

# LI ZIHAO

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The Hong Kong Polytechnic University, Hong Kong

## EDUCATION

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<b>PhD Candidate</b>   <i>Department of Computing</i> The Hong Kong Polytechnic University	2021 – Present
<b>Master Degree</b>   <i>Cyberspace Security</i> University of Electronic Science and Technology of China	2017 – 2020
<b>Bachelor Degree</b>   <i>Information Security</i> University of Electronic Science and Technology of China	2013 – 2017

## WORK EXPERIENCE

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<b>Research Assistant</b>   <i>Department of Computing</i> The Hong Kong Polytechnic University	Aug. 2018 – Jan. 2019
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## RESEARCH INTERESTS

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**Blockchain Security, Smart Contract Security, Software Engineering**

## AWARDS AND GRANTS

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**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.

**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

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**Conference Program Committee:** BlockSys 2023, SecureComm 2023

**Artifact Evaluation Committee:** USENIX Security 2024, ACSAC 2022

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

## TEACHING

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**Blockchain and Smart Contract Security (COMP5566):** Teaching Assistant

**Cyber and Internet Security (COMP5355):** Teaching Assistant

## PUBLICATIONS

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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)

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)

**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)

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)

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)

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)

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

T. Chen, **Z. Li** (First student author), 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 (also appear at the Journal First Session of the IEEE/ACM International Conference on Automated Software Engineering (ASE), 2021, and the Demo and Poster Session of the IEEE International Conference on Distributed Computing Systems (ICDCS), 2023). (CCF A)

T. Chen, **Z. Li** (First student author), 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)

T. Chen, Y. Feng, **Z. Li**, 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)

T. Chen, Y. Zhang, **Z. Li**, 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)

T. Chen, **Z. Li** (First student author), 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)

T. Chen, **Z. Li** (First student author), 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)

T. Chen, Z. Li (First student author), 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)

T. Chen, Y. Zhu, Z. Li (First student author), 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)

T. Chen, X. Li, Y. Wang, J. Chen, Z. Li, 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

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- <https://zzzhao-li.github.io/>
- <https://github.com/zzzhao-li>