

JIANLIANG WU

PH.D STUDENT

✉ wu1220@purdue.edu

EDUCATION

Purdue University

PH.D IN COMPUTER SCIENCE

- Co-advised by Dongyan Xu and Antonio Bianchi

West Lafayette, IN, USA

Aug. 2017 - Present

Shandong University

M.E IN COMPUTER SCIENCE

- Advised by Shanqing Guo

Jinan, Shandong, China

Aug. 2012 - May. 2015

Shandong University

B.S IN COMPUTER SCIENCE

- Overall GPA: 85%

Jinan, Shandong, China

Aug. 2008 - May. 2012

RESEARCH INTERESTS

IoT Security, System Security, Mobile Security, Program Analysis, Binary Analysis

PUBLICATIONS

BLESA: Spoofing Attacks against Reconnections in Bluetooth Low Energy

2020

Jianliang Wu, Yuhong Nan, Vireshwar Kumar, Dave (Jing) Tian, Antonio Bianchi, Mathias Payer, Dongyan Xu.

Proceedings of the USENIX Workshop on Offensive Technologies (WOOT).

BlueShield: Detecting Spoofing Attacks in Bluetooth Low Energy (BLE) Networks

2020

Jianliang Wu, Yuhong Nan, Vireshwar Kumar, Mathias Payer, and Dongyan Xu.

Proceedings of 23rd International Symposium on Research in Attacks, Intrusions and Defenses (RAID).

Automatically detecting ssl error-handling vulnerabilities in hybrid mobile web apps

2015

Zuo, Chaoshun, Jianliang Wu, and Shanqing Guo.

Proceedings of the 10th ACM Symposium on Information, Computer and Communications Security (ASIACCS).

All your sessions are belong to us: Investigating authenticator leakage through backup channels on Android

2015

Bai, Guangdong, Jun Sun, Jianliang Wu, Quanqi Ye, Li Li, Jin Song Dong, and Shanqing Guo.

2015 20th International Conference on Engineering of Complex Computer Systems (ICECCS)

Best Paper Award

PaddyFrog: systematically detecting confused deputy vulnerability in Android applications

2015

Wu, Jianliang, Tingting Cui, Tao Ban, Shanqing Guo, and Lizhen Cui.

Security and Communication Networks 8 (SCN).

TrustFound: Towards a Formal Foundation for Model Checking Trusted Computing Platforms

2014

Bai, Guangdong, Jianan Hao, Jianliang Wu, Yang Liu, Zhenkai Liang, and Andrew Martin.

In International Symposium on Formal Methods (FM).

WORK EXPERIENCE

FRIENDS lab, Purdue University

RESEARCH ASSISTANT

West Lafayette, IN

Aug. 2017 - PRESENT

- IoT security research.
- Currently focusing on Bluetooth stack security starting from the firmware up to the application security. Binary analysis is used for firmware analysis when source code is not available. While compiler-based (LLVM) program analysis is used at the higher level when source code is available.
- Bluetooth Low Energy spoofing attack against mobile phones and device agnostic defense.

People's Bank of China, Jinan Branch

SENIOR STAFF MEMBER

Jinan, China

Aug. 2015 - Jun. 2017

- System maintenance.
- I was responsible for the maintenance of the systems running on the branch's servers.

Software Engineering Lab, NUS

RESEARCH ASSISTANT

Singapore

Oct. 2013 - Apr. 2014

- Mobile security research combined with formal methods.
- Investigating authentication information leakage via backup channel in Android.

Security Research Lab, Shandong University

RESEARCH ASSISTANT

Jinan, China

Aug. 2012 - May. 2015

- Mobile security research.
- Detecting Android application permission misuse (potential confused deputy applications) based on program analysis.

HONORS & AWARDS

Best Paper Award

2015

All your sessions are belong to us: Investigating authenticator leakage through backup channels on Android

First Prize of Scientific and Technical Innovation

2011

First Prize of Shandong Province in MCM

2010

TALKS & PRESENTATIONS

BlueShield: Detecting Spoofing Attacks in Bluetooth Low Energy Networks

Oct. 2019

NAVY CRANE VISITORS MEETING

PROFESSIONAL SERVICES

SecureComm

2020

SUBREVIEWER

Conference on Dependable Systems and Networks (DSN)

2020

SUBREVIEWER