
FOREWORD

Special Section on Emerging Technologies and Applications for Microwave and Millimeter-Wave Systems

The popularization of ICT is making smarter tools and devices essential for our everyday life. This is driving technological innovations to increase the transmission speed of smart phones, higher energy efficiency management through smart grids, enhancements in security and healthcare management, and quick disaster recovery. Novel wireless technologies and services that can more efficiently utilize the available spectrum, including the THz band, and that can construct sensor systems, imaging systems, and energy application systems have been playing important roles in continuously supporting such innovations.

This special section is intended to encourage the wide-scale and speedy disclosure of the latest research works in these fields. Nineteen regular and brief papers have been submitted, and eleven regular papers and one brief paper have been accepted for publication based on reviewers' reports and discussions in the Editorial Committee. The topics of these papers cover emerging theories and techniques on microwave/millimeter-wave passive and active circuits, material designs, measurement and modeling, antennas, and system applications. The Editorial Committee has invited papers for system applications by Mr. Toshiyuki Ikee on three dimensional millimeter- and THz-wave imaging and Professor Tadashi Takano on wireless power transfer.

I would like to express my sincere gratitude to all authors who submitted papers for their contributions, to the reviewers for their enthusiastic efforts in the review process, and to all Editorial Committee members for volunteering to edit this section. My special thanks go as well to the members of the IEICE publication department.

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Masashi Nakatsugawa, Guest Editor

Masashi Nakatsugawa (*Senior Member*) was born in Hamamatsu, Japan, in 1963. He received the B.E. and M.E. degrees, both from Waseda university, Tokyo, Japan, in 1987 and 1989, respectively, and the M.S. degree from the California Institute of Technology, CA, USA, in 1999. He joined NTT Radio Communication Systems Laboratories in 1989. His research experiences include MMIC circuit design, packaging technology, location-based service systems, software defined radio, and wide-area wireless access systems. From 2010 to 2012, he was a Senior Manager at Radio Division, Technical Planning Department, NTT, where he was involved in regulatory and standardization activities for wireless systems. He is currently an Executive Manager, Wireless Access Systems Project, NTT Access Network Service Systems Laboratories, and responsible for the development of fundamental technologies for wireless access systems. He received the 1996 Young Engineer Award from the IEICE, and YRP Award from YRP R&D Promotion Committee in 2002. He is a member of the IEEE and the Japan Society of Applied Physics.

