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## FOREWORD

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### Special Section on Communication Quality in Wireless Networks

The IEICE Technical Committee on Communication Quality has been contributing to the research and development for improving communication quality in wireless networks. To improve the quality in wireless networks, it is required to establish efficient network design technologies which enable technical advances in each layer such as MIMO, diversity, access control, wireless resource management, and wireless physical layer security. The integration of these technologies over existing layers and comprehensive treatment of various wireless technologies such as wireless network protocol designs considering user and machines' behaviors should also be addressed. This special section has been prepared to further promote the fundamental technologies in the area of communication quality and provides useful information to researchers in this area.

After a careful discussion, the editorial committee has arranged two invited papers; one deals with Multiuser MIMO technique, another presents an advanced network technique with the assistance of deep learning. This special section consists of two invited papers and 11 papers among 23 submissions.

As the guest editor-in-chief, I would like to express my sincere appreciation to all the authors for their contributions and to all the editors and reviewers for their voluntary activities.

#### Special Section Editorial Committee Members

##### Guest Editors:

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Yukitoshi Sanada, Guest Editor-in-Chief

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**Yukitoshi Sanada** (*Fellow*) received his B.E. degree in electrical engineering from Keio University, Yokohama Japan, his M.A.Sc. degree in electrical engineering from the University of Victoria, B.C., Canada, and his Ph.D. degree in electrical engineering from Keio University, Yokohama Japan, in 1992, 1995, and 1997, respectively. In 1997, he joined the Faculty of Engineering, Tokyo Institute of Technology as a research associate. In 2000, he joined Advanced Telecommunication Laboratory, Sony Computer Science Laboratories, Inc., as an associate researcher. In 2001, he joined Faculty of Science and Engineering, Keio University, where he is now a professor. From 2011 to 2013, he was a Chair of the Technical Committee on Software Radio, IEICE Communication Society. From 2013 to 2015, He served as a vice chair of Council of Technical Committee Representatives, IEICE Communication Society. From 2015, he is a vice chair of Technical Committee on Radio Communication Systems, IEICE Communication Society. In 2015, he also served as a vice chair of the Communication Quality Basic Lecture Workshop and he was a chair of the workshops in 2016 and 2017. He received the Young Engineer Award from IEICE in 1997, the Communication Society Distinguished Contributions Award from IEICE in 2003, 2005, 2009, 2010, 2012, 2015, 2017, and the Communication Society Outstanding Contributions Award from IEICE in 2013, respectively. He is a Fellow of the IEICE.

