

## Foreword

### Special Section on Communications and Information Technologies

Communications and Information Technologies (ICT) have been widely applied into many circumstances, such as world-wide networks, computers, home electronics, automobile, mobile/smart phone, and so on. Many cutting edge technologies, i.e., cognitive radio and cognitive networks, green radio and energy-efficient networks, smart grid communications, compressed sensing for communications and networking, dynamic spectrum access and management, self-organizing networks, nature-inspired communications, cooperative communications and networking, MIMO communications, OFDM systems, cross-layer air interface, ad-hoc, mesh and sensor networks, underwater communications, vehicular networks, RFID networking, broadband optical networks, have greatly contributed to the recent development of the next generation information society and our future life.

As an important symposium on this field, the 11th International Symposium on Communications and Information Technologies (ISCIT 2011) was held in Hejiang University, Hangzhou, China, on October 12-14, 2011 and it was technically sponsored by IEEE CAS Society, IEICE and ECTI. Many of the above topics were presented and discussed. The editorial committee of this special section solicited papers from these attendees of ISCIT 2012. In addition, the “Call for Papers” has been distributed for all researchers.

In this section, our committee has asked two invited papers from Thailand and Australia. Although the regular papers of this section are finally presented only from Japan, we hope all of readers will get some new and novel techniques from these papers.

As the Guest Editor, I would like to thank all authors for their submissions, reviewers and the editorial committee members for their kind cooperation. Finally, I really express my sincere thanks to Prof. Kosin Chamnongthai for his patient secretarial works.

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Yoshikazu Miyanaga, Guest Editor

He received the B.S., M.S., and Dr. Eng. degrees from Hokkaido University, Sapporo, Japan, in 1979, 1981, and 1986, respectively. He was a Research Associate at the Institute of Applied Electricity, Hokkaido University from 1983 to 1987, a lecturer of Electronic Engineering at Faculty of Engineering, Hokkaido University from 1987 to 1988 and an Associate Professor of Electronic Engineering at Faculty of Engineering, Hokkaido University from 1988 to 1997. He is currently a Professor of Graduate School of Information Science and Technology, Hokkaido University. His research interests are in the areas of speech signal processing and low power consumption VLSI system. Dr. Miyanaga has served as an associate editor of Journal of Signal Processing, RISP Japan since 2005 and as an associate editor of IEEE CAS Society TCAS II since 2012. He was a chair of Technical Group on Smart Info-Media System, IEICE (IEICE TG-SIS) and now a member of the advisory committee, IEICE TG-SIS. He is now vice-President, IEICE Engineering Science (ES) Society. He is Fellow member of IEICE. He is also vice-President, Asia-Pacific Signal and Information Processing Association (APSIPA) since 2009. He was a secretary of IEEE Circuits and Systems Society, Technical Committee on Digital Signal Processing (IEEE CASS DSP TC) (2004-2006) and was its chair (2006-2008). He was a distinguished lecture (DL) of IEEE CAS Society (2010-2011) and he is now a Board of Governor (BoG) of IEEE CAS Society since 2011.