Wanning He

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Education

University of Michigan 2023 – Present
Ph.D. in Computer Science and Engineering
- Advisor: Prof. Ryan (Peng) Huang

Southern University of Science and Technology 2019 – 2023
B.Eng. in Computer Science and Engineering
- GPA: 3.85/4.0; Ranking: 9/181
- Advisor: Prof. Fengwei Zhang

University of California, Berkeley 2022
Berkeley International Study Program (BISP)
- GPA: 4.0/4.0

Honors

Second-class Outstanding Student Scholarship 2020 – 2021, 2021 – 2022
Outstanding Undergraduate 2023
Bachelor's Thesis Award 2023

Publication & Patent

1. **Wanning He***, Hongyi Lu*, Fengwei Zhang, Shuai Wang. RingGuard: Guard io_uring with eBPF. In *SIGCOMM 2023 Workshop on eBPF and Kernel Extensions (eBPF '23)*.
2. Hongyi Lu, Shuai Wang, Yechang Wu, **Wanning He**, Fengwei Zhang. MOAT: Towards Safe BPF Kernel Extension. In arXiv.
3. Hongyi Lu, **Wanning He**, Xingying Zheng, Fengwei Zhang. Kernel space debugging method and device, computer equipment and storage medium. CN Patent 114546751.

Research Projects

Southern University of Science and Technology
Undergraduate Research Assistant, Advised by Prof. Fengwei Zhang

Auditing io_uring Apr – Jun 2023
- Proposed a framework that uses eBPF programs to audit io_uring operations
- Accepted by the 1st SIGCOMM 2023 Workshop on eBPF and Kernel Extensions (eBPF '23)

Isolating BPF Programs Jun – Oct 2022
- Proposed a security mechanism that isolates BPF programs using Intel MPK

Verifying RISC-V TEE Jan – Jun 2022
- Explored verifying a RISC-V TEE using TLC model checker and Coq theorem prover

RISC-V Kernel Space Debugger Sep – Nov 2021
- Invented a kernel debugger for RISC-V devices using PMP as the debugging primitive
- Received a patent from China National Intellectual Property Administration

Skills

Programming Languages: Proficient in C, Java; familiar with Python, OCaml

English Qualification: TOEFL 109/120 (Reading: 29, Listening: 29, Speaking: 25, Writing: 26)

Academic Experience

Volunteer translator of *Software Foundations*

Artifact Evaluation Committee, *SOSP '23*