FOREWORD

Special Section on Recent Advances in Simulation Techniques and Their Applications for Electronics

Application area of simulation technologies which has advanced with computer efficiency (processor speed, memory size, and so on) will be expanded from the lower layer (electric/optical devices, modules and systems) to the higher layer (applications and services), accompanied by research and development of simulation algorithms that would match future improvement in computer efficiency and architecture. Furthermore, simulation technologies has a possibility to create the new technical filed by cooperated with other technologies such as AI. The purpose of this special section is to present recent technologies for simulation which include not only basic numerical techniques, applications but also new design concept.

Based on the critical evaluation reports by the reviewers and discussions by the editorial committee members, 10 papers are accepted for publication, which include 3 regular and 7 brief papers. The topics cover from basic numerical simulation techniques such as algorithm to application area which includes electric and optical devices, and optimal design technique. I hope these recent papers will contribute to the technology advancement of academia, the competition enhancement of industry, and activation of society from the view point of technologies in the future.

On behalf of the editorial committee, I would like to express my sincere gratitude to all the authors of the submitted papers for their contribution, and the reviewers for their generous effort in reviewing the papers. Also I would like to thank all the members of the editorial committee for their devoted work.

Hideaki Kimura, Guest Editor-in-Chief

Hideaki Kimura *(Senior Member)* received the B.E and M.E. and Ph.D. degrees in electrical engineering from Hokkaido University, Sapporo, Japan, in 1987, 1989, and 1992, respectively. In 1992, he joined NTT LSI Laboratories, where he engaged in research on package design for high-frequency wideband ICs and numerical simulation technologies. From 1996, he has been engaged in research on super-low-power transceiver technologies such as 1V-operation-super-small-size ONU and no-power-supply voice communication service for blackout situation due to disaster. From 2003 to 2005, he was engaged in personnel business at personnel department of NTT East Corporation. From 2006 to 2010, he has been researched future optical access network systems based on WDM and DSP. From 2009 to 2010, and 2012 to 2014, he is a member of ITU-T SG13 FG-FN and FG-DR&NRR. From 2012 to 2014 and 2014 to 2016 he was a general manager of 1st promotion project and operation innovation project. Now, he is an executive research engineer at international business planning section and the chair of the Electronics Simulation Technical Group of the same society. He is a member of IEEE and a senior member of IEICE.