

## FOREWORD

### Special Section on Satellite Communication Technologies in Conjunction with Main Topics of JC-SAT2011

The continuous research and development activities on space technologies have been positioning the satellites as one of the essential functions in the wireless networks for communications and navigations. The recent disastrous earthquake reaffirmed the continued importance, effectiveness and strength of satellite systems to the rescue activities covering wide area.

The Joint Conference on Satellite Communications (JC-SAT) is held every year with the cooperation of Technical Committee on Satellite Communications, IEICE, Japan, and Korea Society of Space Technology, Korea (KOSST). This conference intends to provide a forum for researchers in satellite telecommunications field to discuss the current status, technical challenges, standards, fundamental issues, future services, and applications.

The Great East Japan Earthquake and the accompanying accidents had no small effect on JC-SAT 2011. However, in this Special Section on Satellite Communication Technologies in Conjunction with Main Topics of JC-SAT2011, we received 17 submissions: 2 invited papers, 11 general papers and 4 letters. Each submission was carefully reviewed by one guest associate editor and two experts. The special section contains 2 invited papers, 4 general papers and 1 letter.

The editorial committee believes that this special section is valuable and encourages further research and development activities. On behalf of the editorial committee, I would like to thank all the authors of their excellent contributions to this special issue. I am also grateful to the reviewers for their dedicated time to deliver the valuable review comments within a very tight schedule. I would also like to thank the publication staffs for the continuous support during the preparation and publication process of this special issue.

#### Special Section Editorial Committee Members

Guest Editor: Yoshihisa Takayama (NICT)

Guest Associate Editors: Eiji Okamoto (Nagoya Institute of Technology), Akira Yamada (KDDI Lab.), Takahiro Aoyagi (Tokyo Institute of Technology), Kazuo Imai (B-SAT), Hiroyuki Omine (Mitsubishi Electric), Minoru Okada (NAIST), Shigeru Ozeki (ENRI), Kenji Kamogawa (NTT docomo), Isahiko Kawachi (SKY Perfect JSAT), Takatoshi Sugiyama (NTT), Shigeru Shimamoto (Waseda Univ.), Takashi Jono (JAXA), Wataru Chujo (Meijo Univ.), Akinori Hashimoto (NHK STRL), Hiroki Nishiyama (Tohoku Univ.)

Nei Kato, Guest Editor-in-Chief

**Nei Kato** (Member) received his Bachelor Degree from Polytechnic University, Japan in 1986, M.S. and Ph.D. Degrees in information engineering from Tohoku University, Japan, in 1988 and 1991, respectively. He joined Computer Center of Tohoku University at 1991, and has been a full professor with the Graduate School of Information Sciences since 2003. He has been engaged in research on satellite communications, computer networking, wireless mobile communications, smart grid, image processing and neural networks. He has published more than 300 papers in peer-reviewed journals and conference proceedings. He currently serves as the Vice Chair of IEEE Ad Hoc & Sensor Networks Technical Committee, the Chair of IEEE ComSoc Sendai Chapter, a technical editor of IEEE Wireless Communications (2006–), and editor of IEEE Network Magazine (2012–), an editor of IEEE Transactions on Wireless Communications (2008–), an associate editor of IEEE Transactions on Vehicular Technology (2010–), an editor of IEEE Trans. on Parallel and Distributed Systems, a co-guest-editor of several Special Issues of IEEE Wireless Communications Magazine. He has served as the Chair of IEEE Satellite and Space Communications Technical Committee (2010–2012), a symposium co-chair of GLOBECOM'07, ICC'10, ICC'11, ICC'12, Vice Chair of IEEE WCNC'10, WCNC'11, ChinaCom'08, ChinaCom'09, Symposia co-chair of GLOBECOM'12, and workshop co-chair of VTC2010. His awards include Minoru Ishida Foundation Research Encouragement Prize (2003), Distinguished Contributions to Satellite Communications Award from the IEEE Communications Society, Satellite and Space Communications Technical Committee (2005), the FUNAI information Science Award (2007), the TELCOM System Technology Award from Foundation for Electrical Communications Diffusion (2008), the IEICE Network System Research Award (2009), the KDDI Foundation Excellent Research Award (2012), IEEE GLOBECOM Best Paper Award (twice), IEEE WCNC Best Paper Award, and IEICE Communications Society Best Paper Award (2012). Besides his academic activities, he also serves on the expert committee of Telecommunications Council, Ministry of Internal Affairs and Communications, and as the chairperson of ITU-R SG4 and SG7, Japan. Nei Kato is a Distinguished Lecturer of IEEE Communications Society (2012–2013) and the co-PI of A3 Forecast Program (2011–2014) funded by Japan Society for the Promotion of Sciences (JSPS), NSFC of China, and NRF of Korea.

