Wayne Wang

PhD Candidate in Computer Science and Engineering wswang@umich.edu
University of Michigan, Ann Arbor waynewang.me

Research Overview

My current research explores digital transformation (DX) as a core computing challenge: developing system-level abstractions and control frameworks that bring principled, verifiable design to the ad hoc tooling that dominates today's critical infrastructure, with a focus on data centers and power systems. My prior research studied mobile VPN security, Internet-scale measurement, and congestion control algorithms.

Education

- **University of Michigan, Ann Arbor** Ann Arbor, Michigan
  Ph.D. in Computer Science and Engineering 2023 - 2028(exp.)
  Advisor: Prof. Ang Chen
- **Middlebury College** Middlebury, Vermont
  B.A. with a Major in Computer Science and a Minor in Political Science 2018 - 2022

Publications

[1] [NDSS 2026] **MVPNalyzer: An Investigative Framework for the Security & Privacy Audit of Mobile VPNs**
*Wayne Wang**, A. Ortwein*, E. Sobrados*, P. Kumar, A. Anwar, R. Ensafi
In: Network and Distributed System Security Symposium (NDSS), 2026

[2] [CCS'25] **Fingerprinting Deep Packet Inspection Devices by their Ambiguities**
D. Xue, A. Huremagic, *Wayne Wang*, R. Ram Sundara Raman, and R. Ensafi
In: ACM SIGSAC Conference on Computer and Communications Security (CCS), 2025
* Award: 2026 IRTF Applied Networking Research Prize (ANRP)

[3] [FOCI'25] **Is Custom Congestion Control a Bad Idea for Circumvention Tools?**
Wayne Wang, D. Xue, P. Kumar, A. Mishra, Anonymous, and R. Ensafi
In: Free and Open Communications on the Internet (FOCI), 2025.

[4] [LangSec 2022] **Research Report: On the Feasibility of Retrofitting Operating Systems with Generated Protocol Parsers**
Wayne Wang, P. C. Johnson
In: Language-theoretic Security Workshop (LangSec) @ IEEE S&P, 2022

Teaching Experience

- **Graduate Student Instructor** at University of Michigan
  EECS 281: Data Structures and Algorithms - Fall 2025, Spring 2026

- **Assistant in Instruction** (ASI, full-time)
  Department of Computer Science - Spring 2023
- **Teaching Assistant**
  CS 201: Data Structures - Fall 2019, Spring 2020
  CS 202: Computer Architecture - Spring 2022, Fall 2022

Awards

- **Middlebury College Timothy T. Huang Award in Computer Science** - May 2023
  Awarded to one graduating senior for outstanding research, academic accomplishments, and service to the computer science department