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## FOREWORD

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### Special Section on Recent Progress in Electromagnetic Theory and Its Application

The purpose of this special section is to present a collection of original papers that give an overview of recent progress of research and development in electromagnetic theory and its applications, including those related papers presented at the 2020 Symposium on Electromagnetic Theory, held in online format, Japan on November 5–6, 2020. Presentations in international symposia and meetings held in 2020 were also considered as possible contributions to this special section. In response to the call-for-papers, we received several potential paper submissions. After careful reviews, 3 papers and 2 brief papers were accepted in this special section.

The topics of accepted papers are scattering by circular conducting cylinders, analysis of optical slab waveguide, analysis of pulsed multipole magnet beam injector, pulse response in dispersion media, and analysis of InSb sphere array. We hope that the readers find this special section useful in the research of the electromagnetic theory and its applications. We would like to express our sincere appreciations to all the authors of contributed papers for their efforts in preparing the manuscripts and to all the reviewers for their careful reviews and valuable comments.

We are also indebted to the editorial committee members for their dedicated efforts in organizing this special section. In particular, we would like to express our sincere gratitude to Professor Yukihiisa Suzuki of Tokyo Metropolitan University and Associate Professor Yoshihiro Naka of University of Miyazaki, who played important roles in the publication of this special section.

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Koichi Hirayama and Hiroyuki Deguchi, Guest Editors

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**Koichi Hirayama** (*Member*) received the B.S., M.S., and Ph.D. degrees in electronic engineering from Hokkaido University, Sapporo, Japan, in 1984, 1986, and 1989, respectively. In 1989, he joined the Department of Electronic Engineering, Kushiro National College of Technology, Kushiro, Japan. In 1992, he became an Associate Professor of Electronic Engineering at Kitami Institute of Technology, Kitami, Japan, in 2004 he became a Professor, and in 2020 he was appointed Vice President. He has been interested in the analysis and optimal design of electromagnetic and optical waveguides. In 2018, he was awarded the Best Paper Award from the IEICE. Dr. Hirayama is a senior member of IEEE.



**Hiroyuki Deguchi** (*Member*) received the B.E., M.E., and D.E. degrees from Doshisha University, Kyoto, Japan, in 1986, 1988, and 1999, respectively. From 1988 to 2000, he was with the Mitsubishi Electric Corporation. Since 2000, he has been with Doshisha University, where he is currently a Professor. His current research activities are concerned with microwave and millimeter-wave aperture antennas and antenna measurements. Prof. Deguchi is a member of the Institute of Electronics, Information and Communication Engineers (IEICE), Japan, and the Institute of Electrical Engineers (IEE), Japan. He was the recipient of the 1992 IEICE Young Engineer Award.

