Professor Shang Ming Zhou, chair of GCIS 2009, indicated that the past decade has witnessed a rapid development of intelligent systems based on the theory and practice of artificial intelligence. This includes biologically inspired computing such as evolutionary computing, neural networks, artificial immune systems, ant colony optimization, swarm intelligence, agent technology, fuzzy logic, knowledge discovery, machine learning, intelligent control, intelligent robotics, intelligent manufacturing, and information fusion.

Intelligent information processing applies knowledge discovery, agent technology, machine learning, and automatic reasoning to applications in biomedicine, manufacturing, global supply chain networks, defense, enterprise computing, etc. Related topics include automatic reasoning, Bayesian networks, cognitive modeling, computer vision, data mining, evolutionary computation, fuzzy and rough sets, knowledge engineering, knowledge grid, learning theory, logic programming, machine translation, mobile agents, model-based diagnosis, natural language processing, neural computing, ontology, speech understanding and interaction, web intelligence, etc.

Today, not only large companies, but also medium-sized companies are learning that intelligent information processing is a required element of doing business. As a result, there is a growing demand for insights into challenges, issues, and solutions related to the design, implementation, and management of intelligent systems.

Due to the importance of the subject, there is a significant amount of ongoing research in the area. To respond to the market needs from both academic researchers and practitioners for communicating research results, GCIS 2010 will be held in Wuhan, China, December 16–17, 2010. The number of submissions received for this conference reached 647, of which 279 (43.12%) were selected for inclusion in the proceedings after a rigorous review process. This conference is intended to provide an international forum for researchers in academia and industry to present their most recent findings in intelligent systems and intelligent information processing. The purpose of this conference is to report on the state of the art of, and emerging trends in, research and practice in intelligent systems. To prepare for this conference, all authors were asked to respond to a rigorous peer review. The papers included share the common theme of intelligent systems. Each paper emphasizes in a different way the importance of intelligent information processing. The proceedings will be published by the IEEE Conference Publishing Services.

We are very pleased that WCSE 2010 is being held in Wuhan, the capital of Hubei province, China. Wuhan is one of the most populous cities in China, and also the scientific and educational center of Central China, with more than 50 higher educational institutions such as Wuhan University, Huazhong University of Science and Technology, and Wuhan University of Technology, which cover all fields of science and technology related to software engineering. Wuhan has been considered a major scientific and educational base with a high ranking in China. Due to the trend of increasing integration
of software engineering and systems engineering, and the trend of increasingly complex systems of systems, software engineering is one of main research areas at the Institute of Systems Science and Engineering, Wuhan University of Technology.

Chinese artificial intelligence (AI) researchers have been pursuing AI-related research for many years. Since 1999, at least five special issues of SCI indexed journals/magazine have published focused issues on intelligent systems in China:

**Journals**


**Magazine**


Intelligent systems development has been emphasized in China since China’s first expert system for the diagnosis and treatment of hepatitis was developed in the 1970s. Intelligent systems activity has been steadily growing in China since then. Chinese researchers have developed thousands upon thousands of intelligent systems that have been successfully applied to the manufacturing, agriculture, transportation, environmental protection, scientific research, education, and defense industries. In the mid-1980s, China launched the well-known 863 Advanced Technology Project under the late leader Deng Xiaoping. This national research project initiated an era of unprecedented development of AI technology. Many of today’s sophisticated intelligent systems are the results of the 863 Project. Since the launching of the 863 Project, we have witnessed the emergence of advanced intelligent systems technology. From this conference, it is not difficult to find that, in China, intelligent systems research and development is evolving and growing steadily as China is emerging as an economic powerhouse in the 21st century.

GCIS is an international conference. I hope this conference will provide our participants with an avenue to gain a global perspective on intelligent systems technology and applications.
I would especially like to thank the World Research Institutes (WRI) for sponsoring this conference. On behalf of GCIS 2010 Organizing Committee, we would specially like to thank Professor Xinhan Huang (Co-General Chair, HUST), Professor Zu De Zhou (Co-General Chair, Ex-President of WUT), Professor Zhun Fan (Co-Program Chair, Technical University of Denmark), Professor M.M. Gupta (Co-Program Chair, University of Saskatchewan, Canada), Professor Pan Wang (Co-Program Chair, WUT), Dean Ming Ran Deng (WUT), Professor Ke Fan Xie (WUT), and Professor Qing Ping Guo (WUT) for their support and guidance throughout this endeavor. We are also deeply grateful to all IPC members and the many individual reviewers who worked with us so diligently. Without their time and effort, this conference would never have been possible.

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