

Technical Communications of the 34th International Conference on Logic Programming

ICLP 2018, July 14–17, 2018 ,Oxford, United Kingdom

Edited by

Alessandro Dal Palu'

Paul Tarau

Neda Saeedloei

Paul Fodor



Editors

Alessandro Dal Palu'
Università di Parma, Italy
alessandro.dalpalu@unipr.it

Paul Tarau
University of North Texas, USA
Paul.Tarau@unt.edu

Neda Saeedloei
Southern Illinois University Carbondale, USA
neda@cs.siu.edu

Paul Fodor
Stony Brook University, USA
pfodor@cs.stonybrook.edu

ACM Classification 2012

Software and its engineering → Constraint and logic languages, Theory of computation → Logic,
Theory of computation → Constraint and logic programming,

ISBN 978-3-95977-090-3

Print ISBN: 978-1-5108-7548-7

Published online and open access by

Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern,
Germany. Online available at <http://www.dagstuhl.de/dagpub/978-3-95977-090-3>.

Publication date

November 2018

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed
bibliographic data are available in the Internet at <http://dnb.d-nb.de>.

License

This work is licensed under a Creative Commons Attribution 3.0 Unported license (CC-BY 3.0):
<http://creativecommons.org/licenses/by/3.0/legalcode>.



In brief, this license authorizes each and everybody to share (to copy, distribute and transmit) the work
under the following conditions, without impairing or restricting the authors' moral rights:

- Attribution: The work must be attributed to its authors.

The copyright is retained by the corresponding authors.

Digital Object Identifier: 10.4230/OASlcs.ICLP.2018.0

ISBN 978-3-95977-090-3

ISSN 2190-6807

<http://www.dagstuhl.de/oasics>


■ Contents

| | |
|---|------------|
| Preface | |
| <i>Alessandro Dal Palu', Paul Tarau, Neda Saeedloei, and Paul Fodor</i> | 0:vii–0:ix |

ICLP 2018: Technical Communications

| | |
|--|------------|
| Epistemic Logic Programs with World View Constraints | |
| <i>Patrick Thor Kahl and Anthony P. Leclerc</i> | 1:1–1:17 |
| Cumulative Scoring-Based Induction of Default Theories | |
| <i>Farhad Shakerin and Gopal Gupta</i> | 2:1–2:15 |
| Introspecting Preferences in Answer Set Programming | |
| <i>Zhizheng Zhang</i> | 3:1–3:13 |
| A New Proof-Theoretical Linear Semantics for CHR | |
| <i>Igor Stéphan</i> | 4:1–4:17 |
| CHR ^{vis} : Syntax and Semantics | |
| <i>Nada Sharaf, Slim Abdennadher, and Thom Frühwirth</i> | 5:1–5:20 |
| Improving Candidate Quality of Probabilistic Logic Models | |
| <i>Joana Côrte-Real, Anton Dries, Inês Dutra, and Ricardo Rocha</i> | 6:1–6:14 |
| Towards Incremental and Modular Context-Sensitive Analysis | |
| <i>Isabel Garcia-Contreras, José F. Morales, and Manuel V. Hermenegildo</i> | 7:1–7:2 |
| MASP-Reduce: A Proposal for Distributed Computation of Stable Models | |
| <i>Federico Igne, Agostino Dovier, and Enrico Pontelli</i> | 8:1–8:4 |
| Declarative Algorithms in Datalog with Extrema: Their Formal Semantics Simplified | |
| <i>Carlo Zaniolo, Mohan Yang, Matteo Interlandi, Ariyam Das, Alexander Shkapsky, and Tyson Condie</i> | 9:1–9:3 |
| Towards Static Performance Guarantees for Programs with Run-Time Checks | |
| <i>Maximiliano Klemen, Nataliia Stulova, Pedro Lopez-Garcia, José F. Morales, and Manuel V. Hermenegildo</i> | 10:1–10:2 |
| SMT-Based Answer Set Solver CMODELS(DIFF) (System Description) | |
| <i>Da Shen and Yuliya Lierler</i> | 11:1–11:15 |
| Learning Commonsense Knowledge Through Interactive Dialogue | |
| <i>Benjamin Wu, Alessandra Russo, Mark Law, and Katsumi Inoue</i> | 12:1–12:19 |
| Application of Logic-Based Methods to Machine Component Design | |
| <i>Bram Aerts and Joost Vennekens</i> | 13:1–13:15 |
| Explanations Generation For Web Service Workflow | |
| <i>Van Duc Nguyen, Son Cao Tran, and Enrico Pontelli</i> | 14:1–14:3 |

Technical Communications of the 34th International Conference on Logic Programming (ICLP 2018).
Editors: Alessandro Dal Palu', Paul Tarau, Neda Saeedloei, and Paul Fodor

 **OASICS** OpenAccess Series in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

ICLP 2018: Doctoral Consortium

| | |
|---|------------|
| Probabilistic Action Language $p\mathcal{BC}+$ <i>Yi Wang</i> | 15:1–15:12 |
| Explaining Actual Causation via Reasoning About Actions and Change <i>Emily C. LeBlanc</i> | 16:1–16:11 |
| Translating P-log, LP^{MLN} , LPOD, and CR-Prolog2 into Standard Answer Set Programs <i>Zhun Yang</i> | 17:1–17:11 |
| Proof-Relevant Resolution for Elaboration of Programming Languages <i>František Farka</i> | 18:1–18:9 |
| The Learning-Knowledge-Reasoning Paradigm for Natural Language Understanding and Question Answering <i>Arindam Mitra</i> | 19:1–19:6 |
| Speeding up Lazy-Grounding Answer Set Solving <i>Richard Taupe</i> | 20:1–20:9 |
| Knowledge Authoring and Question Answering via Controlled Natural Language <i>Tiantian Gao</i> | 21:1–21:8 |
| Natural Language Generation From Ontologies Using Grammatical Framework <i>Van Duc Nguyen</i> | 22:1–22:7 |
| Model Revision of Logical Regulatory Networks Using Logic-Based Tools <i>Filipe Gouveia, Inês Lynce, and Pedro T. Monteiro</i> | 23:1–23:10 |
| Scalable Robotic Intra-Logistics with Answer Set Programming <i>Philipp Obermeier</i> | 24:1–24:5 |