CfP: 22nd International Symposium on Formal Methods (FM 2018)

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CALL FOR PAPERS

22nd International Symposium on Formal Methods (FM 2018)


Important Dates:

- Abstract registration deadline January 8, 2018
- Submission deadline January 22, 2018
- Notification April 9, 2018
- Camera Ready May 9, 2018

FM 2018 is the latest in a series of symposia organized by Formal Methods Europe, an independent association that encourages the use of, and research on, formal methods for the engineering of computer-based systems and software. The symposia have been notably successful in bringing together researchers and industrial users around a programme of original papers on research and industrial experience, workshops, tutorials, reports on tools, projects, and ongoing doctoral work. FM 2018 will take place in Oxford, UK, 15-17 July 2018 as part of FLoC 2018, the Federated Logic Conferences.

FM 2018 will highlight the development and application of formal methods in a wide range of domains including software and integrated computer-based systems. In the latter field, cyber-physical systems, systems-of-systems, human-computer interaction, manufacturing, sustainability, power, transport, cities, healthcare, and biology are of particular interest. We also welcome papers on experiences of formal methods in industry, and on the design and validation of formal methods tools.

Submission Guidelines

FM 2018 encourages submissions on formal methods for developing and evaluating systems that interact with physical processes, and systems that use artificial intelligence technology. Examples include autonomous systems, robots, and cyber-physical systems in general. Applying formal methods to these systems
of growing interest and importance is challenging because they exhibit much greater non-determinism than traditional systems, making them challenging to assure. All papers must be original and not simultaneously submitted to another journal or conference.

The broad topics of interest for FM 2018 include, but are not limited to:

- **Interdisciplinary formal methods:** Techniques, tools and experiences demonstrating formal methods in interdisciplinary frameworks.
- **Formal methods in practice:** Industrial applications of formal methods, experience with formal methods in industry, tool usage reports, experiments with challenge problems. Authors are encouraged to explain how formal methods overcame problems, led to improved designs, or provided new insights.
- **Tools for formal methods:** Advances in automated verification, model-checking, and testing with formal methods, tools integration, environments for formal methods, and experimental validation of tools. Authors are encouraged to demonstrate empirically that the new tool or environment advances the state of the art.
- **Role of formal methods in software and systems engineering:** Development processes with formal methods, usage guidelines for formal methods, and method integration. Authors are encouraged to evaluate process innovations with respect to qualitative or quantitative improvements. Empirical studies and evaluations are also solicited.
- **Theoretical foundations:** All aspects of theory related to specification, verification, refinement, and static and dynamic analysis. Authors are encouraged to explain how their results contribute to the solution of practical problems with methods or tools.

### Submission Information

Papers should be original work, not published or submitted elsewhere, in Springer LNCS format, written in English, submitted through Easychair

https://easychair.org/account/signin.cgi?key=62642159.WvvdTBXHgD5L59eg

Each paper will be evaluated by at least three members of the Programme Committee. Authors of papers reporting experimental work are strongly encouraged to make their experimental results available for use by reviewers. Similarly, case study papers should describe significant case studies, and the complete development should be made available at the time of review. The usual criteria for novelty, reproducibility, correctness and the ability for others to build upon the described work apply. Tool papers should explain enhancements made compared to previously published work. A tool paper need not present the theory behind the tool but should focus on the tool's features, how it is used, its evaluation, and examples and screen shots illustrating the tool's use. Authors of tool papers should make their tool available for use by reviewers.

We solicit two categories of papers:

- **Regular Papers** should not exceed 15 pages, not counting references and appendices.
- **Short papers**, including tool papers, should not exceed 6 pages, not counting
references and appendices. Besides tool papers, short papers are encouraged for any subject that can be described within the page limit, and in particular for novel ideas without an extensive experimental evaluation. Short papers will be accompanied by short presentations.

For regular and tool papers, an appendix can provide additional material such as details on proofs or experiments. The appendix is not part of the page count and not guaranteed to be read or taken into account by the reviewers. It should not contain information necessary to the understanding and the evaluation of the presented work. Papers will be accepted or rejected in the category in which they were submitted -- there will be no "demotions" from a regular to a short paper.

**Keynote Speakers**

- Annabelle McIver, Macquarie University, Sydney, Australia
- Leonardo de Moura, Microsoft Research, Redmond, USA
- Kim Guldstrand Larsen, Aalborg University & UP4ALL, Denmark

**Best Paper Award**

During the conference, the Programme Committee Chairs will present an award to the authors of the submission selected as the FM 2018 Best Paper.

**Publication**

Accepted papers will be published in the Symposium Proceedings to appear in Springer’s Lecture Notes in Computer Science. Extended versions of selected papers will be invited for publication in a special issue of one or more journals.

**Location**

FM2018, the 22nd International Symposium on Formal Methods, will take place in Oxford, UK, 15-17 July 2018 as part of FLoC 2018, the Federated Logic Conferences.

**General Chair**

Erik P. de Vink, Eindhoven University of Technology, NL

**Programme Chairs**

Bill W. Roscoe, University of Oxford, GB Jan Peleska, University of Bremen, DE

**Committees**

**Programme Chairs**
Program Committee

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Jan Peleska, University of Bremen, DE
Ralf Pinger, Siemens, DE

Doctoral Symposium Chairs

Eerke Boiten, De Montfort University, UK
Fatiha Zaidi, Universite Paris-Sud XI, FR

Organizing Committee

Erik de Vink (general chair), Eindhoven University of Technology, NL
Mahmoud Talebi (website), Eindhoven University of Technology, NL

Contact

All questions about submissions should be emailed to the programme chairs.


Call for Papers Validation and Verification Foundations