

TIANYI LIU

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<https://liutianyi.site> tianyi28@illinois.edu

EDUCATION

University of Illinois Urbana-Champaign

IL, USA

Advised by Prof. Yupeng Zhang

Aug. 2023 - Expected July 2026

- Mainly worked on **succinct ZKP** and its applications on blockchain and machine learning.

Texas A&M University

TX, USA

Advised by Prof. Yupeng Zhang and Prof. Juan Garay

Aug. 2021 - Aug. 2023

Shanghai Jiao Tong University

Shanghai, China

Bachelor of Engineering (BE) in Computer Science, ACM Honor Class

Sept. 2016 - July 2020

- **Bachelor thesis** ([\[blog\]](#)[\[code\]](#)) advised by Prof Yu Yu and Dr. Xiang Xie.

- Worked on **lattice-based homomorphic encryption**, advised by Prof. Yu Yu.

- Worked on **identity-based lossy trapdoor function**, advised by Prof Sanjam Garg (UCB).

PUBLICATIONS

Ceno: Non-uniform, Segment and Parallel Zero-knowledge Virtual Machine [\[pdf\]](#)[\[code\]](#)

Tianyi Liu, Zhenfei Zhang, Yuncong Zhang, Wenqing Hu, Ye Zhang.

(Accepted by Journal of Cryptology, 2025)

Pianist: Scalable ZK-Rollups via Fully Distributed Zero-Knowledge Proofs [\[pdf\]](#) [\[code\]](#)

Tianyi Liu, Tiancheng Xie, Jiaheng Zhang, Dawn Song, Yupeng Zhang.

(Accepted by S&P 2024)

zkCNN: Zero Knowledge Proofs for Convolutional Neural Network Predictions and Accuracy [\[pdf\]](#) [\[code\]](#)

Tianyi Liu, Xiang Xie, Yupeng Zhang.

(Accepted by CCS 2021)

Doubly Efficient Interactive Proofs for General Arithmetic Circuits with Linear Prover Time [\[pdf\]](#) [\[code\]](#)

Jiaheng Zhang, Tianyi Liu, Weijie Wang, Yinuo Zhang, Dawn Song, Xiang Xie, Yupeng Zhang.

(Accepted by CCS 2021)

WORK EXPERIENCE

Microsoft Research

WA, USA

Research Intern, supervised by Dr. Greg Zaverucha and Dr. Srinath Setty

May 2023 - Aug. 2023

- Worked on developing new applications with some succinct argument schemes.

Google LLC.

CA, USA

Software Engineering Intern, supervised by Dr. Zhao Tian

May 2022 - Aug. 2022

- Worked on supporting certificate-based authentication of IKEv2 in a distributed system, using **Go** as the programming language.

Matrixelements

Shanghai, China

Algorithm Intern, supervised by Dr. Xiang Xie

June 2020 - July 2021

- Worked on the first track of **iDASH Privacy & Security Workshop 2020**, reached 91% accuracy in the final test and generate inferences for the testing dataset within only 1min.

- Published **two CCS papers** advised by Prof. Yupeng Zhang and Dr. Xiang Xie..