
FOREWORD

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 to the papers presented at the 2007 Symposium on Electromagnetic Theory, held at Okudogo-Onsen, Matsuyama-shi, Ehime, Japan on October 18–20, 2007. Presentations in this symposium were considered to be the important parts of this special section. Presentations in the International Symposia and Meetings such as PIERS 2007-Beijing, ISAP2007, and PIERS 2007-Prague were also considered to be the parts of this special section. We received 23 papers and 3 letters and 14 papers and 3 letters were accepted in this special section after careful review.

The accepted papers and letters may be categorized into 10 groups which include (1) Fundamental Theory of Electromagnetic Field and Basic Electromagnetic Theory, (2) Scattering and Diffraction, (3) High-Frequency Asymptotic Methods, Radiation and Propagation, (4) Microwave and Millimeter Waveguide, and Optical Waveguide, (5) Artificial and Nonlinear Materials, (6) Random Media and Random Waveguide, (7) Periodic Structure, (8) Remote Sensing and Electromagnetics in Information Processing, (9) Inverse Problem, and (10) Signal Processing. 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 adequate judgments and valuable comments.

The guest editors-in-chief are also indebted to the editorial committee members for their dedicated efforts in organizing this special section. Especially, we would like to express our sincere thanks to Professor Akira Komiyama of Osaka Electro-Communication University who played an important role in the publication of the special section.

Editorial Committee of the Special Section on Recent Progress in Electromagnetic Theory and its Application:

Secretaries:

Akira Komiyama (Osaka Electro-Communication University)
Masahiro Tanaka (Gifu University)

Guest Associate Editors:

Yoshiaki Ando (The University of Electro-Communications)
Hiroyuki Deguchi (Doshisha University)
Kiyotaka Fujisaki (Kyushu University)
Koichi Hirayama (Kitami Institute of Technology)
Akimasa Hirata (Nagoya Institute of Technology)
Akira Hirose (The University of Tokyo)
Yoshio Inasawa (Mitsubishi Electric Corporation)
Akihiro Maruta (Osaka University)
Masahiko Nishimoto (Kumamoto University)
Shinichiro Ohnuki (Nihon University)
Toru Sato (Kyoto University)

Toyohiko Ishihara and Mitsuru Tanaka, Guest Editors-in-Chief

Toyohiko Ishihara (*Member*) was born in Kumamoto, Japan, on January 21, 1947. He received the B.S. (equivalent) from the National Defense Academy, Yokosuka, Japan, and M.S. and Ph.D. degrees from the Polytechnic Institute of New York (now Polytechnic University), Brooklyn, NY, in 1970, 1975, and 1978, respectively. He received the Dr. of Eng. degree from Tohoku University, Sendai, Japan, in 1983. From 1979 to 1982, he was a Research Scientist at the Institute of Research and Development of Defense Agency in Japan. In 1982, he became a Lecturer at the National Defense Academy. From September 1984 through February 1985, he was a Visiting Scholar at the Polytechnic Institute of New York, NY. He was an Associate Professor from 1985 to 1990 and is currently a Professor with the National Defense Academy. He was a Chairman of the Research Committee on Electromagnetic Theory of the Institute of Electronics, Information and Communication Engineers (IEICE) in Japan for one year starting from May 2007. He served as a Chairman of the 2000 Marine Acoustic Society of Japan Technical Meeting. His research interests include high-frequency asymptotic analysis of scattering of electromagnetic waves, radio wave propagation, and acoustic wave propagation in underwater. Dr. Ishihara received the Defense Technology Journal Paper Award of the Defense Technology Foundation of Japan in 1985, the Paper Award of the Marine Acoustic Society of Japan in 1997, and the Sato Paper Award of the Acoustic Society of Japan in 1999.



Mitsuru Tanaka (*Member*) was born in Kitakyushu, on January 7, 1950. He received the B.E., M.E., and D.E. degrees in Communication Engineering from Kyushu University, Fukuoka, Japan, in 1973, 1975, and 1981, respectively. In 1975 he joined the Department of Computer Science and Communication Engineering, Kyushu University, as a Research Associate. He became an Assistant Professor at the Department of Electronic Engineering, Oita University, Oita, Japan, in 1981, and was promoted to an Associate Professor in 1983. During October 1986 and July 1987, he was a Visiting Associate Professor in the University of Illinois at Chicago, IL, USA. Since 1993 he has been a Professor at the Department of Electrical and Electronic Engineering, Oita University. From January 2008 he has been the Dean of the Faculty of Engineering at Oita University. He received the ISAP 2000 Paper Award at the International Symposium on Antennas and Propagation in 2000. His research interests are in electromagnetic direct/inverse scattering, optical computed tomography, and electromagnetic wave interaction with artificial media. Dr. Tanaka is currently the Chair of the Technical Committee on Electromagnetic Theory in Electronics Society of the Institute of Electronics, Information and Communication Engineers (IEICE).

