WEIJIA HE

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RESEARCH INTERESTS

Security & Privacy; Human-Computer Interaction (HCI); Internet of Things (IoT); Ubiquitous Computing

EMPLOYMENT

Dartmouth College   **Sep. 2022 – Present**
Postdoctoral Researcher   *Hanover, NH, USA*
Advisor: David Kotz

Data Science Institute Summer Lab   **Summer 2022**
Lab Coordinator   *University of Chicago*
Duties for this position include giving workshops and mentoring research for high-school students.

EDUCATION

University of Chicago   **Sep. 2017 – Aug. 2022**
Ph.D. in Computer Science   *Chicago, IL, USA*
Advisor: Blase Ur

Shanghai Jiao Tong University   **Sep. 2013 – Jul. 2017**
B. Eng. in Cybersecurity   *Shanghai, China*

HONORS & AWARDS

· 2022 Siebel Scholar ($35,000)
· Finalist for the 2020 Norton LifeLock Graduate Fellowship
· Student Travel Grant for the 2019 IEEE Symposium on Security and Privacy ($1,250)
· USENIX Security 2018 Student Grant ($745)
· SOUPS 2018 Student Grant ($770)

CONFERENCE PUBLICATIONS

Contextualizing Interpersonal Data Sharing in Smart Homes

Weijia He, Nathan Reitinger, Atheer Almogbil, Yi-Shyuan Chiang, Timothy Pierson, David Kotz
*In Proceedings on Privacy Enhancing Technologies (**PETS**). 2024.*

SoK: Context Sensing for Access Control in the Adversarial Home IoT

Weijia He, Valerie Zhao, Olivia Morkved, Sabeeka Siddiqui, Earlence Fernandes, Josiah Hester, Blase Ur
*In Proceedings of the 6th IEEE European Symposium on Security and Privacy (**EuroS&P**). 2021.*

Trace2TAP: Synthesizing Trigger-Action Programs From Traces of Behavior

Lefan Zhang, **Weijia He**, Olivia Morkved, Valerie Zhao, Michael L. Littman, Shan Lu, Blase Ur
*In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT/UbiComp**). 2020.*

AutoTap: Synthesizing and Repairing Trigger-Action Programs Using LTL Properties

Lefan Zhang, **Weijia He**, Jesse Martinez, Noah Brackenbury, Shan Lu, Blase Ur
*In Proceedings of the 41st International Conference on Software Engineering (**ICSE**). 2019.*

How Users Interpret Bugs in Trigger-Action Programming

Will Brackenbury, Abhimanyu Deora, Jillian Ritchey, Jason Vallee, **Weijia He**, Guan Wang, Michael L. Littman, Blase Ur
*In Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems (**CHI**). 2019.*

Rethinking Authentication and Access Control for the Home Internet of Things (IoT)
Weijia He, Maximilian Golla, Roshni Padhi, Jordan Ofek, Markus Dürmuth, Earlence Fernandes, Blase Ur
*In Proceedings of the 27th USENIX Security Symposium (**USENIX Security**).* 2018.

WORKSHOP PUBLICATIONS

Challenges and Opportunities in Onboarding Smart-Home Devices
Chixiang Wang, Liam Cassidy, **Weijia He**, Timothy Pierson, David Kotz
*In International Workshop on Mobile Computing Systems and Applications (**HotMobile**).* 2024.

The HandyTech's Coming Between 1 and 4: Privacy Opportunities and Challenges for the IoT Handyperson
Denise Anthony, Carl A. Gunter, **Weijia He**, Mounib Khanafer, Susan Landau, Ravindra Mangar, Nathan Reitinger
*In Workshop on Privacy in the Electronic Society (**WPES**).* 2023.

When Smart Devices Are Stupid: Negative Experiences Using Home Smart Devices
Weijia He, Jesse Martinez, Roshni Padhi, Lefan Zhang, Blase Ur
*In Proceedings of the IEEE Workshop on the Internet of Safe Things (**SafeThings**).* 2019.

Clap On, Clap Off: Usability of Authentication Methods in the Smart Home
Weijia He, Juliette Hainline, Roshni Padhi, Blase Ur
*In Proceedings of the Interactive Workshop on the Human Aspect of Smarthome Security and Privacy (**WSSP**).* 2018.

SERVICE

[**PETS**] Privacy Enhancing Technologies Symposium │ *Publication chair*	2023, 2022
[**PETS**] Privacy Enhancing Technologies Symposium │ *PC member*	2024, 2023
[**USEC**] Symposium on Usable Security │ *PC member*	2024, 2023
[**SDIoTSec**] NDSS Workshop on Security and Privacy in Standardized IoT │ *PC member*	2024
[**EuroUSEC**] European Workshop on Usable Security │ *PC member*	2020, 2019
Workshop on Ubiquitous Privacy: Research and Design for Mobile and IoT Platforms │ *PC member*	2019
[**SOUPS**] Symposium on Usable Privacy and Security │ *Poster Jury*	2023, 2022, 2021
[**USENIX Security**] USENIX Security Symposium │ *Artifact Evaluation Committee Member*	2022, 2021
[**Oakland**] IEEE Symposium on Security and Privacy │ *Shadow PC member*	2020

External reviewers at CHI (2024,2023,2022), TOCHI(2024), IMWUT(2022), TOSP(2023), TIOT (2021), IJHCS (2022, 2020)

TEACHING EXPERIENCE

Introduction to Computer Science (CMSC 15100)   **Summer 2021**
Instructor   *University of Chicago*

Duties as the lead instructor for this undergraduate course included giving all lectures for the course; leading labs; holding office hours; and designing labs, homework, and exams. This course is the first programming course in the sequence for prospective computer science majors, and I was the instructor of record for the summer offering.

Introduction to Computer Security (CMSC 23200 / CMSC 33200)   **Winter 2022, 2021**
Teaching Assistant   *University of Chicago*

Duties for this primarily undergraduate course included giving one guest lecture per year, grading assignments, and holding office hours.

Machine Learning for Cybersecurity   **Spring 2021**
Teaching Assistant   *University of Chicago Graham School*

Duties for this four-meeting continuing education class for working professionals included preparing homework assignments, holding office hours, and taking notes.

Ethics, Fairness, Responsibility, and Privacy in Data Science (CMSC 25900)   **Spring 2020**
Teaching Assistant   *University of Chicago*

Duties for this primarily undergraduate course included grading assignments and holding office hours.

Usable Security and Privacy (CMSC 23210 / CMSC 33210) — Spring 2019, 2018
Teaching Assistant   *University of Chicago*

Duties for this undergraduate course included giving one guest lecture per year and grading assignments.

Computer Science with Applications 1 (CMSC 12100) — Fall 2017
Teaching Assistant   *University of Chicago*

Duties for this undergraduate course, intended for students not planning to major in computer science, included leading lab sessions, grading problem sets, and holding office hours.

COMMUNITY OUTREACH

superpowHer: compileHer Tech Capstone 2019 — Apr. 2019
Instructor   *University of Chicago*

Duties for this outreach activity to middle school girls included giving workshops.