Title:

ICAIS2019 workshop on IoT Connectivity, Security and Privacy

Abstract:

IoT device manufactures has the capability to sense users and their surrounding environment to provide context-aware services. While with the increase of the variety and the number of IoT devices, it may also bring up many addressing issues, attacks and information leaks. Researchers are working to design protocols and systems to promote the connectivity, detect new vulnerabilities and control the flow between devices. Whereas with the growing adoption of IoT devices, many connectivity and security issues remain open. The goal of the ICAIS2019 Workshop on IoT Addressing, Security and Privacy is to bring together academic and industry researchers from the networking communities and security to design, measure, and analyze addressing methods, secure and privacy enhancing systems for IoT devices.

We encourage the submission of work-in-progress papers in the area of design, implementation, management, and deployment of connectivity, secure and privacy IoT frameworks as well as measurement and analysis of the addressing and security of existing IoT devices and packages.

Scope and Topics:

Potential topics include but are not limited to:

- ✧ Network architectures and protocols for IoT
- ✧ Novel IoT frameworks and applications
- ✧ Security and privacy issues in IoT
- ✧ Measurement of IoT connectivity performance
- ✧ Design and measurement of IoT addressing
- ✧ Threat models and attack strategies in IoT
- ✧ Privacy-preserving IoT sensing, connectivity
- ✧ Lightweight security for IoT
- ✧ Security framework of IoT
- ✧ Security for NB-IoT, Z-Wave, Bluetooth, LoRa, SigFox, 6LowPAN, NFC, Zigbee IoT

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Zhixin Sun received his Ph.D. degree in Engineering of Aeronautics and Astronautics from Nanjing University of Aeronautics and Astronautics , China in 1998. He

currently services as a professor and dean in the School of Posts of Nanjing University of Posts and Telecommunications. His research interests include Network Traffic Identification, Internet of Things, Big Data, Block Chain, SDN, Security & Privacy, and Mobile Computing.

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Jianhua Ma is a professor in the Faculty of Computer and Information Sciences, Hosei University, Tokyo, Japan. He served as the Chair of Digital Media Department of Hosei University in 2011-2012. His research interests include multimedia, networking, pervasive computing, social computing, wearable technology, IoT, smart things, cyber life, and cyber intelligence. Ma is one of pioneers in research on Hyper World and Cyber World (CW) since 1996, and was a co-initiator of the first international symposium on Cyber World in 2002. He first proposed Ubiquitous Intelligence (UI) towards Smart World (SW), which he envisioned in 2004, and was featured in the European ID People Magazine in 2005. He has conducted several unique CW-related projects including the Cyber Individual (Cyber-I), which was featured by and highlighted on the front page of IEEE Computing Now in 2011. Ma has published more than 300 papers, co-authored/edited over 15 books and 30 journal special issues, and delivered over 30 keynote speeches at international conferences. He has founded three IEEE Congresses on ‘Smart World’, ‘Cybermatics’ and ‘Cyber Science and Technology’, respectively, as well as IEEE Conferences on Ubiquitous Intelligence and Computing (UIC), Pervasive Intelligence and Computing (PICom), Advanced and Trusted Computing (ATC), Dependable, Autonomic and Secure Computing (DASC), Cyber Physical and Social Computing (CPSCom), Internet of Things (iThings), and Internet of People (IoP). He is a Chair of IEEE Technical Committee on Cybermatics, and a Chair of IEEE Technical Committee on Smart World.

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Professor Geyong Min is a Chair in High Performance Computing and Networking at the University of Exeter, UK. His recent research has been supported by European Horizon-2020, FP6/FP7, UK EPSRC, Royal Academy of Engineering, Royal Society, and industrial partners including Motorola, IBM, Huawei Technologies, INMARSAT, and InforSense Ltd. He has published more than 200 research papers in leading international journals including IEEE/ACM Transactions on Networking, IEEE Journal on Selected Areas in Communications, IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, IEEE Transactions on Multimedia, IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, and at reputable international conferences, such as

SIGCOMM-IMC, INFOCOM, ICDCS, IPDPS, GLOBECOM, and ICC. He is an Associated Editor of several international journals, e.g., IEEE Transactions on Computers, and IEEE Transactions on Cloud Computing. He served as the General Chair/Program Chair of a number of international conferences in the area of Information and Communications Technologies.

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Fan Wu is a full professor of Computer Science Department at Tuskegee University. He is also the interim director of Tuskegee University Office of Undergraduate Research and the director of Tuskegee University National Center of Information Assurance Education (CIAE). Dr. Fan Wu received his Ph.D. degree from Worcester Polytechnic Institute (WPI), Worcester, USA in 2008, and M.S. degree in 2003 and B.S. degree in 2000 from Nanjing University of Posts and Telecommunications, Nanjing, China with all degrees in Computer Science. Dr. Wu's research interests are in broad areas of Mobile Security, Information Assurance, Big Data Analysis, Mobile Graphics and Computing, Bioinformatics, High Performance Computing with General Purpose Graphics Processing Units (GPGPU), and Robotics.

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Jun Wang is a Full Professor of Computer Engineering; and Director of the Computer Architecture and Storage Systems (CASS) Laboratory at the University of Central Florida, Orlando, FL, USA. He received his Ph.D. in Computer Science and Engineering from University of Cincinnati in 2002. He is the recipient of National Science Foundation Early Career Award 2009 and Department of Energy Early Career Principal Investigator Award 2005. He has authored over 120 publications in premier journals such as IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, and leading HPC and systems conferences such as VLDB, HPDC, EuroSys, IPDPS, ICS, Middleware, FAST. He has conducted extensive research in the areas of Computer Systems and High Performance Computing. His specific research interests include massive storage and file System in local, distributed and parallel systems environment. His group has secured more than four million dollars federal research fundings in last five years. At present, his group is investigating three US National Science Foundation projects, one DARPA and one NASA project. He has graduated nine Ph.D. students who upon their graduations were employed by major US IT corporations (e.g., Google, Microsoft, etc). He has served as numerous US NSF grant panelists and US DOE grant panelists and TPC members for many premier conferences. He has been serving on the editorial board for the IEEE transactions on parallel and distributed systems, and IEEE transactions on cloud computing. He is a general executive chair for IEEE DASC/DataCom/PIcom/CyberSciTech 2017, and has co-chaired technical programs in numerous computer systems conferences including the 10th IEEE International Conference on Networking, Architecture, and Storage (NAS 2015), and 1st

International Workshop on Storage and I/O Virtualization, Performance, Energy, Evaluation and Dependability (SPEED 2008) held together with HPCA. His specific research interests include: Big Data and Big Compute Systems，Data-intensive High Performance Computing，Massive Storage and File System，I/O Architecture

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Wenbing Zhao received the Ph.D. degree in Electrical and Computer Engineering from the University of California, Santa Barbara, in 2002. Currently, he is a Professor and Director for the Master of Science in Electrical Engineering program in the Department of Electrical Engineering and Computer Science (EECS) at Cleveland State University. His research interests include dependable distributed systems, mobile security and privacy, smart and connected health. Dr. Zhao has a single-authored a research monograph titled: “Building Dependable Distributed Systems,” two edited books, and over 180 peer-reviewed papers in topic journals and conferences, such as IEEE Communications Surveys & Tutorials, THMS, TPDS, TSC, TDSC, TII, IEEE Internet of Things Journal. Dr. Zhao’s research is supported in part by the US National Science Foundation, the US Department of Transportation, Ohio State Bureau of Workers’ Compensation, Ohio Third Frontier, and by Cleveland State University. Dr. Zhao is an associate editor for IEEE Access and MDPI Computers. He is currently serving on the organizing committee and the technical program committee for numerous international conferences. He is a member of editorial board for PeerJ Computer Science, International Journal of Parallel Emergent and Distributed Systems, Applied Systems Innovation, International Journal of Distributed Systems and Technologies, and International Journal of Performability Engineering. Dr. Zhao has given over ten keynote talks and invited tutorials.

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