
Editorial

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Biographical notes: Associate Professor Xiangjian He received his PhD degree in Computer Science from the University of Technology, Sydney (UTS) in 1999. He is the Deputy Director of the UTS Centre for Innovation in IT Services and Applications, and a Senior Member of IEEE. In the past years, he has received four national grants awarded by Australian Research Council (ARC). He is the chair of the *3rd International Conference on Information Technology and Applications (ICITA2005)*, and the Chief Editor of the conference proceedings published by IEEE CS Society.

Dr. Zhongyu Lu is a Senior Lecturer in Computing, member of British Computer Society, and Fellow of the Higher Education Academy, UK. Her research interests include agent technology, XML technology, data management system, security issues, mobile and internet computing, with more than 50 publications since 2001. Currently she is supervising nine PhD students. Dr. Lu was also the programme Chair on *Agent, Data mining and Ontology (ADO05)*, *International Conference on Information Technology and Applications (ICITA2005)*, Australia, 2005; has been the programme Chair for *XML Technology Workshop* and Associate Editor for the proceedings of *International Conference of Internet Computing*, USA since 2003.

The term 'Information Technology' has become increasingly popular over the last decade to refer to all technologies related to computers and communications and their use in everyday life, science, business and many other fields. The scientific and technological progress has been steady, leading to a range of new devices with increased speed, storage capacity, connectivity, mobility, autonomy and flexibility of use. The challenge ahead for Information Technology is to prove even more useful and effective in an even broader range of application domains.

In view of this, the purpose of ICITA'05 – *International Conference on Information Technologies and Applications 2005* – was to provide a platform for academics and engineers in all areas of Information Technology to meet, exchange ideas and establish new professional networks.

The number of papers submitted to ICITA'05 overwhelmed those of previous editions. We received more than 700 submissions coming from many countries and accepted about 290 regular papers and poster papers published in the conference proceedings. The revision process for all papers was rigorous and thorough, including peer-reviewing from at least two qualified reviewers. The accepted papers are of very high quality and cover the wide range of topics of the conference. For this special section of IJAOSE, we selected only seven quality papers from the large number of papers published in ICITA'05. These seven papers fall into various application areas of Agents, Data mining and Ontology.

Ono and Masateru, in their paper, propose a two-layered multi-agent model that is able to simulate complex systems in consensus formation. Hawryszkiewycz defines a meta-model to describe collaborative work and identifies generic agents based on the metamodel concepts. Liu and Chen address the importance of a combination of agent and meta-search engine technologies. Foster and Varadharajan present a Security- And Trust-Enhanced Mobile Agent (SATEMA) architecture. The security-enhanced agent structure and the architecture were designed in such a way that they could support multiple applications in either single and multiple hop scenarios.

Paik and Akimoto have developed an advanced ontology querying mechanism, which could be used for a supply chain network. Lu and Rahman have followed a systematic approach to semantic web technologies and have presented a tool that was combined with the three latest content management techniques, *i.e.* XML-based specification (RDF), Ontology and Agent technologies.

Fu and Lui present an outstanding piece of research in their paper ‘Agent Oriented Network Intrusion Detection System Using Data Mining Approaches’. The work shows an additional contribution in the area, *i.e.* its ability for detecting new types of attack as well as a higher tolerance to fluctuations.

It is our pleasure to introduce these papers to you. We deeply thank Professor Brian Henderson-Sellers and Dr. Paolo Giorgini, the Editors of the *International Journal of Agent Oriented Software Engineering* for accepting the extended versions of these seven papers to be published as a special section in this journal.