Preface

The 8th International Conference on Knowledge Science, Engineering and Management 2015 (KSEM 2015) was the latest of the KSEM series, building on the success of seven previous events held, respectively, 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), and Sibiu, Romania (KSEM 2014). The series was initiated in 2006 by Prof. Ruqian Lu from the Chinese Academy of Sciences, with the aim of providing 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 2015 was held in Chongqing, a major city in Southwest China and the largest of China's four direct-controlled municipalities by administration the other three being Beijing, Shanghai, and Tianjin. The conference was hosted by Southwest University, which was officially established in July 2005 with a history that can be traced back to the foundation of East Sichuan Teachers College in 1906. The main theme of KSEM 2015 was on how knowledge science, engineering, and management contribute to big data analytics. This yielded a larger part of the presentations and discussions on machine learning, classification and clustering, knowledge discovery and recognition, and text mining and analysis. Knowledge and data processing techniques in various types of domains were tackled, including mobile data analytics, bioinformatics, and recommendation systems. Theoretical studies in formal reasoning and ontologies, detection, evidence theory, and conceptual analysis dealt with the fundamental issues in knowledge representation, management, and acquisition.

KSEM 2015 consisted of the main conference and three special sessions. It attracted a total of 247 submissions from 17 countries all over the world, including 58 papers submitted to the special sessions. The Program Committee members together with external reviewers contributed 546 reviews. As a result, a combination of 57 full papers and 22 short papers were selected to be included in the proceedings with a very competitive full paper acceptance rate of 23% and overall acceptance rate of 32%. Moreover, we were honored to have five prestigious scholars giving keynote speeches at the conference, Dr. Dean Allemang (Working Ontologist LLC, USA), Dr. Sheng-Chuan Wu (Franz Inc., USA), Prof. Aoying Zhou (East China Normal University, China), Prof. Mark Reynolds (University of Western Australia, Australia), and Prof. Lorna Uden (Staffordshire University, UK). The abstracts of their talks are included in this volume.

KSEM 2015 would not have been possible without the contributions and efforts of a large scientific community. We thank our authors for being willing to submit their work to KSEM. We sincerely appreciate the large amount of valuable and timely reviews from the members of the Program Committee, the members of three special session committees, and helpful external reviewers. Moreover, we would like to express our gratitude to the conference honorary general chair, Prof. Hojjat Adeli (The Ohio State

University, USA), the conference general co-chair, Prof. Dimitris Karagiannis (University of Vienna, Austria), and the co-chairs of the special sessions, Prof. Li Liu (National University of Singapore, Singapore), Prof. Li Li (Southwest University, China), Prof. Le Zhang (Southwest University, China), and Prof. Yong Deng (Southwest University, China). The organization committee from Southwest University in Chongqing provided extensive support for the conference, and we especially thank Prof. Guoqiang Xiao and Associate Prof. Guoxian Yu. We are also grateful to the team at Springer led by Alfred Hofmann for publication of this volume.

Many thanks go to Franz Inc. for sponsoring the best paper award of KSEM 2015. The conference management system EasyChair was used to handle the submissions, conduct the electronic Program Committee meetings, and assist with the assembly of the proceedings.

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