

# WEIJIA HE

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## RESEARCH INTERESTS

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

## EMPLOYMENT

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### Dartmouth College

*Postdoctoral Researcher*

*Advisor: David Kotz*

**Sep. 2022 – Present**

*Hanover, NH, USA*

### Data Science Institute Summer Lab

*Lab Coordinator*

Duties for this position include giving workshops and mentoring research for high-school students.

**Summer 2022**

*University of Chicago*

## EDUCATION

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### University of Chicago

*Ph.D. in Computer Science*

*Advisor: Blase Ur*

**Sep. 2017 – Aug. 2022**

*Chicago, IL, USA*

### Shanghai Jiao Tong University

*B. Eng. in Cybersecurity*

**Sep. 2013 – Jul. 2017**

*Shanghai, China*

## HONORS & AWARDS

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- 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

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### Contextualizing Interpersonal Data Sharing in Smart Homes

**Weijia He**, Nathan Reiter, 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, Earlene 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 Brackenburg, 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 Brackenburg, 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

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### 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 Reitering  
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

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[PETS] Privacy Enhancing Technologies Symposium   <i>Publication chair</i>	2023, 2022
[PETS] Privacy Enhancing Technologies Symposium   <i>PC member</i>	2024, 2023
[USEC] Symposium on Usable Security   <i>PC member</i>	2024, 2023
[SDIoTSec] NDSS Workshop on Security and Privacy in Standardized IoT   <i>PC member</i>	2024
[EuroUSEC] European Workshop on Usable Security   <i>PC member</i>	2020, 2019
Workshop on Ubiquitous Privacy: Research and Design for Mobile and IoT Platforms   <i>PC member</i>	2019
[SOUPS] Symposium on Usable Privacy and Security   <i>Poster Jury</i>	2023, 2022, 2021
[USENIX Security] USENIX Security Symposium   <i>Artifact Evaluation Committee Member</i>	2022, 2021
[Oakland] IEEE Symposium on Security and Privacy   <i>Shadow PC member</i>	2020
External reviewers at CHI (2024,2023,2022), IMWUT(2022), TOSP(2023), TIOT (2021), IJHCS (2022, 2020)	

## TEACHING EXPERIENCE

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**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)**

*Teaching Assistant*

**Fall 2017**

*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**

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**superpowHer: compileHer Tech Capstone 2019**

*Instructor*

**Apr. 2019**

*University of Chicago*

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