

# YUANHANG ZHOU

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## 📌 RESEARCH INTERESTS

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**Blockchain:** Blockchain Application, Security and Privacy, Applied Cryptography

**Crowdsensing:** Incentive Mechanism, Optimization

## 🎓 EDUCATION

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### Southeast University

2021.9 – Present

*Pursuing Master's degree* Cyberspace Security Advisor: **Fei Tong**

GPA: 90.4/100 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

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### Southern University of Science and Technology (SUSTech)

2023.6 – 2023.10

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

## 🏆 HONORS

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National Scholarship, *Ministry of Education*

2023

Pacemaker to Merit Student, *Southeast University*

2023

National Scholarship, *Ministry of Education*

2022

“Huawei Cup” 1st Network Security Innovation Competition, Third Prize

2022

Second Class Postgraduate Academic Scholarship, *Southeast University*

2022

First Class Postgraduate Academic Scholarship, *Southeast University*

2021

Excellent Graduation Thesis, *NJUPT*

2021

## 📄 RESEARCH ACHIEVEMENTS

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Academic Page

Google Scholar

ORCID

### *Publications*

- Fei Tong\*, **Yuanhang Zhou\***, Kaiming Wang, et al., “A Privacy-Preserving Incentive Mechanism for Mobile Crowdsensing based on Blockchain,” *IEEE Transactions on Dependable and Secure Computing (TDSC)*. 2024. **CCF-A**.
- **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**, Shubo Peng, Hanzheng Lyu, et al., “KLOTSKI: Towards Consensus Enabled Collaborative Vehicles in Intelligent Transportation,” submitted to *IEEE Transactions on Intelligent Transportation Systems (TITS)*, Under review.
- Fei Tong, Jiuhe Liu, **Yuanhang Zhou**, et al., “BAC-IDS: A Blockchain-Assisted Collaborative Intrusion Detection System for Smart Home IoT,” submitted to *Transactions on Information Forensics and Security (TIFS)*, Under review.
- First Author, “Towards Efficient, Robust, and Privacy-preserving Incentives for Crowdsensing via Blockchain,” Under research.

## 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

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|   |                             |                   |
|---|-----------------------------|-------------------|
| <b>Confidential Smart Contracts</b>   | <i>Southeast University</i> | 2023.11 – Present |
| - Realize blockchain scaling through off-chain computation<br>- Design reliable blockchain system utilizing trusted execution environment           |                             |                   |
| <b>Incentive Design for Crowdsensing via Blockchain</b>   | <i>Southeast University</i> | 2021.9 – Present  |
| - Realize a decentralized crowdsensing system based on blockchain<br>- Design privacy-preserving incentive mechanisms under blockchain architecture |                             |                   |
| <b>Dynamic Consensus for Intelligent Transportation</b>   | <i>SUSTech</i>              | 2023.6 – 2024.1   |
| - Design and realize transportation decision for intelligent transportation (V2X)<br>- Consider dynamic participation in consensus                  |                             |                   |
| <b>Crowdsourcing Task Diffusion based on Social Network</b>   | <i>NJUPT</i>                | 2020.6 – 2021.6   |
| - Realize the crowdsourcing task diffusion based on social network for influence maximization   |                             |                   |
| <b>Robust Incentive Mechanism Design for Crowdsensing</b>   | <i>NJUPT</i>                | 2019.4 – 2020.5   |
| - Design robust incentive mechanisms for crowdsensing system  |                             |                   |

## OTHER EXPERIENCE

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|---|--|------------------|
| <b>Academic Report</b>  | <i>Beijing Institute of Technology</i> | 2022.11          |
| <i>Long Report, 2nd Distributed Control, Optimization and Security, Zhizhen Academic Forum for Postgraduate</i> |  |                  |
| <b>Project Director</b>   | <i>Southeast University</i>            | 2022.10 – 2023.5 |
| <i>Student Research Training Program and Student Information Security Contest</i>                               |  |                  |
| <b>Conference Reviewer</b>  |  | 2022.8           |
| <i>IEEE/CIC International Conference on Communications in China (ICCC)</i>                                      |  |                  |
| <b>Teaching Assistant</b>   | <i>Southeast University</i>            | 2021.9 – 2022.2  |
| <i>Principles of Computer Composition</i>   |  |                  |
| <b>Short Visit</b>  | <i>Tohoku University</i>               | 2018.8           |
| <i>Learning frontier technology in Computers and Electronics</i>  |  |                  |