

EDUCATION

Areas: Network and Security, Wireless Network, Cloud Computing, AI for Distributed System

- Ph.D. student in Computer Science and Engineering, Michigan State University *2019 - now*
- M.S. in Computer Applied Technology, University of Chinese Academy of Sciences *2016 - 2019*
- B.S. in Information Security, Hunan University *2012 - 2016*

EMPLOYMENT

- Research/Teaching Assistant, Michigan State University *2019 - now*
Study 3GPP 4G/5G standards and find vulnerabilities in Radio Access Network and IMS Core Network. Launch proof-of-concept attacks on operators and software-defined radio.
- Research Intern, Los Alamos National Lab *10 weeks, 2021*
Built a simulation testbed of cyber-physical system using Julia and generated dataset. Developed learning framework to infer privacy of the cyber-physical system. Finished writing related sections in the paper.
- Research Intern, Alibaba *6 months, 2019*
Developed a robust deep learning model for traffic prediction based on distributed monitoring system of Alibaba cloud. Developed efficient algorithms for abnormal machine detection in cluster with thousands of machines. Finished one paper and submitted two patents for the company.

SELECTED PUBLICATIONS AND GRANTED PATENTS

- **[Peer-reviewing]: Jingwen Shi**, Guan-Hua Tu, Andrew Hou, Sihan Wang, Tian Xie, Chi-Yu Li, Xinyu Lei, Yiwen Hu, Xiaoming Liu, Xiao Li: Side-Channel Attacks on Encrypted 5G/4G Voice Calls
- **[Mobicom'22]:** Yiwen Hu, Min-Yue Chen, Guan-Hua Tu, Chi-Yu Li, Sihan Wang, **Jingwen Shi**, Tian Xie, Xiao Li, Chunyi Peng, Zhaowei Tan, Songwu Lu: Uncovering Insecure Designs of Cellular Emergency Services (911) (To be appeared)
- **[Peer-reviewing]:** Xu Zhou, Xinyu Lei, Cong Yang, Yichun Shi, Xiao Zhang, **Jingwen Shi**: Handling Data Heterogeneity in Federated Learning via Knowledge Fusion [Paper](#)
- **[TMC'22]:** Tian Xie, Sihan Wang, Xinyu Lei, **Jingwen Shi**, Guan-Hua Tu, Chi-Yu Li: MPKIX: Towards More Accountable and Secure Internet Application Services via Mobile Networked Systems [Paper](#)
- **[JST'19]:** **Jingwen Shi**, Shutian Luo, Kejiang Ye, Chengzhong Xu: Traffic Prediction and Uncertainty Interval Estimation for E-Commerce Clusters [Paper](#)
- **[IPCCC'18]:** Xingsheng Zhao, **Jingwen Shi**, Mingzhe Du, Fan Ni, Song Jiang, Yang Wang: A Road-Aware Spatial Mapping for Moving Objects [Paper](#)
- **Jingwen Shi**, Chengzhong Xu, Kejiang Ye, Yang Wang: MongoDB data migration monitoring method and device based on log analysis, CN Patent, Patent Number: [CN 110147353 A](#), 08/20/2019.
- **Jingwen Shi**, Chengzhong Xu, Kejiang Ye, Yang Wang: A method and device for predicting and locating urban collective events, CN Patent, Patent Number: [CN 110147904 B](#), 06/18/2019.

SKILLS

- Tools: Software-defined radio system, srsRAN, Open IMS Core, Wireshark, Android, Docker, MongoDB, Hbase, Spark, Hadoop, sqlite3, Django, Keras, Tensorflow, Scikit-learn, OpenCV, Linux, Jupyter, Bash, Shell, Git, Scrapy, Json, MobileInsight, QXDM, FPGA
- Languages: Python, C, C++, Julia, Java, SQL, Matlab, JavaScript, CSS, R, D3.js, PHP, HTML
- Courses: 3GPP LTE/NR Standards, Mobile Application Development, Network Security, Cryptography, Operating System, Big Data System, Machine Learning, Deep Learning, Algorithm, Web Data Mining