
PROCEEDINGS OF THE FIRST INTERNATIONAL
WORKSHOP ON ARGUMENTATION AND
APPLICATIONS
(ARG&APP 2023)

CO-LOCATED WITH THE TWENTIETH INTERNATIONAL CONFERENCE ON
PRINCIPLES OF KNOWLEDGE REPRESENTATION AND REASONING (KR
2023)

EDITED BY

OANA COCARASCU
SYLVIE DOUTRE
JEAN-GUY MAILLY
ANTONIO RAGO

King's College London
Université Toulouse Capitole
Université Paris Cité
Imperial College London

SEPTEMBER 2023
CEUR-WS

Preface

In recent years, the increasing availability of data and computational power has driven a remarkable proliferation of Artificial Intelligence (AI) systems in everyday users' lives. However, as data-driven AI systems have become commonplace, it has become increasingly clear that fields from symbolic AI have important roles to play in the future development of these systems, with one such candidate being Computational Argumentation. Formal models of argumentation have received a significant amount of attention in recent years, both within the Knowledge Representation and Reasoning community and from AI researchers in general. Given that argumentation is a mature discipline, it provides not only a wealth of theoretical formalisms suitable for a wide range of tasks, but a whole host of software instantiating these formalisms for real world settings. These strengths mean that argumentation is particularly adaptable to various application domains, e.g. cyber-democracy, explainable AI, law, medicine, multi-agent systems, public policy making, sustainable development, etc. The goal of this workshop was to emphasise the efforts of the community in this spirit and strengthen the links between formal works on argumentation, their implementations and these domains of application.

The workshop received 11 submissions, and we accepted 8 papers on diverse applications of argumentation. They cover a range of topics from the formal foundations of argumentation when deployed in a particular context, to demonstrations of application-driven, argumentative systems. The proceedings also include an invited paper describing the ICCMA 2023 competition. We hope that the works presented in the proceedings appeal not only to the growing argumentation community, but also to researchers in general who intend to use computational argumentation in their own applications.

We thank all the authors, the invited speakers Antonis Kakas, Tuomo Lehtonen and Andreas Niskanen, as well as the program committee members (listed below), for their valued contributions to the workshop.

September 2023

Oana Cocarascu
Sylvie Doutre
Jean-Guy Mailly
Antonio Rago

Program Committee

- Leila Amgoud (IRIT, CNRS, Toulouse)
- Katie Atkinson (University of Liverpool)
- Floris Bex (Utrecht University)
- Elena Cabrio (University Côte d'Azur)
- Madalina Croitoru (University of Montpellier, LIRMM)
- Anthony Hunter (University College London)
- Antonis Kakas (University of Cyprus)
- Santiago Marro (University Côte d'Azur)
- Nir Oren (University of Aberdeen)
- Fabio Paglieri (ISTC-CNR, Rome)
- Simon Parsons (University of Lincoln)
- Guilherme Paulino-Passos (Imperial College London)
- Nico Potyka (Imperial College London)
- Matthias Thimm (FernUniversität Hagen)
- Rallou Thomopolous (INRAE, Montpellier)
- Francesca Toni (Imperial College London)
- Srdjan Vesic (CRIL, CNRS, Lens)

Contents

1	Design of ICCMA 2023 - 5th International Competition on Computational Models of Argumentation: A Preliminary Report (M. Järvisalo and T. Lehtonen and A. Niskanen)	4
2	Stable Semantics for Epistemic Abstract Argumentation Framework (G. Alfano and S. Greco and F. Parisi and I. Trubitsyna)	11
3	Argumentative information improves automatic generation of counter-narratives against Hate Speech (D. A. Furman and P. Torres and J. A. Rodríguez and D. Letzen and M. V. Martínez and L. A. Alemany)	26
4	ArguCast: A System for Online Multi-Forecasting with Gradual Argumentation (D. Gorur and A. Rago and F. Toni)	40
5	A New Evolutive Generator for Graphs with Communities and its Application to Abstract Argumentation (J.-M. Lagniez and E. Lonca and J.-G. Maily and J. Rossit)	52
6	ADP : An Argumentation-based Decision Process Framework Applied to the Modal Shift Problem (C. Leturc and F. Balbo)	65
7	A Discussion of Challenges in Benchmark Generation for Abstract Argumentation (I. Kuhlmann and M. Thimm)	78
8	Abstract Argumentation Applied to Fair Resources Allocation: A Preliminary Study (J.-G. Maily)	85
9	Accessible Algorithms for Applied Argumentation (D. Odekerken and A. Borg and M. Berthold)	92