

Message from General and Program Chairs

RTCSA 2025

Welcome to the 31st IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA 2025) in Singapore! Over the years, RTCSA has established itself as a prominent technical venue in the fields of real-time systems and their applications. This year, we are honored that RTCSA is sponsored by the IEEE, the IEEE Computer Society, the IEEE Technical Committee on Real-Time Systems (TCRTS), and Bosch. The conference aims to bring together international researchers and developers from academia and industry to promote cross-fertilization and discuss advances and trends in the technology of embedded and real-time systems, Internet of Things, cyber-physical systems, and their emerging applications.

This year, we have assembled an exciting program. For a start, we will host two keynote speakers and a reflections speaker:

- Keynote speaker Prof. Gian Pietro Picco from University of Trento will talk about ultra-wideband concurrent transmissions, in which tight network-wide time synchronization is crucial;
- Keynote speaker Prof. Pei-Chun Lin from National Taiwan University will present system-level design and integration strategies for multi-modal robotic locomotion;
- Reflections speaker Prof. Tulika Mitra from National University of Singapore will reflect on the key milestones of real-time embedded systems, from foundational breakthroughs to embodied intelligence.

We received 53 submissions to the three technical tracks: real-time systems track; IoT, CPS, and emerging applications track; and embedded systems track. The submissions came from 19 countries/regions around the world. Among the submissions, 21 were accepted (39% acceptance rate). The accepted papers are organized into 5 technical sessions over three days. We also feature a poster and demo session with 6 extended abstracts and 2 demos.

A conference like RTCSA is not possible without contributions from many people. We are grateful to all the authors for their contributions to and participation in the conference. We thank all members of the Program Committee for their outstanding efforts in both reviewing and discussing the submissions to produce an excellent program. Special appreciation goes to the RTCSA Steering Committee and the RTCSA Advisory Board, especially the current Steering Committee Chair, Prof. Qixin Wang, for their guidance throughout the entire conference organizing process. Finally, we also express sincere thanks to our Organizing Committee members: Mario Günzel and Qun Song (Posters and Demos Co-Chairs); Sudipta Chattopadhyay (Finance Chair); Fanxin Kong (Publication Chair); Shivaraman Nitin (Local Arrangement Chair); Duc Van Le (Registration Chair); Xiangzhong Luo, Rutvij H. Jhaveri, Song Han, and Kuan-Hsun Chen (Publicity Co-Chairs); Jiale Chen (Web Chair); Siyuan Zhou (Media Chair). Without their efforts, the conference would not have been possible.

RTCSA 2025 General Co-Chairs:

Rui Tan, *Nanyang Technological University, Singapore*
Xue Liu, *McGill University, Canada*

RTCSA 2025 Program Co-Chairs:

Mitra Nasri, *Eindhoven University of Technology (TU/e), The Netherlands*
Abusayeed Saifullah, *University of Texas at Dallas, USA*
Wei Zhang, *Hong Kong University of Science and Technology, Hong Kong SAR*