

# 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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- **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).
- **Academic Excellence Scholarship**  
from Beijing Institute of Technology, Beijing, China

## References

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- **Gail-Joon Ahn:** Email: [gahn@asu.edu](mailto: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](mailto: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  
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