

Rohan Kapoor

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EDUCATION

Dartmouth College

PhD in Mathematics, MS awarded in 2026

Advised by Dr. Dimitris Giannakis, research in data-driven methods for dynamical systems

Hanover, NH

Sep 2024-Present

University of Chicago

BA in Mathematics (Honors), Minor in Physics

Finished Coursework for MS in Statistics, Dean's List 2021-22

Chicago, IL

Sep 2019-June 2023

EXPERIENCE

SPAR Fellow

Supervised Program for Alignment Research

Mar 2026 - Jun 2026

Remote

- Mentored by David Africa from the UK AI Safety Institute on research for novel methods for consistency training for alignment of LLMs
- Couathored research paper published at AI4GOOD workshop at ICML and submitted to EMNLP for review

Exponent Fellow

National Museum of Mathematics

Aug 2023 - Apr 2024

New York City, NY

- Selected for a year-long fellowship as a museum docent and math education. Work with leading mathematicians on research and outreach. Led math lessons at public schools.

Quantitative Trading Intern

IMC Trading

Jun 2022 - Aug 2022

Chicago, IL

- Used Pandas and SQL to analyze equity options wholesaling data. Implemented profit-making improvements to IMC's payment for order flow(PFOF) decision-making automated system.
- Attended classes in options, market, and game theory. Competed in algorithmic mock trading. Shadowed traders on all desks

Research Associate

Ferguson Lab, Pritzker School of Molecular Engineering

Jan 2021-Sep 2021

UChicago

- Applied molecular dynamics and active learning ML frameworks to solve inverse design problems in computational drug design.
- Read previous literature, worked independently to gather data and present the findings.

Summer Research Intern

Strand Life Sciences

Jun-Sep 2020

Bangalore, India

- Implemented a within-exome approach to detecting Copy Number Variations (CNVs) to more efficiently analyze large genetic data sets obtained from Next Gen Sequencing(NGS).

ACTIVITIES AND LEADERSHIP

Organizer

Graduate Student Seminar

Sep 2024-Present

Dartmouth

- Organize weekly research talks by graduate students, arrange food for every talk
- Worked with faculty to introduce new programming for the graduate student open house

President, Founding Member

UChicago Applied Math Club

Sep 2020-Present

UChicago

- Networked with leading faculty and grad students to revive and raise funding for a long-defunct applied math club
- Pursued an intensive marketing strategy to get turnout for virtual events: oversaw a 200% increase in turnout for talks and saw larger turnouts over Zoom compared to similar STEM RSOs.

Varsity Debater, Chancellor

Chicago Debate Society

Sep 2019- Present

UChicago, IL

- Compete almost every weekend during the school year. Represented UChicago at the World Universities Debating Championships (WUDC) in 2021.
- Ranked 10th best speaker in North America at North American Debate Championships, and 13th best team at American Parliamentary Nationals
- Serve as Chancellor: in charge of alumni relations and recording team history, and a Training Leader for incoming freshmen debaters.

TEACHING AND OUTREACH

Mentor, Directed Reading Program

Jan 2025-Now

Dartmouth Math Department

Hanover, NH

- Mentored 2 undergraduates on Ergodic Theory (Winter 2026)
- Mentored 1 undergraduate on AI Safety and Alignment Research (Winter 2025)

Graduate Teaching Assistant

Sep 2024-Now

Dartmouth Math Department

Hanover, NH

- Held weekly tutorials for Linear Algebra With Applications (Math 22), Differential Equations (Math 23), Calculus II (Math 8), and Probability (Math 20)

Teaching Assistant

Sep 2021-Jun 2022

UChicago Math Department

Chicago, IL

- Teaching Assistant for first-year introductory calculus course
- Graded proof-based problem sets for Real Analysis I and Abstract Linear Algebra

Debate Coach

Apr-Aug 2021

Indian Schools Debating Society

Chennai, India

- Coached Team India White, a development squad for the Indian national team. Taught specific debate skills and broad-based politics, philosophy and economics knowledge on how the world works

Math Camp Counsellor

Jun-Aug 2020

Young Scholars Programme

Chicago, IL

- Worked with the UChicago Math Department for their annual extracurricular mathematics summer camp. Used the features of Zoom to effectively teach mathematics in an online setting.

PUBLICATIONS AND PREPRINTS

1. T. Camper, D. Giannakis, **R. Kapoor**, and J. Slawinska "Integral Transformation Methods for Spectral Approximation of Koopman Operators" in preparation (2026)
2. S. Gautam, N. Shah, A. Dhoot, B. Maruyama, C. Wei, **R. Kapoor**, R. Sidey, P. Gupta, Z.C. Huang, and D.D. Africa "Consistency Training Along the Transformer Stack" arXiv:2606.05817 (2026)
3. Y. Ma, **R. Kapoor**, B. Sharma, A.P. Liu, and A.L. Ferguson "Computational design of self-assembling peptide chassis materials for synthetic cells" Mol. Syst. Des. Eng. (2022)

CONFERENCES ATTENDED, SEMINAR TALKS

Funded attendee: SLMath Graduate Summer School on Dynamical Systems and AI *IBM Research, July 2026*

The kernel trick: A Functional Analysis perspective, *Dartmouth Graduate Student Seminar, Oct 2025*

An Introduction to Random Matrix Theory, *Dartmouth Graduate Student Seminar, Jan 2025*

A Computability-theoretic Approach to the Kakeya Conjecture, *Dartmouth Graduate Student Seminar, Nov 2024*

Funded attendee, NSF-CBMS Conference on Algorithmic Fractal Dimension, *May 2024*

ACADEMIC HONORS

International Theoretical Physics Olympiad:UChicago representative at 2022 edition

Joint Entrance Exam(JEE Advanced): All India Rank 2715 For admission to IITs, written by 1 million people

KVPY: All India Rank 203, awarded scholarship to pursue further studies in STEM up to PhD level

National Talent Search Examination: National Level Scholar, 1 of 700 chosen out of 1 million in a two-stage process.

Indian National Mathematical Olympiad Training Camp: by invitation after the Regional Math Olympiad. Top 40 in Karnataka state.

SKILLS AND INTERESTS

Languages: English, Hindi, some Sanskrit

Computer Languages: Python(scikit-learn, pandas, mdtraj), R, Unix Shell, SQL

Skills: Quantitative problem-solving, Teaching, Public speaking & Scientific explanation , Scientific literacy

Interests: Formula 1, Mountaineering (summitted Mt. Kilimanjaro!), Coffee brewing