Editorial

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Biographical notes: Ruay-Shiung Chang received his BSEE from National Taiwan University in 1980 and his PhD in Computer Science from National Tsing Hua University in 1988. He is now a Vice-President of National Dong Hwa University and a Professor in the Department of Computer Science and Information Engineering. His research interests include internet, wireless networks and cloud computing. He is a member of ACM, a senior member of IEEE, and founding member of ROC Institute of Information and Computing Machinery. He also served on the advisory council for the Public Interest Registry (www.pir.org) from 2004–2005 to 2007–2008. In 2009, he received the Outstanding Information Technology Elite Award from the ROC Information Month Committee.

Tai-hoon Kim received his MS and PhD in Electrics, Electronics and Computer Engineering from the Sungkyunkwan University, Korea. After working with Technical Institute of Shindoricoh two years as a Researcher and working at the Korea Information Security Agency as a Senior Researcher two years and six months, he worked at the DSC (Defense Security Command) about two years. After working with E-wha Woman University a half year as a Research Professor, now he is currently a Professor of Hannam University. He wrote 16 books about the software development, OS such as Linux and Windows, and computer hacking and security. He researched security engineering, the evaluation of information security products or systems with Common Criteria and the process improvement for security enhancement. In these days, he researches also some approaches and methods making IT systems more secure.

Cho-Li Wang received his BS in Computer Science and Information Engineering from National Taiwan University in 1985. He obtained his MS and PhD in Computer Engineering from the University of Southern California in 1990 and 1995, respectively. He is currently affiliated with the Department of Computer Science at The University of Hong Kong. His research interests include parallel architecture, software systems for cluster and grid computing, and virtualisation techniques for cloud computing. He is currently serving on the editorial boards of several international journals, including *IEEE Transactions on Computers*, *Multiagent and Grid Systems*, *International Journal of Pervasive Computing and Communications* and *Journal of Information Science and Engineering*. He is also the Regional Coordinator (Hong Kong) of IEEE Technical Committee on Scalable Computing (TCSC).

Sheng-Lung Peng received the BS in Mathematics from National Tsing Hua University in 1988, and the MS and PhD in Computer Science from National Chung Cheng University and National Tsing Hua University in 1992 and 1999, respectively. He is now an Associate Professor of the Department of Computer Science and Information Engineering in National Dong Hwa University. His research interests include graph theory, algorithms design, telematics and bioinformatics.

Radio Frequency Identification (RFID) is the use of an object (typically referred to as an RFID tag) applied to or incorporated into a product, animal, or person for the purpose of identification and tracking using electromagnetic waves. Tags can be read from metres away wirelessly without necessary line-of-sight. RFID has applications in payment systems, road tolls, products tracking, animals or persons identification, inventories, etc. However, before RFID becomes a daily reality, many issues need to be addressed and solved. This special issue serves the purpose of highlighting the state-of-the-art research results in RFID. The call-for-paper has attracted 31 submissions from all over the world. Among them, six papers are selected. With regret that owing to space limitations, many high-quality papers have to be parted with.

The first paper 'Implementation of terminal middleware platform for mobile RFID computing' proposes the core components for achieving the mobile RFID application such as mobile RFID reader, platform and its network architecture. The second paper 'Using RFID for tracing cumulated resources and emissions in supply chain' studies the physical level, the data storing level and the operational actions when RFID is used for real-world tracking of physical objects. The third paper 'A novel Threat Evaluation method for privacy-aware system in RFID' presents a threat evaluation system for privacy protection in RFID. A key feature of the model allows users to customise the services on the basis of their concerns to the potential threats. The fourth paper 'LOVINA: Location-aware Virtual Navigation system based on active RFID' integrates RFID positioning technology and virtual reality. Using a museum as an example, it develops a 3D virtual navigation system that supports indoor RFID localisation function. The fifth paper 'Parallel Splitting for RFID tag anti-collision' proposes a probabilistic counter-based anti-collision protocol using the idea of parallel splitting to speed up RFID tag identification. Finally, the last paper 'A novel software-radio-defined passive RFID reading system with real-time collision resolution' develops a software-defined radio reconfigurable FPGA based interrogator to address the stringent time constraints of the tag-reader handshakes.

As the guest editors of this special issue, we thank all authors who have submitted papers to the special issue. Assistance from the editorial staff of the Journal is also very much appreciated. Besides, the guest editors wish to acknowledge all reviewers who have generously given their time to review the papers. Finally, our special thanks go to Professor Yuh-Shyan Chen (Editor-in-Chief) for his support throughout the preparation of this special issue.