

Preface

This volume contains the papers presented at VMCAI 2018: the International Conference on Verification, Model Checking, and Abstract Interpretation held during January 7–9, 2018, in Los Angeles, co-located with POPL 2018 (the annual ACM SIGPLAN/SIGACT Symposium on Principles of Programming Languages). Previous meetings were held in Port Jefferson (1997), Pisa (1998), Venice (2002), New York (2003), Venice (2004), Paris (2005), Charleston (2006), Nice (2007), San Francisco (2008), Savannah (2009), Madrid (2010), Austin (2011), Philadelphia (2012), Rome (2013), San Diego (2014), Mumbai (2015), St. Petersburg, Florida (2016), and Paris (2017).

VMCAI provides a forum for researchers from the communities of verification, model checking, and abstract interpretation to present their research and aims to facilitate interaction, cross-fertilization, and advancement of hybrid methods that combine these and related areas. VMCAI topics include: program verification, model checking, abstract interpretation, program synthesis, static analysis, type systems, deductive methods, decision procedures, theorem proving, program certification, debugging techniques, program transformation, optimization, hybrid and cyber-physical systems.

This year the conference received 43 submissions, of which 24 were selected for publication in the proceedings. Each submission was reviewed by at least three Program Committee members, and the main selection criteria were quality, relevance, and originality. In addition to the presentations of the 24 selected papers, the conference also featured an invited tutorial by Mayur Naik (University of Pennsylvania) as well as three invited keynote talks by Ken McMillan (Microsoft Research), Azadeh Farzan (University of Toronto), and Ranjit Jhala (University of California San Diego). We warmly thank them for their participation and contributions.

We would like to thank the members of the Program Committee and the external reviewers for their excellent work. We also thank the members of the Steering Committee, and in particular Lenore Zuck and Andreas Podelski, for their helpful advice, assistance, and support. We thank Annabel Satin for her help in coordinating the events co-located with POPL 2018, and we thank the POPL 2018 Organizing Committee for providing all the logistics for organizing VMCAI. We are also indebted to EasyChair for providing an excellent conference management system.

Finally, we would like to thank our sponsors, Amazon Web Services and Facebook, for their valuable contributions to VMCAI 2018.

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Isil Dillig
Jens Palsberg

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Dillig, I.; Palsberg, J. (Eds.)

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