# Lecture Notes in Artificial Intelligence 4953

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Ngoc Thanh Nguyen Geun Sik Jo Robert J. Howlett Lakhmi C. Jain (Eds.)

# Agent and Multi-Agent Systems: Technologies and Applications

Second KES International Symposium, KES-AMSTA 2008 Incheon, Korea, March 26-28, 2008 Proceedings



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### **Preface**

Following from the very successful First KES Symposium on Agent and Multi-Agent Systems – Technologies and Applications (KES-AMSTA 2007), held in Wroclaw, Poland, 31 May–1 June 2007, the second event in the KES-AMSTA symposium series (KES-AMSTA 2008) was held in Incheon, Korea, March 26–28, 2008. The symposium was organized by the School of Computer and Information Engineering, Inha University, KES International and the KES Focus Group on Agent and Multiagent Systems. The KES-AMSTA Symposium Series is a sub-series of the KES Conference Series.

The aim of the symposium was to provide an international forum for scientific research into the technologies and applications of agent and multi-agent systems. Agent and multi-agent systems are related to the modern software which has long been recognized as a promising technology for constructing autonomous, complex and intelligent systems. A key development in the field of agent and multi-agent systems has been the specification of agent communication languages and formalization of ontologies. Agent communication languages are intended to provide standard declarative mechanisms for agents to communicate knowledge and make requests of each other, whereas ontologies are intended for conceptualization of the knowledge domain.

The symposium attracted a very large number of scientists and practitioners who submitted their papers for nine main tracks concerning the methodology and applications of agent and multi-agent systems, a doctoral track and two special sessions. From the submissions for KES-AMSTA 2008 coming from more than 20 countries throughout the world, only 91 papers were selected for presentation and inclusion in the proceedings. Many of the papers have been reviewed in a double blind process. The Program Committee defined the following main tracks: *Methodological Aspects of Agent Systems; Agent-Oriented Web Applications; Ontology Management; Multi-Agent Resource Allocation; Cooperation, Coordination, and Teamwork; Agents for Network Management; Multi-Agent Learning; Mobile Agents and Agents in Applications.* Jointly with the main tracks of the symposium there was also the doctoral track and the following two special sessions: *Intelligent and Secure Agent for Digital Content Management* and *Self-Organization in Multi-Agent Systems*.

We would like to thank the invited speakers – J.K. Lee (Korea), L.C. Jain (Australia), and D.S. Huang (China) – for their interesting and informative talks of world-class standard.

Special thanks go to one of the Program Co-chairs, Jason J. Jung (Korea), for his great help in the organization work. We thank the Program Co-chairs for their efforts in managing the reviews and the paper selection process. Thanks are due to the Program Committee and the Board of Reviewers, essential for reviewing the papers to ensure the high quality. We thank the members of the Local Organizing Committee, the Doctoral Track Chair, Publicity Chair and Special Session Chairs. We acknowledge with gratitude the efforts of the KES Focus Group on Agent and Multi-Agent Systems for coordinating the organization of the symposium. We extend

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cordial thanks to the KES Secretariat for the support with central administration and the registration process. Special thanks go to Franz I.S. Ko and his team for very effective publicity action. Finally, we thank authors, presenters and delegates for their contribution to a successful event.

Thanks are also due to the many experts who contributed to making the event a success.

January 2008

Ngoc Thanh Nguyen Geun Sik Jo Robert J. Howlett Lakhmi C. Jain

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