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Advances in Artificial Intelligence – IBERAMIA 2018

16th Ibero-American Conference on AI
Trujillo, Peru, November 13–16, 2018
Proceedings

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Preface

IBERAMIA 2018, the 16th Ibero-American Conference on Artificial Intelligence, was held in Trujillo (Perú) held during November 13–16, 2018, organized by the Universidad Nacional de Trujillo and the Sociedad Peruana de Inteligencia Artificial. IBERAMIA is the biennial Ibero-American Conference on Artificial Intelligence. The conference is sponsored by the main Ibero-American Societies of Artificial Intelligence (AI) and gives researchers from Portugal, Spain, and the Latin America countries the opportunity to meet with AI researchers from all over the world. This volume presents the proceedings of the conference.

Since its first edition in Barcelona during 1988, IBERAMIA has continuously expanded its scope to become a well-recognized international conference where the AI community shares the results of their research. Springer's *Lecture Notes in Computer Science* has published the works accepted for the conference since 1998 when the sixth edition of IBERAMIA took place in the city of Lisbon, Portugal. The organizational structure of IBERAMIA 2018 follows the standard of the most prestigious international scientific conferences. The scientific program this year led to fruitful debates among the researchers on the main topics of AI. As customary, the program of the conference was organized in several tracks and each one was coordinated by area chairs in charge of the reviewing process following the general rules of assigning each submitted paper to three members of the Program Committee (PC).

The tracks organized for this edition were the following:

- Knowledge Engineering, Knowledge Representation and Reasoning under Uncertainty
- Multiagent Systems, Game Theory and Economic Paradigms, Game Playing and Interactive Entertainment, Ambient Intelligence
- Machine Learning Applications, Machine Learning Methods, Cognitive Modeling, Cognitive Systems
- Planning and Scheduling, Robotics, Vision
- Natural Language Processing, Human–Computer Interaction, AI in Education, NLP and Knowledge Representation, NLP and Machine Learning, NLP and Text Mining, Humans and AI, Human-Aware AI
- General AI, Knowledge Engineering, AI and the Web Applications, Computational Sustainability and AI, Heuristic Search and Optimization

The criterion to select these tracks was based on their current relevance in the field. IBERAMIA 2018 received 92 papers with widespread contributions from Latin America and the rest of the world; from that initial set of submissions 41 of them were accepted through a process that involved the collaboration of three reviewers per paper. When necessary, additional reviews were requested to obtain a clear decision on a particular work. The full list of area chairs, PC members, and additional reviewers can be found after this preface.

We would like to express our sincere gratitude to all the people who helped to bring about IBERAMIA 2018. First and foremost, to the contributing authors that provided the works of the highest quality to the conference and for their cooperation in the preparation of this volume. We also want to give special thanks to the area chairs and the members of the PC and the reviewers for the quality of their work, which undoubtedly helped in the selection of the best papers for the conference. Without the expert guidance and continuous support of the IBERAMIA Executive Committee and secretariat that shepherd our work, nothing would have been possible. In particular, we acknowledge the enormous help of Federico Barber and Francisco Garijo.

The use of the EasyChair conference management system provided the support for all the tasks involved in the submission and review of the papers and the preparation of the proceedings. We would like to express our thanks to the sponsors of the conference since without their contribution the conference would not have been possible.

Lastly, it is necessary to remark that IBERAMIA 2018 was possible through the work and dedication of the Organizing Committee from the Universidad de Trujillo. We wish to express our gratitude to all the people who helped in the organization of this significant event.

November 2018

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