

## David Adrian

### Contact Information

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### Online Information

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### Education

**University of Michigan**, Ann Arbor, MI

*PhD, Computer Science*

Expected 2020

- ADVISOR: J. Alex Halderman
- RESEARCH FOCUS: Computer Security

*Masters of Science in Engineering, Computer Science*

Expected 2016

- GPA: 4.00/4.00

*Bachelors of Science in Engineering, Computer Science*

Class of 2014

- MINOR: Mathematics
- GPA: 3.52/4.00

### Research Experience

**Research Assistant**, with Professor J. Alex Halderman

2013 - Present

- Computer security and Internet measurement research, concentrating on taking a global view of network ecosystems to gain security insights
- Created and maintain ZGrab and ZMap, open-source tools for high-speed Internet-wide measurement (available on GitHub)
- Developed a custom and automated big-data processing toolchain capable of handling >1TB data/day on current small-scale deployment, used for analyzing and searching Internet-wide measurement results

**Whisper Project**, with Professor Robert P. Dick

2011 - 2013

- Released MANES, an Android prototyping framework for mobile ad-hoc networks
- Released Shout, a user-facing censorship-resistant communication application built using MANES (available on Google Play Store)

### Work Experience

**Software Engineering Intern**, Duo Security

Summer 2013

- Two-factor authentication-as-a-service, using mobile phones as the second authentication factor and push notifications for login approval.
- Grew various Python backend subsystems to support new features; handled all bugs, feature requests, and security considerations for the Duo Unix client.
- Wrote a patch for OpenSSH to securely allow third-party authentication plugins.

### Teaching Experience

**Instructional Aide**, EECS 280: Programming and Data Structures

Fall 2013

**Instructional Aide**, EECS 281: Data Structures and Algorithms

Winter 2014

**Graduate Student Instructor**, EECS 588: Computer Security

Winter 2015

### Leadership and Honors

**Eta Kappa Nu (HKN)**, Beta Epsilon Chapter

2013 - Present

- Taught local high school and middle school students programming in Java and Android application development.

### Computer Skills

**Languages:** C, Python, Go, C++, Java, Javascript, PHP, L<sup>A</sup>T<sub>E</sub>X, HTML/CSS, Haskell

**Platforms/Frameworks:** Android, Unix API, Node.js, Tornado/Cyclone/Twisted, Celery, React, Parse, Unity3D, OpenGL, MATLAB

**Databases:** MySQL, RocksDB, MongoDB, Voldemort, Redis, neo4j

**Conference  
Publications**

**Neither Snow Nor Rain Nor MITM An Empirical Analysis of Mail Delivery Security**

Zakir Durumeric, David Adrian, Ariana Mirian, James Kasten, Kurt Thomas,  
Vijay Eranti, Nicholas Lidzborski, Elie Bursztein, Michael Bailey, and J. Alex Halderman

*Proc. 15th ACM Internet Measurement Conference (IMC 15), October 2015.*

**Imperfect Forward Secrecy: How Diffie-Hellman Fails in Practice**

David Adrian, Karthikeyan Bhargavan, Zakir Durumeric, Pierrick Gaudry,  
Matthew Green, J. Alex Halderman, Nadia Heninger, Drew Springall,  
Emmanuel Thomé, Luke Valenta, Benjamin VanderSloot, Eric Wustrow,  
Santiago Zanella-Béguelin and Paul Zimmermann.

*Proc. 22nd ACM Conference on Computer and Communications Security (CCS 15), October 2015.*

**A Search-Engine Backed by Internet-Wide Scanning**

Zakir Durumeric, David Adrian, Ariana Mirian, Michael Bailey, and J. Alex Halderman

*Proc. 22nd ACM Conference on Computer and Communications Security (CCS 15), October 2015.*

**Performance and Energy Consumption Analysis of a Delay-Tolerant Network for Censorship-Resistant Communication**

Yue Liu, David R. Bild, David Adrian, Gulshan Singh, Robert P. Dick,  
Dan S. Wallach, and Z. Morley Mao

*Proc. ACM International Symposium on Mobile Ad Hoc Networking and Computing 2015 (MobiHoc 2015)*

**The Matter of Heartbleed**

Zakir Durumeric, Frank Li, James Kasten, Johanna Amann, Jethro Beekman,  
Mathias Payer, Nicolas Weaver, David Adrian, Vern Paxson, Michael Bailey,  
and J. Alex Halderman

*Proc. 14th ACM Internet Measurement Conference (IMC '14)*

**Best Paper Award!**

**Workshop  
Publications**

**Zipppier ZMap: Internet-Wide Scanning at 10 Gbps**

David Adrian, Zakir Durumeric, Gulshan Singh and J. Alex Halderman  
*8th USENIX Workshop on Offensive Technologies (WOOT '14)*