

# Preface

The annual International Symposium on Knowledge and Systems Sciences aims to promote the exchange and interaction of knowledge across disciplines and borders so as to explore new territories and new frontiers. With over 16 years of continuous endeavors, attempts to strictly define knowledge science may still be ambitious, but a very tolerant, broad-based, and open-minded approach to the discipline can be taken. Knowledge science and systems science can complement and benefit each other methodologically.

The First International Symposium on Knowledge and Systems Sciences (KSS 2000) was initiated and organized by the Japan Advanced Institute of Science and Technology (JAIST) in September of 2000. Since then KSS 2001 (Dalian), KSS 2002 (Shanghai), KSS 2003 (Guangzhou), KSS 2004 (JAIST), KSS 2005 (Vienna), KSS 2006 (Beijing), KSS 2007 (JAIST), KSS 2008 (Guangzhou), KSS 2009 (Hong Kong), KSS 2010 (Xi'an), KSS 2011 (Hull), KSS 2012 (JAIST), KSS 2013 (Ningbo), KSS 2014 (Sapporo), and KSS 2016 (Xi'an) have been held successfully, with contributions by many scientists and researchers from different countries. During the past 16 years, people interested in knowledge and systems sciences have formed a community, and an international academic society has existed for 13 years.

This year KSS will be held in during November 4–6, 2016, Kobe, Japan, to provide opportunities for presenting interesting new research results, facilitating interdisciplinary discussions, and leading to knowledge transfer under the theme of “Systems Approaches to Knowledge, Technology, and Service Management”. We are particularly fortunate to have three distinguished scholars to deliver the keynote speeches, which reflect the diverse features of KSS topics,

- Takayuki Ito (Nagoya Institute of Technology, Japan), “Crowd Decision-Making and Consensus Support System Based on Agent and AI Technologies”
- Tetsuo Sawaragi (Kyoto University, Japan), “Semiotic Analysis of Behavioral Knowledge and Skills for Cyber-Physical Co-Coaching”
- Alfred Taudes (Vienna University of Economics, Austria), “Production as a Service”

The organizers of KSS 2016 received 48 submissions, and finally 21 submissions were selected for the proceedings after a rigorous review process. The co-chairs of the international Program Committee made the final decision for each submission based on the reports from the reviewers, who came from Australia, China, France, Japan, New Zealand, and the USA.

To make this event possible, we received a lot support and help from many people and organizations. We would like to express our sincere thanks to the authors for their remarkable contributions, all the Technical Program Committee members for their time and expertise in reviewing the papers within a very tight schedule, and the publisher Springer for their professional help. This is the first time that KSS proceedings are

published as a CCIS volume by Springer. We greatly appreciate our three distinguished scholars for accepting our invitation to deliver keynote speeches to the symposium. Last but not least, we are indebted to the local organizers for their hard work for the symposium.

The conference facilitated not only cross-cultural learning and integration, but also academic achievements in the area of knowledge and systems sciences.

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