Editor's Message to Special Issue on Computer Security Technologies against New Risks

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IT security threats are increasing, with so many sophisticated and customized-to-target attacks. Cyber-attackers are now organized with professional expertise, always seeking vulnerabilities of new devices and services. Once they find a chance to make a business, or an effective political/social appeal, they persistently continue attacks.

One newly emerging risk is networking of control systems and/or IoT (Internet of Things) devices, and big data platforms accompanying the data collection. If they become targets of the cyber-attackers, we might face serious damages such as large scale data loss/leakage and disruption of social services.

Considering these, this special edition has been focused on papers for computer security technologies that can cope with the new risks and construct a solid, attack-resilient social infrastructure, with wide range of topics such as basic theories/technologies, protocol/architecture, software/application, implementation/operation and social science consideration.

We encouraged CSS2013 (Computer Security Symposium 2013) held by Computer Security Working Group and MWS2013 (Malware Workshop 2013), a collocated workshop for malware protection researcher training, to submit their outcomes. As a result we had 42 submissions and 21 of them were accepted. The accepted papers cover broad topics in a well-balanced manner, including system security, security and society, network security, risk/emergency management, security fundamental technology, and machine learning/data mining.

Also we invited two papers by distinguished researchers. One is on current topics of IT risk research by Professor Ryoichi Sasaki (Tokyo Denki University), and the other one is on attacker model issues of privacy protection research by Prof. Nobuaki Hoshino (Kanazawa University). The invitation of Prof. Hoshino is triggered by his presentation in IWSEC2013 (The 8th International Workshop on Security). The committee hopes this special edition contributes further progress of computer security research, as well as activities of CSEC/MWS and associated conferences.

In order to publish this edition as scheduled, editors, reviewers, invited paper authors and IPSJ secretaries have done magnificent work to keep high quality discussions on various topics with limited time. I would like to express my sincere thanks for their effort. In particular, I appreciate the work of Prof. Takeshi Okamoto (National University Corporation of Tsukuba University of Technology) and Prof. Takao Ohkubo (Institute of Information Security) for their devotion to manage the whole editing process.

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