**ICCCN 2020**

 **The 29th International Conference on**

 **Computer Communications and Networks**

**August 3 – August 6, 2020**

 **Final Program**

**Honolulu, Hawaii, USA**



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 ICCCN 2020 Workshop Program Overview

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| **August 6 (Thursday) – Workshops*****All times listed in Honolulu, Hawaii USA time.*** |
| 8:45 – 9:00 ICCCN workshop virtual welcome |
| 9:00 - 10:30  | Zoom Link 1IoTSPT 1 | Zoom Link 2VENITS 1 | Zoom Link 3BDMLS 1 |
| 10:30 – 10:45 | Virtual Coffee break |
| 10:45 – 12:15 | Zoom Link 1IoTSPT 2 | Zoom Link 2VENITS 2 | Zoom Link 3BDMLS 2 |
| 12:15 - 13:30  | Virtual Lunch break |
| 13:30 - 15:30  | Zoom Link 1SmartCityCom | Zoom Link 2AFEC 1 | Zoom Link 3BDMLS 3 |
| 15:30 – 15:45 | Virtual Coffee break |
| 15:45 – 17:15 |  | Zoom Link 2AFEC 2 | Zoom Link 3BDMLS 4 |
| Closing |

Integrated Workshop Schedule

**Aug 6 (Thursday)**

***All times listed in Honolulu, Hawaii USA time.***

**IoTSPT-ML Workshop (Zoom Link 1)**

Chair: Geetha Thamilarasu (University of Washington Bothell, USA) and Abhishek Parakh (University of Nebraska at Omaha, USA

Welcome 8:45 – 9:00

**Session 1: 9:00 – 10:30**

**Session Chair: Geetha Thamilarasu (University of Washington Bothell, USA)**

**Email:** **geetha@uw.edu**

* **Fingerprinting Analog IoT Sensors for Secret-Free Authentication**

Felix Lorenz, Lauritz Thamsen, Andreas Wilke, Ilja Behnke, Jens Waldmüller-Littke,

Ilya Komarov, Odej Kao and Manfred Paeschke (Technische Universität Berlin and Bundesdruckerei GmbH)

* **Modelling DoS Attacks & Interoperability in the Smart Grid**

Dilara Acarali, Muttukrishnan Rajarajan, Doron Chema and Mark Ginzburg (City, University of London and L7Defense)

* **Quantitative Risk Modeling and Analysis for Large-Scale Cyber-Physical Systems**

Adeel A. Malik and Deepak K. Tosh

(University of Texas at El Paso)

**Coffee Break: 10:30 – 10:45**

**Session 2: 10:45 – 12:15**

**Session Chair: Abhishek Parakh (University of Nebraska at Omaha, USA)**

**Email:** **aparakh@unomaha.edu**

* **Bidirectional Blockchain**

Joshua Lampkins and Tiffany Hyun-Jin Kim (HRL Laboratories)

* **Statistical Analysis of Enhanced SDEx Encryption Method Based on SHA-512 Hash Function**

Artur Hłobaż (University of Lodz)

* **Secure Single-Server Nearly-Identical Image Deduplication**

Jonathan Takeshita , Ryan Karl and Taeho Jung (University of Notre Dame)

**Lunch Break 12:15 – 13:30**

**SmartCityCom Workshop (Zoom Link 1)**

Chair: Shuhui Yang (Purdue University Northwest, USA), Besma Smida (University of Illinois at Chicago, USA)

**Welcome 13:30 – 13:40**

**Session 13:40 – 15:30**

**Session Chair: Shuhui Yang**

**Email:** **Shuhuiyang@pnw.edu**

* **NFEH: An SDN Framework for Containerized Network Function-enabled End Hosts**

Rahil Gandotra, Levi Perigo

*(University of Colorado Boulder)*

* **On the Mitigation of Controllable Event Triggering Attack in WSNs**

Haoran Hu, Wei Chang

*(Saint Josephs University)*

* **Minor Privacy Protection Through Real-time Video Processing at the Edge**

Meng Yuan, Seyed Yahya Nikouei, Alem Fitwi, Yu chen and Yunxi Dong

*(State University of New York - Binghamton, Syracuse University)*

Closing

**VENITS Workshop (Zoom Link 2)**

Chair: Francisco J. Martinez (University of Zaragoza, Spain), Carlos T. Calafate (Technical University of Valencia, Spain).

**Welcome 8:45 – 9:00**

**Session 1: 9:00 – 10:30**

**Session Chair: Carlos T. Calafate (Technical University of Valencia, Spain)**

**Email:** **calafate@disca.upv.es**

* **Real-time Cooperative Vehicle Tracking in VANETs**

Taku Noguchi, Yu-Cheng Ting, Masami Yoshida, Alberto Gallegos Ramonet (Ritsumeikan University)

* **Analyzing the impact of VIM systems over the MEC management and orchestration in vehicular communications**

Nina Slamnik-Krijestorac, Michael Peeters, Steven Latre and Johann Marquez-Barja (University of Antwerp & imec, IDLab)

* **Adaptive level lane estimation policy of automotive systems moving within arbitrary road networks**

Jennie Lioris, Neila BHOURL (Univ Eiffel/ENPC)

**Coffee Break: 10:30 – 10:45**

**Session 2: 10:45 – 12:15**

**Session Chair: Francisco J. Martinez (University of Zaragoza, Spain)**

**Email:** **f.martinez@unizar.es**

* **A Low Latency Transmission Control for Multi-link WLAN**

Yoshihisa Kondo, Hiroyuki Yomo, Hiroyuki Yokoyama (ATR, Kansai University)

* **Providing resilience to UAV swarms following planned missions**

Jamie Wubben, Izan Catalán, Manel Lurbe, Francisco Fabra, Francisco J. Martinez, Carlos T. Calafate, Juan-Carlos Cano, Pietro Manzoni (Universitat Politecnica de Valencia)

* **Asynchronous Distributed Topology Control for Signature Management in Mobile Networks**

Benjamin Campbell (DST)

**AFEC Workshop (Zoom Link 2)**

Chair: Wei Chang (Saint Joseph's University, USA), Ning Wang (Rowan University, USA)

**Welcome 13:30 – 13:40**

**Session 1: 13:40 -15:30**

**Session Chair: Ning Wang (Rowan University, USA)**

**Email:** **wangn@rowan.edu**

* **Towards Optimal System Deployment for Edge Computing: A Preliminary Study**

Dawei Li, Chigozie Asikaburu, Boxiang Dong, Huan Zhou, and Sadoon Azizi

(Montclair State University, China Three Gorges University, and University of Kurdistan)

* **An Energy Saving-Oriented Incentive Mechanism in Colocation Data Centers**

Ce Chi, Zhiyong Liu, Kaixuan Ji, Avinab Marahatta, Fa Zhang, and Youshi Wang (Chinese Academy of Sciences, and Meituan-Dianping Group)

* **Slicenomics: How to Provide Cost-Based Intra and Inter Slice Resource Management?**

Alexander Gerasimov, and Vitaly Antonenko

(J'son&Partners Consulting, and Lomonosov Moscow State University)

* **Research on Design and Application of Mobile Edge Computing Model Based on SDN**

Shaohua Cao, Dingde Jiang, Zhihao Wang, Yizhi Chen, Yang Yan, and Hui Chen

(China University of Petroleum (East China), and University of Electronic Science and Technology of China)

* **PeerCould: Enhancing Mobile Cloud with Social-Aware Device-to-Device Offloading**

Xiaomei Zhang (University of South Carolina Beaufort)

**Coffee Break: 15:30 – 15:45**

**Session 2: 15:45 – 17:15**

**Session Chair: Wei Chang (Saint Joseph's University, USA)**

**Email:** **wchang@sju.edu**

* **AI-Governance and Levels of Automation for AIOps-supported system administration**

Odej Kao, Anton Gulenko, Alexander Acker, and Feng Liu (TU Berlin, and Huawei Research Center Munich)

* **Resource Management for Processing Wide Area Data Streams on Supercomputers**

Joaquin Chung, Mainak Adhikari, Satish Narayana Srirama, Eun Sung Jung, and Rajkumar Kettimuthu (Argonne National Laboratory, University of Tartu, Hongik University, and The University of Chicago)

* **Trade-offs in the Design of Blockchain of Finite-Lifetime Blocks for Edge-IoT Applications**

Shravan Garlapati (Qualcomm Technologies Inc)

* **Comparing Energy Efficiencies of SDN Hardware Based on Forwarding Configurations**

Rahil Gandotra, and Levi Perigo (University of Colorado Boulder)

Closing

**BDMLS Workshop (Zoom Link 3):**

Chair: Yuqing Zhang(University of Chinese Academy of Sciences), Xiaofeng Lu (Beijing University of Posts and Telecommunications)

Welcome 8:45 – 9:00

**Session 1: 9:00 – 10:30**

**Session Chair: Juhua Pu (Beihang University)**

**Email:** **pujh@buaa.edu.cn**

**Topic:** *Network Security*

* **Research on the Important Nodes Affecting Network Security in Complex Networks**

Yongshan Liu, Jianjun Wang, Haitao He, Guoyan Huang and Weibo Shi(Yanshan University)

* **IoT-APIScanner: Detecting API Unauthorized Access Vulnerabilities of IoT Platform**

Yilian Li, Yiyu Yang, Xiao Yu, Ting Yang, Lihua Dong, Wenjie Wang and Yuqing Zhang(School of Communication Engineering, Xidan University, Xian, China, National Computer Network Intrusion Protection Center, university of Chinese of Academy of Sciences, and College of Information Science and Engineering, Hebei University of Science and Technology, Shijiazhuang, China)

* **A Security Scheme for the Cloud Source Data of IoT**

Yongkai Fan, Guanqun Zhao, Wenqian Shang, Weiguo Lin and Jianxiang Cao(Communication University of China, and China University of Petroleum)

**Coffee Break: 10:30 – 10:45**

**Session 2: 10:45 – 12:15**

**Session Chair: Junfeng Tian**

**Email:** **tjf@hbu.edu.cn**

**Topic:** *NLP for Security*

* **IFVD: Design of Intelligent Fusion Framework for Vulnerability Data Based on Text Measures**

Ruike Li, Shichong Tan, Chensi Wu, Xudong Cao, Haitao He, Wenjie Wang and Yuqing Zhang(Xidian University, National Computer Network Intrusion Protection Center, University of Chinese Academy of Sciences, and College of Information Science and Engineering, Yanshan University, Qinhuangdao, Hebei)

* **Open source threat intelligence discovery based on topic detection**

Dong Li, Xiaofeng Lu, Xiao Zhou and Ao Xue(Beijing University of Posts and Telecommunications)

* **Relational Database Watermarking Based on Chinese Word Segmentation and Word Embedding**

Wenling Li, Jianen Yan and Zhaoxin Zhang(Harbin Institute of Technology)

**Lunch Break: 12:15 – 13:30**

**Session 3: 13:30 – 15:30**

**Session Chair: Yongkai Fan (Communication University of China)**

**Email:** **fanyongkai@gmail.com**

**Topic:** *Prediction & Selection Model*

* **Trustworthy Web Service Selection Method Based on Personality Preference**

Ruizhong Du, Chong Qin, Pengliang Shi and Junfeng Tian(hebei univesity , and Dacheng County Branch of China United Network Communication Co, Ltd, Hebei Province, Langfang)

* **AtPGAN: A Rule-based Password Guessing Model**

Ru Tan, Hongjun Bi, Yanhui Chen, Cheng Luo, Jianjun Zhao and Qixu Liu(Beijing Jiaotong University, University of Chinese Academy of Science, and China Academy of Information and Communications Technology)

* **A Model Based on Program Slice and Deep Learning for Software Defect Prediction**

Junfeng Tian and Yongqing Tian(School of Cyberspace Security and Computer Institute, Hebei University)

* **Predict the Next Attack Location via An Attention-based Fused-SpatialTemporal LSTM**

Zhuang Liu, Juhua Pu, Nana Zhan and Xingwu Liu(Beihang University, Research Institute of Beihang University in Shenzhen, and Institute of Computing Technology, Chinese Academy of Sciences)

* **Smart e-Health Security and Safety Monitoring with Machine Learning Services**

Wei Liu, EK Park, U. Krieger, and S.S. Zhu (GGC, UCCN, Otto-Friedrich University Bamberg, and Shantou University)

**Coffee Break: 15:30 – 15:45**

**Session 4: 15:45 – 17:15**

**Session Chair: Qixu Liu (China Academy of Information and Communications Technology)**

**Email:** **liuqixu@iie.ac.cn**

**Topic:** *Power LTE & IoT*

* **Fast Authentication Protocol With Privacy Preserving For Large-Scale Power LTE Private Network Terminals**

Weiwei Miao, Chengling Jiang, Huang Jin, Liwu Zhang and Luo Wei(Nari Information Communication Technology Co., Ltd, and State Grid Jiangsu Electric Power Co., Ltd. information communication branch)

* **The Enhanced EAP Authentication Protocol for Devices in Power LTE Private Network**

Liu Rui, Zhao Gaofeng, Liu Jinsuo, Zhang Ying and Gong Liangliang(Nanjing Nari Information Communication Technology)

* **Multi-user broadcast authentication in Power LTE Private Network with Compressed Bloom Filter**

Liu Jinsuo, Liu Rui, Huang Jin, Zhang Mingxuan and Miao Weiwei(Nanjing Nari Information Communication Technology Co., Ltd, and State Grid Jiangsu Electric Power Co., Ltd. information communication branc)

* **A Secure ECC-based RFID Authentication Protocol in IoT**

Xuejun Li, Jia Zhao and Tianyi Jiang(School of Cyber Engineering, Xidian University)

Closing

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