

Preface

In 2017, MATES, the German Conference on Multiagent System Technologies, celebrated its 15th edition—a blessed age in a fast-changing and moving field like computer science. Over these 15 years, the MATES conference series has been aiming at the promotion of and the cross-fertilization between theory and application of intelligent agents and multi-agent systems. In all these years, numerous brilliant, renowned keynote speakers, Program Committee (PC) chairs, and honorary chairs helped to promote MATES and to lift it to an internationally highly respected and accepted conference level. This year was no exception as can easily be seen from the list of keynote speakers. Thus, it was no surprise that Springer decided to publish the proceedings ab initio in its *Lecture Notes in Artificial Intelligence* (LNAI) series. And of course, 2017 was no exception.

MATES celebrated its significant birthday during August 23–26, 2017, in Leipzig, Germany, in conjunction with the 2017 IEEE/WIC/ACM International Conference on Web Intelligence (WI 2017). This was seen as a dignified location and setting for this event given the fact that the Steering Committee (SC) of MATES had decided to end this conference series with this event. It was an affair of the heart for the SC to end this series as long as it is still going strong and the SC came to the conclusion that the 15th edition is the right time and location to execute this decision. Of course, now that MATES leaves the stage with its head held high we would like to thank all those who have contributed to the enormous success of MATES, especially Matthias Klusch, as one of the most active founding members of MATES, and Springer for their excellent support of this conference during all these years. We are very grateful to all those who did the work, the PC and honorary chairs, the keynote speakers, the many PC members, the even bigger number of authors. A toast to all.

This year, the combined event of MATES and Web Intelligence offered six excellent keynote talks by renowned scientists and expert practitioners. In particular, distinguished cognitive science scholar Cristiano Castelfranchi contributed his views on the problems of mixed reality and hybrid societies consisting of natural and artificial intelligences. Turing Award winner Raj Reddy extended this vision by discussing the benefits and potentials of computational social science. These positions were complemented by Amit Sheth's talk about the background and applications of semantic, cognitive, and perceptual computing. Frank Leymann bridged the gap between agent-based and Web technologies with his discussion of architectures for loose coupling of systems. Finally, both Christine Preisach and Matthias Klusch focused in their keynotes on the highly timely and exciting topics of the Internet of Things and Industry 4.0. They addressed these emerging technologies from a machine-learning as well as an agent-based computing perspective, respectively.

In addition, both MATES and WI conferences shared a doctoral consortium (DC) program, chaired by Alexander Pokahr and René Schumann. This program offered PhD students a platform to present and to discuss their work in an academic

professional environment. Students presented their PhD projects, receiving feedback and suggestions from both their peers and experienced researchers. Moreover, each PhD student was assigned to an expert in the respective field as a mentor for individual interaction.

As conference chairs and on behalf of the MATES SC, we are very grateful to the authors and keynote speakers for contributing to the success of this conference. Moreover, we would like to express our thanks to the PC members and additional reviewers for their timely and helpful reviews of the submissions, as well as to the local organization team at the University of Leipzig. Besides, we are indebted to the Springer LNAI team for their kind and excellent support in publishing these proceedings.

Finally, we hope that all attendees enjoyed MATES 2017 and had interesting inspiration and exciting insights from attending the conference.

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