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FOREWORD

Special Section on Electromagnetic Compatibility Technology in Conjunction with Main Topics of EMC'14/Tokyo

The progress in wideband radio frequency technology is broadened by combining digital communication technology, signal processing, and power electronics such as wireless power transfer systems and automotive electronics. In this context, the importance of the electromagnetic compatibility (EMC) technology increases not only for the functional safety of electronic devices and systems but also for the safe interactions between equipment/systems and the human. Such related problems had been discussed in the 2014 International Symposium on Electromagnetic Compatibility (EMC'14/Tokyo) which had been held in Tokyo in May 2014.

This special section has been planned to introduce recent results, which includes papers from EMC'14/Tokyo and some additional contributions on related topics, to promote the development of new EMC technologies further. We received 22 submissions for regular papers, and after careful review and discussion, eleven papers were accepted for publication. In addition to that, two invited papers were also solicited for this special section. The first one is on digital communication EMC, which presents the overview of a new method suitable to evaluate impact of electromagnetic (EM) interference on digital radio systems, utilizing the amplitude probability distribution (APD) of the interfering noise. The second one is on the biological effect of EM field, which deals with the evaluation of a computational modeling of human exposure to the magnetic fields of wireless power transfer systems. Some of the regular papers are related to the topics of the invited papers. Other papers are on modeling of EM radiation sources, EM coupling related to semiconductor chips, printed circuit boards, cables, electrostatic discharge (ESD) and immunity, etc. The editorial committee believes that this special section can provide worthwhile information to the readers.

As the Guest Editor-in-Chief, I would like to express my sincere appreciation to all of the authors who submitted their valuable papers, and to the members of editorial committee and the reviewers who made great effort to complete the editing and reviewing process.

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Osami Wada (Kyoto University), Guest Editor-in-Chief

Osami Wada *(Fellow)* received the B.E., M.E., and Dr. Eng. degrees in Electronics from Kyoto University in 1981, 1983, and 1987, respectively. From 1988 to 2005, he was in the Faculty of Engineering, Okayama University, Japan. In 2005, he became a Full Professor in the Department of Electrical Engineering at Kyoto University. He has been engaged in the study of electromagnetic compatibility (EMC) of electric, electronic and electromagnetic circuits and systems, and development of EMC macro-models of integrated circuits. He was the Vice Chairperson of EMC'14/Tokyo Organizing Committee. Prof. Wada is a member of IEEE, the Institute of Electrical Engineers of Japan (IEEJ), and the Japan Institute of Electronics Packaging (JIEP).

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