Preface

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Biographical notes: Tomoya Enokido received his BE and ME in Computers and Systems Engineering from Tokyo Denki University, Japan in 1997 and 1999, respectively. After that he worked for NTT Data Corporation, he joined Tokyo Denki University in 2002. He received his DE in Computer Science from Tokyo Denki University in 2003. After that, he worked for Computers and Systems Engineering as a Research Associate. He joined the Faculty of Business Administration of Rissho University in 2005. He is a Professor in the Faculty of Business Administration, Rissho University. His research interests include distributed systems. He is a member of IEEE.

Makoto Takizawa is a Professor in the Department of Advanced Sciences, Hosei University since April of 2013. He was a Professor in the Department of Computers and Information Science, Seikei University since April of 2008 to March of 2013. He was a Professor in the Department of Computers and Systems Engineering, Tokyo Denki University from 1986 to 2008. He was the Dean of the Graduate School of Science and Engineering, Tokyo Denki University from April of 2001 to March of 2005. He was a Visiting Professor at GMD-IPSI, Keele University, and Xidian University. He was on the Board of Governors and is a Golden Core member of IEEE CS and is a Fellow of IPSJ. He received his DE in Computer Science from Tohoku University. He has chaired several international conferences such as IEEE ICDCS, ICPADS, and DEXA. He founded IEEE AINA. His research interests include distributed systems and computer networks.

Information technologies of today are going through a rapid evolution and are giving a great influence to economy, business, and society. Different kinds of systems with different characteristics are emerging and they are integrated into heterogeneous

networks. For these reasons, there are many interconnection problems, which may occur at different levels in the hardware and software design of communicating entities and communication networks. As a result, architectures, computation models, and algorithms in information systems become very complex and it is significant to discuss how to design and realise the complex, intelligent, and software intensive systems. This special issue covers novel theories and designs of applications, middleware, and networks in the complex, intelligent, and software intensive systems. This special issue aims at sharing new idea and recent research results in the complex, intelligent, and software intensive systems among researchers and developers.

The papers included in this special issue are the extended versions of the papers presented at the 7th International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS-2013) held at Asia University, Taichung, Taiwan from July 3rd to July 5th, 2013. Each submitted paper in this special issue was peer-reviewed by at least three reviewers. Based on the papers quality, originality, and significance finally five high-quality papers were accepted for this special issue.

In the first paper, Kenta Henmi and Akio Koyama proposed a routing protocol which can dynamically set the maximum number of appropriate replications depending on network states and select appropriate relay nodes in delay/disruption/disconnection tolerant network (DTN). Then, the authors showed the packet delivery rate can be enhanced by the proposed protocol compared with conventional protocols.

In the second paper, Danda B. Rawat et al. investigated waiting probability of secondary users (SUs) to get channel access based on the ON-OFF activities of primary users (PUs) in cognitive radio (CR) technology. Then, the authors showed the use of multiple channels and/or multiple slots leads to significant delay reduction and transmission fairness through the simulation.

In the third paper, Noriki Uchida et al. proposed the resilient network with cognitive wireless network (CWN) based on delay tolerant networking (DTN) for disaster information system (DIS) in rural areas. Then, the authors showed simulation results with the GIS map. In the simulation studies, it was shown to be useful to adopt DTN in rural areas.

The fourth paper written by Kenta Miura and Fumiaki Sato presented location anonymisation scheme that can provide location privacy by a hybrid method using the dummy node and the cloaking region. Then, the author proposed a method to keep the anonymity without reducing the QoS of the location-based services (LBS) by setting the cloaking region based on the road mobility model.

The last paper written by Dilawaer Duolikun et al. proposed a hybrid type of clock (HC) to causally deliver messages in a scalable group. The HC protocol takes advantage of linear clock (LC) and physical clock (PC). Then, the authors showed unnecessarily ordered messages can be reduced in the HC protocol compared with the LC protocol through the experimentation.