Hannah Q. Li

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EDUCATION

Stanford University
Ph.D. Candidate in Operations Research (Management Science & Engineering)   Expected 2022
Research: I work with Prof. Ramesh Johari and Prof. Gabriel Weintraub on the optimization of online marketplaces. I develop statistical methodology for experimentation on these platforms in the presence of interference. I combine techniques from statistics, causal inference, economics, and operations research to develop theoretical insights for practically motivated problems.
Relevant Coursework: Data science, machine learning, linear and convex optimization, stochastic modeling, causal inference, econometrics, market design, game theory

- *Awards: RMP Jeff McGill Student Paper Award Finalist (2021), 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: Phi Beta Kappa; Llewellyn Bixby Prize for excellence in mathematics

Budapest Semester in Mathematics- Budapest, Hungary (*Received High Honors*)   2015

PUBLICATIONS AND WORKING PAPERS

- "Experimental Design in Two-Sided Platforms: An Analysis of Bias." (2021)
  - With Ramesh Johari, Inessa Liskovich, and Gabriel Weintraub.
  - *Finalist, RMP Jeff McGill Student Paper Award (2021)*
  - *Forthcoming at Management Science (MS)*
  - *Presented in MSOM Service SIG 2021*
  - *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.
  - *Working paper, presented in EC '20 Workshop on Design of Online Platforms.*
- "Decision Making using Platform Experiments: Errors Under Interference."
  - *Working paper.*
- "Standardized Tests and Affirmative Action: The Role of Bias and Variance." (2021)
  - With Nikhil Garg and Faidra Monachau.
  - *Working paper*, preliminary version accepted to *ACM Conference in Fairness, Accountability, and Transparency Conference (FAccT), 2021.*
- "Exploration vs. Exploitation in Team Formation." (2018)
  - With Ramesh Johari, Vijay Kamble, and Anilesh K. Krishnaswamy.
  - *Abstract 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

Common App
Volunteer Consultant   Mar '21-Present
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 – Aug '14
Developing liquidity metrics to assess financial portfolio risk.

TEACHING EXPERIENCE

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

- Finalist in RMP Jeff McGill Student Paper Award (2021)
- 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

Journals, Conferences, and Seminars
- Reviewer for EC'21 Operations of People-Centric Systems Workshop
- Reviewer for *Management Science*
- Session Chair for INFORMS '20 and INFORMS '21
- Organizer for the Stanford Research on Algorithms, Incentives, and Networks Seminar.

Service and Outreach
- Senior student mentor at *ACM Economics and Computer (EC '20 and EC '21)*
- Mentor, Stanford Data Science Inclusive Mentoring program
- Stanford MS&E department liaison and student mentor
- Pomona College Math Dept. Liaison

PRESENTATIONS

"Experimental Design in Two-Sided Platforms: An Analysis of Bias"
- INFORMS Annual Meeting 2021 (Upcoming)
- INFORMS MSOM SIG Conference 2021
- Marketplace Innovations Workshop 2021
- Vinted Data Science Team
- Stanford Data Science Labs
- 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
- Facebook Core Data Science Seminar
- Stanford Causal Inference Seminar (invited)

"Dropping Standardized Testing for Admissions: Differential Variance and Access"
- INFORMS MSOM Conference 2021

"Exploration vs. Exploitation in Team Formation"
- Conference on Web and Internet Economics 2018
- INFORMS Annual Meeting 2018
- Upwork Data Science Seminar
- Stanford Social Algorithms Seminar
- Informs Annual Meeting 2020.

TECHNICAL TOOLS

- Python • C++ • Java • 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