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Brijesh Dongol · Elena Troubitsyna (Eds.)

Integrated Formal Methods

16th International Conference, IFM 2020
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Proceedings

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Preface

In recent years, we have witnessed a proliferation of approaches that integrate several modeling, verification, and simulation techniques, facilitating more versatile and efficient analysis of computation-intensive systems. These approaches provide powerful support for the analysis of different functional and non-functional properties of the systems, different hardware and software components, and their interaction, as well as design and validation of diverse aspects of system behavior.

This volume contains the papers presented at the 16th International Conference on integrated Formal Methods (iFM 2020), which has taken place virtually due to the COVID-19 pandemic. The iFM conference series is a forum for discussing recent research advances in the development of integrated approaches to formal modeling and analysis. The conference covers all aspects of the design of integrated techniques, including language design, system verification and validation, automated tool support, and the use of such techniques in practice. We are also seeing increasing interest in the integration of fields such as machine learning and program synthesis with traditional formal approaches.

iFM 2020 solicited high-quality papers reporting novel research results as well as tool papers and experience reports. The Program Committee (PC) received 63 submissions and selected 24 for the publication, of which 2 are short papers. The acceptance rate is 38% (which also includes short papers). Each paper received three reviews. The PC members thoroughly discussed the merits of each paper before making the final decisions.

The program of iFM 2020 also includes keynote talks given by three prominent researchers:

- Edward A. Lee from the University of California, Berkeley, USA
- David Parker from the University of Birmingham, UK
- Hongseok Yang from the School of Computing, KAIST, South Korea

We would like to thank the invited speakers for accepting our invitation and agreeing to share their research results and aspirations with the iFM 2020 audience.

The PC co-chairs would like to thank the PC members for their active work in advertising iFM 2020, contributing to the program and reviewing submissions. We also thank all our subreviewers for providing expert guidance and contributing to the PC discussions. Despite the pandemic, the PC members and subreviewers stayed active throughout the entire review and discussion processes. We are especially grateful to the general chair Carlo A. Furia from Università della Svizzera italiana, Switzerland, for organizing the conference, and Springer for sponsoring iFM 2020. Finally, we would like to thank all the authors, who despite hard pandemic times, prepared submissions and helped us to build a strong and interesting iFM 2020 program.

We hope you enjoyed the conference!

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