SHUCHEN LI

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EDUCATION

Carnegie Mellon University, Pittsburgh   August 2022 – December 2023 (Expected)
Master of Science in Computer Science, QPA: 4.14/4.33
Advisor: Pravesh Kothari

Peking University, Beijing   September 2018 – June 2022
Bachelor of Science in Computer Science, *Turing Class*, GPA: 3.85/4.00 (rank: 5/231)
Advisor: Qian Li

VISITING

Institute of Computing Technology, Chinese Academy of Sciences, Beijing   July 2021 – June 2022
Host: Xiaoming Sun, Qian Li

RESEARCH

Robust mean estimation   May 2023 – Present
Advisors: Pravesh Kothari, Manolis Zampetakis
- Considered the setting where the noise is added after the adversary corrupts the means
- Designed an algorithm based on sparse Fourier transform

Testable learning   January 2023 – May 2023
Advisor: Pravesh Kothari
- Considered learning Gaussian mixtures based on tensor decomposition with testable assumptions
- Proved an exponential lower bound for the tester if we want to replace the linear independence assumption

Unifying structural results about Boolean functions via primal-dual frameworks   November 2021 – June 2022
Advisor: Qian Li
- Proposed a framework to unify a class of structural results about Boolean functions via Lagrangian duality
- Reproved classic results and proved an upper bound on the ℓ_∞ norm of Boolean functions under this framework

MANUSCRIPTS

Shuchen Li. *Applications of Lagrangian Duality in Boolean Function Analysis*. 2022. Peking University, Bachelor's thesis.

Shuchen Li. *Robust Mean Estimation Against Oblivious Adversaries*. 2023. Carnegie Mellon University, Master's thesis.

TEACHING

Fundamentals of Cryptography   Fall 2021
Teaching Assistant, Peking University (Instructor: Guang Yang)

Discrete Mathematics and Structures   Fall 2020
Teaching Assistant, Peking University (Instructor: Xiaotie Deng)

TALKS

Fourier Analysis on the Boolean Cube   December 2021
Tutorial, at Center on Frontiers of Computing Studies, Peking University

AWARDS & SCHOLARSHIPS

John Hopcroft Scholarship, Turing Class   2021

John Hopcroft Scholarship, Turing Class   2020

Merit Student, Pacesetter, (Top 2.5% in) Peking University   2019

Peking University Scholarship   2019

Jiang Zehan Mathematical Contest in Modeling of Peking University, First Prize, Ranked 1st   2019