

TIANYI LIU

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EDUCATION

University of Illinois Urbana-Champaign	IL, USA
<i>Advised by Prof. Yupeng Zhang</i>	<i>Aug. 2023 - Now</i>
- Mainly worked on succinct ZKP and its applications on blockchain and machine learning.	
Texas A&M University	TX, USA
<i>Advised by Prof. Yupeng Zhang and Prof. Juan Garay</i>	<i>Aug. 2021 - Aug. 2023</i>
Shanghai Jiao Tong University	Shanghai, China
<i>Bachelor of Engineering (BE) in Computer Science, ACM Honor Class</i>	<i>Sept. 2016 - July 2020</i>
- 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..