
FOREWORD

Special Section on Recent Progress in Microwave and Millimeter-Wave Photonics Technology

“Microwave and Millimeter-wave Photonics (MWP)” is an interdisciplinary research field, which is harmonious interaction between wireless communication and optical communication technologies, and has provided a plenty of advanced devices, components, antenna, and systems. MWP research field covers the technologies related material/devices/components, measurements, Radio on Fiber (RoF) transmission techniques, systems and applications using lightwave, THz wave, millimeter wave, microwave and their convergence. MWP also includes the technologies for wideband and transparent conversion among a variety of frequency bands, fixed mobile convergence, and further extended transparent convergence between wired/wireless networks.

The 7th Asia-Pacific Microwave Photonics Conference (APMP 2012) was held from 25th to 27th of April 2012 in Kyoto, Japan. In the conference, there were a variety of papers presented and a fruitful discussion. In order to take this opportunity to extend technical matter and discussion therein, we planed the present special section, where indeed more detailed studies are presented in both invited and regular papers. We believe that the special section covers most of the active MWP technical area at the time of publication.

This special section consists of following areas:

- 1) RoF system, Coherent RoF system, Mobile Backhaul networks using MWP technologies
- 2) Devices and techniques for optical generation and measurements of microwave or millimeter-wave
- 3) Optical analog-to-digital conversion
- 4) Optical wireless systems
- 5) RoF components, RoF transceiver, and their standardization

We would like to express our sincere thanks to all the authors, reviewers, and the editorial committee members for their contributions to the publication of this special section. Finally special thanks are addressed to the members of the IEICE publication departments. We, all editorial committee expect this special section will contribute to the further progress of MWP technologies. The following conference APMP 2013 will be held in Korea.

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Katsutoshi Tsukamoto, Guest Editor

Katsutoshi Tsukamoto (*Member*) received the B.E., M.E. and Ph.D. degrees in Communications Engineering from Osaka University, in 1982, 1984 and 1995 respectively. He is currently a Professor in the Faculty of Information Science and Technology, Osaka Institute of Technology, engaging in the research on radio communication, optical communication, and Radio on Fiber network systems. He is a member of IEEE and ITE. He was awarded the Paper Award and the Achievement Award of IEICE, Japan in 1996 and 2004, respectively.

