

Preface

This volume contains the proceedings of the Second International Workshop of Formal Techniques for Safety-Critical Systems (FTSCS 2013), held in scenic Queenstown, New Zealand, during October 29–30, 2013, as a satellite event of the ICFEM conference.

The aim of FTSCS is to bring together researchers and engineers who are interested in the application of formal and semi-formal methods to improve the quality of safety-critical computer systems. FTSCS strives to promote research and development of formal methods and tools for industrial applications, and is particularly interested in industrial applications of formal methods. Specific topics of the workshop include, but are not limited to:

- Case studies and experience reports on the use of formal methods for analyzing safety-critical systems, including avionics, automotive, medical, and other kinds of safety-critical and QoS-critical systems;
- Methods, techniques, and tools to support automated analysis, certification, debugging, etc., of complex safety/QoS-critical systems;
- Analysis methods that address the limitations of formal methods in industry (usability, scalability, etc.);
- Formal analysis support for modeling languages used in industry, such as AADL, Ptolemy, SysML, SCADE, Modelica, etc.;
- Code generation from validated models.

The first FTSCS was held in Kyoto in 2012, also as a satellite event of ICFEM that year. The proceedings of FTSCS 2012 appeared as volume 105 of *Electronic Proceedings in Theoretical Computer Science*, and a special issue of the *Science of Computer Programming* journal devoted to selected papers from that workshop is in preparation.

FTSCS 2013 received 32 regular paper submissions and one position/work-in-progress paper submission. Each submission was reviewed by three reviewers; based on the reviews and extensive discussions, the Program Committee selected 17 of these regular papers and the position/work-in-progress paper for presentation at the workshop. This volume contains revised versions of these 17 regular papers, as well as an extended abstract of the invited talk by Ian Hayes. Extended versions of selected papers from the workshop will also appear in a special issue of *Science of Computer Programming*.

Many colleagues and friends have contributed to FTSCS 2013. First, we would like to thank Kokichi Futatsugi and Hitoshi Ohsaki for encouraging us to start this series of workshops in 2012. We thank Ian Hayes for accepting our invitation to give an invited talk and the authors who submitted their work to FTSCS 2013 and who, through their contributions, made this workshop an interesting event attracting more than 30 participants. We are particularly grateful that so many well-known researchers agreed to

serve on the Program Committee, and that they all provided timely, insightful, and detailed reviews.

We also thank the editors of Springer's *Communications in Computer and Information Science (CCIS)* for agreeing to publish the proceedings of FTSCS 2013, Bas van Vlijmen for accepting our proposal to devote a special issue of *Science of Computer Programming* to extended versions of selected papers from FTSCS 2013, Jing Sun for his invaluable help with local arrangements, and Andrei Voronkov for the excellent EasyChair conference systems.

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