

---

## FOREWORD

---

### Special Section on Security and Privacy in Blockchain

Blockchain is emerging as a disruptive and transformative technology, with enormous potential, benefits, and implications for organizations and government services. The proliferation of blockchain technology in various sectors is changing our lives, and blockchain is considered a breakthrough technology for cryptography and cybersecurity. While blockchain has recently gained increasing interest in both academia and industry, blockchain security and privacy continue to be at the center of debate when it comes to deploying blockchain in a variety of applications. For example, designing a blockchain system which is consistent with GDPR (General Data Protection Regulation) is still one of the challenging issues. Therefore, the purpose of this special issue is to provide the scientific community with a cutting-edge venue to explore the latest ideas, models, and innovative applications in the areas of security and privacy.

This special section in IEICE Transactions on Information and Systems is originally to present Blockchain theories, models, technologies, and systems in the domain of security and privacy. It is mainly inspired from two international conferences: (1) The 5th International Workshop on Blockchain and Security (BlockchainSec2022), Zhangjiajie, China, November 15–18, 2022, and (2) The Second International Conference on Ubiquitous Security (UbiSec 2022), Zhangjiajie, China, November 15–18, 2022.

In response to our call for papers, a total of four submissions were received including one invited paper and three regular papers from both domestic and international. After a thorough and careful review process as the procedure of IEICE Transaction, the editorial committee selected only one invited paper of exceptional quality that prove the significance and importance of the regarding and importance of the regarding areas. While this result indicates the difficulty of making journal papers in this field, it also shows the high quality and internationality of the papers of IEICE Trans.

The Editorial Board would like to thank the reviewers for their constructive comments and to thank all the authors who contributed valuable research results to this special issue.

#### Guest Editors-in-Chief:

Kouichi Sakurai (Kyushu University)

#### Guest Associate Editors-in-Chief:

Saqib Ali (University of Agriculture, Faisalabad)

Guojun Wang (Guangzhou University)

Yaokai Feng (Kyushu University)

#### Guest Associate Editors:

Santoso Bagus (University of Electro-Communications), Aniello Castiglione (University of Naples Parthenope), Arcangelo Castiglione (University of Salerno), Jiageng Chen (Central China Normal University), Chen-Mou Cheng (BTQ AG), Yinglong Dai (Hunan Normal University), Sabyasachi Dutta (University of Calgary), Haroon Elahi (Umeå University), Richard Hill (University of Huddersfield), Jie Hu (University of Electronic Science and Technology of China), Wenjun Jiang (Hunan University), Georgios Kambourakis (University of the Aegean), Constantinos Koliass (University of Idaho), Mario Larangeira (Input Output and Tokyo Institute of Technology), Kuan-Ching Li (Providence University), Ruidong Li (Kanazawa University), Anfeng Liu (Central South University), Qin Liu (Hunan University), Xiangyong Liu (Guangzhou University), Matsume Matsusaki (University of Nagasaki), Sancheng, Peng (Guangdong University of Foreign Studies), Tao Peng (Guangzhou University), Yizhi Ren (Hangzhou Dianzi University), Seong Han Shin (AIST), Yoshiaki Shiraiishi (Kobe University), Chunhua Su (University of Aizu), Haowen Tan (Zhejiang Sci-Tech University), Feng Wang (China University of Geosciences), Tian Wang (Huaqiao University), Yulei Wu (University of Exeter), Yang Xu (Hunan University), Naoto Yanai (Panasonic Holdings Corporation), Chung-Huang Yang (National Kaohsiung Normal University), Wenyin Yang (Foshan University), Deze Zeng (China University of

---

Geosciences)

---

**Kouichi Sakurai** (Kyushu University), Guest Editor-in-Chief

---

***Kouichi Sakurai*** (*Member*) received the B.S. degree in mathematics from the Faculty of Science, Kyushu University in 1986. He received the M.S. degree in applied science in 1988, and the Doctorate in engineering in 1993 from the Faculty of Engineering, Kyushu University. He was engaged in research and development on cryptography and information security at the Computer and Information Systems Laboratory at Mitsubishi Electric Corporation from 1988 to 1994. From 1994, he worked for the Dept. of Computer Science of Kyushu University in the capacity of associate professor and promoted to be a full professor there in 2002. He was concurrently working also with the Institute of Systems & Information Technologies and Nanotechnologies, as the chief of Information Security laboratory, for promoting research co-operations among the industry, university and government under the theme “Enhancing IT-security in social systems”. He is now researching also partially with Advanced Security Laboratory of Advanced Telecommunications Research Institute International (ATR). He was working for IEICE/ISEC, and the chair of 2015, and he is now a senior member of IEICE.

