier venue for research in the field of embedded real-time systems and become known for its focus on practical implementation and real-world impact.

The scope of this year's edition was slightly changed to consider a wide range of time-sensitive systems, from embedded systems to distributed and cloud-connected systems, but requiring a clear focus on timing aspects to stay close to the interests and expertise of our community. However, to further extend this community and increase industrial applicability, relevant timing aspects were broadly defined to include not only classical hard real-time constraints, but also soft real-time, probabilistic, quality-of-service (QoS), throughput, and latency requirements.

In line with previous years, the submission and review process of RTAS 2024 was organized in two tracks: Track 1 on Systems and Applications and Track 2 on Applied Methodologies and Foundations. Track 1 focused on applied systems research, spanning hardware, middleware, and applications in time-sensitive systems. In contrast, Track 2 focused on fundamental research into modelling and analysis methods that address challenges in time-sensitive systems. In total, we received 124 submissions from countries around the world. This was a substantial increase over recent years, suggesting that the community is bouncing back after the pandemic and that there is a clear interest in the topics covered by the conference. In particular, the number of submissions to Track 1 almost doubled!

The Program Committee comprised 61 reviewers, supported by 87 sub-reviewers, blending expertise from a diverse group of experts in both academia and industry. The review process remained consistent with previous years, adhering to established best practices and TCRTS guidelines to guarantee high quality standards. Each submission was evaluated through at least four reviews, resulting in a total of nearly 500 expert reviews. In addition, the review process was double anonymous to reduce potential bias. We also maintained the practice of having an author response phase, allowing authors to address and clarify any issues raised in the initial reviews to prevent misunderstandings. The Program Committee discussed the submissions on a message board and during a two-day online meeting. 19 papers were directly accepted at the meeting and another 10 papers after completing a shepherding process, resulting in a final acceptance rate of 23.3%.

Similarly to previous years, the two main technical tracks were complemented by a Brief Presentation track, this time co-chaired by Jing Li and Matthias Becker. This track added an assortment of brief-industry papers, work-in-progress papers, journal first papers, and demonstrations to the technical program. In addition, RTAS also continued to encourage authors to submit accepted papers to the Artifact Evaluation process, chaired by Mohamed Hassan, to validate reproducibility of their results according to the principles of reproducible science.

The organization of a conference like RTAS requires a lot of effort and relies heavily on the voluntary service from many committed people, to whom we are very thankful. We would like to extend our gratitude to the members of the Program Committee for their diligent reviews and active participation in discussions, especially under the pressure of an unexpectedly high review workload. Special appreciation goes to the

shepherds for their additional efforts in refining the quality of the conditionally accepted papers. We also acknowledge all those involved in conference organization, including Brief Presentation Chairs Jing Li and Matthias Becker, Publication Chair Xiaotian Dai, Artifact Evaluation Chair Mohamed Hassan, Publicity Chairs Gabrielle Russo, Zheng Dong, and Kilho Lee, and Web Chair Kuan-Hsun Chen. A heartfelt thank you goes out to past and present IEEE TCRTS Chairs Christopher Gill and Robert I. Davis, TCRTS Vice Chair Liliana Cucu, and past TCRTS Conference Sub-committee Chair Björn Brandenburg for their support and valuable advice. Our thanks also go to the entire CPS-IoT Week 2024 organization team, especially general Co-Chairs Guoliang Xing and Tei-Wei Kuo.

Lastly, but most importantly, we express our gratitude to all authors who submitted their work to RTAS 2024. Your contributions are the lifeblood of this conference and the driving force behind the ongoing evolution of our field.

Benny Akesson
RTAS 2024 Program Chair and Track 1 Chair

Mitra Nasri
RTAS 2024 Track 2 Chair

Gedare Bloom
RTAS 2024 Track 1 Deputy Chair

Bryan Ward
RTAS 2024 Track 2 Deputy Chair

Iain Bate
RTAS 2024 General Chair