

Preface

Welcome to the proceedings of the 20th International Conference on Principles and Practice of Multi-Agent Systems (PRIMA 2017) held in Nice, France, from October 30 to November 3.

Originally started as a regional (Asia-Pacific) workshop in 1998, PRIMA has become one of the leading and influential scientific conferences for research on multi-agent systems. Each year since 2009, PRIMA has brought together active researchers, developers, and practitioners from both academia and industry to showcase, share, and promote research in several domains, ranging from foundations of agent theory and engineering aspects of agent systems, to emerging interdisciplinary areas of agent-based research. PRIMA's previous editions were held in Nagoya, Japan (2009), Kolkata, India (2010), Wollongong, Australia (2011), Kuching, Malaysia (2012), Dunedin, New Zealand (2013), Gold Coast, Australia (2014), Bertinoro, Italy (2015), and Phuket, Thailand (2016).

We received 88 submissions from 34 countries, including five papers submitted to the social science track, chaired by Michael Mäs, whose accepted papers will be fast-tracked into the *Journal of Artificial Societies and Social Simulation* (these are not included in the present proceedings). Each submission was carefully reviewed by at least three members of the Program Committee (PC) composed of 121 prominent world-level researchers and 37 additional reviewers. The PC and senior PC (SPC) included researchers from all continents. This year, we were proud to be able to provide four or more reviews to 79 papers, in the hope of offering more feedback to the authors. In total, 350 reviews were sent to authors.

The review period was followed by PC discussions moderated by SPC members. The PRIMA SPC has been part of the PRIMA reviewing scheme since 2010, and this year it included 19 members. At the end of the reviewing process, in addition to the technical reviews, authors received a summary meta-review by an SPC member.

Of the 88 submissions, PRIMA 2017 accepted 24 full papers (an acceptance rate of 27%). An additional 11 submissions whose core ideas were judged innovative, perhaps even disruptive, but which were not fully polished to make it as full papers, were selected to appear as short papers. Two papers were accepted to be presented in the social science track.

In addition to the paper presentations and poster sessions, the conference also included a demo session and three keynote talks: the first by Jorge M. Pacheco titled "Evolutionary Game Theory of Cooperation: From Cells to Societies," the second by Wolfram Burgard on "Deep Learning for Robot Navigation and Perception," and the third by Massimiliano Giacomini titled "Handling Heterogeneous Disagreements Through Abstract Argumentation."

We would like to thank all individuals, institutions, and sponsors that supported PRIMA 2017. Mainly we thank the conference delegates and the authors, who answered our call for papers by submitting state-of-the-art research papers from all over

the world, confirming the role that PRIMA has gained as a leading international conference in multi-agent system research. Without them, none of this would have been possible. We also thank EasyChair for the use of their conference management system, which allowed us to handle the reviewing process of a conference of this size, from the early stages until the production of the present volume. We are indebted to our PC and SPC members and additional reviewers for spending their valuable time by providing careful reviews and recommendations on the submissions, and for taking part in follow-up discussions.

We also thank the demo session chair, Viviana Mascardi, and the web chair, Jeremie Dauphin, for their hard work. Finally, we are very grateful to the sponsors who supported PRIMA financially, making the conference accessible to a larger number of delegates, and supporting the participation of keynote speakers: Université Côte d’Azur, Laboratoire I3S Sophia Antipolis, and Inria.

September 2017

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PRIMA 2017: Principles and Practice of Multi-Agent
Systems

20th International Conference, Nice, France, October
30 – November 3, 2017, Proceedings

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(Eds.)

2017, XVI, 544 p. 92 illus., Softcover

ISBN: 978-3-319-69130-5