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AI 2016: Advances in Artificial Intelligence

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Preface

This volume contains the papers presented at the 29th Australasian Joint Conference on Artificial Intelligence 2016 (AI 2016), which was held in Hobart, Australia, December 5–8, 2016.

The conference is the premier event for artificial intelligence in Australasia and provides a forum for researchers and practitioners across all subfields of artificial intelligence to meet and discuss recent advances. This year, we were co-located with the 2016 International Conference on Smart Media and Applications (SMA 2016), with which we shared the keynote speech session, a joint session, and a social event.

The technical program of AI 2016 comprised a number of high-quality papers that were selected in a thorough, single-blind reviewing process with at least two expert reviews per paper. Out of 121 submissions, our senior Program Committee with the help of an experienced international Program Committee selected 40 long papers and 18 short papers for presentation at the conference and inclusion in these proceedings. In addition to the technical program, we also selected two papers from the doctoral consortium and six papers from SMA 2016 to be included in the proceedings as invited papers.

Papers were submitted by authors from 28 countries, demonstrating the broad international appeal of our conference. In addition to the 58 paper presentations, we had four keynote talks by high-profile speakers:

- Prof. Rayid Ghani, University of Chicago, USA
- Prof. Takayuki Ito, Nagoya Institute of Technology, Japan
- Prof. Maurice Pagnucco, UNSW, Australia
- Prof. Zhi-Hua Zhou, Nanjing University, China

AI 2016 was complemented by a doctoral consortium, and featured an exciting selection of four workshops and a tutorial that were free for all conference participants to attend. The four workshops were:

- The 8th International Workshop on Collaborative Agents Research and Development
- The Workshop on Time Series Analytics and Applications
- The Workshop on Experiential Knowledge Platform Development Research
- Korean Academy of Scientists and Engineers in Australasian Annual Workshop

The tutorial were on:

- Deep Learning and Applications in Non-Cognitive Domains by Truyen Tran (Deakin University)

A large number of people and organizations helped make AI 2016 a success. First and foremost, we would like to thank the authors for contributing and presenting their latest work at the conference. Without their contribution this conference would not

have been possible. The same is true for the members of the conference organization. We also thank our senior Program Committee members, the members of our Program Committee, as well as additional reviewers who were all very dedicated and timely in their contributions to selecting the best papers for presentation at AI 2016.

We are grateful for support and sponsorship from the Australian Computer Society for AI (ACS-AI) Meeting, the School of Engineering and ICT, the University of Tasmania (UTAS), and the Science and Engineering Research Support Society. In particular, we appreciate the ACS-AI Meeting for student scholarships and the School of Engineering and ICT of UTAS for the administration and technical supports for this conference. We also appreciate the free conference management system EasyChair, which was used for putting together this volume. Last but not the least, we thank Springer for their sponsorship and their support in preparing and publishing this volume in the *Lecture Notes in Computer Science* series.

October 2016

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