

# YEGANEH ALIMOHAMMADI

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## EDUCATION

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- **Stanford University**

Ph.D. in Management Science & Engineering (Operations Research), *2018–2024*

Advisor: Amin Saberi

Thesis: *Learning from Network Data: Algorithmic Insights into Epidemic Prediction and More*

M.S. in Management Science & Engineering (Operations Research), *2021–2022*

- **Sharif University of Technology, Iran**

B.S. in Computer Engineering and minor in Applied Mathematics, *2014–2018*

## ACADEMIC APPOINTMENTS

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- **University of Southern California**, Marshall School of Business

Assistant Professor in Data Science and Operations, *2025–present*

- **University of California, Berkeley**

UC President's Postdoctoral Fellow, *2024–2025*

Mentor: Christian Borgs

- **Simons Institute for the Theory of Computing**, UC Berkeley

Research Fellow, *Fall 2022*

Program: Graph Limits and Processes on Networks: From Epidemics to Misinformation

## HONORS & AWARDS

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- University of California President's Postdoctoral Fellowship, 2024.

(*2.6% acceptance rate in Engineering*).

- Simons Institute for the Theory of Computing, Research Fellowship, UC Berkeley, 2022.

- Dantzig–Lieberman Operations Research Funds, Stanford University, 2019–2023.

- Myron J. Stolaroff Fellowship, Stanford University, 2021–2022.

- Bronze Medal, International Mathematical Olympiad, 2014.

- Gold Medal, Iranian National Mathematical Olympiad, 2013.

## PUBLICATIONS

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### Refereed Journal Publications

1. Yeganeh Alimohammadi, Christian Borgs, and Amin Saberi. Locality of Random Digraphs on Expanders. *Annals of Probability*, 2023.

2. Yeganeh Alimohammadi, Persi Diaconis, Mohammad Roghani, and Amin Saberi. Sequential Importance Sampling for Estimating Expectations over the Space of Perfect Matchings. *Annals of Applied Probability*, 2023.
3. Yeganeh Alimohammadi, Kirankumar Shiragur, Ramesh Johari, David Scheinker, Kevin Schulman, and Kristan Staudenmayer. Relative-Risk and the Assessment of School Safety in the COVID-19 Pandemic: Schools May Offer Students Shelter from the Storm. *Health Management, Policy, and Innovation* (special issue on COVID-19), 2021.

### **Working Papers Under Review**

1. Yeganeh Alimohammadi, Christian Borgs, Jennifer Chayes, Karissa Huang. Encouraging Agreement, Losing Dissent: Minority Effects in Community Moderation of Social Media Platforms.
2. Yeganeh Alimohammadi, Vahideh Manshadi, Saed Alizamir. Diffusing Traceable Sustainable Practices in Supply Chain Networks: Incentives, Market Distortions, and Interventions.
3. Yeganeh Alimohammadi, Christian Borgs, Remco van der Hofstad, and Amin Saberi. Epidemic Forecasting on Networks: Bridging Local Samples with Global Outcomes. *Operations Research*, major revision.
4. Yeganeh Alimohammadi, Kiana Asgari. How to Measure Differences in Ranking Model? Maximum Likelihood Estimation and Sampling from Mallows Model with Learned Metric. arXiv:2507.08108.
5. Yeganeh Alimohammadi, Ramesh Johari, David Scheinker, Kevin Schulman, and Kristan Staudenmayer. The Impact of COVID-19 Mitigation and Testing on Reopening a U.S. School District.
6. Yeganeh Alimohammadi, Senem Isik, and Amin Saberi. Local Limits of Small-World Networks. arXiv:2501.11226.

### **Refereed Conference Proceedings**

1. Yeganeh Alimohammadi, Luana Ruiz, and Amin Saberi. A Local Graph Limits Perspective on Sampling-Based Graph Neural Networks. *IEEE International Symposium on Information Theory (ISIT'25)*.
2. Yeganeh Alimohammadi, Aranyak Mehta, and Andres Perlroth. Incentive Compatibility in the Auto-bidding World. *ACM Conference on Economics and Computation (EC'23)*.
3. Yeganeh Alimohammadi, Christian Borgs, and Amin Saberi. Algorithms Using Local Graph Features to Predict Epidemics. *ACM-SIAM Symposium on Discrete Algorithms (SODA'22)*.
4. Mohammad Akbarpour, Yeganeh Alimohammadi, Shengwu Li, and Amin Saberi. The Value of Excess Supply in Spatial Matching Markets. *ACM Conference on Economics and Computation (EC'22)*.
5. Yeganeh Alimohammadi, Nima Anari, Kirankumar Shiragur, and Thuy-Duong Vuong. Fractionally Log-Concave and Sector-Stable Polynomials: Counting Planar Matchings and More. *ACM Symposium on Theory of Computing (STOC'21)*.

## INVITED TALKS

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*How to Measure Differences in Ranking Model? Maximum Likelihood Estimation and Sampling from Mallows Model with Learned Metric*

- INFORMS Annual Meeting, Oct. 2025.
- Joint Statistical Meeting, Aug. 2025.
- Simons Laufer Mathematical Sciences Institute (formerly MSRI), May 2025.
- INFORMS Biannual Applied Probability Society Meeting, Jun. 2025.

*Epidemic Prediction and Control: Insights from Network Data*

- Los Angeles Probability Forum, UCLA, Nov. 2025.
- LU-UMN Joint Probability Seminar, May 2025.
- UC Berkeley, Neyman Statistics Seminar, Feb. 2025.
- Columbia University, IEOR Seminar, Jan. 2024.
- University of Chicago, Booth School of Business, Jan. 2024.
- Northwestern University, Kellogg School of Management, Dec. 2023.
- New York University, Stern School of Business, Jan. 2024.
- Cornell University, ORIE Seminar, Jan. 2024.
- University of Southern California, Operations and Data Science Seminar, Jan. 2024.
- University of Michigan, IOE Seminar, Dec. 2023.
- Georgia Institute of Technology, ISyE Seminar, Nov. 2023.
- INFORMS Annual Meeting, Oct. 2023.
- INFORMS Biannual Applied Probability Society Meeting, Jun. 2023.
- University of Chicago Booth, Brown Bag Seminar, May 2023.
- The Fields Institute, Workshop on Algorithms and Models for the Web Graph, **Plenary Speaker**, May 2023.

*Graph Neural Networks: A Local Graph Limit Perspective*

- Simons Institute for the Theory of Computing, UC Berkeley, Aug. 2025.
- INFORMS Annual Meeting, Oct. 2024.

*Incentive Compatibility in the Auto-bidding World*

- Meta, Market Algorithm Group, Mar. 2024.

- INFORMS Annual Meeting, Highlights from EC, Oct. 2023.
- Stanford Institute for Theoretical Economics, Aug. 2023.
- Google Research, Market Algorithms Seminar, Sep. 2022.

#### *Locality of Random Digraphs on Expanders*

- London School of Economics, Statistics Seminar, Mar. 2023.
- Duke Fuqua, Workshop on Operations Research and Data Structures, Nov. 2022.
- Cornell University, ORIE Young Researcher Workshop, Oct. 2022.
- INFORMS Annual Meeting, Oct. 2022.
- Cornell University, Computer Science Theory Seminar, Oct. 2022.
- Simons Institute for the Theory of Computing, UC Berkeley, Sep. 2022.
- London Business School, 21st Annual Trans-Atlantic Doctoral Conference, Mar. 2022.
- Rutgers University, Computer Science Theory Seminar, Feb. 2022.
- Stanford Women in Theory Forum, *Inaugural Meeting*, Oct. 2021.

#### *Network Models for School Reopening during COVID-19*

- INFORMS Healthcare Meeting, Jul. 2023.
- University of Maryland, Brin Mathematics Research Center, Apr. 2023.
- INFORMS Healthcare Meeting, Jul. 2021.

#### *The Value of Excess Supply in Spatial Matching Markets*

- INFORMS Annual Meeting, Oct. 2021.
- London Business School, Operations Research Seminar, Mar. 2021.
- Simons Institute for the Theory of Computing, UC Berkeley, Feb. 2021.
- London School of Economics, Highlights of Algorithms Workshop, Mar. 2021.

## TEACHING EXPERIENCE

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**University of Southern California**, Marshall School of Business

*Instructor*

DSO 576: Algorithmic Thinking with Python, Fall 2025

Core course for the MS in Business Analytics (MSBA) program (class size: 190).

**Stanford University**

*Teaching Assistant*

CS 265: Randomized Algorithms and Probability Methods, Winter 2022

MS&E 235/337: Network Structure and Epidemics, Fall 2020

CS 161: Design and Analysis of Algorithms, Summer 2019

## PROFESSIONAL ACTIVITIES

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### Journal Reviewing

Annals of Probability; Annals of Applied Probability; Operations Research; Management Science; Review of Economic Studies; Math of Operations Research; Computational Statistics and Data Analysis; Computational and Applied Mathematics.

### Conference Program Committee Roles

*Senior Program Committee:* ACM Conference on Economics and Computation (EC) (2026)

*Program Committee:* ML x OR (Workshop as part of NeurIPS 2025);

ACM Conference on Economics and Computation (EC) (2023, 2025);

Conference on Web and Internet Economics (WINE) (2024).

### Seminar Organization

University of Southern California, Operations Management Seminar (2025–present)

Operations Research Student Seminar, *co-founded*, Stanford University (2021–2023).

## INDUSTRY & PUBLIC SECTOR EXPERIENCE

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- **Google Research**

Research Intern, *Summer 2022*

Host: Aranyak Mehta

- **D. E. Shaw & Co.**

Quantitative Research Intern, *Summer 2021*

Host: Sam Lichtenstein

- **Los Angeles Unified School District (LAUSD)**

Research collaborator on COVID-19 mitigation strategies for school reopening, *2020–2021*.

Developed simulation models to evaluate reopening and testing policies for a large K-12 district that led to their implemented reopening strategies in Winter 2021.

## MENTORING AND OUTREACH

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### Student Mentees (not formal advisees)

- **Senem Isik** (Stanford) – research mentee; co-author.

Preprint: “Local Limits of Small-World Networks” (2025), submitted.

- **Kiana Asgari** (Stanford) – research mentee; co-author.

Preprint: “How to Measure Differences in Ranking Model? Maximum Likelihood Estimation and Sampling from Mallows Model with Learned Metric” (2025), submitted.

- **Karissa Huang** (UC Berkeley) – junior collaborator; co-author.

Preprint: “Encouraging Agreement, Losing Dissent: Minority Effects in Community Moderation of Social Media Platforms” (2025).

### Other Mentoring Experiences

- Women in Operations Research and Management Science, INFORMS, 2021–2023.

- Board Member and Mentor in Women in Math Mentoring, Stanford University, 2019–2021.

- MS&E Undergraduate Diversity in Research, Stanford University, 2021.
- Math Directed Reading Program, Stanford University, 2021–2022.
- CS Mentoring Program, Stanford University, 2022.
- Panelist, EC 2025 Job-Market Panel.
- Panelist, SLMath 2025 Job-Market Panel.
- Panelist, INFORMS Annual Meeting, Oct. 2024 Job-Market Panel.