

ZHEYUAN HE



PERSONAL DETAILS

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Position: University of Electronic Science and Technology of China (UESTC) | PhD student

Google scholar: scholar.google.com/citations?user=O_vixKoAAAAJ

INTRODUCTION

Zheyuan He is currently pursuing his PhD degree at the School of Computer Science and Engineering, University of Electronic Science and Technology of China, under the supervision of Prof. Xiaosong Zhang. Concurrently, he is undertaking an exchange program at the lab of Martin Monperrus. His current research interests include the security of blockchain and client diversity.

EDUCATION

PhD Candidate | Cyberspace Security

2022 – Present

University of Electronic Science and Technology of China (UESTC)

Master Degree | Cyberspace Security

2019 – 2022

University of Electronic Science and Technology of China (UESTC)

Bachelor Degree | Telecommunications Engineering

2013 – 2017

Beijing Electronic Science and technology Institute (BESTI)

INTERNSHIP

Software Security Engineer

2021 – 2022

Ant Group, Chengdu

Research engineer

Sep 2024 – Sep 2025

KTH/Prof. Martin Monperrus, Stockholm

RESEARCH INTERESTS

Blockchain Security, Smart Contract Security, Software Engineering

PUBLICATIONS

- **Z. He**, Z. Li, J. Luo, F. Luo, J. Duan, J. Li, S. Song, X. Luo, T. Chen, X. Zhang, "Auspex: Unveiling Inconsistency Bugs of Transaction Fee Mechanism in Blockchain." *USENIX Security (Usenix sec)*, 2025.
- **Z. He**, Z. Li, A. Qiao, J. Li, F. Luo, S. Yang, G. Deing, S. Song, X. Zhang, T. Chen, X. Luo, "Maat: Analyzing and

Optimizing Overcharge on Blockchain Storage." *USENIX Conference on File and Storage Technologies (Usenix FAST)*, 2025. (Matt has hatched [EIP-7863](#)).

- Z Li, X Peng, [Z. He](#), X Luo, T Chen, "fAmulet: Finding Finalization Failure Bugs in Polygon zkRollup." *ACM Conference on Computer and Communications Security (CCS)*, 2024 .
- [Z. He](#), Z. Li, 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.
- Z. Li, J. Li, [Z. He](#), X. Luo, T. Wang, X. Ni, W. Yang, X. Chen, T. Chen, "Demystifying DeFi MEV Activities in Flashbots Bundle," *ACM Conference on Computer and Communications Security (CCS)*, 2023.
- Feng Luo, Ruijie Luo, Ting Chen, Ao Qiao, [Zheyuan He](#), Shuwei Song, Yu Jiang, Sixing Li, "SCVHunter: Smart Contract Vulnerability Detection Based on Heterogeneous Graph Attention Network," *The International Conference on Software Engineering (ICSE)*, 2023.
- [Zheyuan He](#), Shuwei Song, Yang Bai, Xiapu Luo, Ting Chen, Wensheng Zhang, Peng He, Hongwei Li, Xiaodong Lin, Xiaosong Zhang, "TokenAware: Accurate and efficient bookkeeping recognition for token smart contracts," *ACM Transactions on Software Engineering and Methodology (TOSEM)*, 2023.
- [Z. He](#), Z. Liao, F. Luo, D. Liu, T. Chen, Z. Li. "TokenCat: Detect Flaw of Authentication on ERC20 Tokens", *IEEE International Conference on Communications (ICC)*, 2022.

ACADEMIC SERVICES

The Reviewer of IEEE TDSC (*IEEE Transactions on Dependable and Secure Computing*), CCS Workshop (*The ACM Conference on Computer and Communications Security*), and BCRA (Blockchain: Research and Applications).