Automated Verification of Critical Systems 2018 (AVoCS 2018)

Preface

1 pages

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The international workshop on Automated Verification of Critical Systems (AVoCS) is a forum to foster interaction and exchange of ideas among members of the international research community on tools and techniques for the verification of critical systems. The subject is to be interpreted broadly and inclusively. For example, the topics of AVoCS 2018 cover all aspects of automated verification, including model checking, theorem proving, SAT and SMT constraint solving, automated testing and verification, abstract interpretation, security analysis, model-based development, and refinement. These topics concern various types of critical systems which need to meet stringent dependability requirements: distributed databases and execution platforms, railways systems, mobile phone applications, embedded operating systems, and internet communicating applications.

The 18th edition of AVoCS has been hosted by the Department of Computer Science of University of Oxford, during July 18-19, 2018. The event was affiliated to Formal Methods (FM) 2018 as part of the Federated Logic Conference (FLoC) 2018, which included other conferences related with formal methods and automated verification, for example CAV and IJCAR. Papers were solicited for AVoCS 2018 under two categories: regular papers describing fully developed work and complete results, and short papers describing research ideas, work in progress or preliminary results. The symposium received 15 full papers and 1 short paper, out of which were accepted 11 full papers for pre-proceedings publication of FLoC 2018. All these papers included as authors young researchers, usually master or PhD candidates, which demonstrate the vitality of this domain. This volume contains 11 papers from the accepted ones, after a final review of the pre-proceeeding version.

In addition to the referred papers, the symposium featured three invited presentations: "Formal Methods at Amazon Web Services," by Michael Tautschnig, Software Development Engineer at AWS, ; "Automatic Verification of Concurrent Objects," by Michael Emmi, Researcher at SRI International; and "Experiences with thread-modular static analysis of concurrent embedded systems by abstract interpretation," by Antoine Miné, Professor at Sorbonne Université.

The organizers are grateful to the authors for submitting their work at AVoCS 2018 and to the invited speakers for sharing their experience and for interesting insights. AVoCS 2018 and the publication of this volume would not have been possible without the productive collaboration of the Programming Committee. We thanks the EASST board for accepting the publication of these post-proceedings and for their support. The AVoCS 2018 website can be found at http://avocs18.irisa.fr.

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