

Bo Zhao



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Education Background

- 2016.09-2020.06
Nanjing University of Aeronautics and Astronautics
Information Security Undergraduate GPA: 3.2/5.0
- 2020.09-
Nanjing University of Aeronautics and Astronautics
Cyberspace Security Master

Research Interests

- Distributed Machine Learning / Federated Learning Security (ongoing)
- Blockchain and Computationally Intensive Smart Contracts

Ongoing Topic

Distributed Machine Learning / Federated Learning Security

- Advanced poisoning attacks may compromise existing Byzantine-robust federated learning schemes, especially when local datasets are highly non-IID.
- Proposing novel Byzantine-robust federated learning schemes, which could defend local model / local dataset poisoning attacks on highly non-IID local datasets.

Publications

(* marks the corresponding author, red color marks the supervisor.)

- **Bo Zhao**, Peng Sun*, Tao Wang, Keyu Jiang, "FedInv: Byzantine-robust Federated Learning by Inversing Local Model Updates", AAAI Conference on Artificial Intelligence (**AAAI**), accepted, 2022.
- **Bo Zhao**, Peng Sun, **Liming Fang***, Tao Wang, Keyu Jiang, "FedCom: A Byzantine-Robust Local Model Aggregation Rule Using Data Commitment for Federated Learning", rejected by IEEE Symposium on Security and Privacy (**IEEE S&P**), under revision, 2021.
- **Bo Zhao**, **Liming Fang***, Hanyi Zhang, Chunpeng Ge, Weizhi Meng, Liang Liu, Chunhua Su, "Y-DWMS: A Digital Watermark Management System Based on Smart Contracts", Sensors, accepted, 2019.
- **Liming Fang**, **Bo Zhao**, Yang Li, Zhe Liu*, Chunpeng Ge, Weizhi Meng, "Countermeasure Based on Smart Contracts and AI against DoS/DDoS Attack in 5G Circumstances", IEEE Network Magazine, accepted, 2020.