

Annie Edmundson

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Research Interests

I'm a fifth year CS Ph.D. student at Princeton University. My research interests are broad in security, privacy, and technology policy.

Education

- 2015-2018** Ph.D. in Computer Science - Princeton University
Advisors: Nick Feamster, Ed Felten
- 2013-2015** M.A. in Computer Science - Princeton University
Advisor: Ed Felten
- 2010-2013** B.S. in Computer Science - Cornell University
Concentrations: Security, Systems

Awards

- ACM SIGCOMM Student Research Competition Winner, 2016**
- National Defense Science and Engineering Graduate (NDSEG) Fellowship, 2015-2018**
- Resident Graduate Student (RGS), Invited Residential College Guest, 2015-2018**
- Princeton First Year Engineering Fellowship, 2013-2014**

Publications

Using BGP to Acquire Bogus TLS Certificates

Henry Birge-Lee, Yixin Sun, **Anne Edmundson**, Jennifer Rexford, Prateek Mittal
HotPETS, July 2017.

Counter-RAPTOR: Safeguarding Tor Against Active Routing Attacks

Yixin Sun, **Anne Edmundson**, Nick Feamster, Mung Chiang, Prateek Mittal
IEEE Security & Privacy, May 2017.

A First Look into Transnational Routing Detours

Anne Edmundson, Roya Ensafi, Nick Feamster, Jennifer Rexford
{Poster} *Proceedings of the ACM SIGCOMM 2016 Conference*, August 2016.

Characterizing and Avoiding Routing Detours through Surveillance States

Anne Edmundson, Roya Ensafi, Nick Feamster, Jennifer Rexford
arXiv:1605.076685, May 2016.

RAPTOR: Routing Attacks on Privacy in Tor

Yixin Sun, **Anne Edmundson**, Laurent Vanbever, Oscar Li, Jennifer Rexford, Mung Chiang, Prateek Mittal
USENIX Security Symposium, August 2015.

Security Audit of Safepug “Tor in a Box”

Anne Edmundson, Anna Kornfeld Simpson, Joshua A. Kroll, Edward W. Felten
Proceedings, FOCL, August 2014.

An Empirical Study on the Effectiveness of Security Code Review

Anne Edmundson, Brian Holtkamp, Emanuel Rivera, Matthew Finifter, Adrian Mettler, David Wagner
Engineering Secure Software and Systems(ESSoS), March 2013.

Automated Analysis of Election Audit Logs

Patrick Baxter, **Anne Edmundson**, Keishla Ortiz, Ana Maria Quevedo, Samuel Rodriguez, Cynthia Sturton, David Wagner
Proceedings, EVT/WOTE, August 2012.

Industry

June 2016 - MIT Lincoln Laboratory

August 2016 *Research Intern, Cyber Analytics & Decisions Group*

- **Identified a new class of attacks on Software Defined Networking (SDN) frameworks.**
- **Implemented multiple instantiations of attack on a variety of SDN controllers.**
- **Designed potential countermeasures to protect against the new attack class.**

June 2015 - Twitter, Inc.

August 2015 *Intern, Application Security Team*

- **Developed an open-source Content Security Policy (CSP) library in Scala.**
- **Replaced Twitter’s existing CSP configuration with the new CSP library.**

Software

Scala Content Security Policy (CSP) Configuration Library: an open source library for generating and configuring CSP headers.

Anne Edmundson, Matt Finifter

Audit-Bear: a web application for analyzing audit logs from ES&S iVotronic voting machines

Patrick Baxter, Anne Edmundson, Keishla Ortiz Lopez, Ana Maria Quevedo, Samuel Rodriguez, Cynthia Sturton, and David Wagner

Talks

Studying Transnational Routing Detours through Surveillance States

RIPE 73, Madrid, October 2016.

Studying Transnational Routing Detours

NANOG 67, Chicago, June, 2016.

Security Audit of Safepug “Tor in a Box”

FOCI, San Diego, August 2014.

An Empirical Study on the Effectiveness of Security Code Review
Engineering Secure Software and Systems (ESSoS), Paris (Rocquencourt), March 2013.

Automated Analysis of Election Audit Logs
EVT/WOTE, Bellevue, August 2012.

Teaching & Mentoring

Teaching Assistant, COS 484 (Innovating Across Technology, Business, and Markets), Spring 2015
Princeton University, Instructor: Jaswinder Singh

Teaching Assistant, COS 432 (Information Security), Fall 2014
Princeton University, Instructor: Ed Felten

References

{Available upon request.}