Yuanhang Zhou

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Research Interests

Blockchain: Blockchain Application, Security and Privacy, Applied Cryptography
Crowdsensing: Incentive Mechanism, Optimization, Influence Maximization

Education

Southeast University 2021.9 – Present

Pursuing Master's degree Cyberspace Security Advisor: **Fei Tong**
GPA: 3.75/4 (Normalized score: 84.63) Ranking 14 (<4%)

Nanjing University of Posts and Telecommunication (NJUPT) 2017.9 – 2021.6

Bachelor of Engineering Information Security Advisor: **Jia Xu**
GPA: 3.94/5 Ranking 14 (Elite class)

Employment

Southern University of Science and Technology (SUSTech) 2023.6 – Present

Visiting Student Department of Computer Science and Engineering Advisor: **Jianyu Niu**

Honors

National Scholarship, *Ministry of Education* 2022
"Huawei Cup" 1st Network Security Innovation Competition, Third Prize 2022
First Class Postgraduate Academic Scholarship, *Southeast University* 2021
Excellent Graduation Thesis, *NJUPT* 2021

Research Achievements

Academic Page Google Scholar ORCID

Publications

- **Yuanhang Zhou**, Fei Tong, and Shibo He, "Bi-objective Incentive Mechanism for Mobile Crowdsensing with Budget/Cost Constraint," IEEE Transactions on Mobile Computing (***TMC***). 2022. **CCF-A**.
- Jia Xu, **Yuanhang Zhou**, Gongyu Chen, et al., "Topic-aware Incentive Mechanism for Task Diffusion in Mobile Crowdsourcing through Social Network," ACM Transactions on Internet Technology (***TOIT***). 2022. **CCF-B**.
- Jia Xu, **Yuanhang Zhou**, Yuqing Ding, et al., "Biobjective Robust Incentive Mechanism Design for Mobile Crowdsensing," IEEE Internet of Things Journal (***IoTJ***). 2021. **JCR Q1**.
- Jia Xu, Gongyu Chen, **Yuanhang Zhou**, et al., "Incentive Mechanisms for Large-Scale Crowdsourcing Task Diffusion Based on Social Influence," IEEE Transactions on Vehicular Technology (***TVT***). 2021. **JCR Q1**.

Unpublished Research

- **Yuanhang Zhou**, Fei Tong, Kaiming Wang, et al., "A Privacy-Preserving Incentive Mechanism for Mobile Crowdsensing based on Blockchain," IEEE Transactions on Dependable and Secure Computing (***TDSC***). **Major revision** (Revision submitted). 2023.
- "Towards Efficient, Robust, and Privacy-preserving Incentives for Crowdsensing via Blockchain," Under research. 2023.
- "BAC-IDS: A Blockchain-Assisted Collaborative Intrusion Detection System for Smart Home IoT," Under research. 2023.

Patents

- A Privacy-preserving Incentive Mechanism Method for Crowdsensing based on Blockchain, Authorized *First Student Author*
- A Bi-objective Incentive Mechanism Method for Crowdsensing, Authorized *First Student Author*
- A Bi-objective Crowdsensing System and Incentive Method, Authorized *First Student Author*
- An Anomaly User Detection Method for Temporal and Spatial Mobile Crowdsensing, Authorized *Third Author*
- A Topic-aware Task Diffusion Method and Incentive for Crowdsourcing, Authorized *Third Author*

Research Experience

Incentive Analysis in Blockchain Consensus *SUSTech* 2023.6 – Present

- Survey the consensus and incentives in blockchain platforms
- Analysis the rationality of incentives using game theory

Incentive Design for Crowdsensing via Blockchain *Southeast University* 2021.7 – Present

- Realize a decentralized crowdsensing system based on blockchain
- Design secure and privacy-preserving incentive mechanisms under blockchain architecture

Crowdsourcing Task Diffusion based on Social Network *NJUPT* 2020.6 – 2021.6

- Realize the crowdsourcing task diffusion based on social network
- Maximize infuence within social network and design incentive

Robust Incentive Mechanism Design for Crowdsensing *NJUPT* 2019.4 – 2020.5

- Design robust incentive mechanisms for crowdsensing system

Other Experience

Academic Report *Beijing Institute of Technology* 2022.11

Long Report, 2nd Distributed Control, Optimization and Security, Zhizhen Academic Forum for Postgraduate

Project Director *Southeast University* 2022.10 – Present

Student Research Training Program and *Student Information Security Contest*

Conference Reviewer 2022.8

IEEE/CIC International Conference on Communications in China (ICCC)

Teaching Assistant *Southeast University* 2021.9-2022.2

Principles of computer composition

Short Visit *Tohoku University* 2018.8

Technical Abilities

- Programming Language: C/C++ (mastered), Nodejs & Java (competent), experienced in algorithm design
- Platform: Linux (mastered), experienced in Windows server/Ubuntu server management
- Development: experienced in Hyperledger Fabric (Blockchain platform) development, focusing on Chaincode and interface methods
- Software: Latex (proficient), Matlab & Visio (mastered), etc.
- Language: CET-4 602, CET-6 496, experienced in academic writing

Other Info

- Address: Jiulonghu Campus, Southeast University, Nanjing, Jiangsu Province, P.R. China (Postal Code: 211189)
- Academic E-mail: 220215212@seu.edu.cn