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Clare Dixon · Marcelo Finger (Eds.)

Frontiers of Combining Systems

11th International Symposium, FroCoS 2017
Brasília, Brazil, September 27–29, 2017
Proceedings

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Preface

The 11th International Symposium on Frontiers of Combining Systems (FroCoS) was held 27–29th September 2017 at the University of Brasília, Brazil. It was co-located with the 26th International Conference on Automated Reasoning with Analytic Tableaux and Related Methods (Tableaux) and the 8th International Conference on Interactive Theorem Proving (ITP). The symposium included both invited speakers and contributed papers and the three co-located events shared a poster session and were preceded by a number of workshops and tutorials.

The first FroCoS symposium was held in Munich, Germany, in 1996. Initially held every two years, since 2004 it has been organised annually with alternate years forming part of IJCAR. Like previous events in the FroCoS series, FroCoS 2017 offered a forum for research in the general area of combination, modularisation, and integration of systems, with an emphasis on logic-based ones and on their practical use. The development of techniques and methods for the combination and integration of dedicated formal systems, as well as for their modularisation and analysis, is crucial to the development of systems in logic, computation, program development and verification, artificial intelligence, knowledge representation, and automated reasoning.

FroCoS 2017 received 26 full paper submissions, with authors from 16 different countries. These were reviewed and discussed by the Programme Committee and each paper received at least three reviews. From these, 17 papers were selected for presentation at the symposium and publication. Their topics include description and temporal logics, decision procedures, decidability and verification, SAT, SMT and automated theorem proving, term rewriting, and properties and combinations of logics. The proceedings also include papers from two of our invited speakers.

The FroCoS programme included two invited speakers:

- Cesare Tinelli (University of Iowa, USA) Designing Extensible Theory Solvers
- Renata Wassermann (University of São Paulo, Brazil) Revising System Specifications in Temporal Logic

with three additional invited speakers being shared between all conferences:

- Katalin Bimbó (University of Alberta, Canada) The Perimeter of Decidability (with Sequent Calculi on the Inside)
- Jasmin Blanchette (Vrije Universiteit Amsterdam, The Netherlands) Foundational (Co)datatypes and (Co)recursion for Higher-Order Logic
- Cezary Kaliszyk (University of Innsbruck, Austria) Locally Abstract, Globally Concrete Semantics of Concurrent Programming Languages

We would like to thank all the people who worked hard to make the 2017 symposium a success. In particular, we thank the invited speakers for their inspirational talks and contributed papers, authors for submitting, revising and presenting their work, and all the attendees for contributing to the symposium discussion. We also extend our

thanks to the Program Committee and external reviewers for their prompt, careful reviewing and discussion of the submissions.

Finally we convey our gratitude and appreciation to everybody who contributed to the organisation of the event, in particular to Cláudia Nalon, Daniele Nantes Sobrinho, Elaine Pimentel, João Marcos and their team for taking care of all the local organisation so expertly and making our life as co-chairs much easier. Particular thanks go to Cláudia Nalon for bringing the symposium and co-located events to Brazil and for her thorough organisation, enthusiasm, leadership and patience.

We acknowledge and thank a number of organisations for supporting the symposium. The Association for Automated Reasoning (AAR), the European Association for Computer Science Logic (EACSL), and the Association for Symbolic Logic (ASL) provided scientific support. We received financial support from the National Council for Scientific and Technological Development (CNPq, ARC 03/2016). The University of Brasília and the Federal University of Rio Grande do Norte have both contributed to the organisation. We thank Springer for their continuing support with publishing the proceedings and to EasyChair for allowing us to use their conference management system. We are grateful for the support of all these organisations.

September 2017

Clare Dixon
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