

RESEARCH INTERESTS

I am interested in cryptography (both classical and post-quantum). My research has been focused on Zero-Knowledge Protocols, Secure Multi-Party Computation, and Non-Malleability, with an emphasis on black-box techniques.

EDUCATION

Stony Brook University , Stony Brook, NY, USA Ph.D. in Computer Science (Advisor: Omkant Pandey)	2016–2021 GPA: 3.96/4.00
Stony Brook University , Stony Brook, NY, USA M.S. in Applied Mathematics	2014–2016 GPA: 4.00/4.00
Beijing Institute of Technology , Beijing, China B.S. in Economics	2010–2014 GPA: 91/100 (Ranked 1st/73)
City University of Hong Kong , Kowloon, Hong Kong Visiting Student in the College of Business	2013 Spring

SCHOLARSHIPS AND AWARDS

• University Fellowship , Stony Brook University	2016–2019
• Excellent Student Scholarship (three times), Beijing Institute of Technology	2013–2018
• National Scholarship , Ministry of Education of China	2012
• Straight-A Scholarship , Beijing Institute of Technology	2012
• 1st Prize , the 2nd Mathematics Competition at Beijing Institute of Technology	2011
• Silver Medal , the 22nd Beijing College Students Mathematics Competition	2011
• 3rd Prize , the 7th Challenge Cup Beijing College Students Extracurricular Academic Science and Technology Competition	2011

LANGUAGES

- **Mandarin:** Native Proficiency
- **English:** Professional Working Proficiency (TOEFL Score: 109/120)

SKILLS

- **Programming:** Python, C++, R, Matlab
- **SAS:** SAS Certified Advanced Programmer for SAS

PROFESSIONAL SERVICE

Subreviewer: Crypto (2020, 2021), Eurocrypt (2020), TCC (2018–2021), Asiacrypt (2019, 2021), ITC (2020), PKC (2020), ACM Transactions on Storage (2019)

PUBLICATIONS

- [7] **Towards a Unified Approach to Black-Box Constructions of Zero-Knowledge Proofs**
Xiao Liang and Omkant Pandey
The 41st International Cryptology Conference (CRYPTO 2021)
- [6] **Compact Ring Signatures from Learning with Errors**
Rohit Chatterjee, Sanjam Garg, Mohammad Hajiabadi, Dakshita Khurana, Xiao Liang, Giulio Malavolta, Omkant Pandey, and Sina Shiehian
The 41st International Cryptology Conference (CRYPTO 2021)
- [5] **Black-Box Constructions of Bounded-Concurrent Secure Computation**
Sanjam Garg, Xiao Liang, Omkant Pandey, and Ivan Visconti
The 12th International Conference on Security and Cryptography for Networks (SCN 2020)
- [4] **Improved Black-Box Constructions of Composable Secure Computation**
Rohit Chatterjee, Xiao Liang, and Omkant Pandey
The 47th International Colloquium on Automata, Languages, and Programming (ICALP 2020)
- [3] **Random Walks and Concurrent Zero-Knowledge**
Anand Aiyer, Xiao Liang, Nilu Nalini, and Omkant Pandey
The 18th International Conference on Applied Cryptography and Network Security (ACNS 2020)
- [2] **ProCSA: Protecting Privacy in Crowdsourced Spectrum Allocation**
Max Curran, Xiao Liang, Himanshu Gupta, Omkant Pandey, and Samir Das
The 24th European Symposium on Research in Computer Security (ESORICS 2019)
- [1] **A Study on the Management Model of China's Nursing Homes with Examples from Beijing**
Jingru Du and Xiao Liang
Foreign Investment in China, 2013(6): 138-140 (Published in Chinese)

NON-CRYPTOGRAPHIC PROJECTS

- Training Data Reduction for Recursive Tensor Neural Network** 2015 Fall
(Collaborator: Niranjana Balasubramanian and Ankit Gupta)
- Propose a method to simplify the parsing tree, saving 40% of labeling work while maintaining the same level of accuracy.
 - Code to measure the performance of these models on different length of phrases and type of nodes.
 - Contribute to the [StonyBrookNLP/stingysentiment](#) on GitHub.
- Analysis of China's Agricultural Exports Using ARIMA & Clustering Model** 2014
(My Bachelor Thesis)
- Construct an ARIMA(1,2,1) model to predict the short-term export of agricultural products.
 - Conduct Hierarchical Clustering with 19 main products using IBM SPSS.
 - Provide policy-making advice based on analysis of trade structure.