Smart Innovation, Systems and Technologies

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Yun-Heh Jessica Chen-Burger
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Agent and Multi-Agent Systems: Technology and Applications

11th KES International Conference, KES-AMSTA 2017
Vilamoura, Algarve, Portugal, June 2017
Proceedings

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Preface

This volume contains the proceedings of the 11th KES Conference on Agent and Multi-Agent Systems—Technologies and Applications (KES-AMSTA 2017) held in Vilamoura, Algarve, Portugal, between June 21 and 23, 2017. The conference was organized by KES International, its focus group on agent and multi-agent systems and University of Zagreb, Faculty of Electrical Engineering and Computing. The KES-AMSTA conference is a subseries of the KES conference series.

Following the successes of previous KES Conferences on Agent and Multi-Agent Systems—Technologies and Applications, held in Puerto de la Cruz, Tenerife, Spain (KES-AMSTA 2016), Sorrento, Italy (KES-AMSTA 2015), Chania, Greece (KES-AMSTA 2014), Hue, Vietnam (KES-AMSTA 2013), Dubrovnik, Croatia (KES-AMSTA 2012), Manchester, UK (KES-AMSTA 2011), Gdynia, Poland (KES-AMSTA 2010), Uppsala, Sweden (KES-AMSTA 2009), Incheon, Korea (KES-AMSTA 2008), and Wroclaw, Poland (KES-AMSTA 2007), the conference featured the usual keynote talks, oral presentations, and invited sessions closely aligned to the established themes of the conference.

KES-AMSTA is an international scientific conference for discussing and publishing innovative research in the field of agent and multi-agent systems and technologies applicable in the digital and knowledge economy. The aim of the conference was to provide an internationally respected forum for both the research and industrial communities on their latest work on innovative technologies and applications that is potentially disruptive to industries. Current topics of research in the field include technologies in the area of mobile and cloud computing, big data analysis, business intelligence, artificial intelligence, social systems, computer embedded systems, and nature-inspired manufacturing. Special attention is paid on the feature topics: business process management, agent-based modeling and simulation, and anthropic-oriented computing.

The conference attracted a substantial number of researchers and practitioners from all over the world who submitted their papers for main track covering the methodologies of agent and multi-agent systems applicable in the digital and knowledge economy, and three invited sessions on specific topics within the field.

Submissions came from 12 countries. Each paper was peer-reviewed by at least two members of the International Programme Committee and International Reviewer Board. Twenty-three papers were selected for oral presentation and publication in the volume of the KES-AMSTA 2017 proceedings.

The Programme Committee defined the main track entitled Agent and Multi-Agent Systems and the following invited sessions: Agent-based Modeling and Simulation (ABMS), Business Process Management (BPM), and Anthropic-Oriented Computing (AOC).

Accepted and presented papers highlight new trends and challenges in agent and multi-agent research. We hope that these results will be of value to the research community working in the fields of artificial intelligence, collective computational intelligence, robotics, dialogue systems, and, in particular, agent and multi-agent systems, technologies, tools, and applications.

The Chairs' special thanks go to the following special session organizers: Dr. Roman Šperka, Silesian University in Opava, Czech Republic, Prof. Salvatore Distefano, University of Messina, Italy, and Kazan Federal University, Russia, Max Talanov, Kazan Federal University and Innopolis University, Russia, Prof. Jordi Vallverdú, Universitat Autònoma de Barcelona, Spain, and Evgeni Magid, Kazan Federal University, Russia, for their excellent work.

Thanks are due to the programme co-chairs, all programme and reviewer committee members, and all the additional reviewers for their valuable efforts in the review process, which helped us to guarantee the highest quality of selected papers for the conference.

We cordially thank all authors for their valuable contributions and all of the other participants in this conference. The conference would not be possible without their support.

April 2017

Gordan Jezic
Mario Kusek
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KES-AMSTA 2017 Conference Organization

KES-AMSTA 2017 was organized by KES International—Innovation in Knowledge-Based and Intelligent Engineering Systems.

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Agent-Based Modelling and Simulation

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Anthropic-Oriented Computing

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