

# Penghui Zhang | Curriculum Vitae

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## Education

- **Ph.D., Computer Engineering** **Aug 2016–Present**  
○ *Arizona State University, Tempe, AZ* *Advisor: Adam Doupe & Gail-Joon Ahn*
- **M.S., Electrical and Computer Engineering** **Aug 2014–May 2016**  
○ *The Ohio State University, Columbus, OH* *Advisor: Xiaorui (Ray) Wang*  
Thesis: Temperature Balancing among Servers with Workload Distribution

## Publications

### Conference Papers with Proceedings (refereed).....

- Zhibo Sun, Adam Oest, **Penghui Zhang**, Carlos Rubio-Medrano, Tiffany Bao, Ruoyu Wang, Ziming Zhao, Yan Shoshitaishvili, Adam Doupe, and Gail-Joon Ahn, “Having Your Cake and Eating It: An Analysis of Concession-Abuse-as-a-Service,” *to appear in the Proceedings of the 30th USENIX Security Symposium*, Aug 2021, Vancouver, B.C., CANADA.
- **Penghui Zhang**, Adam Oest, Haehyun Cho, Zhibo Sun, RC Johnson, Brad Wardman, Shaown Sarker, Alexandros Kapravelos, Tiffany Bao, Ruoyu Wang, Yan Shoshitaishvili, Adam Doupe, and Gail-Joon Ahn, “CrawlPhish: Large-scale Analysis of Client-side Cloaking Techniques in Phishing,” *to appear in the Proceedings of the 42nd IEEE Symposium on Security & Privacy*, May 2021, San Francisco, CA.
- Marzieh Bitaab, Haehyun Cho, Adam Oest, **Penghui Zhang**, Zhibo Sun, Rana Pourmohamad, Doowon Kim, Tiffany Bao, Ruoyu Wang, Yan Shoshitaishvili, Adam Doupe, and Gail-Joon Ahn, “Scam Pandemic: How Attackers Exploit Public Fear through Phishing,” *to appear in the Proceedings of the 2020 APWG Symposium on Electronic Crime Research (eCrime)*.
- Adam Oest, Yeganeh Safaei, **Penghui Zhang**, Brad Wardman, Kevin Tyers, Yan Shoshitaishvili, Adam Doupe, and Gail-Joon Ahn, “PhishTime: Continuous Longitudinal Measurement of the Effectiveness of Anti-phishing Blacklists,” *in the Proceedings of the 29th USENIX Security Symposium(USENIX)*, Aug 2020, Boston, MA.
- Adam Oest, **Penghui Zhang**, Brad Wardman, Eric Nunes, Jakub Burgis, Ali Zand, Kurt Thomas, Adam Doupe, and Gail-Joon Ahn, “Sunrise to Sunset: Analyzing the End-to-end Life Cycle and Effectiveness of Phishing Attacks at Scale,” *in the Proceedings of the 29th USENIX Security Symposium(USENIX)*, Aug 2020, Boston, MA.
- **Penghui Zhang**, Haehyun Cho, Ziming Zhao, Adam Doupe, and Gail-Joon Ahn, “iCORE: Continuous and Proactive Extrospection on Multi-core IoT Devices,” *in Proceedings of the 34th*

ACM/SIGAPP Symposium On Applied Computing (SAC), Limassol, Cyprus, Apr 2019. (24% acceptance rate.)

- 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 34th Annual Computer Security Applications Conference (ACSAC)*, San Juan, Puerto Rico, USA, Dec 2018. (20% acceptance rate.)

## Service

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### Technical Program Committee.....

- 42nd IEEE Symposium on Security and Privacy (IEEE S&P, Shadow Committee)
- 2021 International Conference on Secure Knowledge Management in the Artificial Intelligence Era (SKM)
- 2020 The Fourteenth International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP)

### Session Chair.....

- 2019 IoT Session on ACM/SIGAPP Symposium On Applied Computing (SAC)

### Journal Reviewer.....

- Computers & Security
- Journal of Information Processing Systems

### External Reviewer.....

- 2020 ACM Conference on Data and Application Security and Privacy (CODASPY)

## Experience Summary

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<b>Graduate Research Assistant</b>	<b>Jan 2017–Present</b>
○ SEFCOM - Security Engineering for Future Computing	Arizona State University
<b>InfoSec Intern PhD</b>	<b>May 2020–Aug 2020</b>
○ Applied Research Team	PayPal Inc.
<b>Technical Intern PhD</b>	<b>May 2019–Aug 2019</b>
○ CFIA - Cyber-Fraud Intel.& Analytics	PayPal Inc.
<b>Graduate Teaching Assistant</b>	<b>Aug 2016–May 2017</b>
○ CSE 230, CSE 110, CSE 469	Arizona State University

## Technical Strengths

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- **Programming Languages:** C, Java, Assembly, Python, Matlab, JavaScript, TeX  
Also basic ability with: C++, PHP, VHDL.
- **Skills:** System and Script Programming, JavaScript Cloaking Analysis
- **Operating Systems:** Linux, OP-TEE OS, Windows
- **Computer Architectures:** ARM

## Honors and Awards

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- **Best Student Paper Award**

*"CrawlPhish: Large-scale Analysis of Client-side Cloaking Techniques in Phishing,"* by the Organizing Committee of the 42nd IEEE Symposium on Security and Privacy.

- **Distinguished Paper Award**

- Second Place Facebook's Internet Defense Prize**

- "Sunrise to Sunset: Analyzing the End-to-end Life Cycle and Effectiveness of Phishing Attacks at Scale,"* by the Organizing Committee of the 29th USENIX Security Symposium and Facebook.

- **Engineering Graduate Fellowship**

- from Ira A. Fulton Schools of Engineering, Arizona State University, 2020

- **Ferdinand A. Stanchi Fellowship**

- from Arizona State University, 2019

- **Distinguished Poster Award**

- "SeCore: Continuous Extrospection with High Visibility on Multi-core ARM Platforms,"* by the Organizing Committee of the 8th ACM Conference on Data and Application Security and Privacy (CODASPY '18).

## References

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- **Gail-Joon Ahn:**

*Email: gahn@asu.edu*

- Professor

- Fulton Entrepreneurial Professor

- Director, Center for Cybersecurity and Digital Forensics

- Director, Laboratory of Security Engineering for Future Computing (SEFCOM)

- School of Computing, Informatics and Decision Systems Engineering

- Ira A. Fulton Schools of Engineering

- Arizona State University

- **Adam Doupé:**

*Email: doupe@asu.edu*

- Associate Professor

- Co-Director, Center for Cybersecurity and Digital Forensics

- co-Director, Laboratory of Security Engineering for Future Computing (SEFCOM)

- School of Computing, Informatics and Decision Systems Engineering

- Ira A. Fulton Schools of Engineering

- Arizona State University