

# Editor's Message to Special Issue of Security and Privacy Challenges in Supporting the Digital Social Revolution

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The rapid progress of computer technologies have brought us revolutionary improvements in our society, some of which might have been wholly unimaginable in the last century. These digital social revolution, on the other side of the coin, have also produced emerging new risks in the cyberspace such as cyber crimes, and their threats are becoming more serious and complicated along with the advance of the technologies.

Active development of computer security technologies and its appropriate application are indispensable to cope with these emerging risks. In addition to protecting us from the threats, the computer security technologies are also becoming the keystone to develop new services, which are expected to bring about unprecedented convenience in our lives. For example, the recent emergence of Fintech services like Bitcoin cannot be realized without the advancement of computer security technologies. Moreover, effective utilization of big data is expected to be the prime mover of industrial innovation, but it cannot be done without adequately preserving the privacy of the individuals related to the data.

This special issue aims to identify the security and privacy challenges in such digital social revolution, and discuss the solutions to cope with them. This issue focuses on papers to address such challenges in terms of basic theories, protocols, architectures, software systems, applications, implementations, operation and management, as well as social-scientific analyses.

Out of 45 submissions, 25 excellent papers (including 19 papers written in Japanese and 6 papers in English) were accepted through careful deliberations by the editorial committee of this special issue. The acceptance rate is 56%. This rather high acceptance rate reflects the sincere answers and revisions by the authors upon comments and questions from reviewers.

The special issue includes an invited paper from Prof. Hiroaki Kikuchi (Meiji Univ.), the general chair of the first Privacy Workshop (PWS2015) held in Nagasaki, Oct. 2015. This paper talks about a competition organized during the above workshop on data anonymization and de-anonymization. It also includes the competition's aim, technical problems, and future directions. I hope that the publication of this invited paper in this special issue will facilitate active development of privacy-preserving technologies in Japan.

Finally, I would like to sincerely thank all reviewers, editors and secretaries of IPSJ for their dedication to select excellent papers and publish the special issue. Especially, I appreciate the work of editorial secretaries, Prof. Isao Echizen (National Inst. of Informatics) and Dr. Takehisa Kato (Toshiba). This special issue could not be published without their devoted work.

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