

# Runzhe Yang

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🏠 Homepage

## Personal Details

Date of Birth December 31<sup>st</sup>, 2001  
Citizenship Chinese  
Gender Male

## Educations

- 10/2024 – **Master of Science in Math (Stochastics & Finance)**, Berlin Mathematical School, Berlin,  
10/2026 Berlin, German,  
(Expected) Advisor: *Prof. Dr. Peter Friz*.
- 3/2024 – **Visiting Internship Student for Research**, Department of Mathematics, The Hong Kong  
6/2024 University of Science and Technology, Hong Kong SAR,  
Host: *Prof. Dr. Maximilian Nitzschner*.
- 9/2020 – **Bachelor of Science in Math (Probability & Statistics)**, School of Mathematics and Statistics,  
6/2024 Wuhan University, Wuhan, Hubei, China,  
Thesis Title: Moderate Deviation of Gaussian Fluctuations for Coulomb Gases at Any Temperature,  
Advisor: *Prof. Dr. Fuging Gao*  
Overall GPA: 3.77/4.0 (89.8/100).
- 9/2017 – **High School Diploma**, Huizhou No.1 Middle School, Huizhou, Guangdong, China,  
6/2020 Final Grade: Top 1‰ Provincewide.

## Research Interests

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

### 1. Stochastic Analysis and its Applications.

- Mathematical Finance
- Rough Analysis
- Stochastic Partial Differential Equations

### 2. Statistical Physics.

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

## Research Projects

- 5/2023 – **Lower Bound for Disconnection of Vacant Set in Loop Percolations**,  
6/2024 Adviosr: *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. We also investigate the large deviation for occupation time field of loop soup.

## 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.

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## Honors and Awards

- 12/2021 First Prize, Rank 16<sup>th</sup>, *the 13<sup>th</sup> China National Mathematics Competition for College Students, Wuhan*
- 5/2022 Finalist, Top 1‰, *the 4<sup>th</sup> Alibaba Global Mathematics Competition*
- 7/2022 Winner's Prize, Rank 19<sup>th</sup> Nationwide, *the 13<sup>th</sup> S.-T. Yau College Student Mathematics Contest, Statistics and Probability track (individual)*
- 11/2022 First Class, Top 3‰-, *WHU Outstanding Mathematics Student Scholarship, Wuhan University, 2021-2022 Academic Year*
- 3/2023 Third Prize, *Finals of the 13<sup>th</sup> China National Mathematics Competition for College Students, Shanghai*
- 1/2024 Laureate, *Scholarship for Research Internship Student at HKUST (15,000 HKD/Month), Spring Semester*
- 2/2024 Laureate, *Phase I Scholarship for Student at Berlin Mathematical School (1,000 Euros/Month), 2024 - 2026*
- 5/2024 Laureate, Top 20‰-, *Outstanding Undergraduate Award, Wuhan University*
- 6/2024 Laureate, Top 3‰-, *Outstanding Bachelor's Degree Thesis Award, Wuhan University*

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## Technical Proficiencies

Computer C/C++, R,  $\text{\LaTeX}$

Language Mandarin/Cantonese (Native), English (Fluent), Germany (Beginner)