

Wenhao Wang

Education

- Aug. 2012 **The University of Texas at Dallas**, *Richardson*, TX, United States.
- May. 2019 **Ph.D. Student in Computer Science**
Advisor: *Dr. Kevin Hamlen*
Research: Software Security, Web Security
- Sept. 2009 **Beijing University of Posts and Telecommunications**, *Beijing*, China.
- Jun. 2012 **M.Sc. in Computer Science and Technology**
Advisor: *Prof. Xiuqin Lin*
Research: Natural Language Processing, Data Mining
- Sept. 2005 **Nanchang University**, *Nanchang*, Jiangxi, China.
- Jun. 2009 **B.Sc. in Telecommunication Engineering**

Skills

- Programming C/C++, Inline Assembly, Java, Python, JavaScript, WebAssembly, and OCaml
Toolkit IDA Pro, OllyDbg, LLVM, CMake, and Emacs
Language English and Mandarin

Work Experience

- May. 2018 **Visa Research**, *Intern Research*, Palo Alto, CA, United States.
- Aug. 2018 **Project: Enforcing Confidentiality with Minimal Software TCB**
Enforce data integrity and confidentiality in untrusted computation environment. The program leverages Intel SGX to defend malicious or compromised operating system and hypervisor. Source codes from different vendors form their own independent modules, all of which reside in an Enclave. Fault in a module does not compromise the entire enclave. Code from one vendor does not read secrets maintained by code from other vendors
- Oct. 2017 **The University of Texas at Dallas**, *Research Assistant*, Richardson, TX, United States.
- Apr. 2018 **Project: WebAssembly Analysis for Countering Cryptojacks**
Design and implement a semantic signature-matching method to detect and interrupt unauthorized, browser-based cryptomining. The approach addresses a new wave of cryptojacking attacks, including XSS-assisted, web gadget-exploiting counterfeit mining. Evaluation shows that the approach is more robust than current static code analysis defenses, which are susceptible to code obfuscation attacks. An implementation based on in-lined reference monitoring offers a browser-agnostic deployment strategy that is applicable to average end-user systems without specialized hardware or operating systems.

Sept. 2013 **The University of Texas at Dallas**, *Research Assistant*, Richardson, TX, United States.
Aug. 2017

Project: Binary Retrofitting of Untrusted Software for Security

Develop algorithms that can automatically retrofit commercial, binary software with augmented security dictated by product consumers. This offers security-conscious consumers the best of both worlds—they get the rich feature sets that come with mass-produced software, plus the ironclad, organization-specific security required for mission-critical operations.

Publications

FEAST'18 Xiaoyang Xu, **Wenhao Wang**, Kevin W. Hamlen, and Zhiqiang Lin. **Towards Interface-Driven COTS Binary Hardening**. In Proceedings of the 3rd Workshop on Forming an Ecosystem Around Software Transformation. pp. 20-26, October 2018.

ESORICS'18 **Wenhao Wang**, Benjamin Ferrell, Xiaoyang Xu, Kevin W. Hamlen, and Shuang Hao. **SEISMIC: SEcure In-lined Script Monitors for Interrupting Cryptojacks**. In Proceedings of the 23rd European Symposium on Research in Computer Security. pp. 122-142, September 2018. [*acceptance rate: 20%*]

CCS'17 **Wenhao Wang**, Xiaoyang Xu, and Kevin W Hamlen. **Object Flow Integrity**. In Proceedings of the 24th ACM Conference on Computer and Communications Security. pp. 1909-1924, November 2017. [*acceptance rate: 18%*]

FSKD'11 Xiuqin Lin, **Wenhao Wang**, and Bin Wu. **A complementary method to determine semantic orientations of words based on WordNet**. In 2011 Eighth International Conference on Fuzzy Systems and Knowledge Discovery (FSKD), pp. 1738-1740, July 2011.

WCS'11 **Wenhao wang** and Bin Wu. **Comparing Twitter and Chinese native microblog**. In 2011 Second Worldwide Cybersecurity Summit (WCS). pp. 1-4, June 2011.