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Zhi Jin
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Preface

The International Conference on Knowledge Science, Engineering and Management (KSEM) provides a forum for researchers in the broad areas of knowledge science, knowledge engineering, and knowledge management to exchange ideas and to report state-of-the-art research results. KSEM 2017 was the tenth in this series, building on the success of nine events held in: Guilin, China (KSEM 2006); Melbourne, Australia (KSEM 2007); Vienna, Austria (KSEM 2009); Belfast, UK (KSEM 2010); Irvine, USA (KSEM 2011); Dalian, China (KSEM 2013); Sibiu, Romania (KSEM 2014); Chongqing, China (KSEM 2015); and Passau, Germany (KSEM 2016).

The selection process this year was competitive. KSEM 2017 received 134 submissions, and each submitted paper was reviewed by at least three members of the Program Committee (PC). Following this independent review, there were discussions among reviewers and PC chairs. A total of 35 papers were selected as full papers (26.1%), and another 12 papers were selected as short papers (8.9%), yielding a combined acceptance rate of 35%. Moreover, we were honored to have two prestigious scholars giving keynote speeches at the conference: Prof. Zhi-Hua Zhou (Nanjing University, China) and Prof. Geoff Webb (Monash University, Australia). The abstract of Prof. Webb's talk is included in this volume.

We would like to thank everyone who participated in the development of the KSEM 2017 program. In particular, we would give special thanks to the PC, for their diligence and concern for the quality of the program, and also for their detailed feedback to the authors. The general organization of the conference also relied on the efforts of the KSEM 2017 Organizing Committee. We especially thank Dr. Shaowu Liu (University of Technology Sydney, Australia) and Dr. Huy Quan Vu (Victoria University, Australia) for the general administrative issues and for maintaining the conference website.

Moreover, we would like to express our gratitude to the KSEM Steering Committee chair, Prof. Hui Xiong (Rutgers University, USA), as well as KSEM 2017 general co-chairs, Prof. Michael Blumenstein (University of Technology Sydney, Australia) Prof. Zili Zhang (Southwest University, China) and Prof. Zhi Jin (Peking University, China). We are also grateful to the team at Springer led by Alfred Hofmann for the publication of this volume.

Finally and most importantly, we thank all the authors, who are the primary reason why KSEM 2017 is so exciting and why it is the premier forum for presentation and discussion of innovative ideas, research results, and experience from around the world.

June 2017

Gang Li
Yong Ge

Organization

KSEM 2017 was co-located with the flagship international AI conference, IJCAI 2017, in Melbourne, Australia, during August 19–20, 2017.

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Learning from Non-stationary Distributions (Invited Speech)

Geoff Webb

Monash University, Clayton, Australia
geoff.webb@monash.edu

Abstract. The world is dynamic - in a constant state of flux - but most learned models are static. Models learned from historical data are likely to decline in accuracy over time. This talk presents theoretical tools for analyzing non-stationary distributions and some insights that they provide. Shortcomings of standard approaches to learning from non-stationary distributions are discussed together with strategies for developing more effective techniques.

Keywords: Non-stationary distributions Learning

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