

# Adam Doupe

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## Education

- 2010–2014 **PhD in Computer Science**, *University of California, Santa Barbara*.  
Advisors: Giovanni Vigna and Christopher Kruegel  
Thesis: Advanced Automated Web Application Vulnerability Analysis
- 2008–2009 **Master's Degree in Computer Science**, *University of California, Santa Barbara*.  
Advisor: Giovanni Vigna  
Topic: Black Box Web Vulnerability Scanners
- 2004–2008 **Bachelor's Degree in Computer Science with Honors**, *University of California, Santa Barbara*.

## Professional Appointments

- 2017–Present **Associate Director**, *Center for Cybersecurity and Digital Forensics*, Arizona State University.
- 2014–Present **Assistant Professor**, *Arizona State University*.

## Research Funding

10. DARPA 2019–2022. *DARPA CHESS: CHECRS: Cognitive Human Enhancements for Cyber Reasoning Systems* \$11,730,557, co-PI (w/ Fish Wang PI and Yan Shoshitaishvili PI and Tiffany Bao, Chitta Baral, and Stephanie Forrest as co-PIs), share \$1,524,972.
9. DARPA 2018–2022. *DARPA HACCS: Puppeteer—Achieving Remote Control Over Complex Systems* \$7,474,245, co-PI (w/ Yan Shoshitaishvili PI), share \$1,868,561.
8. NSF 2017–2022. *NSF-SFS: Arizona Cyber Defense Scholarship*, \$3,997,784, co-PI (w/ Gail-Joon Ahn PI and Steven Yau, Ziming Zhao, and Dijiang Huang co-PIs), share \$399,778.
7. NSF 2017–2021. *SaTC: CORE: Medium: Collaborative: Taming Web Content Through Automated Reduction in Browser Functionality*, \$406,080, PI.
6. Soongsil University 2017–2024. *Automatic Deep Malware Analysis Technology for Cyber Threat Intelligence*, \$708,160, co-PI (w/ Gail-Joon Ahn PI), share \$283,264.
5. ONR 2017–2019. *XS-Shredder: A Cross-Layer Framework for Removing Code Bloat in Web Applications*, \$1,230,547, PI.
4. NSF 2017–2022. *CAREER: Next Generation Black-Box Web Application Vulnerability Analysis*, \$416,585, PI.

3. NSF 2016–2019. *Collaborative Research: CICI: Secure and Resilient Architecture: SciGuard: Building a Security Architecture for Science DMZ based on SDN and NFV Technologies*, \$499,484, co-PI (w/ Gail-Joon Ahn PI and Dijiang Huang co-PI), share \$149,845.
2. NSF 2016–2018. *EDU: Collaborative: Educating the Security Workforce through On-Demand Live Competitions*, \$154,643, PI (w/ Gail-Joon Ahn co-PI), share \$77,321.
1. ONR 2015. *Academic Survey of the Cyber Resiliency of the Total Embedded Systems Platform*, \$49,998, PI.

## ■ Honors and Awards

- 2018 **Fulton Schools of Engineering Best Teacher Award**, *Arizona State University*.
- 2017 **Fulton Outstanding Assistant Professor**, *Arizona State University*.
- 2017 **Fulton Schools of Engineering Best Teacher Award**, *Arizona State University*.
- 2017 **NSF CAREER Award**.
- 2016 **Best Paper Award**, *Toward Authenticated Caller ID Transmission: The Need for a Standardized Authentication Scheme in Q.731.3 Calling Line Identification Presentation*, ITU Kaleidoscope.
- 2016 **Fulton Schools of Engineering Best Teacher Award—Top 5%**, *Arizona State University*.
- 2015 **Best Paper Award**, *A Large-Scale Study of Mobile Web App Security*, Mobile Security Technologies Workshop.
- 2013 **Outstanding Publication Award in Computer Science**, *Enemy of the State: A State-Aware Black-Box Web Vulnerability Scanner*, University of California, Santa Barbara.
- 2011 **Outstanding Teaching Assistant Award**, *CS 279—(Graduate) Network Security and Intrusion Detection*, University of California, Santa Barbara.
- 2010 **Gold Star Award**, *Microsoft*.
- 2009 **Outstanding Teaching Assistant Award**, *CS 177—Introduction to Computer Security*, University of California, Santa Barbara.

## ■ Publications

Students advised, co-advised, or mentored are underlined, undergraduate students contain an asterisk next to their name, and conference acceptance rates are provided when available. First authorship indicates primary contribution, unless otherwise noted.

### Journal Papers (refereed)

2. Huahong Tu, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, “Toward Standardization of Authenticated Caller ID Transmission,” in *IEEE Communications Standards Magazine*, 1(3), pp. 30-36, October 2017.

1. Sai Prashanth Chandramouli, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “E-mail Header Injection Vulnerabilities,” in *it - Information Technology*, 59(2), pp. 67-72, March 2017.

### Conference Papers with Proceedings (refereed)

27. Adam Oest, Yeganeh Safaei, **Adam Doupé**, Gail-Joon Ahn, Brad Wardman, and Kevin Tyers, “PhishFarm: A Scalable Framework for Measuring the Effectiveness of Evasion Techniques Against Browser Phishing Blacklists,” in *Proceedings of the IEEE Symposium on Security and Privacy*, San Francisco, CA, May 2019.
26. Zhibo Sun, Carlos E. Rubio-Medrano, Ziming Zhao, Tiffany Bao, **Adam Doupé**, and Gail-Joon Ahn, “Understanding and Detecting Private Interactions in Underground Forums,” in *Proceedings of the ACM on Conference on Data and Application Security and Privacy (CODASPY)*, Dallas, TX, March 2019.
25. Haehyun Cho, Penghui Zhang, Donguk Kim, Jinbum Park, Choong-Hoon Lee, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “Prime+Count: Novel Cross-world Covert Channels on ARM TrustZone,” in *Proceedings of the Annual Computer Security Applications Conference (ACSAC)*, Puerto Rico, December 2018.
24. Jaejong Baek, Sukwha Kyung, Haehyun Cho, Ziming Zhao, Yan Shoshitaishvili, **Adam Doupé**, and Gail-Joon Ahn, “Wi Not Calling: Practical Privacy and Availability Attacks in Wi-Fi Calling,” in *Proceedings of the Annual Computer Security Applications Conference (ACSAC)*, Puerto Rico, December 2018.
23. Vaibhav Hemant Dixit, **Adam Doupé**, Yan Shoshitaishvili, Ziming Zhao, and Gail-Joon Ahn, “AIM-SDN: Attacking Information Mismanagement in SDN-datastores,” in *Proceedings of the ACM Conference on Computer and Communications Security (CCS)*, Toronto, Canada, October 2018.
22. Adam Oest, Yeganeh Safaei, **Adam Doupé**, Gail-Joon Ahn, Brad Wardman, and Gary Warner, “Inside a Phisher’s Mind: Understanding the Anti-phishing Ecosystem Through Phishing Kit Analysis,” in *Proceedings of the Symposium on Electronic Crime Research (eCrime)*, San Diego, May 2018.
21. Sai Prashanth Chandramouli, Pierre-Marie Bajan, Christopher Kruegel, Giovanni Vigna, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “Measuring E-Mail Header Injections on the World Wide Web,” in *Proceedings of the ACM Symposium on Applied Computing (SAC)*, Pau, France, April 2018.
20. Sukwha Kyung, Wonkyu Han, Naveen Tiwari, Vaibhav Dixit, Lakshmi Srinivas, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “HoneyProxy: Design and Implementation of Next-Generation HoneyNet via SDN,” in *Proceedings of the IEEE Conference on Communications and Network Security (CNS)*, Las Vegas, NV, October 2017.
19. Sailik Sengupta, Satya Gautam Vadlamudi, Subbarao Kambhampati, **Adam Doupé**, Ziming Zhao, Marthony Taguinod, and Gail-Joon Ahn, “A Game Theoretic Approach of Strategy Generation for Moving Target Defense in Web Applications,” in *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Sao Paulo, May 2017.

18. Niall McLaughlin, Jesus Martinez del Rincon, BooJoong Kang, Suleiman Yerima, Paul Miller, Sakir Sezer, Yeganeh Safaei, Erik Trickett, Ziming Zhao, **Adam Doupé**, Gail-Joon Ahn, "Deep Android Malware Detection," in *Proceedings of the ACM on Conference on Data and Application Security and Privacy (CODASPY)*, Scottsdale, Arizona, March 2017.
17. Huahong Tu, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, "Toward Authenticated Caller ID Transmission: The Need for a Standardized Authentication Scheme in Q.731.3 Calling Line Identification Presentation," in *Proceedings of the ITU Kaleidoscope*, Bangkok, Thailand, November 2016.  
**Best Paper Award**
16. Mike Mabey, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, "dbling: Identifying Extensions Installed on Encrypted Web Thin Clients," in *Proceedings of the Digital Forensics Research Conference (DFRWS)*, Seattle, WA, August 2016.
15. Wonkyu Han, Hongxin Hu, Ziming Zhao, **Adam Doupé**, Gail-Joon Ahn, Kuang-Ching Wang and Juan Deng, "State-aware Network Access Management for Software-Defined Networks," in *Proceedings of the ACM Symposium on Access Control Models and Technologies (SACMAT)*, Shanghai, China, June 2016.
14. Kevin Liao\*, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, "Behind Closed Doors: Measurement and Analysis of CryptoLocker Ransoms in Bitcoin," in *Proceedings of the Symposium on Electronic Crime Research (eCrime)*, Toronto, Canada, June 2016.
13. Huahong Tu, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, "SoK: Everyone Hates Robocalls: A Survey of Techniques against Telephone Spam," in *Proceedings of the IEEE Symposium on Security and Privacy*, San Jose, CA, May 2016. (**13.3%** acceptance rate.)
12. Yiming Jing, Gail-Joon Ahn, **Adam Doupé**, and Jeong Hyun Yi, "Checking Intent-based Communication in Android with Intent Space Analysis," in *Proceedings of the ACM Symposium on Information, Computer and Communications Security (AsiaCCS)*, Xi'an, China, May 2016. (**20.9%** acceptance rate.)
11. Satya Gautam Vadlamudi, Sailik Sengupta, Marthony Taguinod, Ziming Zhao, **Adam Doupé**, Gail-Joon Ahn and Subbarao Kambhampati, "Moving Target Defense for Web Applications using Bayesian Stackelberg Games (Extended Abstract)," in *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, Singapore, May 2016.
10. Vitor Afonso, Antonio Bianchi, Yanick Fratantonio, **Adam Doupé**, Mario Polino, Paulo de Geus, Christopher Kruegel, and Giovanni Vigna, "Going Native: Using a Large-Scale Analysis of Android Apps to Create a Practical Native-Code Sandboxing Policy," in *Proceedings of the ISOC Network and Distributed System Security Symposium (NDSS)*, San Diego, CA, February 2016. (**15.4%** acceptance rate.)
9. Carlos E. Rubio-Medrano, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, "Federated Access Management for Collaborative Network Environments: Framework and Case Study," in *Proceedings*

of the ACM Symposium on Access Control Models and Technologies (SACMAT), Vienna, Austria, June 2015. (**28.8%** acceptance rate.)

8. Yan Shoshitaishvili, Luca Invernizzi, **Adam Doupé**, and Giovanni Vigna, “Do You Feel Lucky? A Large-Scale Analysis of Risk-Rewards Trade-Offs in Cyber Security,” in *Proceedings of the ACM Symposium on Applied Computing (SAC 2014)*, Gyeongju, Korea, March 2014.
7. **Adam Doupé**, Weidong Cui, Mariusz H. Jakubowski, Marcus Peinado, Christopher Kruegel, and Giovanni Vigna, “deDacota: Toward Preventing Server-Side XSS via Automatic Code and Data Separation,” in *Proceedings of the 20th ACM Conference on Computer and Communications Security (CCS)*, Berlin, Germany, November 2013. (**19.8%** acceptance rate.)
6. **Adam Doupé** and Janet L. Kayfetz, “Writing Groups in Computer Science Research Labs,” in *Proceedings of the Frontiers in Education Conference (FIE 2013)*, Oklahoma City, OK, October 2013.
5. Pierre Payet, **Adam Doupé**, Christopher Kruegel, and Giovanni Vigna, “EARs in the Wild: Large-Scale Analysis of Execution After Redirect Vulnerabilities,” in *Proceedings of the ACM Symposium on Applied Computing (SAC 2013)*, Coimbra, Portugal, March 2013.
4. **Adam Doupé**, Ludovico Cavedon, Christopher Kruegel, and Giovanni Vigna, “Enemy of the State: A State-Aware Black-Box Web Vulnerability Scanner,” in *Proceedings of the 21st USENIX conference on Security (USENIX 2012)*, Bellevue, WA, August 2012. (**19.4%** acceptance rate.)  
**Outstanding Publication Award in Computer Science, UC Santa Barbara**
3. **Adam Doupé**, Manuel Egele, Benjamin Caillat, Gianluca Stringhini, Gorkem Yakin, Ali Zand, Ludovico Cavedon, and Giovanni Vigna, “Hit ’em Where it Hurts: A Live Security Exercise on Cyber Situational Awareness,” in *Proceedings of the Annual Computer Security Applications Conference (ACSAC 2011)*, Austin, TX, December 2011. (**20%** acceptance rate.)
2. **Adam Doupé**, Bryce Boe, Christopher Kruegel, and Giovanni Vigna, “Fear the EAR: Discovering and Mitigating Execution After Redirect Vulnerabilities,” in *Proceedings of the 18th ACM Conference on Computer and Communications Security (CCS 2011)*, Chicago, IL, October 2011. (**14%** acceptance rate.)
1. **Adam Doupé**, Marco Cova, and Giovanni Vigna, “Why Johnny Can’t Pentest: An Analysis of Black-box Web Vulnerability Scanners,” in *Proceedings of the Seventh Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA 2010)*, Bonn, Germany, July 2010. (**34%** acceptance rate.)

#### **Workshop Papers with Proceedings (refereed)**

9. Mauricio Gutierrez, Ziming Zhao, **Adam Doupé**, Yan Shoshitaishvili, and Gail-Joon Ahn , “Cache-Light: Defeating the CacheKit Attack,” in *Proceedings of the Workshop on Attacks and Solutions in Hardware Security (ASHES)*, Toronto, Canada, October 2018.
8. Vaibhav Dixit, Sukwha Kyung, Ziming Zhao, Adam Doupé, Yan Shoshitaishvili, and Gail-Joon Ahn, “Challenges and Preparedness of SDN-based Firewalls,” in *Proceedings of the ACM International*

*Workshop on Security in Software Defined Networks and Network Function Virtualization (SDN-NFV Sec)*, Tempe, AZ, March 2018.

7. Carlos E. Rubio-Medrano, Josephine Lamp\*, Adam Doupé, Ziming Zhao, and Gail-Joon Ahn, “Mutated Policies: Towards Proactive Attribute-based Defenses for Access Control,” in *Proceedings of the Workshop on Moving Target Defense (MTD)*, Dallas, TX, October 2017.
6. Erik Trickel, Francesco Disperati, Eric Gustafson, Faezeh Kalantari, Mike Mabey, Naveen Tiwari, Yeganeh Safaei, **Adam Doupé**, and Giovanni Vigna, “Shell We Play A Game? CTF-as-a-service for Security Education,” in *Proceedings of the USENIX Workshop on Advances in Security Education (ASE)*, Vancouver, CA, August 2017.
5. Patrick Mutchler, Yeganeh Safaei, **Adam Doupé**, and John Mitchell, “Target Fragmentation in Android Apps,” in *Proceedings of the Mobile Security Technologies Workshop (MoST)*, San Jose, CA, May 2016.
4. Wonkyu Han, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “HoneyMix: Toward SDN-based Intelligent Honeynet,” in *Proceedings of the ACM International Workshop on Security in Software Defined Networks and Network Function Virtualization (SDN-NFV Sec)*, New Orleans, LA, March 2016.
3. Carlos E. Rubio-Medrano, Josephine Lamp\*, Marthony Taguinod, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, “Position Paper: Towards a Moving Target Defense Approach for Attribute-based Access Control,” in *Proceedings of the ACM Workshop on Attribute Based Access Control (ABAC)*, New Orleans, LA, March 2016.
2. Patrick Mutchler, **Adam Doupé**, John Mitchell, Christopher Kruegel, and Giovanni Vigna, “A Large-Scale Study of Mobile Web App Security,” in *Proceedings of the Mobile Security Technologies Workshop (MoST)*, San Jose, CA, May 2015.

#### **Best Paper Award**

1. Giovanni Vigna, Kevin Borgolte, Jacopo Corbetta, **Adam Doupé**, Yanick Fratantonio, Luca Invernizzi, Dhilung Kirat, and Yan Shoshitaishvili, “Ten Years of iCTF: The Good, The Bad, and The Ugly,” in *Proceedings of the USENIX Summit on Gaming, Games and Gamification in Security Education (3GSE)*, San Diego, CA, August 2014.

#### **Book Chapters**

1. Gail-Joon Ahn, **Adam Doupé**, Ziming Zhao, and Kevin Liao, “Ransomware and cryptocurrency: Partners in crime,” book chapter in Thomas J. Holt, Ed., *Cybercrime Through an Interdisciplinary Lens*, pp. 105–126, Routledge Studies in Crime and Society, Taylor & Francis Publishers, 2016.

#### **Invited Papers**

2. Ajay Modi, Zhibo Sun, Anupam Panwar, Tejas Khairnar, Ziming Zhao, **Adam Doupé**, and Gail-Joon Ahn, “Towards Automated Threat Intelligence Fusion,” in *Proceedings of the IEEE International Conference on Collaboration and Internet Computing (CIC)*, November 2016.

1. Marthony Taguinod, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, "Toward a Moving Target Defense for Web Applications," in *Proceedings of the IEEE International Conference on Information Reuse and Integration (IRI)*, San Francisco, CA, August 2015.

### Patent Activity

2. Weidong Cui, Adam Doupé, Mariusz Jakubowski, and Marcus Peinado, "Automatic Code and Data Separation of Web Application," *Patent US9774620B2*, 2017.
1. Huahong Tu, **Adam Doupé**, Ziming Zhao, and Gail-Joon Ahn, "Systems and Methods of Authenticating Caller Identity and Call Request Header Information for Outbound Telephony Communications," *Provisional Patent*, 2016.

### Invited Talks

12. Participated in the "Education and Workforce" panel at the ASU Congressional Conference on Cybersecurity, August 2017.
11. Participated in the "Rigor in Experimentation" panel at the USENIX Workshop on Cyber Security Experimentation and Test (CSET), August 2017.
10. "The Effectiveness of Telephone Phishing Scams and Possible Solutions," Invited talk at University College London, London, UK, June 2017.
9. "Everybody Hates Robocalls: What Can We Do About It?," Invited talk at Stony Brook University, Stony Brook, NY, April 2017.
8. Moderated the "Trustworthy Data Science" panel at the ACM Conference on Data and Applications Security and Privacy (CODASPY), March 2017.
7. "Large-Scale Security Analysis of Android Applications," Invited talk for the 3rd International Symposium on Mobile Security (MSEC 2016), December 2016.
6. Moderated the "Security Competitions" panel at the USENIX Security Symposium, August 2016.
5. "A Computer in Every Pocket: Securing Mobile Applications," Invited talk by Dr. Jennifer Hackney Price, ASU West, September 2016.
4. "Everything You've Ever Wanted to Know About Black-Box Web Vulnerability Scanners (But Were Afraid to Ask)," Invited talk, Open Web Application Security Project (OWASP) Phoenix Chapter, June 2016.
3. "Using Static Analysis to Tame the Wild Wild Web," Invited talk at Georgia Tech, Georgia, AL, February 2015.
2. "Into the Mind of the Hacker," Three hour workshop at UC Santa Barbara by request of Web Standard Group, Santa Barbara, CA, April 2012.
1. "Fear the EAR: Discovering and Mitigating Execution After Redirect Vulnerabilities," Invited talk at Raytheon, Santa Barbara, CA, October 2011.

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## Service

### **Program Committee**

- 2019 Network and Distributed System Security Symposium (NDSS)
- 2018 Annual Computer Security Applications Conference (ACSAC)
- 2018 ACM Conference on Computer and Communications Security (CCS)
- 2019 IEEE Symposium on Security and Privacy
- 2018 Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA)
- 2018 IEEE International Conference on Distributed Computing Systems (ICDCS)
- 2018 USENIX Security Symposium (USENIX)
- 2018 Network and Distributed System Security Symposium (NDSS)
- 2017 Annual Computer Security Applications Conference (ACSAC)
- 2017 ACM Conference on Computer and Communications Security (CCS)
- 2017 Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA)
- 2017 USENIX Security Symposium (USENIX)
- 2017 ACM Symposium on Applied Computing (SAC)
- 2016 ACM Conference on Computer and Communications Security (CCS)
- 2016 USENIX Security Symposium (USENIX)
- 2016 International Conference on Availability, Reliability and Security (ARES)
- 2016 International World Wide Web Conference (WWW)
- 2016 ACM Symposium on Applied Computing (SAC)
- 2015 ACM Conference on Computer and Communications Security (CCS)
- 2015 USENIX Security Symposium (USENIX)
- 2015 International Conference on Availability, Reliability and Security (ARES)
- 2015 International Conference on Web Engineering (ICWE)
- 2015 OWASP AppSecEU
- 2015 International World Wide Web Conference (WWW)
- 2013 GreHack

### **Conference Reviewer**

- 2016 Frontiers in Education (FIE)
- 2015 Frontiers in Education (FIE)
- 2014 Frontiers in Education (FIE)
- 2013 Frontiers in Education (FIE)



## **Journal Reviewer**

- ACM Transactions on Architecture and Code Optimization
- ACM Transactions on the Web
- ACM Transactions on Information and System Security (TISSEC)
- Computers — Open Access Journal
- Future Generation Computer Systems
- IET Software
- IEEE Transactions on Information Forensics & Security
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Reliability
- IEEE/ACM Transactions on Networking
- Journal of Software Testing, Verification and Reliability (STVR)

## **Conference Organization**

- 2018 Student Travel Grant Committee for the Network and Distributed System Security Symposium (NDSS)
- 2018 Tutorial Chair for ACM Symposium on Information, Computer and Communications Security (AsiaCCS)
- 2017 Panel Chair for ACM Conference on Data and Application Security and Privacy (CODASPY)
- 2015 Poster Co-Chair for USENIX Security Symposium
- 2012 Chair of Graduate Student Workshop on Computing (GSWC), UC Santa Barbara. Raised record \$8,600 from industry, organized larger venue, ensured reviews were written, facilitated PC meeting, and hosted actual event.
- 2011 Industry Liaison for Graduate Student Workshop on Computing (GSWC), UC Santa Barbara. Raised record \$8,500 from industry sponsors Google, AppFolio, Lastline, Qualcomm, and Microsoft.

## **Proposal Reviewer**

- 2018 NSF SaTC Panel Reviewer
- 2018 NSF SaTC-EDU Panel Reviewer
- 2015 NSF SaTC Panel Reviewer

## **Faculty Advisor for Student Groups**

- 2016–Present Faculty Advisor for AZ Saber, a student group dedicated to teaching people the basics of swordsmanship and safety.

- 2015–Present Faculty Advisor for Software Developers Association (SoDA), the largest student organization in the Fulton Schools of Engineering
- 2014–Present Faculty Advisor for pwndevils, a student organization affiliated with the Center for Cybersecurity and Digital Forensics. The group meets weekly to practice ethical hacking skills to compete in Capture the Flag competitions.

### **Department Service**

- 2018 Cybersecurity Faculty Search Committee Chair, Arizona State University
- 2014–Present PhD Admissions Committee, Arizona State University
- 2016 Cybersecurity Faculty Search Committee, Arizona State University
- 2015 Cybersecurity Faculty Search Committee, Arizona State University

### **Advisory Board**

- 2017–2019 Advisory board of the EPSRC UK project “ACCEPT: Addressing Cybersecurity and Cybercrime via a co-Evolutionary aPproach to reducing human-relaTed risks” <http://accept.sccs.surrey.ac.uk>

### **Media Interactions**

- April, 4, 2018 “You Can't Clean Up a Data Spill.” Quoted by April Glaser for Slate on the Facebook data leaks.
- October, 10, 2017 “ASU director testifies at Equifax Senate hearing.” Interviewed by Ethan Millman for The State Press on the Equifax data breach.
- August, 28, 2017 “Junk call nightmare flooded woman with hundreds of bizarre phone calls a day.” Interviewed by Jon Brodtkin for Ars Technica on our robocall and caller ID spoofing research.
- August, 15, 2017 “How you can stop those annoying robocalls.” Appearance on CBS WNCN (North Carolina) discussing our robocall research.
- August, 7, 2017 “ASU engineer Adam Doupé looks to safeguard personal data through advanced automated vulnerability analysis tools.” Interview with Erik Wirtanen on my CAREER award
- June, 19, 2017 “ASU team tests ‘green padlock’ solution to scam phone calls.” Interviewed by Derek Staahl for 3TV and CBS 5 for a story on our caller ID security indicator research
- June, 13, 2017 “Receiving more robocalls than ever? An ASU researcher may have a solution.” Interview with Leslie Minton on our telephony security research
- March, 8, 2017 “Robocall ringing your cellphone? Here’s what not to do.” My PhD student Huahong (Raymond) Tu interviewed by Ian Schwartz for CBS 5 for a story on robocalls
- January, 31, 2017 “Professors explain the flaws of a ‘password system’ in a digital world.” Interview by Aravind Sreenivasa for The State Press, ASU’s student paper, on the state of password security

- January, 10, 2017 “State computers hit with suspected malware attack.” Interview with William Pitts for 12 News about recent reports of state of AZ HR computers infected with malware
- October, 19, 2016 “How the FCC, the telecom industry and computer programmers are working to fight robocalls.” My PhD student Huahong (Raymond) Tu interviewed by Larry Mantle for LA’s KPCC’s AirTalk radio program for a story on robocalls
- October, 4, 2016 “Fed up with rising robocalls, millions say ‘Do Not Call’ list doesn’t work and want relief.” My PhD student Huahong (Raymond) Tu quoted in The Orange Country Register for a story on robocalls by Lily Leung
- September, 23, 2016 “Why is Yahoo hack so problematic?.” Interview with Ryan Cody for 12 News about the impact of the Yahoo breach and why email security is so important.
- August, 29, 2016 “Russian hack targets Arizona voter information.” Interview with Brahm Resnik for 12 News about recent allegations of Russian hackers targeting Arizona voter registration.
- August, 29, 2016 “Russian hackers tried to break into AZ voter database.” Interview with Brahm Resnik for 12 News about recent allegations of Russian hackers targeting Arizona voter registration.
- July, 27, 2016 “DNC email leak should be a lesson for all of us.” Interview with Ryan Cody for 12 News about the importance of securing your personal email and tips to keep your personal email secure.
- March, 1, 2016 “Software Development Association students compete, network and have fun.” Story about the ASU Software Developer Association (SoDA) 2016 Coding Competition.
- February, 4, 2016 “Arizona Department of Revenue IT Systems Vulnerable.” Interview with Amber Kahwaji for Cronkite News about an AZ Department of Revenue Report on IT Vulnerabilities
- July, 27, 2015 “Exclusive: MCAO talked about buying spyware.” Interview with William Pitts for 12 News about details of the Hacking Team leaks.
- April, 22, 2015 “Feds: Terrorist could hack your plane.” Interview with William Pitts for 12 News about hacking airplanes.

## Research Experience

- 2013 **Visiting PhD Student**, *Stanford University*, Advisor: John C. Mitchell.  
(Summer)
- 2012 **Research Intern**, *Microsoft Research*, Advisor: Weidong Cui.  
(Summer)

## Industry Experience

- 2009–2010 **Software Developer Engineer**, *Microsoft*, Developed as a team a C# Microsoft Word plug-in to assist technical writers. Met critical deadlines in high-pressure situations.
- 2008 **Software Developer Engineer Intern**, *Microsoft*, Developed a C# application that could save a technical writer documenting XML schemas 20 hours in 2 weeks.  
(Summer)

- 2007–2008 **Software Developer**, *AT&T Government Solutions*, Developed and maintained a large C++ desktop application.
- 2005–2010 **Founder/Developer**, *WootWatchers.com*, Founded WootWatchers.com using Ruby on Rails connecting to a MySQL backend. At its peak had 4,000 users.
- 2004–2005 **Mobile Produce Manager**, *VCEL, Inc.*, Started off developing a client-server J2ME application. Then maintained and developed the server back-end using PHP.

## ■ Teaching Experience

### **Instructor**

- Fall 2018 CSE 365 “Introduction to Information Assurance” at ASU. **4.72**/5 course evaluation and **4.87**/5 instructor evaluation from 24 of 100 enrolled students.
- Spring 2018 CSE 545 “Software Security” at ASU. **4.66**/5 course evaluation and **4.78**/5 instructor evaluation from 56 of 107 enrolled students.
- Fall 2017 CSE 465 “Information Assurance” at ASU. **4.58**/5 course evaluation and **4.74**/5 instructor evaluation from 27 of 120 enrolled students.
- Spring 2017 CSE 545 “Software Security” at ASU. **4.72**/5 course evaluation and **4.82**/5 instructor evaluation from 92 of 139 enrolled students.
- Fall 2016 CSE 340 “Principles of Programming Languages” at ASU. **4.76**/5 course evaluation and **4.8**/5 instructor evaluation from 71 of 223 enrolled students.
- Spring 2016 CSE 340 “Principles of Programming Languages” at ASU. **4.5**/5 course evaluation and **4.88**/5 instructor evaluation from 32 of 119 enrolled students.
- Spring 2016 CSE 545 “Software Security” at ASU. **4.73**/5 course evaluation and **4.79**/5 instructor evaluation from 73 of 119 enrolled students.
- Fall 2015 CSE 340 “Principles of Programming Languages” at ASU. **4.46**/5 course evaluation and **4.74**/5 instructor evaluation from 92 out of the 204 students.
- Spring 2015 Created CSE 591 “Security and Vulnerability Analysis” at ASU. **4.73**/5 course evaluation and **4.89**/5 instructor evaluation from 48 of 63 enrolled students.
- Fall 2013 Co-created and co-taught “Recent Trends in Computing Research” at University of California, Santa Barbara, a 2-unit seminar graduate class.

### **Current Thesis Advisor (Academic Committee Chair)**

- 2015–Present Yeganeh Safaei (PhD Student)
- 2016–Present Erik Trickel (PhD Student)
- 2016–Present Faris Kokulu (PhD Student)
- 2016–Present Faezeh Kalantari (PhD Student)
- 2016–Present Adam Oest (PhD Student)

### **Prior Thesis Advisor (Academic Committee Chair)**

- 2017 Marthony T. Taguinod (Masters) Thesis: “Moving Target Defense Framework for Web Applications.”
- 2017 Ashwath Anand (Masters) Thesis: “Threats, Countermeasures, and Research Trends for BLE-Based IoT Devices.”
- 2017 Huahong Tu (PhD) Dissertation: “From Understanding Telephone Scams to Implementing Authenticated Caller ID Transmission.” Assistant Clinical Professor, University of Maryland.
- 2017 Michael Mabey (PhD) Dissertation: “Forensic Methods and Tools for Web Environments.”
- 2017 Kevin Liao (Undergraduate) Thesis: “Toward Inductive Reverse Engineering of Web Applications.” PhD Student at UIUC.
- 2017 Gerard Pinto (Masters) Thesis: “Shadow Phone and Ghost SIM: A Step toward Geo-Location Anonymous Calling in GSM.” First job at IBM.
- 2017 Tejas Khairnar (Masters) Thesis: “Next Generation Black-Box Web Application Vulnerability Analysis Framework.”
- 2016 Sai Chandramouli (Masters). Thesis: “E-Mail Header Injections: An Analysis of the World Wide Web.” First job at Amazon.

### **Academic Committee Member**

#### **PhD**

- 2015–Present Sandeep Pisharody, PhD.
- 2015–Present Abdullah O. Alshalan, PhD.
- 2016–2017 Loretta Cheeks, PhD.
- 2014–2016 Carlos Rubio, PhD.
- 2014–2016 Wonkyu Han, PhD.
- 2015–2016 Michael Jonas, PhD.
- 2014–2015 Yiming Jing, PhD.
- 2014–2015 Priyanka Bagade, PhD.

#### **Masters**

- 2016–Present Sukwaha Kyung
- 2017–Present Bhakti Bohara
- 2017 Anupam Panwar
- 2017 Ajay Modi
- 2016 Abhijeet Srivastava
- 2015 Jeremy Whitaker
- 2015 Clinton D’souza
- 2014 Narasimha Gollapudi
- 2014 James Holmes

2014 Michael Sanchez

**Undergraduate Honors Thesis**

2016–Present Josie Lamp

2014–Present Daniel Martin

2017 Nathaniel Vaughan

2016 John Robertson

2014 Ryan Torrence