Longcheng Li

100190 Beijing, China | lilongcheng22s@ict.ac.cn | +86 198 0125 8351 | longcheng.li

Research Interest

I am broadly interested in theoretical computer science and quantum computation. My current research focuses on *quantum cryptography* and *distributed quantum computing*. Specifically, I am exploring the (im)possibility of quantum computation to enhance the security of cryptographic schemes, such as public-key encryption, and to accelerate distributed computing tasks, including Byzantine agreement.

Education

University of Chinese Academy of Sciences, Beijing, China

Sep 2022 – Present

• MS in Computer Science GPA: 3.93/4.0 Advisor: Jialin Zhang

University of Chinese Academy of Sciences, Beijing, China

Sep 2018 – Jun 2022

• BS in Computer Science GPA: 3.93/4.0 Rank 2/102

Publications

1. Quantum Byzantine agreement against full-information adversary

L. Li, Xiaoming Sun, Jiadong Zhu

International Symposium on Distributed Computing (DISC), to appear, 2024

2. How (not) to build QPKE in Minicrypt

L. Li, Qian Li, Xingjian Li, Qipeng Liu

Annual International Cryptology Conference (CRYPTO), 2024

3. Fast exact synthesis of two-qubit unitaries using a near-minimum number of T gates

L. Li, Cheng Guo, Qian Li, Xiaoming Sun *Physical Review A*, 107 (4), 042424

Teaching

Teaching Assistant of Combinatorics	UCAS, Fall 2023
Teaching Assistant of Introduction to Computer Science	UCAS, Spring 2020
Visiting	
Southern University of Science and Technology, Shenzhen, China	Mar 2024 - Jun 2024
• Visiting Student on quantum error correction Advisor: Youpeng Zhong	
National University of Singapore, Singapore	Aug 2021 - Dec 2021
Non-Graduating Programme (Coursework)	

Awards

Silver Medal, 45th International Collegiate Programming Contest Asia East-Continent Final Apr 2021

Gold Medal, 45th International Collegiate Programming Contest Asia Jinan Regional Dec 2020

Skills

Coding: C/C++, Python, HTML/CSS/JS

English: TOEFL 106/120 (Reading 30, Listening 28, Speaking 23, Writing 25)