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## FOREWORD

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### Section on Mathematical Systems Science and its Applications

Mathematical systems science is the study of design, analysis, verification, and control based on mathematical models and it is applicable in many engineering and scientific research areas including emergent fields such as cyber-physical systems, man-machine systems, open systems science, and systems biology. The aim of this special section is to clarify the state of art of research on mathematical systems science and to promote the future research.

The editorial committee has received 16 papers and 1 letter, and accepted 10 papers after a very careful review process by two reviewers for each paper and one reviewer for the letter.

This special section contains two invited papers:

“Game Theoretic Analysis of Incentive-based Power Consumption Reduction Problems with For-Profit or Nonprofit Aggregator” by Yuta Hasegawa and Takafumi Kanazawa, and

“Mathematical Analysis of Phase Resetting Control Mechanism during Rhythmic Movements” by Kazuki Nakada and Keiji Miura.

The invited papers are recommended by the technical committee on Mathematical Systems Science and its Applications (MSS) since Mr. Yuta Hasegawa and Prof. Takafumi Kanazawa won the 2017 MSS best paper award among all papers presented at MSS technical meetings in 2017 and Dr. Kazuki Nakada and Prof. Keiji Miura won the 2018 MSS best paper award among all papers presented at MSS technical meetings in 2018.

On behalf of the editorial committee of the Special Section on Mathematical Systems Science and its Applications, I would like to express my appreciation to all the authors for their contributions and the referees for their cooperation on the review process. I am also grateful to the following guest associate editors of the editorial committee for their kind cooperation.

#### Special Section Editorial Committee Members

##### Guest Associate Editors:

Shunichi Azuma (Nagoya University), Daisuke Ishii (Japan Advanced Institute of Science and Technology), Atsushi Ohta (Aichi Prefectural University), Shun Kataoka (Otaru University of Commerce), Yoshinobu Kawabe (Aichi Institute of Technology), Shoichi Kitamura (Mitsubishi Electric Corporation), Manabu Sugii (Yamaguchi University), Ichiro Toyoshima (Toshiba Energy Systems), Shingo Yamaguchi (Yamaguchi University), Tatsushi Yamasaki (Setsunan University)

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Toshiyuki Miyamoto, Guest Editor-in-Chief

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**Toshiyuki Miyamoto** (*Senior Member*) received his B.E and M.E. degrees both in electronic engineering from Osaka University, Japan, in 1992 and 1994, respectively, and received Dr. of Eng. degree in electrical engineering from Osaka University, Japan in 1997. From 2000 to 2001, he was a visiting researcher in Department of Electrical and Computer Engineering at Carnegie Mellon University in the United States. He is currently an associate professor of Division of Electrical Electronic and Information Engineering, Osaka University. His area of research interests includes theory and applications of concurrent systems and multi agent systems. He is a member of IEEE, SICE, and ISCIE.

