

Preface

This volume contains a selection of the papers presented at LOPSTR 2016, the 26th International Symposium on Logic-Based Program Synthesis and Transformation, held during September 6–8, 2016, at the University of Edinburgh, Scotland, UK. It was co-located with two other conferences: PPDP 2016, the 18th International ACM SIGPLAN Symposium on Principles and Practice of Declarative Programming, and SAS 2016, the 23rd Static Analysis Symposium. The co-location of these three related conferences has been shown to be very productive and cross-fertilizing. Previous LOPSTR symposia were held in Siena (2015), 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://www.cliplab.org/Conferences/LOPSTR16/>.

The aim of the LOPSTR series is to stimulate and promote international research and collaboration in logic-based program development. LOPSTR is open to contributions in all aspects of this area, including all stages of the software life cycle and dealing with issues related to 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 forum that allows presenting and discussing both finished work and work in progress. Formal proceedings are produced only after the symposium so that authors can incorporate the feedback from the conference presentation and discussions.

In response to the call for papers, 45 abstracts were submitted to LOPSTR 2016, of which 38 resulted in full submissions, from 21 different countries. After the first round of reviewing, the Program Committee accepted two full papers for direct inclusion in the formal proceedings, and 18 full papers presented at the symposium were accepted after a post-conference revision and another round of reviewing. Each submission was reviewed by at least three Program Committee members or external reviewers. The paper “A Hiking Trip Through the Orders of Magnitude: Deriving Efficient Generators for Closed Simply-Typed Lambda Terms and Normal Forms” by Paul Tarau won the best paper award, sponsored by Springer. In addition to the 20 contributed papers, this volume includes the abstracts of the talks by our three outstanding invited speakers: Francesco Logozzo (Facebook, USA) and Greg Morrisett (Cornell University, USA), whose talks were shared with PPDP, and Martin Vechev (ETH Zurich, Switzerland), whose talk was shared with SAS.

We would like 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 2016 Organizing Committee composed by James Cheney (local organizer) and Moreno Falaschi for the wonderful job they did in managing the symposium. Many thanks also to Germán Vidal, the Program Committee chair of PPDP 2016, and Xavier Rival, the Program Committee chair of SAS 2016, with whom we often interacted to coordinate the three 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 the invited speakers and to all the authors who submitted and presented their papers at LOPSTR 2016. Finally, we also thank our sponsors, the School of Informatics of the University of Edinburgh, the IMDEA Software Institute, the European Association for Programming Languages and Systems, the European Association for Theoretical Computer Science, the Association for Logic Programming, and Springer for their cooperation and support in the organization of the symposium.

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Papers

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