

# Jianwei Huang

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Palo Alto Networks

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jianwei-huang

Ph.D. student specializing in vulnerability detection using program analysis and LLM-assisted fuzzing  
Darpa AlxCC Final Competitor; DEF CON Speaker; Blackhat Speaker

## Education

### Texas A&M University

Ph.D., Computer Science

09/2019 – 05/2026(Expected)

College Station, TX

### Wuhan University

Bachelor of Engineering, Computer Science

09/2014 – 06/2018

Wuhan, China

## Work Experience

### Palo Alto Networks

Sr Staff Security Researcher

02/2026 – Present

Santa Clara, CA, USA

### Amazon

Security Engineer Intern

05/2025 – 08/2025

Austin, TX, USA

⚙️ *LLM-Assisted Threat Modeling, LangChain*

- > Developing an agentic system for automating threat modeling in GenAI application security reviews, supporting extensibility across varied information sources
- > Identified a jailbreak attack on Amazon Nova Models

### SRI International

Summer Intern

05/2020 – 08/2020

Menlo Park, CA, USA

⚙️ *Android Application Reverse Engineering*

- > Identified two vulnerabilities in the design of popular COVID tracking apps
- > Assessed the risks posed by two vulnerabilities in 10+ popular COVID tracking apps

## Publications

### LogicWeaver: Stitching Client Clues into Deep Web Fuzzing Paths with LLM assistance

In Submission

⚙️ *LLM Agent Development, LangChain*

> **Jianwei Huang**, Guofei Gu

### Beyond Visual Confusion: Understanding How Inconsistencies in ENS Normalization Facilitate Homoglyph At-tacks

At-WWW 2025

⚙️ *Android Reverse Engineering*

> **Jianwei Huang**, Sridatta Raghavendra Chintapalli, Mengxiao Wang, Guofei Gu

### SysFlow: Towards a Programmable Zero Trust Framework for System Security

IEEE TIFS 2023

⚙️ *Linux Kernel Programming*

> Hong Sungmin, Lei Xu, **Jianwei Huang**, Hongda Li, Hongxin Hu, and Guofei Gu

### SWAPP: A New Programmable Playground for Web Application Security

USENIX Security 2022

⚙️ *Web Full Stack*

> Phakpoom Chinprutthiwong, **Jianwei Huang**, and Guofei Gu

### Practical Speech Reuse Prevention in Voice-driven Services

RAID 2021

⚙️ *Voice Signal Processing*

> Yangyong Zhang, Sunpreet Arora, Maliheh Shirvanian, **Jianwei Huang**, Guofei Gu

### Abusing Hidden Properties to Attack the Node.js Ecosystem

USENIX Security 2021

⚙️ *JavaScript Static/Dynamic Analysis*

> Feng Xiao, **Jianwei Huang**, Yichang Xiong, Guangliang Yang, Hong Hu, Guofei Gu, Wenke Lee

### Unexpected Data Dependency Creation and Chaining: A New Attack to SDN

IEEE S&P 2020

⚙️ *Java Static Analysis*

> Feng Xiao, Jinquan Zhang, **Jianwei Huang**, Guofei Gu, Dinghao Wu, Peng Liu

## Discovering Hidden Properties to Attack the Node.js Ecosystem

Blackhat, 2020

JavaScript Static/Dynamic Analysis

> Feng Xiao, **Jianwei Huang**, Yichang Xiong, Guangliang Yang, Hong Hu, Guofei Gu, Wenke Lee

## Hacking the Brain: Customize Evil Protocol to Pwn an SDN Controller

DEF CON 26, 2018

Java Static Analysis

> Feng Xiao, **Jianwei Huang**, Peng Liu

## Chaos: An SDN-Based Moving Target Defense System

SCN 2017

SDN Programming

> Yuan Shi, Huanguo Zhang, Juan Wang, Feng Xiao, **Jianwei Huang**, Daochen Zha, Hongxin Hu, Fei Yan, Bo Zhao

## Curtain: Keep Your Hosts Away from USB Attacks

ISC 2017

Windows Kernel Programming, Machine Learning

> Jianming Fu, **Jianwei Huang**, and Lanxin Zhang

## 🏆 Awards

### AxCC Final Competition 2025 - 4th Place

2025

> Contributed a fuzzing strategy with static analysis results and LLM assistance

### TAMUCTF 2024 - 4th (TAMU), 50th Overall

2024

> Competed individually and solved **all Web challenges**.

### BCTF 2015 - 1st Place

2015

> Focused on Web challenges

### OCTF 2015 - 3rd Place

2015

> Focused on Web challenges

### Software-Defined Networking (SDN) Development Competition - 2nd Prize

2015, China

> Designed a moving target defense mechanism with OpenDayLight, which rotates IP addresses in the network to obfuscate the topology

## ⚙️ Skills

**Languages** C, Python, Java

**Program Analysis** Static(Soot, esprima, CodeQL), Dynamic(Jalangi, ExpoSE)

**GenAI** Agent Development, LangChain