

Runzhe Yang

Education

- 2/2024 – **Visiting Internship Student for Research**, Department of Mathematics, The Hong Kong
6/2024 University of Science and Technology, Hong Kong SAR,
(Expected) Hosted by Prof. Dr. Maximilian Nitzschner.
- 9/2020 – **Bachelor of Science in Statistics**, School of Mathematics and Statistics, Wuhan University,
6/2024 Wuhan, Hubei,
(Expected) Overall GPA: 3.76/4.0 (89.6/100) (2020 Fall – 2024 Winter)
Thesis Title: Moderate Deviation of Gaussian Fluctuations for Coulomb Gases at Any Temperature,
Advisor: Prof. Dr. Fuqing Gao.

Research Interests

My primary research interests lie in the area involving Probability and Analysis:

1. Statistical Physics.

- Percolations
- Gaussian Free Fields and Interface Models
- Random Walks and Random Interlacements
- Schramm-Loewner Evolutions

2. Stochastic Analysis and its Applications.

- Mathematical Finance
- Stochastic Partial Differential Equations

Research Projects

- 5/2023 – **Lower Bound for Disconnection of Vacant Set in Loop Percolations**,
Present Advisor: Prof. Dr. Maximilian Nitzschner,
The principal aim of this project is to derive asymptotic lower on the probability that in a certain model of random walk loops on the integer lattice, a macroscopic set is disconnected from infinity by the trace of the loops.

Academic Experiences

- 7/2023 **Summer School Series on Probability and Related Fields: Masterclass in Random Geometry**,
Funded by Beijing International Center For Mathematical Research (BICMR), Peking University, Beijing, China.

Honors and Awards

- 12/2021 First Prize, Rank 16th, the 13th China National Mathematics Competition for College Students
5/2022 Finalist, Top 1‰, the 4th Alibaba Global Mathematics Competition
7/2022 Winner's Prize, Rank 19th Nationwide, the 13th S.-T. Yau College Student Mathematics Contest, Statistics and Probability track
11/2022 First Class, Top 3%, WHU Outstanding Mathematics Student Scholarship, 2021-2022 Academic Year
3/2023 Third Prize, Finals of the 13th China National Mathematics Competition for College Students
1/2024 Laureate, Scholarship for Research Internship Student at HKUST (15,000 HKD per Month), Spring Semester

Standardized Test

TOEFL iBT: 92(R:28, L:22, S:18, W:24)

Technical Proficiencies

Computer C/C++, R, \LaTeX

Language Mandarin (Native), English (Fluent), Cantonese (Native but not familiar now)