
FOREWORD

Special Section on Wideband Systems

The wideband systems and technologies play vital roles in establishing a wide range of applications in communication, sensing, and control systems. After the successful adoption of spread spectrum technology for the third generation (3G) mobile communication systems in 2000, the great efforts in achieving broadband communications and accurate ranging have been made by making efficient use of ultra-wideband (UWB), orthogonal frequency division multiplexing (OFDM), spreading code, and related technologies. One of the research trends in the wideband systems is visible light communications (VLC) and their applications, such as the intelligent transport systems (ITS), short-range communications, and the Internet of Things (IoT).

In response to the call for this special session, we have received six papers. After a careful and fair review process, the editorial committee finally accepted three full papers. Furthermore, we are very pleased to have an invited paper on the VLC technologies by Dr. Shintaro Arai (Okayama University of Science), Dr. Masayuki Kinoshita (Chiba Institute of Technology), and Takaya Yamazato (Nagoya University). The editorial committee is convinced that this special issue covers the important technical areas in wideband systems like VLC and spread spectrum, and broadband wireless communications, which are keys in realizing a future society based on the cyber-physical systems, so-called “Society 5.0.”

As the guest editor-in-chief, I express my sincere appreciation to authors for their contributions to this Special Section. I deeply thank reviewers and editorial committee members for their efforts and valuable reviews that were completed within a very tight schedule. Finally, I am grateful to Dr. Akira NAKAMURA and Dr. Shintaro ARAI for their careful and excellent secretarial work.

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Minoru Okada (Nara Institute of Science and Technology), Guest Editor-in-Chief

Minoru Okada (*Member*) received the B.E. degree from the University of Electro-Communications, in 1990, and received the M.E and Ph.D. degrees in communications engineering from Osaka University in 1992 and 1998, respectively. He served as an assistant professor at Osaka University from 1993–2000. He was a visiting researcher at Southampton University, U.K. in 1999. He moved to Nara Institute of Science and Technology as an associate professor in 2000. Since 2006 He has been a professor at the same institute. He is serving as a chair of the technical committee on wideband systems (WBS) in IEICE. His research interests includes wireless communications and power transfer.

