

SciSec2022 program

Zoom Link for online presentation

<https://us06web.zoom.us/j/87208520680?pwd=SFBZMHBoYjl2U0tOaXplM0E5cm9adz09>

For in-person attendance: Room 401 Kunibi messe

<http://www.kunibikimesse.jp/60.html>

Day 1 August 10, 2022(Tokyo, Japan Time)

09:00–09:20 Welcome plenary: From General Chairs and PC Chairs

09:20- 10:10: Keynote Speech 1 Prof. Moti Young “Science + Systems Imply a Better Security Practice”

10: 10-10:30: Coffee break

10:30-12:10 Session 1 Blockchain and Applications

--Yanze Kang, Xiaobo Yu, Weizhi Meng and Yining Liu. "BlockRAT: An Enhanced Remote Access Trojan Framework via Blockchain"

--Jorge Castillo, Kevin Barba and Qian Chen. "ChainSCAN: A Blockchain-based Supply Chain Alerting Framework for Food Safety"

--Ling Yang and Huawei Huang. "Adapted PBFT Consensus Protocol for Sharded Blockchain"

--Wictor Lang Jensen, Sille Jessing, Wei-Yang Chiu and Weizhi Meng. "A Practical Blockchain-based Maintenance Record System for Better Aircraft Security"

--Chunying Peng and Haixia Xu. "Redactable Blockchain with Fine-Grained Autonomy and Transaction Rollback"

12:10-13:30 Lunch Break

13:30-14:50 Session 2 AI Crypto and Security Workshop (AI-CryptoSec)

-- Invited Talk: Hiroaki Maeshima. “Dataset-based robustness against adversarial examples”,

--Takaya Yamazoe, Hiromi Yamashiro, Kazumasa Omote, Akira Imakura and Tetsuya Sakura. "Image Data Recoverability against Data Collaboration and its

Countermeasure"

--Zongning Gao and Shunliang Zhang. "Encrypted 5G Smallcell Backhaul Traffic Classification Using Deep Learning"

--Ruojin Xiao, Leilei Qu and Wenchang Shi. "Human Security Behavior Assistance in the Cyber-physical Space"

--Siliang Dong and Yining Liu. "A Privacy-preserving Electricity Theft Detection (PETD) Scheme for Smart Grid"

14: 50-15:20: Coffee break

15:20-16:40 Session 3 Cryptography and applications

--Chuyi Yan, Haixia Xu, Yongheng Mu and Jiong Ding. "Pitch in: A Secure Extension Signature based on SM9"

--Amirreza Hamidi and Hossein Ghodosi. "Verifiable DOPE from Semi-homomorphic Encryption, and the Extension to DOT"

--Po-Chu Hsu and Atsuko Miyaji. "Scalable M+1st-Price Auction with Infinite Bidding Price"

--Chen Li, Bibo Tu and Yanchang Feng. "The Shared Memory based Cryptographic Card Virtualization"

16:40-18:20 Session 4 Network Security

--Tao Chen and Kun Wen. "Feature Transfer based Network Anomaly Detection"

--Kun Jia, Jiazhi Liu, Wen Wang and Feng Liu. "Hybrid Routing for Efficient Fine-Grained Management of Specific Services in SDN"

--Wenjie Qin, Chengwei Peng, Tao Yin, Changbo Tian and Guangze Zhao "AtNet: A Novel Anti-tracking Network with Multi-party Judgement Capability based on Cross-domain Small-world Topology"

--Bingxu Wang, Zhen Li, Gaopeng Gou, Peipei Fu, Gang Xiong and Yingchao Qin "A Two-stage Method for Fine-grained DNS Covert Tunnel Behavior Detection"

--Jiang Xie, Shuhao Li and Peishuai Sun Analysis and Detection against Overlapping Phenomenon of Behavioral Attribute in Network Attacks

18:20-20:30 Reception (poster/workshop session, business meeting)

Poster session 18:30-19:00

--Danu Dwi Sanjoyo and Masahiro Mambo. "Zero-touch Provisioned Device Lifecycle and Its Security in IoT"

--Jan Wantoro and Masahiro Mambo. "Separation of Activation Code Delivery on V2X Pseudonym Certificate Revocation"

--Hendra Kurniawan and Masahiro Mambo. "Privacy-preserving Federated Active Learning"

Workshop Session 19:10-19:50

--Ke Chen, Entao Luo, Yong Liu, Shuqi Shangguan, Ming Wu, Tao Peng and Wushour Silamu. "Application of the elimination competition mechanism based on blockchain multi-supervision in vehicle data sharing"

--Jie Ke, Changhong Zhu and Yisen Lin. "Design and implementation of VCP network for Open Flow"

Business meeting 19:50-20:30

Day 2 August 11, 2022(Tokyo, Japan Time)

09:00-09:50 Keynote Speech 2 Prof. Yi Deng "Zero Knowledge Proofs: A Gentle Introduction"

09:50-10:50 Session 5 Cyber-Physical System

-- Thomas Gleerup, Wenjuan Li, Jiao Tan and Yu Wang. "ZoomPass: A Zoom-based Android Unlock Scheme on Smart Devices"

-- Guozhu Zhao, Pinchang Zhang, Yulong Shen and Xiaohong Jiang. "Passive User Authentication Utilizing Consecutive Touch Action Features for IIoT Systems"

-- Sulav Lal Shrestha, Taylor Lee and Sebastian Fischmeister. "Metasploit for Cyber-Physical Security Testing with Real-Time Constraints"

10:50-11:10 Coffee break

11:10-12:10 Session 6 Malware

-- Yu Ding, Xiaoyu Zhang, Binbin Li, Jian Xing, Qian Qiang, Zisen Qi, Menghan Guo, Siyu Jia and Haiping Wang. "Malware Classification Based on Semi-Supervised Learning"

--Xiao Chen, Zhengwei Jiang, Shuwei Wang, Chen Ling, Qiuyun Wang and Rongqi Jing. "Malware detected and tell me why: An verifiable malware detection model with graph metric learning"

--Qin Si, Hui Xu, Ying Tong, Yu Zhou, Jian Liang, Lei Cui and Zhiyu Hao. "Malware Detection using Automated Generation of Yara rules on Dynamic Features"

12:10-13:00 Lunch Break

13:00-13:50 Keynote Speech 3 Prof. Akira Otsuka "Attested Observers to achieve Transparency for Anonymous Digital Currency"

13:50- 14:50 Session 7 Mobile System Security

-- Khalid Alkhattabi, Davita Bird, Kai Miller and Chuan Yue. "Question Answering Models For Privacy Policies of Mobile Apps: Are We There Yet?"

--Xinyu Liu, Wu Zhao, Langping Chen and Qixu Liu. "DroidFP: A Zero-Permission Detection Framework for Android Device Based on Gated Recurrent Unit

--Hung-Yu Chien. "Design of End-to-End Security for MQTT 5.0"

14:50-15:10 Coffee Break

15:10-17:10 Session 8 Theory and Application of Blockchain and NFT Workshop (TA-BC-NFT)

--Invited Talk: Shingo Fujimoto, "The smart contract-based token economy in the NFT era",

--Khoi Le Quoc, Khanh Vo Hong, Huong Hoang Luong, Anh Nguyen The, Khoa Tran Dang, Hieu Le Van, Khiem Huynh Gia, Loc Van Cao Phu, Duy Nguyen Truong Quoc, Nghia Huynh Huu, Tran Nguyen Huyen, Son Ha and Bang Le Khanh. "Medical waste treatment process based on Blockchain technology - a case study of Covid-19 waste handling in Vietnam"

--Khoi Le Quoc, Khanh Vo Hong, Huong Hoang Luongho, Anh Nguyen The, Khoa Tran Dang, Nghia Huynh Huu, Hieu Le Van, Khiem Huynh Gia, Loc Van Cao Phu, Duy Nguyen Truong Quoc, Tran Nguyen Huyen, Son Ha and Bang Le Khanh. "Blockchain technology-based management of blood and its products - a case study in Vietnam"

--Hassan Noun, Florian Rehm, Guillaume Zeller, Rajesh G, Iryna Mozgova and Roland Lachmayer. "Integration of Cybersecurity related Development Processes by using a Quantification Method"

-- Jing Xu and Fei Xu. "Economic Perspective of Cybersecurity: Principles and Strategies"

-- Lin-Fa Lee and Kuo-Hui Yeh. "Towards a Dynamic Reputation Management Scheme for Cross-chain Transactions"

18:00 Banquet

Day 3 August 12, 2022(Tokyo, Japan Time)

9:00-10:40 Session 9 System and Web Security

-- Othmane Belarbi, Aftab Khan, Pietro Carnelli and Theodoros Spyridopoulos. "An Intrusion Detection System based on Deep Belief Networks"

-- Jiawei Sun, Guangjun Wu, Junnan Yin, Liujunjiao and Qian Qiang. "HINCDG: Multi-Meta-Path Graph Auto-Encoders for Mining of Weak Association Malicious Domains"

-- Yi Liu, Yanni Han and Wei An. "AttVAE: A Novel Anomaly Detection Framework for Multivariate Time Series"

-- Xiangyu Du, Zhengwei Jiang, Jun Jiang, Kai Zhang, Zijing Fan, Fangming Dong, Ning Li and Baoxu Liu. "BASNEA: Threat Hunting for Ethereum Smart Contract based on Backtrackless Aligned-Spatial Network Entity Alignment"

-- Qian Zou, Ning Zhang, Feng Guo, Qingshan Kong and Zhiqiang Lv. "Multi-region SRAM-Based TCAM for Longest Prefix"

10:40-11:00 Coffee Break

11:00-11:40 Session 10 Security in Financial Industry

-- Zhexuan Hong and Jiageng Chen. "A solution for the offline double-spending issue of digital currencies"

-- Daniel Kasper and Jens Grossklags. "A Hierarchical Macroeconomic Copula Model for Cyber Damages based on current Cyber Insurance Prices"

11:40-12:40 Session 11 Social Engineering and personalized security

-- Rosana Montanez Rodriguez and Shouhuai Xu. "Cyber Social Engineering Kill Chain"

-- Leilei Qu, Ruojin Xiao and Wenchang Shi. "Towards Practical Personalized Security Nudge Schemes: Investigating the Moderation Effects of Behavioral Features on Nudge Effects"

-- Zhiting Ling, Huamin Feng, Xiong Ding, Xuren Wang, Chang Gao and Peian Yang. "Spear Phishing Email Detection with Multiple Reputation Features and Sample Enhancement"

12:40-13:30: Lunch Break

13:30-15:10 Session 12 Mathematical Science of Quantum Safety and its Application Workshop (MathSci-Qsafe)

--Bagus Santoso. "Revisiting Security of Symmetric-Key Encryption with Imperfect Randomness and Correlation between Source and Keys"

--Qian Dang, Bo Zhao, Biying Sun, Yu Qiu and Chunhui Du. "A Secure Image-Video Retrieval Scheme with Attribute-Based Encryption and Multi-feature Fusion in Smart Grid"

--Debolina Ghatak and Kouichi Sakurai. "A Survey on Privacy Preserving Synthetic Data Generation and a Discussion on a Privacy-Utility Trade-off Problem"

--Bo Pang and Mingsheng Wang Collaborative Private Decision Tree Classification using Multi-Key Fully Homomorphic Encryption

--Mariama Mbow, Hiroshi Koide and Kouichi Sakurai Advances in adversarial attacks and defenses in Intrusion Detection System: A survey

15:10-15:40 Coffee break

15:40-16:20 Session 13 Privacy and Anonymity

--Huajun Cui, Guozhu Meng, Yan Zhang, Weiping Wang, Dali Zhu, Ting Su, Xiaodong Zhang and Yuejun Li. "TraceDroid: A Robust Network Traffic Analysis Framework for Privacy Leakage in Android Apps"

--Jing Yu, Shuguang Yuan, Yulin Yuan, Yafan Li and Chi Chen. "A k-anonymity-based Robust Watermarking Scheme for Relational Database"