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Gita Sukthankar · Juan A. Rodriguez-Aguilar (Eds.)

# Autonomous Agents and Multiagent Systems

AAMAS 2017 Workshops, Best Papers  
São Paulo, Brazil, May 8–12, 2017  
Revised Selected Papers

*Editors*

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# Preface

AAMAS is the leading scientific conference for research in autonomous agents and multiagent systems, which is annually organized by the non-profit organization, the International Foundation for Autonomous Agents and Multiagent Systems (IFAAMAS). The AAMAS conference series was initiated in 2002 by merging three highly respected meetings: the International Conference on Multi-Agent Systems (ICMAS); the International Workshop on Agent Theories, Architectures, and Languages (ATAL); and the International Conference on Autonomous Agents (AA).

Besides the main program, AAMAS hosts a number of workshops, which aim at stimulating and facilitating discussion, interaction, and comparison of approaches, methods, and ideas related to specific topics, both theoretical and applied, in the general area of Autonomous Agents and Multiagent Systems. The AAMAS workshops provide an informal setting where participants have the opportunity to discuss specific technical topics in an atmosphere that fosters the active exchange of ideas.

This book compiles the best papers of the AAMAS 2017 workshops. In total, AAMAS 2017 ran 18 workshops. To select the best papers, the organizers of each workshop were asked to nominate up to two papers from their workshop and send those papers, along with the reviews they received during their workshop's review process, to the AAMAS 2017 workshop co-chairs. The AAMAS 2017 workshop co-chairs then studied each paper carefully, in order to assess its quality and whether it was suitable to be selected for this book. Notice that not all workshops were able to contribute to this volume. The result is a compilation of 17 papers selected from 13 workshops, which we list below.

- The 22nd International Workshop on Coordination, Organization, Institutions, and Norms in Agent Systems (COIN 2017)
- The 18th International Workshop on Multi-Agent-Based Simulation (MABS 2017)
- The 8th International Workshop on Optimisation in Multiagent Systems (OptMAS 2017)
- The 10th International Workshop on Agents Applied in Health Care (A2HC 2017)
- The 19th International Workshop on Trust in Agent Societies (Trust 2017)
- The 17th International Workshop on Adaptive Learning Agents (ALA 2017)
- The 1st International Workshop on Teams in Multi-Agent Systems (TEAMAS 2017)
- The 10th International Workshop on Agent-Based Complex Automated Negotiations (ACAN 2017)
- The 1st International Workshop on Transfer in Reinforcement Learning (TiRL 2017)
- The 5th International Workshop on Engineering Multi-Agent Systems (EMAS 2017)
- The 4th International Workshop on Multiagent Interaction without Prior Coordination (MIPC 2017)

- The 8th International Workshop on Cooperative Games and Multiagent Systems (CoopMAS 2017)
- The 2nd International Workshop on Agent-Based Modelling of Urban Systems (ABMUS 2017).

We note that a similar process was carried out to select the most visionary papers of the AAMAS 2017 workshops. While best papers follow the style of more traditional papers, visionary papers are papers with novel ideas that propose a change in the way research is currently carried out. The selected most visionary papers may be found in the Springer book LNCS 10643.

The AAMAS 2017 workshops are the second AAMAS workshop series to publish their (selected) papers in the form of a collective book. We hope that this book can better disseminate the most notable results of these workshops and encourage authors to submit top-quality research work to the AAMAS workshops.

August 2017

Gita Sukthankar  
Juan A. Rodriguez-Aguilar

# Organization

## AAMAS 2017 Workshop Co-chairs

Gita Sukthankar	University of Central Florida, USA
Juan A. Rodriguez-Aguilar	Artificial Intelligence Research Institute, Spain

## AAMAS 2017 Workshop Organizers

### COIN 2017

Felipe Meneguzzi	Pontifical Catholic University of Rio Grande do Sul, Brazil
Wamberto Vasconcelos	University of Aberdeen, UK

### MABS 2017

Graçaliz Pereira Dimuro	Universidade Federal do Rio Grande - FURG, Brazil
Luis Antunes	University of Lisbon, Portugal

### OptMAS 2017

Archie Chapman	University of Sydney, Australia
Sebastian Stein	University of Southampton, UK
Long Tran-Thanh	University of Southampton, UK
William Yeoh	New Mexico State University, USA
Roie Zivan	Ben-Gurion University of the Negev, Israel

### A2HC 2017

Sara Montagna	University of Bologna, Italy
Eloisa Vargiu	Fundació Eurecat - eHealth Unit, Spain
Marcia Ito	BM Brazil/Faculty of Technology of São Paulo, Brazil
Daniel Castro Silva	University of Porto, Portugal
Pedro Henriques Abreu	University of Coimbra, Portugal
Michael Ignaz Schumacher	University of Applied Sciences Western Switzerland, Switzerland

### Trust 2017

Jie Zhang	Nanyang Technological University, Singapore
Murat Sensoy	Ozyegin University, Turkey
Rino Falcone	ISTC-CNR, Rome, Italy

## ALA 2017

Tim Brys	Vrije Universiteit Brussels, Belgium
Anna Harutyunyan	Vrije Universiteit Brussels, Belgium
Patrick Mannion	Galway-Mayo Institute of Technology, Ireland
Kaushik Subramanian	Georgia Institute of Technology, USA

## TEAMAS 2017

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Leandro Soriano Marcolino	Lancaster University, UK
Mehdi Farhangian	University of Otago, New Zealand

## ACAN 2017

Susel Fernandez Melian	Nagoya Institute of Technology, Japan
Katsuhide Fujita	Tokyo University of Agriculture & Technology, Japan
Naoki Fukuta	Shizuoka University, Japan
Takayuki Ito	Nagoya Institute of Technology, Japan
Minjie Zhang	University of Wollongong, Australia
Quan Bai	Auckland University of Technology, New Zealand
Fenghui Ren	University of Wollongong, Australia
Miguel Angel Lopez Carmona	University of Alcala, Spain
Ivan Marsa Maestre	University of Alcala, Spain
Tim Baarslag	Centrum Wiskunde & Informatica, The Netherlands
Reyhan Aydogan	Ozyegin University, Turkey

## TiRL 2017

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Doina Precup	McGill University, Montreal, Canada
Manuela Veloso	Carnegie Mellon University, USA
Matthew Taylor	Washington State University, USA
Felipe Leno da Silva	Universidade de São Paulo, Brazil
Ruben Glatt	Universidade de São Paulo, Brazil

## EMAS 2017

Amal El Fallah-Seghrouchni	LIP6 - University Pierre and Marie Curie, France
Alessandro Ricci	DISI, University of Bologna, Italy
Son Tran Cao	New Mexico State University, USA

## MIPC 2017

Tathagata Chakraborti	Arizona State University, USA
Katie Genter	University of Texas at Austin, USA
Trevor Santarra	University of California Santa Cruz, USA



**COOPMAS 2017**

Edith Elkind

Tomasz Michalak

Yair Zick

University of Oxford, UK

University of Oxford, UK

National University of Singapore, Singapore

**ABMUS 2017**

Koen H. van Dam

Jason Thompson

Pascal Perez

Nick Malleson

Alison Heppenstall

Andrew T. Crooks

Claudia Pelizaro

Imperial College London, UK

University of Melbourne, Australia

University of Wollongong, Australia

University of Leeds, UK

University of Leeds, UK

George Mason University, USA

University of Melbourne, Australia

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