

BLAINE HOAK

Ph.D. Student, Computer Sciences

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EDUCATION

Ph.D. Computer Sciences

University of Wisconsin-Madison

Aug 2022 – present

- Advisor: Dr. Patrick McDaniel

Ph.D. Computer Science and Engineering¹

Pennsylvania State University

Aug 2020 – July 2022

- Advisor: Dr. Patrick McDaniel

Bachelor of Science, Biomedical Engineering

Pennsylvania State University

Jan 2017 – May 2020

- Specialization: Medical Imaging and Devices

PUBLICATIONS

Conference Proceedings

- Blaine Hoak, Ryan Sheatsley, Eric Pauley, and Patrick McDaniel. “The Space of Adversarial Strategies”. In: *Proceedings of the 32nd USENIX Security Symposium, 2023 (to appear)*. Sept. 2022. URL: <http://arxiv.org/abs/2209.04521>.
- Eric Pauley, Ryan Sheatsley, Blaine Hoak, Quinn Burke, Yohan Beugin, and Patrick McDaniel. “Measuring and Mitigating the Risk of IP Reuse on Public Clouds”. In: *IEEE Symposium on Security and Privacy (S&P)*. Apr. 2022. URL: <https://www.computer.org/csdl/proceedings-article/sp/2022/131600b523/1CI07rpcgSs>.
- Yohan Beugin, Quinn Burke, Blaine Hoak, Ryan Sheatsley, Eric Pauley, Gang Tan, Syed Raful Hussain, and Patrick McDaniel. “Building a Privacy-Preserving Smart Camera System”. In: *Proceedings on Privacy Enhancing Technologies*. Jan. 2022. DOI: [10.2478/popets-2022-0034](https://doi.org/10.2478/popets-2022-0034).
- Ryan Sheatsley, Blaine Hoak, Eric Pauley, Yohan Beugin, Michael J. Weisman, and Patrick McDaniel. “On the Robustness of Domain Constraints”. In: *Proceedings of the 2021 ACM SIGSAC Conference on Computer and Communications Security*. Association for Computing Machinery, 2021. URL: <https://doi.org/10.1145/3460120.3484570>.

INVITED TALKS

The Space of Adversarial Strategies

Collaborative Research Alliance (CRA) Webinar

Oct 2022

The Space of Adversarial Strategies

CATCH MURI Review

May 2022

EXPERIENCE

Graduate Research Assistant

Madison Security & Privacy (MadS&P) Laboratory

Aug 2022 – present

University of Wisconsin-Madison

Graduate Research Assistant

Systems and Internet Infrastructure Laboratory

Aug 2020 – Jul 2022

Pennsylvania State University

Undergraduate Research Assistant

Systems and Internet Infrastructure Laboratory

Jan 2020 – Jul 2020

Pennsylvania State University

Engineering Co-Op

BK Medical

May 2019 – Dec 2019

State College, PA

Engineering Intern

Summit Radiation Safety Services

Oct 2018 – May 2019

Boalsburg, PA

Undergraduate Research Assistant

Artificial Heart and Cardiovascular Fluid Dynamics Laboratory

May 2018 – Oct 2018

Pennsylvania State University

¹Degree incomplete, transferred to University of Wisconsin-Madison with advisor.

LEADERSHIP AND TEACHING

Teaching Assistant

CMPSC297 - Intro to C Programming

📅 Fall 2021

📍 Pennsylvania State University

Guided Study Group Leader

Women in Engineering Program

📅 Jan 2019 – May 2020

📍 Pennsylvania State University

Vice President

Nittany Chemical Society

📅 May 2019 – May 2020

📍 Pennsylvania State University

Learning Assistant

Chem112 - General Chemistry II

📅 Spring 2018

📍 Pennsylvania State University

OUTREACH ACTIVITIES

Mentor

Chronic Health Allies Mentorship Program (CHAMP)

📅 Aug 2022 - present

📍 University of Wisconsin-Madison

Lead Organizer

Queer in Security & Privacy Social Hours

📅 May 2022 - present

- Symposium on Computer and Communications Security (CCS) 2022
- IEEE Symposium on Security & Privacy (IEEE S&P) 2022

Volunteer

Girls Who Code

📅 Spring 2022

📍 Pennsylvania State University

Creator and Volunteer

EECS Girl's Summer Camp

📅 Summer 2021 & 2022

📍 Pennsylvania State University

REVIEWING AND INVOLVEMENT

Program Committee

- IEEE Conference on Secure and Trustworthy Machine Learning (SaTML) - 2023

External Reviewer

- USENIX Security Symposium - 2023
- IEEE Symposium on Security and Privacy (IEEE S&P) - 2022
- ACM Conference on Computer and Communications Security (CCS) - 2022
- ACM Conference on Mobile Computing and Networking (MobiCom) - 2021
- IEEE Computer Security Foundations Symposium (CSF) - 2021

Grant Involvement

- National Science Foundation - Center for Trustworthy Machine Learning (CTML)
- Multidisciplinary University Research Initiative - Cybersecurity Assurance for Teams of Computers and Humans (CATCH MURI)
- Army Research Laboratory - Collaborative Research Alliance (CRA)