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## FOREWORD

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### Special Section on Knowledge-Based Software Engineering

The special interest group Knowledge-based Software Engineering (SIG-KBSE) was established by the Institute of Electronics, Information and Communication Engineers (IEICE) in 1992.

Software development can be envisioned as a series of activities to reproduce human knowledge as an algorithm on a computer. SIG-KBSE offers discussion and presentation opportunities not only on software development methods using knowledge engineering, but also actual software development. The objective of this SIG-KBSE is to report and overview recent progress in the interdisciplinary area of Artificial Intelligence and Software Engineering.

This special section is notable for the cooperation between the IEICE journal and SIG-KBSE. Especially, SIG-KBSE has the Joint Conference on Knowledge-based Software Engineering (JCKBSE). JCKBSE is held in Europe or Russia every two years. The purpose of this special section is to publish the JCKBSE accepted papers in journal format. Because there was no JCKBSE before the establishment of this special section, we feared that submissions would be lacking. Fortunately, that was not the case.

In preparation for this special section, an Editorial Committee was organized and a Call for Papers (CFP) was distributed via IEICE transactions. 29 papers were submitted in response. After extensive review, eight full papers and one letter were accepted. This acceptance rate of about 30% demonstrates the strictness of the reviewing process and high quality of the accepted papers.

In conclusion, I would like to express my sincere appreciation and gratitude to all the authors for their contributions. Special thanks are also due to the following editorial committee members and additional referees for their very considerable efforts to review the submissions and their assistance in preparing for this special section.

#### Special Section Editorial Committee Members

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Shigeo Kaneda (Doshisha University), Guest Editor-in-Chief

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**Shigeo Kaneda** (*Member*) is a professor in the Faculty of Science and Engineering at Doshisha University. He received B. Eng., M. Eng., and Ph.D. degrees from Kyoto University in 1974, 1976, and 1984, respectively. From 1976 to 1997, he worked as a researcher at the Research and Development Center of Nippon Telegraph and Telephone Corporation. He joined Doshisha University in 1997 as a professor in the Graduate School of Policy and Management. He was Chairman of SIG Knowledge-based Software Engineering of IEICE from June 2016 to May 2018. His research interests include object-oriented modeling, sensor applications for bicycles, and home energy management systems.

