

Hongkai Chen

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<https://hongkai.org>

EDUCATION

Arizona State University

January 2023 - Present

PhD in Computer Science

Advisors: Yan Shoshitaishvili, Adam Doupé, Ruoyu (Fish) Wang, and Tiffany Bao

University of California, San Diego

September 2021 - December 2022

Master of Science in Computer Science

GPA: 4.00/4.00

University of Minnesota Crookston

January 2019 - May 2021

Bachelor of Science in Software Engineering with Honors, High Distinction

Minor in Information Technology Management

GPA: 3.947/4.00

PUBLICATIONS

- [1] **Hongkai Chen**, Yuqing Yang, Chao Wang, Arpit Nandi, Moritz Schloegel, Tiffany Bao, Ruoyu Wang, Adam Doupé, Zhiqiang Lin, and Yan Shoshitaishvili. SoK: History Doesn't Repeat Itself, but Android Design-Level Vulnerabilities Rhyme in OpenHarmony. Accepted for the 35th USENIX Security Symposium (USENIX Security '26).
- [2] **Hongkai Chen**, Chao Wang, Yuqing Yang, Jennifer Miller, Tiffany Bao, Ruoyu Wang, Adam Doupé, Zhiqiang Lin, and Yan Shoshitaishvili. Fragile Deliveries: Inconsistencies in Android Parcel and Their Security Consequences. In *Proceedings of the 24th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys '26)*, Cambridge, UK, June 2026.
- [3] Jennifer Miller, Manas Ghandat, Kyle Zeng, **Hongkai Chen**, Abdelouahab (Habs) Benchikh, Tiffany Bao, Ruoyu Wang, Adam Doupé, and Yan Shoshitaishvili. System Register Hijacking: Compromising Kernel Integrity By Turning System Registers Against the System. In *Proceedings of the 34th USENIX Security Symposium (USENIX Security '25)*, Seattle, WA, USA, August 2025.
- [4] **Hongkai Chen** and Mohammad Hossain. Application of Machine Learning on Software Quality Assurance and Testing: A Chronological Survey. In *Proceedings of 37th International Conference on Computers and Their Applications*, 82, 42-52. 2022.
- [5] **Hongkai Chen** and Mohammad Hossain. Developing a Google Chrome Extension for Detecting Phishing Emails. In *Proceedings of ISCA 30th International Conference on Software Engineering and Data Engineering*, 77, 13-22. 2021.

AWARDS

Google Bug Hunters Honorable Mention

July 2024

Black Hat USA 2024 Student Scholarship

May 2024

SERVICES

Program Committee Member

ACM Workshop on Security and Safety of AI-Empowered Mobile Super Apps (SaTS) 2026

Reviewer

ACM Transactions on Privacy and Security (TOPS) 2026

Artifact Evaluation Committee Member

Network and Distributed System Security Symposium (NDSS) 2027

ACM Conference on Computer and Communications Security (CCS) 2026

IEEE Symposium on Security and Privacy (Oakland) 2026

RESEARCH EXPERIENCES

SEFCOM Lab, Arizona State University January 2023 - Present
Research area: mobile systems security Tempe, AZ

- Research to solve real-world problems to enhance the security and reliability of modern mobile operating systems, such as Android.
- My research also broadens to system security in general.

Software Aurora Lab, UC Irvine February 2022 - January 2023
Research area: Android static program analysis Remote

- Focus on building an intent-based symbolic execution engine to analyze Android applications.
- Perform an experiment on a symbolic execution engine with multiple Android apps.

University of Minnesota Crookston January 2020 - May 2021
Research area: phishing emails Crookston, MN

- Employ text data mining using Tidy Data Principles to find out the Term Frequency and Inverse Document Frequency (tf-idf) to identify suspicious words for detecting phishing.
- Create a classifier to identify phishing email samples and standard email samples.
- Implement a Google Chrome extension with the classifier to detect phishing emails.

TEACHING EXPERIENCE

ASU CSE 365 Information Assurance Fall 2023
Teaching Assistant

MENTORSHIP

ASU High School Research Internship Program 2025
2 students mentored (from BASIS Peoria and Hamilton High School)

PROFESSIONAL EXPERIENCE

Google Search Group May 2020 - June 2020
Project Assistant Remote

- Develop and implement computational linguistic models such as Word2Vec.
- Implement a novel news aggregator from different news sources.
- Handle binary classification tasks to help predict unlabeled Twitter user types.

TECHNICAL STRENGTHS

Programming Languages	Java, Python, Golang, Haskell, C#, SQL, $\text{\LaTeX}$
Other Skills & Tools	Docker, SSH, Frida, adb, Charles, Wireshark, Mininet
Operating Systems	Linux, macOS, Windows
Languages	English (proficient, the second language), Chinese (mother tongue)