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Xin Geng · Byeong-Ho Kang (Eds.)

# PRICAI 2018: Trends in Artificial Intelligence

15th Pacific Rim  
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# Preface

This volume contains the papers presented at the 15th Pacific Rim International Conference on Artificial Intelligence (PRICAI 2018) held during August 28–31, 2018, in Nanjing, China. PRICAI is a biennial conference inaugurated in Tokyo in 1990. It provides a common forum for researchers and practitioners in various branches of artificial intelligence (AI) to exchange new ideas and share experience and expertise. Over the past 28 years, the conference has grown, both in participation and scope, to be a premier international AI event for all major Pacific Rim nations as well as countries from further afield. This year, PRICAI 2018 featured two special tracks in addition to the main track, “Reinforcement Learning” and “Smart Modelling and Simulation,” both of which accentuated emerging hot topics in recent years of AI research.

This year, we received 382 high-quality submissions from 24 countries to both the main and special tracks. The submission number set a record over the last ten years (six PRICAIs in a row), reflecting the growing boom of artificial intelligence all over the world. The paper selection process was very competitive. From these submissions, 82 (21%) were accepted as regular papers, with a further 58 (15%) accepted as short papers. Each submitted paper was considered by the Program Committee (PC) members and external reviewers, and evaluated against criteria such as relevance, significance, technical soundness, novelty, and clarity. Every paper received at least two reviews, in most cases three, and in some cases up to five. Finally, the program co-chairs read the reviews, the original papers, and called for additional reviews if necessary to make final decisions. The entire review team (PC members, external reviewers, and co-chairs) expended tremendous effort to ensure fairness and consistency in the paper selection process.

The technical program consisted of workshops and tutorials and the three-day main conference program. There were four tutorials and six workshops covering thriving and important topics in artificial intelligence. The workshops included the Pacific Rim Knowledge Acquisition Workshop (PKAW), co-chaired by Kenichi Yoshida (University of Tsukuba, Japan) and Maria R. Lee (Shih Chien University, Taiwan, China), which has long enjoyed a successful co-location with PRICAI. All regular papers were orally presented over the three days in the topical program sessions and special sessions. The authors of short papers presented their results during the poster sessions, and were also offered the opportunity to give shortened talks to introduce their work. It was our great honor to have three outstanding keynote/invited speakers, whose contributions have pushed boundaries of artificial intelligence across various aspects: Professor Stephen Muggleton (Imperial College London, UK), Professor Qiang Yang (Hong Kong University of Science and Technology, China), and Dr. Kun Zhang (Carnegie Mellon University, USA). We are grateful to them for sharing their insights on their latest research with us.

The success of PRICAI 2018 would not have been possible without the effort and support of numerous people from all over the world. First of all, we would like to thank

the Program Committee members and external reviewers for their engagements in providing rigorous and timely reviews. It was because of them that the quality of the papers in this volume is maintained at a high level. We wish to express our gratitude to the general co-chairs, Zhi-Hua Zhou (Nanjing University, China) and Geoff Webb (Monash University, Australia) for their continued support and guidance. We are also thankful to the workshop co-chairs, Yang Yu (Nanjing University, China) and Tsuyoshi Murata (Tokyo Institute of Technology, Japan), the tutorial co-chairs, Mengjie Zhang (Victoria University of Wellington, New Zealand) and Tru Hoang Cao (Ho Chi Minh City University of Technology, Vietnam), the publication chair, Min-Ling Zhang (Southeast University, China), the sponsorship chair, Xiang Bai (Huazhong University of Science and Technology, China), the local organizing co-chairs, Feng Xu (Hohai University, China) and Deyu Zhou (Southeast University, China), and the publicity co-chairs, Chuan-Kang Ting (National Chung Cheng University, Taiwan, China) and Sheng-Jun Huang (Nanjing University of Aeronautics and Astronautics, China).

We gratefully acknowledge the support of the organizing institutions Southeast University, Jiangsu Association of Artificial Intelligence, Nanjing University, Nanjing University of Aeronautics and Astronautics, and Hohai University, as well as the financial support from Nanjing Future Sci-Tech City, Alibaba Group, Baidu Inc., Huatai Securities Co., Ltd., Huawei Technologies Co., Ltd., iHome Technologies Co., Ltd., Key Laboratory of IntelliSense Technology, CETC, Springer Publishing, and Jiangsu Zhitu Education Technology Co., Ltd. Special thanks to EasyChair, whose paper submission platform we used to organize reviews and collate the files for these proceedings. We are also grateful to Alfred Hofmann and Anna Kramer from Springer for their assistance in publishing the PRICAI 2018 proceedings as a volume in its *Lecture Notes in Artificial Intelligence* series.

Last but not least, we also want to thank all authors and all conference participants for their contribution and support. We hope all the participants took this valuable opportunity to share and exchange their ideas and thoughts with one another and enjoyed their time at PRICAI 2018.

August 2018

Xin Geng  
Byeong-Ho Kang

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