LI ZIHAO

cszhli@comp.polyu.edu.hk
The Hong Kong Polytechnic University, Hong Kong

EDUCATION

PhD Candidate | *Department of Computing*   2021 – Present
The Hong Kong Polytechnic University

Master Degree | *Cyberspace Security*   2017 – 2020
University of Electronic Science and Technology of China

Bachelor Degree | *Information Security*   2013 – 2017
University of Electronic Science and Technology of China

WORK EXPERIENCE

Research Assistant | *Department of Computing*   Aug. 2018 – Jan. 2019
The Hong Kong Polytechnic University

RESEARCH INTERESTS

Blockchain System Security, including Blockchain Infrastructure, Decentralized Applications, and Smart Contracts

AWARDS AND GRANTS

Ethereum Foundation Academic Grant, awarded by Ethereum Foundation on blockchain security research, 2023.

Best Paper Nominee, awarded by International Symposium on Empirical Software Engineering and Measurement (ESEM), 2019.

Best Paper Award, awarded by IEEE International Conference on Computer Communications (INFOCOM), 2018.

Best Paper on Blockchain, awarded by China Computer Federation (CCF) Technical Committee on Block Chain, 2018.

Best Paper Award, awarded by International Conference on Information Security Practice and Experience (ISPEC), 2017.

Outstanding Graduates, awarded by University of Electronic Science and Technology of China, 2020.

National Scholarship, awarded by Ministry of Education, 2019.

The 1st Prize Scholarship, awarded by University of Electronic Science and Technology of China, 2019.

National Scholarship, awarded by Ministry of Education, 2018.

The 1st Prize Scholarship, awarded by University of Electronic Science and Technology of China, 2018.

National 2nd Prize, awarded by The 9th National College Student Information Security Contest, 2016.

SERVICES

Conference Program Committee: BlockSys 2023, 2024, SecureComm 2023, DeFi 2024, KDD 2024.

Artifact Evaluation Committee: USENIX Security 2024, ACSAC 2022

Journal Reviewer: IEEE Transactions on Dependable and Secure Computing (TDSC)

Blockchain and Smart Contract Security (COMP5566): Teaching Assistant

Cyber and Internet Security (COMP5355): Teaching Assistant

Object-Oriented Programming (COMP2021): Teaching Assistant

Human Computer Interaction (COMP5517): Teaching Assistant

1. **Z. Li**, X. Peng, H. Zhe, X. Luo, T. Chen, **fAmulet: Finding Finalization Failure Bugs in Polygon zkRollup**, ACM Conference on Computer and Communications Security (CCS), 2024. (**CCF A**)

2. Z. Sun, **Z. Li**, X. Peng, X. Luo, M. Jiang, H. Zhou, Y. Zhang, **DoubleUp Roll: Double-spending in Arbitrum by Rolling It Back**, ACM Conference on Computer and Communications Security (CCS), 2024. (**CCF A**)

3. F. Luo, H. Lin, **Z. Li**, X. Luo, R. Luo, Z. He, S. Song, T. Chen, X. Luo, **Towards Automatic Discovery of Denial of Service Weaknesses in Blockchain Resource Models**, ACM Conference on Computer and Communications Security (CCS), 2024. (**CCF A**)

4. W. Shuo, **Z. Li**, H. Zhou, X. Luo, J. Li, H. Wang, **Following the "Thread": Toward Finding Manipulatable Bottlenecks In Blockchain Clients**, ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA), 2024. (**CCF A**)

5. Z. He, **Z. Li(Co-first Author)**, A. Qiao, X. Luo, X. Zhang, T. Chen, S. Song, D. Liu, W. Niu, **"NURGLE: Exacerbating Resource Consumption in Blockchain State Storage via MPT Manipulation"**, IEEE Symposium on Security and Privacy (S&P), 2024. (**CCF A**)

6. S. Wu, **Z. Li**, L. Yan, W. Chen, M. Jiang, C. Wang, X. Luo, H. Zhou, **"Are We There Yet? Unraveling the State-of-the-Art Smart Contract Fuzzers"**, IEEE/ACM International Conference on Software Engineering (ICSE), 2024. (**CCF A**)

7. **Z. Li**, J. Li, Z. He, X. Luo, T. Wang, X. Ni, W. Yang, X. Chen, and T. Chen, **"Demystifying DeFi MEV Activities in Flashbots Bundle"**, ACM Conference on Computer and Communications Security (CCS), 2023. (**CCF A**)

8. K. Zhao, **Z. Li**, J. Li, H. Ye, X. Luo, and T. Chen, **"DeepInfer: Deep Type Inference from Smart Contract Bytecode"**, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2023. (**CCF A**)

9. S. Li, J. Li, Y. Tang, X. Luo, Z. He, **Z. Li**, X. Chen, Y. Bai, T. Chen, Y. Tang, Z. Liu, and X. Zhang, **"BlockExplorer: Exploring Blockchain Big Data via Parallel Processing"**, IEEE Transactions on Computers (TC), 2023. (**CCF A**)

10. Z. He, Z. Liao, F. Luo, D. Liu, T. Chen, and **Z. Li**, **"TokenCat: Detect Flaw of Authentication on ERC20 Tokens"**, IEEE International Conference on Communications (ICC), 2022. (**CCF C**)

11. Y. Tang, **Z. Li**, and Y. Bai, **"Rethinking of Reentrancy on the Ethereum"**, DASC/PiCom/CBDCom/CyberSciTech, 2021. (**CCF C**)

12. T. Chen, **Z. Li**, X. Luo, X.Wang, T.Wang, Z. He, K. Fang, Y. Zhang, H. Zhu, H Li, Y Cheng, and X. Zhang, **"SigRec: Automatic Recovery of Function Signatures in Smart Contracts"**.

   - IEEE Transactions on Software Engineering (TSE), 2021. (**CCF A**)
   - Journal First Session of the IEEE/ACM International Conference on Automated Software Engineering (ASE), 2021. (**CCF A**)

- Demo and Poster Session of the IEEE International Conference on Distributed Computing Systems (ICDCS), 2023. (**CCF B**)

13. T. Chen, <u>**Z. Li**</u>, Y. Zhu, J. Chen, X. Luo, J. Lui, X. Lin, and X. Zhang, **"Understanding Ethereum via Graph Analysis"**, ACM Transactions on Internet Technology (TOIT), 2020. (**CCF B**)

14. T. Chen, Y. Feng, <u>**Z. Li**</u>, H. Zhou, X. Luo, X. Li, X. Xiao, J. Chen and X. Zhang, **"GasChecker: Scalable Analysis for Discovering Gas-Inefficient Smart Contracts"**, IEEE Transactions on Emerging Topics in Computing (TETC), 2020. (**CCF B**)

15. T. Chen, Y. Zhang, <u>**Z. Li**</u>, X. Luo, T. Wang, R. Cao, X. Xiao, and X. Zhang, **"TokenScope: Automatically Detecting Inconsistent Behaviors of Cryptocurrency Tokens in Ethereum"**, ACM Conference on Computer and Communications Security (CCS), 2019. (**CCF A**)

16. T. Chen, <u>**Z. Li**</u>, Y. Zhang, X. Luo, T. Wang, T. Hu, X. Xiao, D. Wang, J. Huang, and X. Zhang, **"A Large-Scale Empirical Study on Control Flow Identification of Smart Contracts"**, International Symposium on Empirical Software Engineering and Measurement (ESEM), 2019. (**CCF B**)

17. T. Chen, <u>**Z. Li**</u>, Y. Zhang, X. Luo, A. Chen, K. Yang, B. Hu, T. Zhu, S. Deng, T. Hu, J. Chen, and X. Zhang, **"DataEther: Data Exploration Framework For Ethereum"**, IEEE International Conference on Distributed Computing Systems (ICDCS), 2019. (**CCF B**)

18. T. Chen, <u>**Z. Li**</u>, H. Zhou, J. Chen, X. Luo, X. Li, and X. Zhang, **"Towards Saving Money in Using Smart Contracts"**, IEEE International Conference on Software Engineering (ICSE-NIER), 2018. (**CCF A**)

19. T. Chen, Y. Zhu, <u>**Z. Li**</u>, J. Chen, X. Li, X. Luo, X. Lin, and X. Zhang, **"Understanding Ethereum via Graph Analysis"**, IEEE International Conference on Computer Communications (INFOCOM), 2018. (**CCF A**)

20. T. Chen, X. Li, Y. Wang, J. Chen, <u>**Z. Li**</u>, X. Luo, M. Au, and X. Zhang, **"An Adaptive Gas Cost Mechanism for Ethereum to Defend Against Under-Priced DoS Attacks"**, International Conference on Information Security Practice and Experience (ISPEC), 2017. (**CCF B**)

MISCELLANEOUS

- https://zzzihao-li.github.io/

- https://github.com/zzzihao-li