FOREWORD

Special Section on Microwave and Millimeter-Wave Technology

Towards the 2020 Tokyo Olympic and Paralympic Games, the service rollout of the 5th generation mobile communication system (5G) is being planned. 5G is expected to provide higher data capacity, massive connectivity and ultra-reliable low latency communications, which will satisfy rapidly growing traffic demands for diversifying applications. 5G will also support "Internet of Things (IoT)", where billions of devices or items are to be connected to cloud networks, and will advance the intelligent transportation system (ITS). Microwave and millimeter-wave technologies are key enablers that achieve such a broad range of wireless systems. Furthermore, considerable attention has been drawn to applications of microwave/millimeter-wave/terahertz-wave in the fields of sensing/imaging, wireless power transfer, health care, and so on. The purpose of this Special Section is to publish and stimulate the latest researches and developments in these technical fields.

It is my great honor to announce the publication of the Special Section on Microwave and Millimeter-wave Technology. After careful reviews by the Editorial Committee, fifteen full papers and a brief paper have been accepted for publication. The topics of the papers cover active and passive devices, antenna beam forming, microwave measurement, and system applications. The Editorial Committee has invited three papers authored by Prof. Kei Sakaguchi, Dr. Kazuaki Takahashi and Dr. Hideyuki Nakamizo on microwave and millimeter-wave technologies related to 5G, IoT and ITS systems.

On behalf of the Editorial Committee, I would like to thank all of the authors for submitting manuscripts. I would also like to express my gratitude to the Editorial Committee members who have extensively contributed in editing this Special Section and to all of anonymous reviewers for their devoted services. My special thanks go as well to members of the IEICE publication department.

Takao Kuki, Guest Editor-in-Chief

Takao Kuki *(Senior Member)* was born in Tochigi, Japan, on March 3, 1961. He received the B.E. and M.E. degrees from the University of Electro-Communications, Tokyo, Japan, in 1983 and 1985, respectively, and the D.E. degree from Tokyo Institute of Technology, Tokyo, Japan, in 2004. In 1985, he joined the Japan Broadcasting Corporation (NHK), and was with the Science and Technical Research Laboratories of NHK from 1988, where he had been engaged in research and development on microwave functional devices and millimeter-wave application systems. Since 2015, he has been a professor at Kokushikan University. His current research interests are in RF functional devices/circuits for various wireless communication systems.