

Fangzhou “Bonnie” Dong

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Chandler, AZ

Education

Arizona State University

Tempe, AZ

Ph.D. Computer Science

Jan 2020~Present

- Research topics: system security, program abstraction, symbolic execution, reverse engineering
- Supervisor: Dr. Fish Wang

Sichuan University

Chengdu, China

B.E. Information Security

Sep 2015~June 2019

- Ranking: 1/74
- GPA: 3.77/4.0
- Thesis: Research on Program Data Structure Inference Techniques Based on Binary Code

Publications

Discovering Blind-Trust Vulnerabilities in PLC Binaries via State Machine Recovery

Fangzhou Dong, Arvind S Raj, Efrén López-Morales, Siyu Liu, Yan Shoshitaishvili, Tiffany Bao, Adam Doupé, Muslum Ozgur Ozmen and Ruoyu Wang

Proceedings of Network and Distributed System Security (NDSS) Symposium 2026.

Fuzz to the Future: Uncovering Occluded Future Vulnerabilities via Robust Fuzzing

Arvind S Raj, Wil Gibbs, Fangzhou Dong, Jayakrishna Menon Vadayath, Michael Tompkins, Steven Wirsz, Yibo Liu, Zhenghao Hu, Chang Zhu, Gokulkrishna Praveen Menon, Brendan Dolan-Gavitt, Adam Doupé, Ruoyu Wang, Yan Shoshitaishvili, and Tiffany Bao

Proceedings of the 2024 ACM SIGSAC Conference on Computer and Communications Security (CCS '24), ACM, 2024.

Operation Mango: Scalable Discovery of Taint-Style Vulnerabilities in Binary Firmware Services

Wil Gibbs, Arvind S Raj, Jayakrishna Menon Vadayath, Hui Jun Tay, Justin Miller, Akshay Ajayan, Zion Leonahenahe Basque, Audrey Dutcher, and Fangzhou Dong, Xavier Maso, Giovanni Vigna, Christopher Kruegel, Adam Doupé, Yan Shoshitaishvili, and Ruoyu Wang

Proceedings of the 33rd USENIX Conference on Security Symposium (USENIX Sec '24), USENIX Association, 2024.

Greenhouse: Single-Service Rehosting of Linux-Based Firmware Binaries in User-Space Emulation

Hui Jun Tay, Kyle Zeng, Jayakrishna Menon Vadayath, Arvind S Raj, Audrey Dutcher, Tejesh Reddy, Wil Gibbs, Zion Leonahenahe Basque, Fangzhou Dong, Zack Smith, Adam Doupe, Tiffany Bao, Yan Shoshitaishvili, and Ruoyu Wang

Proceedings of the 32nd USENIX Conference on Security Symposium (USENIX Sec '23), USENIX Association, 2023.

Experience

SEFCOM Lab, ASU

Graduate Research Assistant

Jan 2020~Present

- Researched on system security, binary program analysis, CPS security and safety verification.
- Reverse engineered software and firmware with IDA Pro, Ghidra, GDB, angr.
- Actively contribute to open-source binary analysis project angr.

Activities

Attendee, Cyber Truck Challenge

2023, 2024

Member, DEFCON CTF quals & finals with team Shellphish

2022, 2023, 2025

Member, Pwn2Own Toronto 2022 with team SEFCOM T0

2022

Mentoring & Teaching

Mentor, High School Summer Internship

May~July 2023, 2024

Teaching Assistant, CSE 545 Software Security

2021 Fall, 2023 Spring

Honors & Awards

Outstanding Graduate of Sichuan University

2019

Outstanding Student of Sichuan University

2016~2018

National Scholarship

2017