

# Preface

This volume contains a selection of the papers presented at LOPSTR 2015, the 25th International Symposium on Logic-Based Program Synthesis and Transformation held during July 13–15, 2015, at the University of Siena, Italy. It was co-located with PPDP 2015, the 17th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming.

Previous LOPSTR symposia were held in Canterbury (2014), Madrid (2013 and 2002), Leuven (2012 and 1997), Odense (2011), Hagenberg (2010), Coimbra (2009), Valencia (2008), Lyngby (2007), Venice (2006 and 1999), London (2005 and 2000), Verona (2004), Uppsala (2003), Paphos (2001), Manchester (1998, 1992, and 1991), Stockholm (1996), Arnhem (1995), Pisa (1994), and Louvain-la-Neuve (1993). More information about the symposium can be found at: <http://alpha.diism.unisi.it/lopstr15/>.

The aim of the LOPSTR series is to stimulate and promote international research and collaboration on logic-based program development. LOPSTR is open to contributions in all aspects of logic-based program development, all stages of the software life cycle, and issues of both programming-in-the-small and programming-in-the-large. LOPSTR traditionally solicits contributions, in any language paradigm, in the areas of synthesis, specification, transformation, analysis and verification, specialization, testing and certification, composition, program/model manipulation, optimization, transformational techniques in SE, inversion, applications, and tools. LOPSTR has a reputation for being a lively, friendly forum for presenting and discussing work in progress. Formal proceedings are produced only after the symposium so that authors can incorporate this feedback in the published papers.

In response to the call for papers, 30 contributions were submitted from 17 different countries. The Program Committee accepted six full papers for immediate inclusion in the formal proceedings, and 14 full papers plus one short paper presented at the symposium were accepted after a revision and another round of reviewing. Each submission was reviewed by at least three Program Committee members or external reviewers. In addition to the 21 contributed papers, this volume includes the abstract of the talks by two outstanding invited speakers: Patrick Cousot (Courant Institute of Mathematical Sciences, New York University, USA), whose talk was shared with PPDP, and Gilles Barthe (IMDEA Software Institute, Madrid, Spain). This volume also includes the full paper by a third outstanding invited speaker: Dale Miller (Inria and LIX/Ecole Polytechnique, Palaiseau, France), whose talk was shared with PPDP.

We want to thank the Program Committee members, who worked diligently to produce high-quality reviews for the submitted papers, as well as all the external reviewers involved in the paper selection. We are very grateful to the LOPSTR 2015 local organizers for the great job they did in managing the symposium. Many thanks also to Elvira Albert, the Program Committee chair of PPDP, with whom we often interacted to coordinate the two events. We would also like to thank Andrei Voronkov for his excellent EasyChair system that automates many of the tasks involved in

chairing a conference. Special thanks go to all the authors who submitted and presented their papers at LOPSTR 2015, without whom the symposium would have not been possible. We also thank the Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche, the Italian Chapter of the European Association for Computer Science, and the Association for Logic Programming for their cooperation and support in the organization of the symposium.

October 2015

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<http://www.springer.com/978-3-319-27435-5>

Logic-Based Program Synthesis and Transformation  
25th International Symposium, LOPSTR 2015, Siena,  
Italy, July 13-15, 2015. Revised Selected Papers  
Falaschi, M. (Ed.)  
2015, XVII, 385 p. 88 illus. in color., Softcover  
ISBN: 978-3-319-27435-5