

# RICHARD ROBERTS

## CONTACT INFORMATION

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## EDUCATION

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### University of Maryland, College Park

Computer Science, Ph.D. (In Progress)  
Ph.D. Advisor - Dr. Dave Levin

2017 - Present

### University of Pennsylvania

Computer & Information Science, MSE  
Research Advisor - Dr. Nadia Heninger

2015 - 2017

Thesis - Analyzing, Inducing, and Capitalizing on Memory Faults in Android Systems

Computer Science, BSE (Mathematics minor)  
Academic Advisor - Dr. Camillo J. Taylor

2012 - 2016

## PUBLICATIONS & RESEARCH

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### Refereed Publications

*You Are Who You Appear to Be: A Longitudinal Study of Domain Impersonation in TLS Certificates*

**Richard Roberts**, Yaelle Goldschlag, Rachel Walter, Taejoong Chung, Alan Mislove, Dave Levin.

ACM CCS 2019 (Conference on Computer and Communications Security)

*When Certificate Transparency Is Too Transparent: Analyzing Information Leakage in HTTPS Domain Names* (Short Paper)

**Richard Roberts**, Dave Levin.

WPES 2019 (Workshop on Privacy in the Electronic Society)

*The Effect of Entertainment Media on Mental Models of Computer Security*

Kelsey Fulton, Rebecca Gelles, Alexandra McKay, **Richard Roberts**, Yasmin Abdi, Michelle Mazurek.

SOUPS 2019 (Symposium on Usable Privacy and Security)

*Measurement and Analysis of Hajime, a Peer-to-peer IoT Botnet*

Stephen Herwig, Katura Harvey, George Hughey, **Richard Roberts**, Dave Levin.

NDSS 2019 (Network and Distributed System Security Symposium)

**Poster Presentations***Measuring Domain Impersonation with Certificate Transparency Logs***Richard Roberts**, Yaelle Goldschlag, Dave Levin.

ACM IMC 2018 (Intrenet Measurement Conference)

*Measurement and Analysis of Hajime, a Peer-to-peer IoT Botnet*Stephen Herwig, Katura Harvey, George Hughey, **Richard Roberts**, Dave Levin.

ACM IMC 2018 (Intrenet Measurement Conference)

**Technical Reports***Suspicious Domain Comparison*

2018

Erica Blum, **Richard Roberts**, Debjani Saha, Hanyu Wang, Zhehan Xion.*Advanced Database Transaction Rollback and Security with Dependency Graphs*

2018

Nathaniel Grammel, Rangfu Hu, **Richard Roberts**.*Notorious RNG: Biasing the Linux Random Number Generator*

2017

**Richard Roberts**, Debjani Saha, Jessica Thompson.*Analyzing, Inducing, and Capitalizing on Memory Faults in Android Systems*

2017

**Richard Roberts**.*E.L.E.C.T.: Elections- Let's Encrypt Certifiable Tallies*

2016

Brian Kim, **Richard Roberts**, Fernando Trujano.*/dev/!random: Profiling Entropy Collection in the Linux Random Number Generator*

2016

Justin MacIntosh, **Richard Roberts**.*Android Soft Memory Error Exploit*

2015

**Richard Roberts**, Terry Sun.*Cryptanalysis of the Aguilar-Melchor and Gaborit Lattice-Based PIR Scheme*

2014

**Richard Roberts**, Dennis Sell, Terry Sun.**TEACHING EXPERIENCE****Teaching Assistant - Introduction to Networks and Security (CIS 331)**

Spring 2015

University of Pennsylvania

2016

Professor - Dr. Nadia Heninger

2017

<b>Teaching Assistant - Introduction to Computer Systems (CIS 240)</b>	Spring 2014
University of Pennsylvania	Fall 2014
Professors - Dr. Camillo J. Taylor, Dr. Thomas Farmer, Dr. John Seng	2015
	2016

## PROFESSIONAL EXPERIENCE

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<b>Synack Inc.</b>	2016 - 2017
<i>Research &amp; Data</i> - Remote Contractor, Summer Intern	
Researched into automated vulnerability detection, implemented efficient UDP service probing, and deployed open-source vulnerability scanners.	
<b>Microsoft Corporation</b>	2015
<i>Software Engineer</i> - Summer Intern	
Prototyped the Microsoft Office Researcher tool.	
<b>Palantir Technologies Inc.</b>	2014
<i>Infrastructure Quality Engineer</i> - Summer Intern	
Created a mock dataset generator and tested performance of data analysis software at scale.	

## AWARDS & HONORS

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<b>Dean's Fellowship</b> - <i>University of Maryland</i>	2017
<b>CIS Senior Design Third Prize Award</b> - <i>"/dev/!random"</i>	2016
<b>Tyfone IOT Security Challenge Second Place</b> - <i>"E.L.E.C.T."</i>	2016
<b>Graduated Magna cum Laude</b> - <i>University of Pennsylvania</i>	2016
<b>Dean's List</b> - <i>University of Pennsylvania</i>	2013-2014 2015-2016