

# Preface

This volume contains the papers presented at VMCAI 2017, the 18th International Conference on Verification, Model Checking, and Abstract Interpretation, held during January 15–17, 2017, in Paris, France, co-located with POPL 2017 (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), and St. Petersburg, Florida (2016).

VMCAI provides a forum for researchers from the communities of verification, model checking, and abstract interpretation, facilitating interaction, cross-fertilization, and advancement of hybrid methods that combine these and related areas. VMCAI topics include: program verification, model checking, abstract interpretation and abstract domains, program synthesis, static analysis, type systems, deductive methods, program certification, debugging techniques, program transformation, optimization, hybrid and cyber-physical systems.

This year the conference attracted 60 submissions. Each submission was reviewed by at least three Program Committee members. The committee decided to accept 27 papers. The principal selection criteria were relevance, quality, and originality. We are pleased to include in the proceedings the contributions of three invited keynote speakers: Ernie Cohen (Amazon Web Services), Pascal Cuoq (Trust in Soft), and Jasmin Fisher (Microsoft Research). We warmly thank them for their participation and for their contributions.

We would like also to thank the members of the Program Committee and the external reviewers for their excellent work. We also thanks the members of the Steering Committee, and in particular Andreas Podelski and Lenore Zuck, for their helpful advice, assistance, and support. We also thank Laure Gonnord for her invaluable help in all aspects related to the organization of the conference. We thank Annabel Satin for the help in coordinating the events co-located with POPL 2017, and we thank the POPL 2017 Organizing Committee for providing all the logistics for organizing VMCAI. We are also indebted to EasyChair for providing us with an excellent conference management system.

Finally, we would like to thank our generous sponsors: AdaCore, Amazon Web Services, Facebook, and Microsoft Research.

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