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Contents

Preface
  Ricardo Rocha, Tran Cao Son, Christopher Mears, and Neda Saeedloei 0:vii–0:ix

ICLP 2016: Technical Communications

Entity Set Expansion from the Web via ASP
  Weronika T. Adrian, Marco Manna, Nicola Leone, Giovanni Amendola, and Marek Adrian 1:1–1:5

The Pyglaf Argumentation Reasoner
  Mario Alviano 2:1–2:3

Reasoning on Anonymity in Datalog+/-
  Giovanni Amendola, Nicola Leone, Marco Manna, and Pierfrancesco Veltri 3:1–3:5

Rule Based Temporal Inference
  Melisachew Wudage Chekol and Heiner Stuckenschmidt 4:1–4:14

Logic Programming with Max-Clique and its Application to Graph Coloring (Tool Description)
  Michael Codish, Michael Frank, Amit Metodi, and Morad Muslimany 5:1–5:18

Semantic Versioning Checking in a Declarative Package Manager
  Michael Hanus 6:1–6:16

Understanding Restaurant Stories Using an ASP Theory of Intentions
  Daniela Inclezan, Qinglin Zhang, Marcello Balduccini, and Ankush Israney 7:1–7:4

Learning Effect Axioms via Probabilistic Logic Programming
  Rolf Schwitter 8:1–8:15

Towards Run-time Checks Simplification via Term Hiding
  Nataliia Stulova, José F. Morales, and Manuel V. Hermenegildo 9:1–9:3

A Hitchhiker’s Guide to Reinventing a Prolog Machine
  Paul Tarau 10:1–10:16

Efficient Declarative Solutions in Picat for Optimal Multi-Agent Pathfinding
  Neng-Fu Zhou and Roman Bartáčk 11:1–11:2

ICLP 2016 Doctoral Program: Technical Communications

Treewidth in Non-Ground Answer Set Solving and Alliance Problems in Graphs
  Bernhard Bliem 12:1–12:12

Achieving High Quality Knowledge Acquisition using Controlled Natural Language
  Tiantian Gao 13:1–13:10

A Simple Complete Search for Logic Programming
  Jason Hemann, Daniel P. Friedman, William E. Byrd, and Matthew Might 14:1–14:8

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On Improving Run-time Checking in Dynamic Languages

Nataliia Stulova ................................................................. 15:1–15:10
Preface

This volume contains the Technical Communications of the 33rd International Conference on Logic Programming (ICLP 2017), held in Melbourne, Australia, from the 28th of August to the 1st of September, 2017. Since the first conference held in Marseille in 1982, ICLP has been the premier international event for presenting research in logic programming. Contributions to ICLP are sought in all areas of logic programming, including:

- **Implementation** – Compilation, Virtual Machines, Parallelism, Constraint Handling Rules, Tabling.
- **Environments** – Program Analysis, Transformation, Validation, Verification, Debugging, Profiling, Testing.
- **Language Issues** – Concurrency, Objects, Coordination, Mobility, Higher Order, Types, Modes, Assertions, Programming Techniques.
- **Applications** – Databases, Big Data, Data Integration and Federation, Software Engineering, Natural Language Processing, Web and Semantic Web, Agents, Artificial Intelligence, Bioinformatics, and Education.

Three kinds of submissions were accepted:

- **Technical papers**, for technically sound, innovative ideas that can advance the state of logic programming.
- **Application papers**, that impact interesting application domains;
- **System and tool papers**, which emphasize novelty, practicality, usability, and availability of the systems and tools described.

This year, ICLP adopted the hybrid publication model used in all recent editions of the conference, with journal papers and Technical Communications (TCs), following a decision made in 2010 by the Association for Logic Programming. Papers of the highest quality were selected to be published as **rapid publications** in the journal of Theory and Practice of Logic Programming (TPLP), Cambridge University Press. The TCs comprise papers which the Program Committee judged of good quality but not yet of the standard required to be accepted and published in TPLP as well as dissertation project descriptions stemming from the Doctoral Program (DP) held with ICLP.

We received 55 full submissions for the main conference, the Program Committee recommended 13 to be accepted as TCs, of which 11 were materialized in this volume (2 were withdraw). The DP, with a separate Program Committee, received 4 submissions, all of which were accepted. All papers in this volume were presented in specific sessions of ICLP 2017. The best DP paper was given the opportunity to be presented in a slot of the main conference.

We are of course deeply indebted to both Program Committee members and external reviewers, as the conference would not have been possible without their dedicated, enthusiastic and outstanding work. The Program Committee members for ICLP and the DP were:
The external reviewers were:

Joaquin Arias  Georgios Karachalias  Javier Romero
Marc Bezem  Arash Karimi  Elmer Salazar
Bernhard Bliem  Michael Kifer  Vitor Santos Costa
Zhao Chen  Ruben Lapauw  Lukas Schweizer
Jonnahtan Cook  Thomas Linsbiclzher  Farhad Shakerin
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We would also like to express our gratitude to the full ICLP 2017 organization committee, namely Maria Garcia de la Banda and Guido Tack, who acted as general chairs; Enrico Pontelli, who served as workshop chair; Tommaso Urli, who acted as publicity chair and designed the web pages; and, finally, Paul Fodor and Graeme Gange, who organized the programming contest.

Our gratitude must be extended to Torsten Schaub, who is serving in the role of President of the Association of Logic Programming (ALP), to all the members of the ALP Executive Committee and to Mirek Truszczynski, Editor-in-Chief of TPLP. Also, to the staff at Cambridge University Press, especially Richard Horley and Samira Ceccarelli, and to the
personnel at Schloss Dagstuhl-Leibniz Zentrum für Informatik, especially Marc Herbstritt, for their timely assistance. We would also like to thank the staff of the EasyChair conference management system for making the life of the Program Chairs easier. Thanks should go also to the authors of all submitted papers for their contribution to make ICLP alive and to the participants for making the event a meeting point for a fruitful exchange of ideas and feedback on recent developments.

Finally, we would like to thank our generous gold-tier sponsors – the Association for Logic Programming, the Association for Constraint Programming, the Monash University, the University of Melbourne, CSIRO Data61, COSYTEC and Satalia; our generous bronze-tier sponsors – Google; and our generous donors – the European Association for Artificial Intelligence, the International Journal of Artificial Intelligence, Springer, CompSustNet and Cosling.

Ricardo Rocha, Tran Cao Son, Christopher Mears, and Neda Saeedloei
Program Committee Chairs
August 2017
0:xii Authors

Amit Metodi  
Cadence Design Systems  
ametodi@cadence.com

Matthew Might  
University of Utah  
United States of America  
might@cs.utah.edu

José F. Morales  
IMDEA Software Institute  
Spain  
josef.morales@imdea.org

Morad Muslimany  
Ben-Gurion University of the Negev  
Israel  
moradm@cs.bgu.ac.il

Rolf Schwitter  
Macquarie University  
Australia  
Rolf.Schwitter@mq.edu.au

Heiner Stuckenschmidt  
University of Mannheim  
Germany  
heiner@informatik.uni-mannheim.de

Nataliia Stulova  
IMDEA Software Institute  
Spain  
nataliia.stulova@imdea.org

Paul Tarau  
University of North Texas  
United States of America  
paul.tarau@unt.edu

Pierfrancesco Veltri  
University of Calabria  
Italy  
veltri@mat.unical.it

Qinglin Zhang  
Miami University  
United States of America  
zhangq7@miamioh.edu

Neng-Fa Zhou  
CUNY Brooklyn College  
United States of America  
zhou@sci.brooklyn.cuny.edu