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Multi-Agent Systems

17th European Conference on Multi-Agent Systems (EUMAS 2020) and 7th International Conference on Agreement Technologies (AT 2020), September 14-15, 2020 Revised Papers

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Preface

This volume constitutes the revised post-conference proceedings of the 17th European Conference on Multi-Agent Systems (EUMAS 2020) and the 7th International Conference on Agreement Technologies (AT 2020). The conferences were originally planned to be held in Thessaloniki, Greece, in April 2020, but were eventually held online between September 14-15, 2020. The 38 full papers presented in this volume were carefully reviewed and selected from a total of 53 submissions. The papers report on both early and mature research and cover a wide range of topics in the field of multi-agent systems.

EUMAS 2020 followed the tradition of previous editions (Oxford 2003, Barcelona 2004, Brussels 2005, Lisbon 2006, Hammamet 2007, Bath 2008, Agia Napa 2009, Paris 2010, Maastricht 2011, Dublin 2012, Toulouse 2013, Prague 2014, Athens 2015, Valencia 2016, Evry 2017, Bergen 2018) in aiming to provide the prime European forum for presenting and discussing agents research as the annual designated event of the European Association of Multi-Agent Systems (EURAMAS).

AT 2020 was the seventh instalment in a series of events (after Dubrovnik 2012, Beijing 2013, Athens 2015, Valencia 2016, Evry 2017, Bergen 2018) that focus on bringing together researchers and practitioners working on computer systems in which autonomous software agents interact, typically on behalf of humans, in order to come to mutually acceptable agreements. A wide scope of technologies can help provide the support needed for reaching mutually acceptable agreements, such as argumentation and negotiation, trust and reputation, computational social choice, coalition and team formation, coordination and distributed decision-making, and semantic alignment, to name a few.

This year, for the fifth time, both events were co-located and run as a single, joint event. This joint organization aimed to encourage and continue cross-fertilization among the broader EUMAS and the more specialized AT communities, and to provide a richer and more attractive program to participants. While the technical program was put together by their independent committees, the conferences shared keynote talks and aligned their schedules to minimize overlap and enable participants to make the best possible use of the combined program of the two conferences. Traditionally, both conference series have always followed a spirit of providing a forum for discussion and an annual opportunity for primarily European researchers to meet and exchange ideas. For this reason, they have always encouraged submission of papers that report on both early and mature research.

The peer-review processes carried out by both conferences put great emphasis on ensuring the high quality of accepted contributions. The 90-person EUMAS Program Committee accepted 32 submissions as full papers. The AT review process resulted in the acceptance of 6 full papers by the 54-person AT program committee.

This volume is structured in sections mirroring the presentation sessions of the joint event (https://eumas2020.csd.auth.gr/). In addition to the papers included in this volume, the program was highlighted by two great keynote talks, the first one by Professor Sarvapali (Gopal) Ramchurn of the Department of Electronics and Computer Science, University of Southampton, UK, on "Emerging Challenge Areas for AI and Multi-Agent Systems: From Sports to Maritime", and the second one by Professor Pavlos Moraitis of the Department of Mathematics and Computer Science, University of Paris, France, on "Computational Argumentation: From Theory to Market". Two papers of EUMAS stood out from the rest and were nominated by the EUMAS Program Chairs as candidates for the best paper award. These two papers were presented in a special session and then a committee composed of all the EUMAS and AT program chairs and one of the keynote speakers, Prof. Pavlos Moraitis, decided that the award should be shared among them.

The editors would like to thank all authors for submitting to EUMAS and AT, all participants, the invited speakers, the members of the Program Committees, and the additional reviewers for putting together a strong joint program. We also thank the local organizers for their hard work organizing the events. Finally, we would like to express our gratitude to the sponsors of the conferences: Aristotle University of Thessaloniki for providing technical and human resources, MDPI Computers Journal for sponsoring the EUMAS Best Paper Award, the Journal of Autonomous Agents and Multi-Agent Systems for agreeing to publish extended versions of the EUMAS best and runner-up papers, and SN Computer Science Journal for agreeing to publish a special issue with selected extended EUMAS papers.

November 2020

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