

ZHEYUAN HE



PERSONAL DETAILS

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

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.