Editorial

Special issue: Selected and revised papers from the 16th International Conference of the Italian Association for Artificial Intelligence

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Established in 1988, the Italian Association for Artificial Intelligence (AI*IA) witnessed in the last decades the entire evolution of modern Artificial Intelligence, starting from the initial success and expectations in the 80s, then passing from a maturation period in the 90s, up to the recent success that led AI techniques to be pervasively used in everyday technology and to AI becoming a buzzword generating much hype also among non-technical people.

Since 1989, AI*IA organizes its International Conference where researchers and practitioners interested in Artificial Intelligence research, tasks and applications meet and exchange ideas and results, discuss their positions and envisage future developments of the discipline. Originally a bi-annual event, the International Conference of the AI*IA has become an annual one since 2014, as a consequence of the need to match the rapid and steady advances in AI. This change corresponded to a significant revision of the conference format, that may best satisfy the needs of the current, more varied audience of people interested in AI. It now includes, in addition to the main track and invited talks, a number of workshops (some focused on research topics, others on applications) and poster sessions, plus a Doctoral Consortium and events aimed at the general public, to raise awareness of the discipline and of its current and future implications on our lives. So, the Conference provides its attendees with a wide and representative picture of the current AI landscape, which is reflected by the proceedings of all the involved events.

The 16th International Conference of the Italian Association for Artificial Intelligence (AI*IA 2017) was held in Bari, Italy, from November 14th to November 17th, 2017. It was a success, both as regards participation and as regards the quantity and quality of the research contributions. Out of 91 submissions, evaluated by a team of 97 researchers, 39 were selected for presentation at the conference, yielding an acceptance rate of about 40%. Among these, the General and Programme Chairs analyzed a small set of papers that received particularly good reviews and selected four of them, following a further review process, for inclusion in this special issue:

- *Nurse (Re)scheduling Via Answer Set Programming*, by Mario Alviano, Carmine Dodaro, and Marco Maratea, proposes an improved ASP-based approach to the Nurse Scheduling Problem;
- *Attentive Models in Vision: Computing Saliency Maps in the Deep Learning Era*, by Marcella Cornia, Davide Abati, Lorenzo Baraldi, Andrea Palazzi, Simone Calderara, and Rita Cucchiara, discuss the effectiveness of convolutional neural networks (CNNs) models for estimating the focus of attention of a person looking at an image or a video;
- *Sum-Product Network Structure Learning by Efficient Product Nodes Discovery*, by Nicola

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Di Mauro, Floriana Esposito, Fabrizio Giuseppe Ventola, and Antonio Vergari, investigates the trade-off between accuracy and efficiency when employing approximate but fast procedures to determine independencies among random variables in Sum-Product Networks;

– *Deep Learning and Hierarchical Reinforcement Learning for modeling a Conversational Recommender System*, by Pierpaolo Basile, Claudio Greco, Alessandro Suglia, and Giovanni Semeraro, proposes a framework based on Hierarchical Reinforcement Learning to split the dialogue into more manageable tasks whose achievement corresponds to goals of the dialogue with the user in a Conversational Recommender System scenario.

As a result, this issue collects extended and revised versions of such contributions.

We would like to thank all members of the AI*IA 2017 Programme Committee for their effort and invaluable contribution to the review process, that was fundamental for maintaining the high scientific level of the event, and the Editorial Board members of the journal, who managed the second review process. We also would like to thank the AI*IA Executive Board, and all the researchers of the Artificial Intelligence community who supported this event by submitting their work and actively participating in it. Last but not least, we are grateful to Fabrizio Riguzzi, Editor in Chief of Intelligenza Artificiale, for hosting this special issue.

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