

# XUANMING (HINS) LIU

Yuquan Campus, Zhejiang University

Hangzhou, Zhejiang, China

🏡 <https://hinsliu.com> 📧 [hinsliu@zju.edu.cn](mailto:hinsliu@zju.edu.cn) 💬 <https://github.com/LBruyne>

## EDUCATION

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Zhejiang University

Hangzhou, China

*Ph.D.* in Computer Science

Sept. 2022 - Now

Advised by *Prof. Xiaohu Yang*

Zhejiang University

Hangzhou, China

*Bachelor of Engineering (B.Eng.)* in Software Engineering

Sept. 2018 - June. 2022

*Overall GPA: 3.97/4.0 (90.47/100)*

- Minored in the *Advanced Class of Engineering Education (ACEE Class)* at *Chu Kochen Honors College*, a distinguished program selecting only 40 engineering students annually.

## RESEARCH EXPERIENCE

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Blockchain Research Center, Zhejiang University

Sept. 2022 - Now

Advised by *Prof. Xiaohu Yang* on blockchain technologies.

- Focusing primarily on designing efficient constructs and applications for blockchain using zero-knowledge proofs and related techniques.

Security Lab, National University of Singapore

Aug. 2024 - Jan. 2025

Advised by *Prof. Jiaheng Zhang* on zero-knowledge proofs and AI security.

- As research assistant working on the theory and application about zero-knowledge proofs and its application.

## PUBLICATIONS (CHRONOLOGICAL ORDER)

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### Why Is My Transaction Risky? Understanding Smart Contract Semantics and Interactions in the NFT Ecosystem

Yujing Chen, Xuanming Liu, Zhiyuan Wan, Zuobin Wang, David Lo, Difan Xie and Xiaohu Yang.

- Accepted by *Automated Software Engineering (ASE)*, 2025.

### Scalable Collaborative zk-SNARK and Its Application to Fully Distributed Proof Delegation [pdf] [code]

Xuanming Liu, Zhelei Zhou, Yinghao Wang, Yanxin Pang, Jinye He, Bingsheng Zhang, Xiaohu Yang and Jiaheng Zhang.

- Accepted by *USENIX Security*, 2025.

### DeepFold: Efficient Multilinear Polynomial Commitment from Reed-Solomon Code and Its Application to Zero-knowledge Proofs [pdf] [code]

Yanpei Guo, Xuanming Liu, Kexi Huang, Wenjie Qu, Tianyang Tao and Jiaheng Zhang.

- Accepted by *USENIX Security*, 2025.

## **ZK-GPT: An Efficient Non-interactive Zero-knowledge Proof Framework for LLM Inference** [\[pdf\]](#)

Wenjie Qu, Yijun Sun, *Xuanming Liu*, Tao Lu, Yanpei Guo, Kai Chen and Jiaheng Zhang.

- Accepted by *USENIX Security*, 2025.

## **SmartZKCP: Towards Practical Data Exchange Marketplace Against Active Attacks** [\[pdf\]](#) [\[code\]](#)

*Xuanming Liu*, Jiawen Zhang, Yinghao Wang, Xinpeng Yang and Xiaohu Yang.

- Accepted by *Blockchain: Research and Applications*, 2025.

## **$\pi$ FL: Private, Atomic, Incentive mechanism for Federated Learning based on Blockchain** [\[pdf\]](#)

Kejia Chen, Jiawen Zhang, *Xuanming Liu*, Zunlei Feng and Xiaohu Yang.

- Accepted by *Blockchain: Research and Applications*, 2025.

## **ENTREPRENEURSHIP EXPERIENCE**

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### **MatchUs**

*Co-founder and the technical lead*

*2021 - 2023*

- Co-founded this social networking platform designed to connect students with similar interests and personalities, helping them find ideal partners and foster meaningful relationships.
- The platform has served over 30,000 per users, with 15% successfully forming meaningful friendships.
- Currently undergoing an alpha test at Zhejiang University, with plans for expansion to more universities in the future.

## **WORK EXPERIENCE**

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### **Bytedance Ltd. / Tiktok**

**Hangzhou, China**

*Backend development engineer*

*March 2021 - July 2021*

- Engaged in backend development for a supply-chain management system, utilizing Java.

### **Hyperchain**

**Hangzhou, China**

*Blockchain engineer*

*August 2021 - January 2022*

- Contributed to the development of a WASM virtual machine for blockchain, employing Golang.

## **TEACHING EXPERIENCE**

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### **Blockchain and Digital Currency**

**Zhejiang University 2022 - 2024**

- Served as a *teaching assistant and assistant lecturer* for three consecutive years, guiding students in smart contract with Solidity and the design of decentralized applications (dApps).
- Comprehensive **instructional materials** are provided.
- Assigned and graded different homework each year, focusing on the design and implementation of dApps. Some examples.

## **LEADERSHIP**

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### **Vice-President of the ZJU Internet Association (ZJUINA).**

*2022 - 2023*

**Core Member** of the *ZJU Blockchain Association (ZJUBCA)*, a student organization with considerable recognition in the global blockchain community. *2022 - 2024*

**Core Contributor** to the organizing of the *Ethereum Hangzhou Hackathon (ETH Hangzhou)*, a hackathon endorsed by *the Ethereum Foundation*. *2023*

## SELECTED AWARDS

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**Finalist Prize**, Mathematical Contest in Modeling (MCM), 2021. Awarded to the top 2% of over 10,000 teams worldwide.

Zhejiang Provincial Government Scholarship, 2019 - 2022.

Outstanding Graduates of Zhejiang University, 2022.

Received various awards in multiple Web3 hackathons, since 2022 to the present.

## SELECTED SOFTWARES AND PROJECTS

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### Scalable-Collaborative-zk-SNARKs [[Github](#)]

2024

- Two *Rust*-implemented collaborative zk-SNARKs for Libra and HyperPlonk, featuring fully distributed proof generation. The efficiency of these collaborative zk-SNARKs improves the corresponding prover in terms of time and space cost.

### Find-Relevant-CSRankings-Professors [[Github](#)]

2024

- A public goods aimed at helping pre-PhD students find the most suitable graduate advisors.  
- Implemented in *Python*, it automates the search for professors and their publications on CSrankings and Google Scholar, and matches them with students based on the alignment of academic interests.

### InsPilot [[Github](#)]

2023

- *Fullstack* implementation for InsPilot: a multimodal creative stimulus system that aids designers in generating motivational ideas by leveraging the capabilities of ChatGPT and StableDiffusion.

### ZKTI [[Github](#)]

2023

- A *C++*-implemented zero-knowledge truth inference system, creating a framework to enable verifiable crowdsourcing truth inference with the aid of zero-knowledge proofs.

### SiriusDB [[Github](#)]

2021

- A *Java*-implemented distributed database system prototype emphasizing availability and fault tolerance, utilizing Zookeeper.