

Yibo Wang

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EDUCATION

Syracuse University

PhD., Computer Science

08/2020 ~ Now

Syracuse, NY

Syracuse University

M.S., Computer Engineering

05/2019

Syracuse, NY

Huazhong University of Science and Technology (HUST)

Bachelor's degree in Electronic Information Engineering

06/2016

Wuhan, China

Publications

- Uncovering Atomicity Violations and Security Risks in Decentralized Exchange in the Wild Jiaqi Chen, **Yibo Wang**, Yuxuan Zhou, Wanning Ding, Yuzhe Tang, Xiaofeng Wang, Kai Li, 8th IEEE European Symposium on Security and Privacy, 2023
- Ethical Challenges in Blockchain Measurement Research Yuzhe Tang, Kai Li, **Yibo Wang**, Jiaqi Chen, EthICS 2023, Co-located with NDSS 2023
- Towards Saving Blockchain Fees via Secure and Cost-Effective Batching of Smart-Contract Invocations **Yibo Wang**, Kai Li, Yuzhe Tang, Jiaqi Chen, Qi Zhang, Xiapu Luo, Ting Chen, IEEE Transactions on Software Engineering 2023
- Enabling Cost-Effective Blockchain Applications via Workload-Adaptive Transaction Execution **Yibo Wang**, Yuzhe Tang, Poster ACM CCS 2022
- iBatch: Saving Ethereum Fees via Secure and Cost-Effective Batching of Smart-Contract Invocations **Yibo Wang**, Qi Zhang, Kai Li, Yuzhe Tang, Jiaqi Chen, Xiapu Luo, Ting Chen, ESEC/FSE 2021
- DETER: Denial of Ethereum Txpool sERVICES Kai Li, **Yibo Wang**, Yuzhe Tang, ACM CCS 2021
- TopoShot: Uncovering Ethereum's Network Topology Leveraging Replacement Transactions Kai Li, Yuzhe Tang, Jiaqi Chen, **Yibo Wang**, Xianghong Liu, ACM IMC 2021
- Scalable Log Auditing on Private Blockchains via Lightweight Log-Fork Prevention Yuzhe Tang, Kai Li, **Yibo Wang**, Sencer Burak Somuncuoglu, SERIAL@Middleware 2020

Research Project

Discover DoS attack on Ethereum transaction pool, Go-Ethereum/OpenEthereum

01/2021-06/2022

- Discover the vulnerability of transaction pool in Ethereum clients by reading source code, testing cases and fuzzing.
- Report 4 unique attacks that can deny the service of transaction pool with 0 or low cost.
- Our team receives Bug bounty from Ethereum Foundation \$12,000 (2021), \$2,000 (2022) and OpenEthereum/Parity \$8,000 (2021)

Improve resilience of the transaction pool against DoS attacks, Go-Ethereum client

10/2022-03/2023

- Design defense against transaction pool DoS attacks by tightening the TxPool validation rules. Ensure no vulnerability in our design of defense.
- Co-develop the patch code of the defense against transaction pool DoS attack and the code is merged in Geth client *V1.11.4*.

Talks

- Towards the Comprehensive Understanding of Ethereum Mempool DoS Security **Yibo Wang**, Kai Li, Yuzhe Tang, Consensusday 2022/Workshop of ACM CCS 2022

Work EXPERIENCE

Fulton, Global Supply Chain, Pulaski, New York

08-12/2019

- Provided IT support for supply chain groups: by creating effective formulas and filters, team members can be more efficient analyzing the quote, placing purchasing order with Odoo system; making inventory data more intuitive and easier to spot problems in shipments, arrivals, sales and inventory
- Communicate with suppliers about quotation, part information, parts repair and getting credit issues, so that we can get the lowest quotation in a timely manner, provide engineers with data as quickly as possible, so that accumulated parts repair and refund issues can be resolved in a timely manner

AWARDS & CERTIFICATION

CCS'22 workshop registration fellowship

Protocol Lab

10/2022

USENIX Security '21 Grant

USENIX Security

07/2021

Student Registration Grant

IEEE Symposium on Security and Privacy

05/2021

Graduate Award (50% tuition scholarship)

Syracuse University

05/2017