Editor’s Message to Special Issue on Computer Security Technology Achieving Smart Society

SATORU TORII¹,a)

Sensors now capture a wide variety of information unimaginable before. Data storage holds immense information coming from distributed sources. Analytic software discovers meaningful correlation patterns from a vast amount of data. Devices and computer systems have become ever smarter. Latest user interface allows users easier and more intuitive operations. Our everyday life is greatly affected by these recent technological advances. All these changes lead to a smart society, which should enable us to make much more appropriate and better decisions according to up-to-the-minute circumstances.

For example with the spread of smartphones and SNSs (Social Networking Services), we are now able to access a variety of information almost at any time anywhere. Furthermore, situation-aware terminals give their users timely advices. Information collected through smartphones and SNSs is expected to help provide solutions for complicated social problems, such as traffic congestion, aging society, food safety, and environmental pollution. Such a society is at the heart of achieving it.

Then computer security technologies play an important role in making the smart society a safe and secure place. In order to minimize risks and threats to the smart society, computer security technologies should be employed to reduce various threats, such as exploitation of vulnerability of embedded devices, denial of service attacks, illegal changes and leakage of stored information, and so on.

From the point of view realizing a safe and secure smart society, this special issue focuses on papers that describe such computer security technologies in terms of basic theories and techniques, protocols, architectures, software systems, applications and implementations, operation and management, and social-scientific analyses. Forty eight manuscripts were submitted to the RFP of this special issue. With two manuscripts withdrawn, twenty two manuscripts have made into this issue out of forty six manuscripts.

Along with those high quality papers, I am pleased to announce that there is also an invited paper. The paper describes achievements of the DETER Project that aims to provide experimental infrastructure to support cybersecurity technology development. The initial focus of DETER Project was to develop a tested framework for evaluating security mechanisms. SIG-CSEC (Special Interest Group on Computer Security), the proposer of this special issue, has been hosting Anti-Malware Engineering Workshop (MWS). MWS’s focus has been on malware research development and evaluation using datasets captured in testbeds of some of its member organizations. With this invited paper, I wish this activity of MWS would expand beyond Japan into all over the world.

Finally, I would like to thanks those involved in this special issue: the editorial team members, the reviewers, the secretariat, and of course, to the authors. This special issue would not have been possible without their contributions. In particular, I would like to acknowledge valuable hard work by the Editorial Board members, Koji Chida (NTT Corporation) and Katsunari Yoshioka (Yokohama National University).

The Editorial Committee

- Editor in-Chief: Satoru Torii (Fujitsu Laboratories Ltd.)
- Editorial Board: Koji Chida (NTT Corporation), Katsunari Yoshioka (Yokohama National University)
- Editorial Committee: Hiroshi Doi (Institute of Information Security), Isao Echizen (National Institute of Informatics), Masashi Eto (National Institute of Information and Communications Technology), Masaki Fujikawa (Socho Security Services Co., Ltd.), Yasuhiro Fujiwara (Hyogo College of Medicine), Sadayuki Hongo (Hokkaido Institute of Technology), Keiichi Iwamura (Tokyo University of Science), Takehisa Kato (Toshiba Solutions Corporation), Hiroaki Kikuchi (Tokai University), Masahiro Mambo (University of Tsukuba), Kanta Matsuura (The University of Tokyo), Atsuko Miyaji (Japan Advanced Institute of Science and Technology), Koichi Mouri (Ritsumeikan University), Shiko Mori (National Institute of Informatics and Communications Technology), Yuko Murayama (Iwate Prefectural University), Toru Nakanishi (Okayama University), Masakatsu Nishigaki (Shizuoka University), Eiji Okamoto (University of Tsukuba), Toshio Ohigashi (Hiroshima University), Mirang Park (Kanagawa Institute of Technology), Takamichi Saito (Meiji University), Ryoichi Sasaki (Tokyo Denki University), Junji Shikata (Yokohama National University), Yuji Suga (IIJ Inc.), Tatsuya Takagi (Kyushu University), Kenta Takemori (KDDI R&D Laboratories Inc.), Kiyoshi Tanaka (Shinshu University), Masayuki Terada (Hitachi Ltd.), Masayuki Terada (NTT docomo, Inc.), Satoru Tezuka (Tokyo University of Technology), Toshihiro Yamauchi (Okayama University), Hiroshi Yoshiura (University of Electro-Communications), Yuji Watanabe (IBM Japan, Ltd.)

¹ Fujitsu Laboratories Ltd., Kawasaki, Kanagawa 211–8588, Japan
a pro104@labs.fujitsu.com