Yan Long

yanlong@umich.edu ◇ (734) 881-5577

EDUCATION

My research in embedded systems (1) designs novel embedded systems to achieve innovative and secure sensing applications in healthcare, and (2) protects smartphones and IoT devices from hardware design flaws that could result in information leakage problems and violation of user privacy.

University of Michigan, Ann Arbor, MI — Sep 2019 - May 2024

- Ph.D. in Electrical and Computer Engineering (Embedded Systems Track)

Zhejiang University, Hangzhou, China — Sep 2015 - June 2019

- B.S. in Electronic and Information Engineering

AWARDS & HONORS

UMich Towner Prize for Outstanding Graduate Instructor Finalist	2023
Rackham Predoctoral Fellowship	2023
NSF/NSPW Student Travel Grant	2022
ACM SIGMOBILE Research Highlight on GetMobile	2022
Best Poster Runner-up – SenSys COVID-19 Response Research (top 8%)	2020
Outstanding Undergraduate Thesis of Zhejiang University	2019
UCLA Cross-disciplinary Scholarship in Science and Technology	2018
Samsung Scholarship (top 5% of school)	2018

SELECTED PUBLICATION

Refereed Conference & Workshop Publications

- Po-Min Wang, Stanislav Culaclii, William Yang, Yan Long, Jonathan Massachi, Yi-Kai Lo, Wentai Liu. A Novel Biomimetic Stimulator System for Neural Implant. 9th International IEEE/EMBS Conference on Neural Engineering (IEEE/EMBS NER) 2019

- Chen Yan, Yan Long, Xiaoyu Ji, Wenyuan Xu. The Catcher in the Field: A Fieldprint based Spoofing Detection for Text-Independent Speaker Verification. 26th ACM Conference on Computer and Communications Security (ACM CCS) 2019

- Yan Long, Alexander Curtiss, Sara Rampazzi, Josiah Hester, Kevin Fu. VeriMask: Facilitating Decontamination of N95 Masks in the COVID-19 Pandemic: Challenges, Lessons Learned, and Safeguarding the Future. ACM International Joint Conference on Pervasive and Ubiquitous Computing 2021

- Yan Long, Kevin Fu. Side Auth: Sensor Side Channels Considered Beneficial by Synthesizing Virtual Sensors for Authentication. ACM/ACSA New Security Paradigms Workshop 2022

- Yan Long, Pirouz Naghavi, Blas Kojusner, Kevin Butler, Sara Rampazzi, Kevin Fu. Side Eye: Characterizing the Limits of POV Acoustic Eavesdropping from Smartphone Cameras with Rolling Shutters and Movable Lenses. 44th Annual IEEE Symposium on Security and Privacy 2023

- Yan Long, Chen Yan, Shilin Xiao, Shivan Prasad, Wenyuan Xu, Kevin Fu. Private Eye: On the Limits of Textual Screen Peeking via Eyeglass Reflections in Video Conferencing. 44th Annual IEEE Symposium on Security and Privacy 2023

- Yan Long, Qinhong Jiang, Chen Yan, Tobias Alam, Xiaoyu Ji, Wenyuan Xu, Kevin Fu. EM Eye: Characterizing Electromagnetic Side-channel Eavesdropping on Embedded Cameras. Network and Distributed System Security Symposium 2024

Refereed Journal & Magazine Publications

- Yan Long, Sara Rampazzi, Takeshi Sugawara, Kevin Fu. Protecting COVID-19 Vaccine Transportation and Storage from Analog Cybersecurity Threats. Biomedical Instrumentation & Technology 2021

- Yan Long, Alexander Curtiss, Sara Rampazzi, Josiah Hester, Kevin Fu. VeriMask: Sensor Platform for Decontamination of N95 Masks. Mobile Computing and Communications 2022

TEACHING EXPERIENCE

EECS 498/598 Embedded Security (∼10 undergrad and ∼25 graduate students)	Fall 2022
EECS 298 Applied Comp. Methods for Sci. & Eng. (∼150 undergrad students)	Fall 2021
EECS 501 Probability & Random Process (∼80 graduate students)	Winter 2021

SERVICE

Professional Activities

Technical program committee member:

- International Conference on Mobility, Sensing and Networking (IEEE MSN) 2023
- International Workshop on Security and Privacy of Sensing Systems (Sensors S&P) 2023
- Annual Embedded Security Workshop (EmSec) 2020

Reviewer:

- IEEE Internet of Things Journal (IoTJ)
- IEEE Transactions on Wireless Communications (TWC)
- ACM Transactions on Privacy and Security (TOPS)
- ACM Proceedings on Interactive, Mobile, Wearable and Ubiquitous Tech (IMWUT)

Student Advising

Jiaming Yao	M.S. Data Science	2023-Present
Emiko Sano	High-school student	2023-Present
Yumai Sun	M.S. Electrical and Computer Engineering	2022-2023
Haoliang Cheng	B.S. Computer Engineering	2022-2023