

## Message from the Chairs

### FormaliSE 2023

This volume contains the papers presented at FormaliSE 2023: the 11th International Conference on Formal Methods in Software engineering, co-located with ICSE 2023, the 45th International Conference on Software Engineering. FormaliSE is a well-established annual conference, organised by the FME (Formal Methods Europe) association, whose main goal is to promote integration between the formal methods and software engineering communities and to stimulate researchers to share ideas, techniques, and results, with the aim of proposing new solutions to improve the quality of software systems.

The Program Committee of FormaliSE 2023 comprised 29 researchers from 16 countries on 6 continents. FormaliSE this year received 32 submissions. Each submission went through a thorough reviewing process, receiving at least three detailed reviews by PC members and additional subreviewers. After an intense discussion, we accepted 14 papers. The contributions published in this volume were selected according to their quality, originality, clarity, relevance, and compliance with conference themes. The papers covered the different topics of interest for FormaliSE related to formal methods theory and practice: verification and validation, correctness-by-construction, connections to AI, scalability, integration, requirements and specification, model-based software engineering, performance and other non-functional properties, certification, safety and security, usability, as well as case studies and experience reports.

As reproducibility of experimental results is crucial to foster an atmosphere of trustworthy, open, and reusable research, FormaliSE 2023 again included a dedicated Artifact Evaluation procedure to improve and reward reproducibility. An artifact is any additional material (software, data sets, machine-checkable proofs, etc.) that substantiates the claims made in a paper and ideally makes them fully reproducible. Submission of an artifact was optional but encouraged for all papers where it could support the results presented in the paper. Artifacts were reviewed concurrently with the paper reviewing process by a separate Artifact Evaluation Committee. The results of the evaluation were transferred to the Program Committee discussion to be taken into consideration for the corresponding papers' acceptance decisions. Accepted papers with a successfully evaluated artifact received a badge to be shown on the paper's title page.

FormaliSE 2023 takes place on May 14 and 15, in Melbourne, Australia. Aside from presentations of the accepted papers, the conference program includes two keynote speakers: Paola Spoletini (Kennesaw State University, USA) and Annabelle McIver (Macquarie University, Australia). We would like to thank all authors for submitting their work, the members of the Program Committee and Artifact Evaluation Committee for their investment in the selection process, and the keynote speakers for sharing their ideas and insights with us. We would also like to thank the members of the ICSE co-located events organizing committee and the ICSE publishing team for their help in preparing the conference.

Enjoy the conference!

Stefania Gnesi, *ISTI CNR, Italy*  
Nico Plat, *University of Twente, The Netherlands*  
**General Co-Chairs**

Marie-Christine Jakobs, *TU Darmstadt, Germany*  
Toby Murray, *University of Melbourne, Australia*  
**Program Co-Chairs**

Alessio Ferrari, *CNR-ISTI, Italy*  
**Artifact Evaluation Committee Chair**

Giovanna Broccia, *ISTI-CNR, Italy*  
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