Peiyao Sheng

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⌂ simplespy.github.io

Education

Sept 2021 – Present
Ph.D., Computer Science.
University of Illinois, Urbana-Champaign and Princeton University

Sept 2019 – May 2021
M.S., Computer Science.
University of Illinois, Urbana-Champaign

Sept 2015 – June 2019
B.S., Computer Science and Technology.
ACM Honors Class (an elite CS program for top 5% talented students)

Zhiyuan College, Shanghai Jiao Tong University, China

Publications

NDSS 2024 **Peiyao Sheng**, Nikita Yadav, Vishal Sevani, Arun Babu, SVR Anand, Himanshu Tyagi, Pramod Viswanath. *"Proof of Backhaul: Trustfree Measurement of Broadband Bandwidth"*, The Network and Distributed System Security (NDSS) Symposium.

CCS 2023 **Peiyao Sheng**, Xuechao Wang, Kartik Nayak, Sreeram Kannan, Pramod Viswanath. *"TrustBoost: Boosting Trust among Interoperable Blockchains"*, ACM Conference on Computer and Communication Security.

FC 2023 **Peiyao Sheng**, Gerui Wang, Kartik Nayak, Sreeram Kannan, Pramod Viswanath. *"Player-Replaceability and Forensic Support are Two Sides of the Same (Crypto) Coin"*, Financial Cryptography and Data Security.

HotNets 2022 S.V.R. Anand, Serhat Arslan, Rajat Chopra, Sachin Katti, Milind Kumar Vaddiraju, Ranvir Rana, **Peiyao Sheng**, Himanshu Tyagi, Pramod Viswanath (List of authors in alphabetical order.) *"Trust-free Service Measurement and Payments for Decentralized Cellular Networks"*, ACM Workshop on Hot Topics in Networks.

CCS 2021 **Peiyao Sheng**, Gerui Wang, Kartik Nayak, Sreeram Kannan, Pramod Viswanath. *"BFT Protocol Forensics"*, **Best Paper Award Runner-Up**, ACM Conference on Computer and Communication Security.

FC 2021 **Peiyao Sheng**, Bowen Xue, Sreeram Kannan, Pramod Viswanath. *"ACeD: Scalable Data Availability Oracle"*, Financial Cryptography and Data Security.

Research Experience

July 2022 – Present
Blockchains Lab, at Princeton University.
Visiting Researcher, advised by *Prof. Pramod Viswanath*

Jan 2020 – Present
Coordinated Science Lab, at University of Illinois at Urbana-Champaign.
Research Assistant, advised by *Prof. Pramod Viswanath*

Sept 2018 – Dec 2018
Secure Learning Lab, at University of Illinois at Urbana-Champaign.
Visiting Research Intern, advised by *Prof. Bo Li*
○ Worked on a privacy-preserving advertisement recommendation contract system.

Sep 2017 – Mar 2018
SpeechLab, at Shanghai Jiao Tong University.
Undergraduate Researcher, advised by *Prof. Kai Yu* and *Prof. Yanmin Qian*

Professional Experience

Industry Experience.

Summer 2023 Research Intern, advised by Dr. Dahlia Makkhi, Chainlink Labs, US

Present Co-founder and Head of Research, Witness Chain, US

- Witness Chain is pioneering a unified economy where DePINs converge on a common platform, enabling trust-less coordination and shared value creation.

Summer 2021 Research Intern, Kaleidoscope Blockchain, US

- Worked on building a tokenized telco marketplace, called kaleidoscope. It was designed to connect network applications with network infrastructures in a decentralized manner. We've built a demo where consumers can book network instances from the marketplace, and the blockchain ensures the payment and service according to the service-level agreement posted on chain.

Spring 2019 Research Intern, Urban Computing Group, SenseTime, China

- Worked on network architecture search.

Teaching Assistant.

Spring 2022 ECE598, Principles of Blockchains

Fall 2019 CS107, Data Science Discovery

Spring 2018 MS208, Compilers

Summer 2017 MS106, Principle and Practice of Computer Algorithms

Spring 2017 MS105, Data Structures

Fall 2017 CS122, C++ Programming

Honors and Awards

2022	**Chainlink Labs Fellowship Honorable Mention**	
2021	**ACM CCS Best Paper Award Runner-Up**	
2020	**ICPC Mid-Central USA Regional Contest**	*2nd place*
2019	**Outstanding Graduates in Shanghai Jiao Tong University**	
2017	**Kai Yuan Scholarship**	*Top 2%*
2017	**Meritorious Winner in MCM/ICM**	*Top 10%*
2015, 2016	**Academic Excellence Scholarship**	*1st place*
2016, 2017	**Zhiyuan Honorary Scholarship**	