
FOREWORD

Special Section on Information Theory and Its Applications

The special section on Information Theory and Its Applications of the IEICE Transaction on Fundamentals is devoted to new theoretical developments and techniques in information theory and its applications to real-world problems. This special section has been published annually since 1991.

We received 22 submissions: 18 papers and 4 letters. Some of the submitted papers were originally presented at the 2022 International Symposium on Information Theory and its Applications (ISITA2022) held at Tsukuba, Ibaraki, Japan on October 17–19, 2022, and the 45th Symposium on Information Theory and its Applications (SITA2022) held at Noboribetsu, Hokkaido, Japan on November 29–December 2, 2022. After a careful review process, the Editorial Committee selected 14 papers and 3 letters for publication, which are classified into the following categories: i) Coding Theory and Techniques, ii) Source Coding and Data Compression, iii) Shannon Theory, iv) Cryptography and Information Security, v) Communication Theory and Systems, vi) Learning, vii) Signal Processing, viii) Estimation, ix) Quantum Information Theory.

In addition to those submitted papers and letters, we have an invited paper regarding information-theoretic security authored by Prof. Mitsugu Iwamoto. Readers should notice that this issue of the Transactions contains another special section on Cryptography and Information Security. To promote collaboration among researchers in the two areas, we aimed to publish a paper that can be regarded as “jointly invited” from the two special sections. We would like to express our appreciation to the editorial committee of the special section on Cryptography and Information Security for their kind understanding and cooperation.

As the Guest Editor-in-Chief, I would like to thank all authors for submitting their contributions and the anonymous reviewers for their voluntary work to keep the quality of papers high. I am especially grateful to Dr. Tetsunao Matsuta and Dr. Takahiro Yoshida, the Guest Editors, for their remarkably dedicated efforts and to the other members of the Guest Editorial Committee for their collaboration and support.

Special Section Editorial Committee Members:

Guest Editors:

Tetsunao Matsuta (Saitama Univ.) and Takahiro Yoshida (Nihon Univ.)

Guest Associate Editors:

Masaya Fujisawa (Tokyo Univ. of Science), Shinsuke Ibi (Doshisha Univ.), Motohiko Isaka (Kwansei Gakuin Univ.), Mitsugu Iwamoto (Univ. of Electro-Communications), Ryutaroh Matsumoto (Tokyo Inst. of Tech.), Kazushi Mimura (Hiroshima City Univ.), Jun Muramatsu (NTT), Mikihiro Nishiara (Shinshu Univ.), Yasuyuki Nogami (Okayama Univ.), Shota Saito (Gunma Univ.), Tetsuo Tsujioka (Osaka Metropolitan Univ.), Tsuyoshi Usuda (Aichi Pref. Univ.), Hideki Yagi (Univ. of Electro-Communications), Koji Yamamoto (Kyoto Inst. of Tech.), Maki Yoshida (NICT).

Yuichi Kaji, Guest Editor-in-Chief

Yuichi Kaji (*Member*) received the B.E., M.E., and D.E. degrees from Osaka University in 1991, 1992, and 1994, respectively. He is currently with Nagoya University, Nagoya, Japan.

