

## ACADEMIC APPOINTMENTS

---

### Columbia Business School

Assistant Professor

Starting July '23

### Massachusetts Institute of Technology

Postdoctoral Associate

Sep '22 – June '23

## EDUCATION

---

### Stanford University

**Ph.D. Candidate in Operations Research (Management Science & Engineering)**

June 2022

**Research:** I worked with Prof. Ramesh Johari and Prof. Gabriel Weintraub on the design and optimization of statistical methodology for online marketplaces. I developed methods for experimentation on these platforms, in the presence of interference, using techniques from operations research, causal inference, and economics. I also worked on education applications and utilizing operations research techniques to design accessible education systems.

**Relevant Courses:** Data science, machine learning, linear and convex optimization, stochastic modeling, causal inference, econometrics, market design, game theory

**Awards:** *INFORMS DEI Best Student Paper Award 2022, RMP Jeff McGill Student Paper Award 2021 (2<sup>nd</sup> Place), Best Student Paper Award at ACM EAAMO '21, Dantzig-Lieberman Operations Research Fellowship, MS&E Department Service Award*

### Pomona College

2016

#### Bachelor of Arts in Mathematics

**Thesis:** The Manickam-Miklos-Singhi Conjecture in Combinatorics (*Received Distinctions*)

**Relevant Coursework:** Combinatorics, graph theory, discrete math, abstract algebra, Galois theory

**Awards:** *Llewellyn Bixby Prize for Excellence in Mathematics; Phi Beta Kappa*

### Budapest Semester in Mathematics- Budapest, Hungary (*Received High Honors*)

2015

## PAPERS

---

- “Standardized Tests and Affirmative Action: The Role of Bias and Variance.” (2021)
  - With Nikhil Garg and Faidra Monachau
  - Working paper, under review at *Management Science*.
  - Preliminary version accepted to *ACM Conference in Fairness, Accountability, and Transparency Conference (FAccT)*, 2021
  - INFORMS DEI Best Student Paper Award '22

- Best Paper with a Student Presenter Award at *ACM Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO) '21*.
- “Experimental Design in Two-Sided Platforms: An Analysis of Bias.” (2021)
  - With Ramesh Johari, Inessa Liskovich, and Gabriel Weintraub
  - Forthcoming at *Management Science (MS)*
  - *RMP Jeff McGill Student Paper Award (2021)*, 2<sup>nd</sup> Place
  - Presented in *MSOM Service SIG 2021*
  - Presented in *Conference on Web and Internet Economics (WINE): Spotlights Beyond Wine*
  - Preliminary version presented in *ACM Conference on Economics and Computation (EC '20)*.
- “Interference, Bias, and Variance in Two-Sided Marketplace Experimentation: Guidance for Platforms.” (2021)
  - With Geng Zhao, Ramesh Johari, and Gabriel Weintraub.
  - Accepted to *TheWebConf (WWW) '22*.
  - Presented in *EC '20 Workshop on Design of Online Platforms*.
- “Decision Making using Platform Experiments: Errors Under Interference.”
  - In preparation.
- “Exploration vs. Exploitation in Team Formation.” (2018)
  - With Ramesh Johari, Vijay Kamble, and Anilesh K. Krishnaswamy.
  - Accepted to *Conference on Web and Internet Economics (WINE)*.
- “Novel Characterization and Live Imaging of Schlemm’s Canal Expressing Prox-1.” (2014)
  - With Tan Truong, Young-Kwon Hong, and Lu Chen.
  - *PLoS One*.

## INDUSTRY EXPERIENCE

---

### Vinted

*Research Consultant*

2021-2022

Launched experiments designed to reduce interference bias.

### Common App

*Volunteer Consultant*

2021-2022

Using data science to promote equitable and accessible college education.

### Airbnb

*Data Science Intern*

Jun '19 – Sep '19

Implementing causal inference methods to assess marketplace features.

### Opendoor

*Data Science Intern*

Jun '18 – Sep '18

Implementing causal inference methods to optimize real estate pricing.

### State Street Global Advisors / Worcester Polytechnic Institute

*Math Finance Intern/Researcher*

May '14– Aug '14

Developing liquidity metrics to assess financial portfolio risk.

## TEACHING EXPERIENCE

---

Teaching Assistant for the following classes.

### Stanford University (Graduate Classes)

- Foundations of Data Science, Fall '19, Fall '20, and Fall '21. (Stanford Management Science & Engineering)
- Data Science for Online Marketplaces, Spring '19. (Stanford Graduate School of Business)

### Pomona College (Undergraduate Classes)

- Abstract Algebra
- Operations Research
- Calculus II Honors

## AWARDS AND RECOGNITION

---

- INFORMS DEI Best Student Paper Award (2022)
- INFORMS RMP Jeff McGill Student Paper Award (2021), 2<sup>nd</sup> place
- ACM EAAMO Best Student Paper Award '21
- Dantzig-Lieberman Operations Research Fellowship (Stanford University)
- Management Science & Engineering Department Service Award (Stanford University)
- Llewellyn Bixby Prize for excellence in mathematics (Pomona College)
- Phi Beta Kappa
- National Merit Scholar

## SERVICE AND OUTREACH

---

### Reviewer

- *Management Science*
- *Journal of Causal Inference*
- *WINE*
- *WWW*
- *FAccT*
- *EC*
- *EAAMO*
- EC'21 Operations of People-Centric Systems Workshop

### Conferences, Workshop, and Seminar Organizing

- Session Chair for INFORMS 2020-2023
- AsuFest 2023
- Stanford Research on Algorithms, Incentives, and Networks (RAIN) Seminar

### Service and Outreach

- Senior student mentor at *ACM Economics and Computation (EC '20 and EC '21)*
- Mentor, Stanford Data Science Inclusive Mentoring program
- Stanford MS&E department liaison and student mentor
- Pomona College Math Department liaison

## PRESENTATIONS

---

### “Scaling up Healthcare Interventions using Experimentation”

- INFORMS APS 2023
- AsuFest 2023
- Marketplace Innovation Workshop 2023

### “Platform Experimentation and Decision-Making Under Marketplace Interference”

- INFORMS RMP 2023
- ACM SIGMETRICS Workshop on “Causal Inference for Engineers”
- Airbnb Academic Collaborators Seminar 2023
- Workshop on Mathematical Social Science 2023
- Conference on Artificial Intelligence, Machine Learning, and Business Analytics 2022
- Simons Workshop on Quantifying Uncertainty: Stochastic, Adversarial, and Beyond 2022
- Marketplace Innovation Workshop 2022
- INFORMS Annual Meeting 2021
- Cornell Young Researchers Workshop 2021

### “Interference, Bias, and Variance in Marketplace Experimentation”

- MIT Conference on Digital Experimentation (CODE) 2021.

### “Experimental Design in Two-Sided Platforms: An Analysis of Bias”

- American Causal Inference Conference 2022
- WINE '21: Spotlights Beyond Wine
- Stanford Causal Science Center
- 2021 Conference on Digital Experimentation (CODE)
- INFORMS MSOM SIG Conference 2021
- Marketplace Innovations Workshop (MIW) 2021
- Vinted Data Science Team
- Stanford Data Science Lab
- INFORMS Annual Meeting 2020
- Lyft Data Science Team
- Kellogg-Wharton Operations Management Workshop
- ACM Conference on Economics and Computation (EC) 2020
- Revenue Management and Pricing Live Paper Series
- 2020 Conference on Digital Experimentation (CODE)
- Facebook Core Data Science Seminar
- Stanford Causal Inference Seminar

### “Dropping Standardized Testing for Admissions: Differential Variance and Access”

- INFORMS MSOM Conference 2021

### “Exploration vs. Exploitation in Team Formation”

- Informs Annual Meeting 2020.
- Conference on Web and Internet Economics 2018
- INFORMS Annual Meeting 2018
- Upwork Data Science Seminar
- Stanford Social Algorithms Seminar

## TECHNICAL TOOLS

---

- Python
- R
- SQL

## OTHER EXPERIENCE

---

### **Writer for College Student Blog**

Student Voices, Pomona College

Jan '15 - May '15

### **Research Assistant**

UC Berkeley Vision Sciences- Berkeley, CA

May - Aug '13

### **News Writer**

The Student Life, Pomona College

Aug '12 - May '13