

Shuyang Gong

PhD candidate, School of Mathematical Sciences, Peking University, Beijing, China
gongshuyang@stu.pku.edu.cn

RESEARCH INTERESTS

Probability theory, Graph theory.

EDUCATION

Peking University, Beijing, China
PhD in Mathematics

September, 2021 — June, 2026(expected)

Shandong University, Jinan, China
Bachelor of Mathematics: GPA ranked 1st/132

September, 2017 — June, 2021

PUBLICATIONS/PREPRINTS

- **A polynomial-time approximation scheme for the maximal overlap of two independent Erdős-Rényi graphs.**
Random Structures and Algorithms (2024), 1-38. <https://doi.org/10.1002/rsa.21212>
Coauthors: Jian Ding (PKU) and Hang Du (MIT)
- **The algorithmic phase transition of random graph alignment problem.**
Preprint: <https://arxiv.org/abs/2307.06590>, *submitted*
Coauthors: Hang Du (MIT) and Rundong Huang (PKU)
- **The Umeyama algorithm for matching correlated Gaussian geometric models in the low-dimensional regime.**
Preprint: <https://arxiv.org/abs/2402.15095>, *submitted*
Coauthor: Zhangsong Li (PKU)

TALKS

- An Introduction to First Passage Percolation. Shandong University/October 12, 2020
- A polynomial-time approximation scheme for the maximal overlap of two independent Erdős-Rényi graphs. Shandong University/November 7, 2022
- Algorithms and Phase Transitions in Random Graph Alignment Problem. Peking University/September 11, 2023
- Optimizing the overlap of two independent Erdős-Rényi graphs. Sichuan University/January 15, 2024

AWARDS

- National Scholarship October, 2019/Shandong University
- National Scholarship October, 2020/Shandong University
- Principal Scholarship (Top Award for Undergraduates) October, 2020/Shandong University
- Schlumberger Scholarship October, 2023/Peking University

TEACHING EXPERIENCES

- **Calculus (C)** Fall, 2021
- **Stochastic Processes** Spring, 2022
- **Stochastic Processes** Fall, 2022
- **Measure Theory** Spring, 2023
- **Advanced Probability Theory** Fall, 2023