FormaliSE 2023
11th International Conference on
Formal Methods in Software Engineering
May 14-15, 2023, Melbourne, Australia , co-located with ICSE 2023
https://formalise2023.github.io/

Call for Papers

The software industry has a long-standing and well-earned reputation for failing to deliver high-quality software. Despite major advances since the early days of software development, employing the state of the art of the technologies still does not guarantee the success of software projects. Many of the approaches used for developing large, complex software systems are incapable to ensure the correct behavior - and the general quality - of the delivered product, even when the involved, often very qualified and skilled software engineers make a big effort. This is where formal methods (FMs) can play a significant role. Indeed, they have been developed to provide the means for greater precision and thoroughness in modeling, reasoning about, validating, and documenting the various aspects of software systems during their development. When carefully applied, formal methods can aid with all aspects of software creation: user requirement formulation, design, implementation, verification/testing, and the creation of documentation.

After decades of research with significant advancement, formal methods are though not yet widely used in industrial software development. We believe that a closer integration of formal methods in software engineering can help increase the quality of software applications, and at the same time highlight the benefits of formal methods in terms also of the generated return on investment (ROI).

The main objective of the conference is to foster the integration between the formal methods and the software engineering communities, to strengthen the - still too weak - links between them, and to stimulate researchers to share ideas, techniques, and results, with the ultimate goal to propose novel solutions to the fraught problem of improving the quality of software systems.

Originally a successful satellite workshop of ICSE, since 2018 FormaliSE is organized as a conference co-located with ICSE. The 11th edition of FormaliSE will also be held co-located with ICSE 2023.

Topics

Area of interest (include but are not limited to):
- requirements formalization and formal specification;
- approaches, methods and tools for verification and validation;
- formal approaches to safety and security related issues or for analysis of performance and other non-functional properties;
- scalability of formal method applications;
- formal methods in a certification context;
- usability of formal methods and guidelines to use formal methods in practice;
- integration of formal methods within the software development lifecycle;
- model-based engineering approaches;
- correctness-by-construction approaches for software and systems engineering;
- case studies developed/analyzed with formal approaches or experience reports on the application of formal methods to real-world problems;
- application of formal methods to specific domains, e.g., autonomous, cyber-physical, intelligent, and IoT systems;
- formal methods for AI-based systems (FM4AI), and AI applied in formal method approaches (AI4FM);

Paper Submission and Publication

We invite you to submit:
- Full research papers (up to 10 pages excluding references) that must describe authors' original research work and results. We encourage authors to include validation w.rt. a case study in the recommended themes. We welcome papers focusing on tools and tool development.
- Case study papers (up to 10 pages excluding references) that should identify lessons learned, validate theoretical results (such as scalability of methods) or provide specific motivation for further research and development.
- Research ideas papers (be up to 4 pages plus up to 1 additional page of references) on new research ideas in order to stimulate discussions.

All submission must be unpublished original work written in English, must conform to the IEEE Conference Proceedings Formatting Guidelines (https://www.ieee.org/conferences/publishing/templates.html), and should not be under review or submitted elsewhere whilst being under consideration. Upon submission, papers must comply with the FormaliSE's lightweight double-blind review process.

Submissions to FormaliSE 2023 can be made via EasyChair (https://easychair.org/conferences/?conf=formalise2023) by the submission deadline. We encourage authors to submit artifact in addition to their papers. Each paper will be reviewed by at least three PC members that judge the paper based on its clarity, relevance, originality, and contribution to the field. Artifacts will be evaluated by the artifact evaluation committee, but the result may be considered for the paper acceptance decision. All accepted papers are published as part of the ICSE 2023 Proceedings in the ACM and IEEE Digital Libraries. One author of each accepted paper is required to register and present the paper.

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Kirsten Winter, Defence Science and Technology Group / University of QueenslandAustralia)

Important Dates
Abstract Submission: 09 January ,2023
Paper Submission: 16 January, 2023
Notification: 21 February, 2023
Camera-Ready: 13 March. 2023