LU HONGYI

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Education

HKUST
Ph.D. Computer Science

2022 − Present

SUSTech
B.Sc. Mathematics

2017 − 2021

Working Experience

COMPASS Lab. *Research Assistant*
↪ Prof. Zhang Fengwei

Nov. 2021 − 2022
Southern University of Science and Technology

- Conducted research in computer systems.

Publications

[1] **Hongyi Lu***, Yunjie Deng*, Sukarno Mertoguno, Shuai Wang, and Fengwei Zhang. MOLE: Breaking GPU TEE with GPU-Embedded MCU. In *the Proceedings of the 2025 ACM SIGSAC Conference on Computer and Communications Security (**CCS, CCF-A**)*, 2025.

[2] **Hongyi Lu**, Zhibo Liu, Shuai Wang, and Fengwei Zhang. DTD: Comprehensive and Scalable Testing for Debuggers. In *the Proceedings of the ACM on Software Engineering (**FSE, CCF-A**)*, 2024.

[3] **Hongyi Lu**, Shuai Wang, Yechang Wu, Wanning He, and Fengwei Zhang. MOAT: Towards Safe BPF Kernel Extension. In *33nd USENIX Security Symposium (**USENIX Security, CCF-A**)*, 2024.

[4] Wanning He*, **Hongyi Lu***, Fengwei Zhang, and Shuai Wang. RingGuard: Guard io_uring with eBPF. In *the Proceedings of the 1st Workshop on eBPF and Kernel Extensions (**eBPF**)*, pages 56–62, 2023.

[5] Haonan Li, Weijie Huang, Mingde Ren, **Hongyi Lu**, Zhenyu Ning, Heming Cui, and Fengwei Zhang. A Novel Memory Management for RISC-V Enclaves. In *the Proceedings of the 10th International Workshop on Hardware and Architectural Support for Security and Privacy (**HASP**)*, 2022.

[6] **Hongyi Lu** and Fengwei Zhang. Raven: a Novel Kernel Debugging Tool on RISC-V. In *the Proceedings of the 59th ACM/IEEE Design Automation Conference (**DAC, CCF-A**)*, pages 1039–1044, 2022.

[7] **Hongyi Lu**, Yechang Wu, Shuqing Li, You Lin, Chaozu Zhang, and Fengwei Zhang. BADUSB-C: Revisiting BadUSB with Type-C. In *2021 IEEE Security and Privacy Workshops (**WOOT**)*, pages 327–338, 2021.

In total, I have published **four CCF-A papers** as first/co-first author (marked with *), **two in Security Big4 conferences**.

Academic Service

Official Reviewer   TIFS, TDSC

Ext. Reviewer   USENIX Security 2023, S&P 2023, PoPET 2023, CCS 2023, CCS 2022

Projects & Extracurriculars

LLVM github.com/llvm

Submitted a patch to the LLVM project, fixing a bug of its debugger.

2023

Patent ZL 2022 1 0436969.8

Kernel Space Debug Method, Device and Storage Medium

2022

Video2Ascii github.com/jwnhy/video2ascii

Built a program that transforms your video into text animation.

2022

Translation of Software Foundation coq-zh.github.io/SF-zh

Helped translate the Software Foundation, a famous textbook about formal verification.

2022

Summer Camp, National University of Singapore sws.comp.nus.edu.sg

Conducted a simulation project about highway traffic and mobile phone signal.

2019