
FOREWORD

Special Section on Recent Progress in Measurement and Design Techniques on Antennas, Propagation and Wireless Systems

High-speed wireless telecommunication systems such as MIMO using small handsets have been dramatically getting popular in recent years. In accordance with the situation, accurate measurement techniques of antennas and system performances are required for developing such high-performance wireless systems. Considering the requirements, this special section publishes papers on recent antenna measurement and evaluation techniques. Furthermore, papers with new design concepts on antennas, propagation modeling and wireless systems are also published to share the trends and requirements from both viewpoints of evaluation and design.

For this section, 24 papers from Japan and other several countries were submitted. After careful review process, 13 papers were accepted in this special section. Furthermore, the special section includes three invited papers on discussions of the phase center of antennas, S-parameter techniques for small antenna measurement and discussions on propagation channel model for next-generation of wireless systems.

The editorial committee members believe that this special section will provide deep insight and promote future research activities in relevant fields of study. We are grateful to the IEICE Communication Society for deciding to publish the special section and for their continuous support. Finally, I would like to express my sincere appreciation to all the authors for their excellent contributions, and to the reviewers and the Editorial Committee members for their great effort to make this special section successful.

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Toru Uno (Fellow) received the B.S. degree in Electrical Engineering from Tokyo University of Agriculture and Technology (TUAT), Tokyo, Japan, in 1980, and the M.S. and Ph.D. degrees in Electrical Engineering from Tohoku University, Sendai, Japan, in 1982 and 1985, respectively. In 1985 he was appointed as a Research Associate in the Department of Electrical Engineering of Tohoku University. From 1991 through 1994 he was an Associate Professor of the same university. He is presently a Professor in the Department of Electrical and Electronics Engineering of the TUAT. Since August 1998 through May 1999, he was on leave from the TUAT to join the Electrical Engineering Department at the Pennsylvania State University, University Park, PA, as a Visiting Scholar. He served as an associate-editor of the IEICE Transactions on Communications from 2000 to 2005, chair of Technical Group on Antennas and Propagation from 2011 to 2013, respectively. He also served as a chair of IEEE AP-S Japan Chapter from 2003 to 2004, and an Associate Editor of IEEE Antennas and Wireless Propagation Letters from 2008 to 2013. He received the Young Scientist Award, the Distinguished Contributions Award and the Paper Award, all from IEICE, in 1990, 2006 and 2007, respectively. His research interests include electromagnetic inverse problem, computational electromagnetics, medical and subsurface radar imagings, and electromagnetic compatibility. Dr. Uno is a senior member of IEEE, member of AGU and Japan Society for Simulation Technology.

