

# DONGCHEN LI

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## EDUCATION

**The University of Hong Kong**

PhD, School of Computer Science, Advisor: Prof. Zhiyi Huang

*Sep. 2023 - Present*

**Peking University**

Bachelor of Information Science, School of Mathematical Sciences

*Sep. 2019 - Jul. 2023*

## RESEARCH INTERESTS

My research interests include theoretical computer science, especially on optimal decision making, and machine-learning-based automation (theorem proving or program synthesis).

## PUBLICATIONS

The Search-and-Mix Paradigm in Approximate Nash Equilibrium Algorithms, Xiaotie Deng, Dongchen Li, Hanyu Li, <https://arxiv.org/abs/2310.08066>.

On the Optimal Mixing Problem of Approximate Nash Equilibria in Bimatrix Games, Dongchen Li, Hanyu Li, Xiaotie Deng, IJTCS 2024.

## RESEARCH EXPERIENCE

**Theory Group, HKU**

- Prophet Secretary

**Advisor: Prof. Zhiyi Huang**

*Nov. 2023- Present*

**daGame Lab, Peking University**

- Algorithm for Approximate Nash Equilibrium
- Complexity of Quantal Response Equilibrium
- Cheating in Correlated Equilibrium

**Advisor: Prof. Xiaotie Deng**

*May. 2022- May. 2024*

*Summer Research Internship, 2023*

*Oct. 2021- Dec. 2021*

**Discrete Optimization Group, Peking University**

- Bachelor's Thesis
- Lecture Notes of Math Modelling

**Advisor: Prof. Sihong Shao**

*Jan. 2023- Jun. 2023*

*Jun. 2022 - Jan. 2023*

## AWARDS AND HONORS

- Silver Medal in Chinese Mathematical Olympiad, Top 170 national wide *Oct. 2018*
- Second-Class Freshmen Scholarship *Sep. 2019*
- Academic Excellence Award *Sep. 2020*
- Merit Student in Peking University (Top 25%, Yizheng Scholarship) *Sep. 2021*
- Excellent League Leader in Peking University *Mar. 2022*
- Merit Student in Peking University (Top 25%, 1/2002 Dream Scholarship) *Sep. 2022*
- HKU Presidential PhD Scholarship *Sep. 2023*