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Andrew Chu

INTERESTS	Networking Measurement and Security, Machine Learning

EDUCATION

UNIVERSITY OF CHICAGO — Chicago, IL
Ph.D. Student, Computer Science — *Sep 2021 – present*

Advisor: Nick Feamster

PURDUE UNIVERSITY — West Lafayette, IN
B.S. Computer Science — *Dec 2020*

PUBLICATIONS

† denotes equal contribution.

[1] **Behind the Tube: Exploitative Monetization of Content on YouTube**
Andrew Chu†, Arjun Arunasalam†, Muslum Ozgur Ozmen, Z. Berkay Celik.
USENIX Security Symposium, August 2022.

[2] **Discovering IoT Physical Channel Vulnerabilities**
Muslum Ozgur Ozmen, Xuansong Li, Andrew Chu, Z. Berkay Celik, Bardh Hoxha, Xiangyu Zhang
To appear in the *ACM Conference on Computer and Communications Security, November 2022.*

RESEARCH EXPERIENCE

Research Assistant — Chicago, IL
NOISE Lab — *Sep 2021 – present*
- Examining topics related to deployment of networking protocols, measurement, and security.

Undergraduate Student Researcher — West Lafayette, IN
Purdue PurSec Lab — *Aug 2019 – Sept 2021*
- Led research examining e-crime on online platforms under Prof. Z. Berkay Celik. Wrote two papers examining order fulfillment fraud on Amazon, and exploitatative content monetization on YouTube.

WORK EXPERIENCE

R&D Intern — Albuquerque, NM
Sandia National Laboratories — *Jun 2016 – Aug 2021*

Developed cybersecurity forensic incident response initiatives (ThunderBird Cup, Tracer FIRE) focused on the areas of macOS vulnerabilities, web vulnerabilities, privilege escalation, and remote code execution

Replicated and visualized Open vSwitch (OVS) vulnerabilities affecting the OVS megaflow cache on a virtualized SDN cluster environment

WORKSHOPS, PRESENTATIONS & INVITED TALKS

1. **SNL Tracer FIRE Workshop**
DEF CON 28 SAFE MODE Blue Team Village — *Aug. 2020*
University of Arizona, Tucson, AZ — *July 2020*
Purdue University, West Lafayette, IN — *Apr. 2019, Oct. 2019, Oct. 2020*

2. **SNL ThunderBird Cup Workshop**
University of New Mexico, Albuquerque, NM — *July 2018*
Benedict College, Columbia, SC — *June 2018*
University of the Virgin Islands, St. Thomas, Virgin Islands — *July 2016*

HONORS & AWARDS

Honorable Mention — 2021 NSF Graduate Research Fellowship Program (GRFP) — *Mar. 2021*

Skills   **Programming** — Proficient in Java, C/C++, Python, Bash.
Experience in R, PowerShell, ARM/x86 Assembly.
Markup languages: LaTeX, HTML, CSS, Markdown.

Operating Systems — Mac OS, *nix, Windows.

Software & Services — Ghidra, AWS (Route 53, ELB, EC2, S3), Autopsy, Elastic Stack.