

Vol-2710 urn:nbn:de:0074-2710-9

CILC 2020

Proceedings of CILC 2020

Proceedings of the 35th Italian Conference on Computational Logic - CILC 2020 Rende, Italy, October 13-15, 2020.

Edited by

Francesco Calimeri * Simona Perri * Ester Zumpano **

^{*} University of Calabria, Department of Mathematics and Computer Science, 87036 Rende, Italy
** University of Calabria, Department of Computer, Modelling, Electronics and Systems Engineering, 87036 Rende, Italy

Table of Contents

Summary: There were 37 papers submitted for peer-review to the conference. Out of these, 25 papers were accepted for this volume, 23 as regular papers and 2 as short papers. In addition, 4 more papers were part of the technical program of CILC 2020 but are not included in this volume, as they were non-original works (i.e., already published or submitted elsewhere).

Abstract of Invited Talks

Reversibility of Actions and Plans (invited talk) Wolfgang Faber	1-1
 Computational Argumentation - Formal Models and Complexity Results (invited talk) Stefan Wolfran 	2-2
 On the informal semantics of knowledge representation languages and the case of Logic Programming (invited talk) Marc Denecker 	3-3
= Introduction to Probabilistic Ontologies (tutorial) Rafael Penaloza	4-4
Papers	
= 3coSoKu and its Logic Programming Modeling Nicola Rizzo, Agostino Dovier	5-20
Towards a Complete Characterization of Epistemic Reasoning: the Notion of Trust Francesco Fabiano	21-35
Disentangling Deontic Positions and Abilities: a Modal Analysis Giovanni Sileno, Matteo Pascucci	36-50
Arg-tuProlog: a tuProlog-based Argumentation Framework Giuseppe Pisano, Roberta Calegari, Andrea Omicini, Giovanni Sartor	51-66
Computing Uniform Interpolants for EUF via (conditional) DAG-based Compact Representations Silvio Ghilardi, Alessandro Gianola, Deepak Kapur	67-81
Towards Distributed Contextualized Knowledge Repositories for Analysis of Large-Scale Knowledge Graphs (short paper) Loris Bozzato, Christoph G. Schuetz	82-90
A Natural Deduction Calculus for Gödel-Dummett Logic Internalizing Proof-search Control Mechanisms Camillo Fiorentini, Mauro Ferrari	91-104
MutantChick: Type-Preserving Mutation Analysis for Coq (short paper) Mattee Cavada, Andrea Colò, Alberto Momigliano	105-112
On (Maximal, Tractable) Fragments of the Branching Algebra Alessandro Bertagnon, Marco Gavanelli, Guido Sciavicco, Stefano Trevisani	113-126
On a Plausible Concept-wise Multipreference Semantics and its Relations with Self-organising Maps Laura Giordano, Valentina Gliozzi, Daniele Theseider Dupré	127-140
■ Reasoning on Information Term Semantics with ASP for Constructive EL[] Loris Bozzato, Camillo Fiorentini	141-156
An Ontology for the Iconographic Sources of La Divina Commedia Andrea De Domenico, Domenico Cantone, Marianna Nicolosi-Asmundo	157-168
■ Logic-based Machine Learning for Transparent Ethical Agents Abeer Dyoub, Stefania Costantini, Francesca Alessandra Lisi, Ivan Letteri	169-183
Ensuring Trustworthy and Ethical Behavior in Intelligent Logical Agents Stefania Costantini	184-198
Theorem Proving for Lewis Logics of Counterfactual Reasoning Marianna Girlando, Bioern Lellmann, Nicola Olivetti, Stefano Pesce, Gian Luca Pozzato	199-213
A Quadratic Reduction of Constraints over Nested Sets to Purely Boolean Formulae in CNF Domenico Cantone, Andrea De Domenico, Pietro Maugeri, Eugenio G. Omodeo	214-230
A Decidable Theory of Differentiable Functions with Convexities and Concavities on Real Intervals Gabriele Buriola, Domenico Cantone, Gianluca Cincotti, Eugenio G. Omodeo, Gaetano T. Spartà	231-247
A Ceteris Paribus Deontic Logic Andrea Loreggia, Emiliano Lorini, Giovanni Sartor	248-262
A Labelling Semantics for Weighted Argumentation Frameworks Stefano Bistarelli, Carlo Taticchi	263-277
Compilation of Aggregates in ASP: Preliminary Results Giuseppe Mazzotta, Bernardo Cuteri, Carmine Dodaro, Francesco Ricca	278-296
Towards a Declarative Approach to Object Comparison Bruno Sofiato, Fábio Levy Siqueira, Ricardo Luis de Azevedo da Rocha	297-311
An ASP Approach for Arteries Classification in CT-scans Francesco Fabiano, Alessandro Dal Palu	312-326
= Tautology Checkers in Isabelle and Haskell Jørgen Villadsen	327-341
Chemotherapy Treatment Scheduling via Answer Set Programming Carmine Dodaro, Giuseppe Galatà, Marco Maratea, Marco Mochi, Ivan Porro	342-356
A Formally Verified SMT Approach to True Concurrency Williams K. F. Rowles, Marco B. Caminati The Concurrency of the Concurr	357-371

Non-original papers presented to CILC 2020:

- = Continuous Reasoning for Managing Next-Gen Distributed Applications Stefano Forti, Antonio Brogi
- Logical Judges Challenge Human Judges on the Strange Case of B.C.--Valjean Viviana Mascardi, Domenico Pellegrini
- A Machine Learning guided Rewriting Approach for ASP Logic Programs Elena Mastria, Jessica Zangari, Francesco Calimeri, Simona Perri
- Removing Algebraic Data Types from Constrained Horn Clauses Using Difference Predicates Emanuele De Angelis, Fabio Fioravanti, Alberto Pettorossi, Maurizio Proietti