

Anushka Murthy

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Education

- **Stanford University** 2022 – Present
PhD in Mathematics (2022-2023), PhD in Operations Research (2023-present) Stanford, CA
 - Advisors: Ramesh Johari and Irene Lo.
 - Awards: Stanford Data Science Scholarship, NSF Graduate Fellowship, EDGE Fellowship.
 - PhD minor in Economics with specializations in Market Design, Microeconomic Theory, and Econometric Methods for Causal Inference.
 - Selected coursework: Graduate Analysis and Algebra, Stochastic Systems, Optimization, Topics in Social Data, Game Theory, Topics in Market Design.
 - Activities: Dean’s Graduate Student Advisory Council, Stanford Women in Math Mentoring, mentor in Undergraduate Diversity in Research program, violinist in music department.
- **Columbia University School of Engineering and Applied Science** 2018 – 2022
Bachelor of Science in Applied Math New York, NY
 - Graduated *summa cum laude*, GPA: 4.07/4.33.
 - Activities: VP Internal of Columbia SWE, Applied Math Mentor, Violinist at Manhattan School of Music and in Columbia University Orchestra.
 - Selected Math Courses: Graduate Probability, Interacting Particle Systems and Markov Processes, Elliptic PDE, Statistics, Real Analysis, Numerical Methods.
 - Selected CS Courses: Matching Market Algorithms, Complexity Theory, Data Structures, Numerical Methods.

Papers and Interests

Interests: Applied Probability, Market Design, Personalized Learning, A/B Testing, with applications to education and sustainability.

1. *When Does Interference Matter? Decision-Making in Platform Experiments*, R. Johari, H. Li, A. Murthy, G. Weintraub. *arXiv Preprint*.
 - Selected for Stanford Causal Science Center Conference 2024, CODE 2024 at MIT, and INFORMS 2024.
2. *Dynamic Contracting for Payment for Ecosystem Services*, I. Lo and A. Murthy. *Working Paper*.
 - Presented at MSOM 2024.
3. *One-point asymptotics for half-flat ASEP*, E. Dimitrov and A. Murthy. **Annals of Applied Probability**, 34(1B): 1136-1176 (2024).

Industry Experience

- **Amazon** June – September 2025
Applied Scientist Intern Bellevue, WA
 - Designing ML and experimentation methods for the freight marketplace.

Teaching Experience

- **Simons Laufer Mathematical Sciences Institute** June 2023
Teaching Assistant Berkeley, CA
 - Assisted in graduate summer school on "Mathematics and Computer Science of Market Design."
- **Stanford University** 2022 – Present
Course Assistant Stanford, CA

– Courses Taught: Math 18 (Foundations for Calculus), Math 113 (Linear Algebra), MS&E 232H (Game Theory), OIT 272 (Online Marketplaces).

- **Columbia University**

Teaching Assistant

2020 – 2022

New York, NY

– Courses Taught: Computer Science Theory, Modern Analysis, Fourier Analysis, Partial Differential Equations, Linear Algebra, Multivariable Calculus.

- **One-to-One Tutoring, Columbia University**

Tutor

2020 – 2022

New York, NY

– Math tutor for elementary school students, focusing on improving skills and study habits.

Awards and Recognition

- **Stanford Data Science Scholarship** (2024-2026).
- **NSF Graduate Research Fellowship** (2022-2027).
- **Stanford EDGE Doctoral Fellowship** (April 2022).
- **Columbia Provost's Diversity Fellowship** (March 2022).
- **UC Berkeley Chancellor's Fellowship** (February 2022).
- **Dean's List** (All semesters at Columbia).

Skills

- **Languages:** Python, Julia, R, MATLAB, Java, C++.
- **Libraries/Technologies:** NumPy, Matplotlib, Scikit-learn, cvxpy, Pandas.

References

- **Ramesh Johari, Professor of Management Science and Engineering** *Stanford University*
rjohari@stanford.edu
- **Irene Lo, Assistant Professor of Management Science and Engineering** *Stanford University*
ilo@stanford.edu
- **Gabriel Weintraub, Professor of Operations, Information, and Technology** *Stanford University GSB*
gweintra@stanford.edu