

Shuo Yang

yangsh233@mail2.sysu.edu.cn · shuo-young.github.io · [GitHub](#) · [Google Scholar](#)

BASIC INFORMATION

Language Proficiency: English (Professional, IELTS 7.0, GRE 321+4.0), Chinese (Native)
Research Interests: Software security, smart contract, program analysis, AI for security
Major Research Skills: Smart contract audit (Solidity, Vyper, Move, Rust, Python), EVM decompilation, transaction analysis, audit report analysis, academic paper and technical report writing, LLM-powered security agent development

EDUCATION

Sun Yat-sen University Zhuhai, China
Ph.D. in Software Engineering Sep 2022 – Present
Advisors: Prof. [Zibin Zheng](#) and Assoc. Prof. [Jiachi Chen](#), [InPlusLab](#)
Zhongnan University of Economics and Law Wuhan, China
B.E. in Information Management System Sep 2018 – Jun 2022

PUBLICATIONS

- [1] Mingyuan Huang, Han Liu, **Shuo Yang**, Daoyuan Wu, Shuai Wang. “Revealing the Dark Side of Smart Accounts: An Empirical Study of EIP-7702 Incurred Risks in Blockchain Ecosystem.” *USENIX Security 2026*. (CCF-A)
- [2] **Shuo Yang**, Xingwei Lin, Jiachi Chen, Qingyuan Zhong, Lei Xiao, Renke Huang, Yanlin Wang, Zibin Zheng. “Hyperion: Unveiling DApp Inconsistencies using LLM and Dataflow-Guided Symbolic Execution.” *ICSE 2025*. (CCF-A)
- [3] **Shuo Yang**, Jiachi Chen, Lei Xiao, Jinyuan Hu, Dan Lin, Jiajing Wu, Tao Zhang, Zibin Zheng. “Who is Pulling the Strings: Unveiling Smart Contract State Manipulation Attacks through State-Aware Dataflow Analysis.” *IEEE TSE*, 2025. (CCF-A)
- [4] **Shuo Yang**, Jiachi Chen, Mingyuan Huang, Zibin Zheng, Yuan Huang. “Uncover the Premeditated Attacks: Detecting Exploitable Reentrancy Vulnerabilities by Identifying Attacker Contracts.” *ICSE 2024*. (CCF-A)
- [5] **Shuo Yang**, Jiachi Chen, Zibin Zheng. “Definition and Detection of Defects in NFT Smart Contracts.” *ISSTA 2023*. (CCF-A)
- [6] Jiachi Chen, Zhenzhe Shao, **Shuo Yang**, Yiming Shen, Yanlin Wang, Ting Chen, Zhenyu Shan, Zibin Zheng. “NumScout: Unveiling Numerical Defects in Smart Contracts using LLM-Pruning Symbolic Execution.” *IEEE TSE*, 2025. (CCF-A)
- [7] Lei Xiao, **Shuo Yang*** (corresponding author), Wen Chen, Zibin Zheng. “WakeMint: Detecting Sleep-minting Vulnerabilities in NFT Smart Contracts.” *SANER 2025*. (CCF-B)
- [8] Mingxi Ye, Yuhong Nan, Hong-Ning Dai, **Shuo Yang**, Zibin Zheng, Xiapu Luo. “FunFuzz: A Function-oriented Fuzzer for Smart Contract Vulnerability Detection with High Effectiveness and Efficiency.” *ACM TOSEM*, 2024. (CCF-A)
- [9] Jiajing Wu, Dan Lin, Qishuang Fu, **Shuo Yang**, Ting Chen, Zibin Zheng, Bowen Song. “Towards Understanding Asset Flows in Crypto Money Laundering Through the Lenses of Ethereum Heist.” *IEEE TIFS*, 2023. (CCF-A)
- [10] **Shuo Yang**, Huizhong Li, Zibin Zheng. “WaLi: Control-Flow-Based Analysis of Wasm Smart Contracts.” *BlockSys 2022*. (CCF-C)

ACADEMIC SERVICE

Program Committee Member

- International Conference on Blockchain, Artificial Intelligence, and Trustworthy Systems (BlockSys 2026, CCF-C)
- International Conference on Blockchain and Trustworthy Systems (BlockSys 2023, CCF-C)

Sub-reviewer

- IEEE Internet of Things Journal (IoTJ, CCF-C, JCR Q1)
- IEEE Transactions on Dependable and Secure Computing (TDSC, CCF-A, JCR Q1)
- ACM Transactions on Software Engineering and Methodology (TOSEM, CCF-A, JCR Q1)
- IEEE Transactions on Network Science and Engineering (TNSE, JCR Q1)
- Blockchain: Research and Applications (BCRA, CCF-B, JCR Q1)
- Annual Meeting of the Association for Computational Linguistics (ACL 2025, CCF-A)
- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2025, CCF-A)
- International Conference on Learning Representations (ICLR 2025, CCF-A)
- Asia-Pacific Software Engineering Conference (APSEC 2024, CCF-C)
- 15th Asia-Pacific Symposium on Internetware (Internetware 2024, CCF-C)

INDUSTRY EXPERIENCE

DarkNavy <i>Research Intern</i>	Shanghai, China 2025 – 2026
GoPlus Security <i>Research Intern</i>	Remote Sep 2024 – Dec 2024
Skyward Lab, Ant Group <i>Research Intern</i>	Hangzhou, China Aug 2023 – Jan 2024
R&D of Blockchain Underlying Platform, WeBank <i>Research Intern</i>	Shenzhen, China Oct 2021 – Jan 2022

AWARDS & HONORS

- **National Scholarship**, China 2024
- President Scholarship for Doctoral Students, Sun Yat-sen University 2023
- 1st Prize, China Service Computing Innovation Contest 2023
- 8th Place, Numen Cyber CTF 2023
- 3rd Prize, Competition of Service Outsourcing and Entrepreneurship Innovation 2021
- 3rd Prize, Chinese Undergraduate Internet Software Design Competition 2021
- 3rd Prize, Competition of Service Outsourcing and Entrepreneurship Innovation 2020
- 2nd Prize, Chinese Undergraduate Computer Design Contest 2019

SECURITY CONTRIBUTIONS

- Earned \$22,800+ in rewards from **ImmuneFi** Web3 bug bounty for confirmed vulnerabilities.
- AI-driven automated blockchain attack root cause analysis reports garnering over **15K** views.
- 10 uncovered real-world attack analyses confirmed by **DeFiHackLabs**.
- 2 GPT prompt-leak bugs confirmed by developers; 1 developer adopted our prompt protection suggestion.
- 2 confirmed issues in **Uniswap V4 Periphery** and Stop Loss Orders with Uniswap V4 Hooks repos.

OPEN-SOURCE TOOLS

- **SMAsher** – State manipulation attack detector via state-aware dataflow analysis.
- **Hyperion** – DApp inconsistency detector using LLM and symbolic execution.
- **BlockWatchdog** / **Lydia** – Reentrancy attacker contract identification (Python / Rust).
- **NFTGuard** – NFT smart contract defect definition and detection.