

Sixth International Workshop on Systems and Algorithms for Formal Argumentation

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1. Introduction

Computational models of argumentation are approaches that deal with the representation and interaction of arguments and counterarguments. These models can be applied in all areas that benefit from automatic decision-support such as medicine, accounting, chemistry, and law. Many of these models were inspired by works within the fields of non-monotonic reasoning and logic programming and therefore share the sometimes considerable computational complexity of these approaches.

Algorithmic aspects of computational models of argumentation are an important area, as witnessed by the popularity of the International Competition on Computational Models of Argumentation (ICCMA). This workshop aims at complementing the competition by providing a forum to present and discuss both systems and algorithms dealing with all aspects of computational argumentation, in particular those approaches addressing the tracks of the competition. A first workshop¹ had been organised in Potsdam (Germany) in 2016, a second one² in Warsaw (Poland) in 2018, a third one³ virtually in 2020, a fourth one⁴ in Cardiff (Wales, UK) in 2022, and a fifth one⁵ in Hagen (Germany) in 2024.

This workshop welcomes technical contributions in all areas dealing with algorithms and systems of formal argument. Topics of interest include, but are not limited to:

- Algorithms for solving problems in abstract argumentation frameworks
- Algorithms for solving problems in structured argumentation frameworks (such as ASPIC+, ABA, DeLP, and others)
- Computational complexity of problems in formal argumentation
- Advanced techniques that may be exploited for algorithmic purposes
- Parallel algorithms
- Approximation algorithms
- Web-based systems and argument mining
- Dialogue systems and strategic aspects of argumentation
- Machine learning and argumentation
- Design principles and software engineering aspects of tools for formal argumentation
- Metrics for evaluating algorithms
- Benchmark generation and empirical studies on real-world argumentation graphs
- System descriptions of tools for formal argumentation

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¹<http://safa2016.argumentationcompetition.org>

²<http://safa2018.argumentationcompetition.org>

³<http://safa2020.argumentationcompetition.org>

⁴<http://safa2022.argumentationcompetition.org>

⁵<http://safa2024.argumentationcompetition.org>

The workshop specifically welcomes preliminary works on the above topics. In particular, no systematic evaluations are needed for inclusion in the program. Finally, we welcome position papers that propose new tracks for the competition or discuss general matters related to it.

1.1. Submission Deadlines

- Paper submission deadline: July 13, 2026
- Notification of acceptance: August 10, 2026
- Camera-ready version: August 28, 2026
- Workshop: September 15, 2026

In this sixth edition, we received a total of nine submissions, out of which eight were accepted as regular papers in this volume after a peer review, with each submission receiving 2-3 reviews. In addition, this volume contains an abstract of the invited talk “On Logical Encodings for Argumentation-Based Reasoning” by Sylvie Doutre.

2. Organisation

2.1. Organizers

- AnneMarie Borg (Utrecht University, Netherlands)
- Jean-Guy Mailly (University Toulouse Capitole, France)
- Andreas Niskanen (University of Helsinki, Finland)
- Johannes P. Wallner (Graz University of Technology, Austria)

2.2. Program Committee

- Mario Alviano (University of Calabria, Italy)
- Matti Berthold (FernUniversität in Hagen, Germany)
- Stefano Bistarelli (University of Perugia, Italy)
- Martin Caminada (Cardiff University, United Kingdom)
- Victor David (INRIA, France)
- Jérôme Delobelle (LIPADE, University Paris Cité, France)
- Sylvie Doutre (IRIT, University Toulouse Capitole, France)
- Massimiliano Giacomin (University of Brescia, Italy)
- Matti Järvisalo (University of Helsinki, Finland)
- Timotheus Kampik (Umeå University, Sweden)
- Tuomo Lehtonen (Aalto University, Finland)
- Samer Nofal (German Jordanian University, Jordan)
- Daphne Odekerken (Utrecht University, Netherlands)
- Tjitze Rienstra (Maastricht University, The Netherlands)
- Fabio Rossi (University of Perugia, Italy)
- Francesco Santini (University of Perugia, Italy)
- Matthias Thimm (FernUniversität in Hagen, Germany)
- Mauro Vallati (University of Huddersfield, United Kingdom)

2.3. Subreviewers

- Carlo Taticchi (University of Perugia, Italy)

Declaration on Generative AI

The author(s) have not employed any Generative AI tools.