

HAOSHENG ZHOU

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EDUCATION

University of California, Santa Barbara (UCSB), Department of Statistics and Applied Probability Santa Barbara, CA, U.S.
PhD in Applied Probability and Mathematical Statistics; GPA: 4.0/4.0 Present

- **Relevant Coursework:** Advanced courses in Probability, Statistics, Mathematical Finance, Stochastic Differential Game

New York University (NYU), Courant Institute of Mathematical Science New York, NY, U.S.
Master in Mathematics; GPA: 3.86/4.0 Sep 2020 – May 2022

- **Relevant Coursework:** Advanced courses in Probability, Statistics, Numerical Analysis, Optimization etc.

Peking University (PKU), School of Electrical Engineering and Computer Science Beijing, China
Bachelor in Data Science and Big Data Technology (IT Finance); GPA: 3.57/4.0 Sep 2016 – Jul 2020

- **Relevant Coursework:** Fundamentals in Mathematics, Computer Science and Economics

HONORS AND AWARDS

- UCSB Amazon Fellowship 2022
- Alibaba Global Mathematics Competition, Top 0.5% 2022
- NYU GSAS Students for the Pathways to the PhD Program 2021
- PKU Academic Excellence Award 2018 & 2019
- PKU Scholarship for Outstanding Undergraduates 2018

THESIS AND PUBLICATIONS

Research in Multi-Agent Reinforcement Learning | UCSB Present
Topic: Reinforcement Learning and Stochastic Differential Games on Graphs
Advisor: Ruimeng Hu, *Assistant Professor of UCSB PSTAT and Math Department*

- Build a stochastic differential game on graph with closed-form solutions of Nash equilibrium
- Plan to design a reinforcement learning algorithm that converges to the Markovian Nash Equilibrium on certain graph structure (in progress)
- Test the algorithm on the baseline model and provide theoretical convergence results (in progress)

Master's Thesis | NYU Sep 2021 - May 2022
Title: Detecting Boolean Asymmetric Relationships with a Loop Counting Technique and its Implications for Analyzing Heterogeneity within Gene Expression Datasets
Advisor: Aaditya Rangan, *Associate Professor of NYU Courant*

Bachelor's Thesis | PKU Jan 2020 – Jun 2020
Title: Approximation Algorithms and PTAS of the Minimum Dominating Set and the 3-Path Vertex Cover Problem on Unit Disk Graph

Advisor: Jianhua Tu, *Professor of Beijing Technology and Business University, Associate Professor of Beijing University of Chemical Technology (former position)*

ACADEMIC ACTIVITIES

- **Duncan Chair Actuarial Science Research Day** | UCSB Sep 2022
- **PIMS-CRM, Summer School in Probability** | UBC, Vancouver, Canada May 2022 - Jun 2022
- **DURF(Deans' Undergraduate Research Fund) Project in Percolation Theory** | NYU Shanghai May 2019 – Dec 2019

Advisor: Leonardo T. Rolla, *Associate Professor of Argentina Research Council, Visiting Assistant Professor of NYU Shanghai (former position)*

- [Click here](#) to view a website we constructed for particle system simulations

TEACHING EXPERIENCES

- **TA of Probability and Statistics (PSTAT 120B)** | UCSB Jan 2023 - Mar 2023
- **TA of Trans to Data Science, Probability and Statistics (PSTAT 8)** | UCSB Jan 2023 - Mar 2023
- **TA of Intro to Math Finance (PSTAT 170)** | UCSB Sep 2022 - Dec 2022
- **Recitation Leader (TA) of Algebra and Calculus (MATH-UA 009)** | NYU Jan 2022 - May 2022

SKILLS

- **Programming Skills:** Matlab, Python, MySQL, Teradata, C++, C, Javascript, HTML, SPSS, R, STATA
- **Data Visualization Skills:** Tableau

VOLUNTEER ACTIVITIES

- **Volunteer Teacher** | Hong Village, Anhui Province, China Oct 2015 - Nov 2015