Yeganeh Alimohammadi

Management Science and Engineering
Stanford University
✉ *yeganeh@stanford.edu*
My Webpage
Github *Linkedin*

Academic Positions

University of Southern California.

2025- Assistant Professor in Data Science and Operations
Marshall School of Business

University of California Berkeley.

2024-2025 UC President's Postdoctoral Fellowship
Mentor: Christian Borgs

Simons Institute for the Theory of Computing.

Fall 2022 Research Fellow
Prorgam: Graph Limits and Processes on Networks: From Epidemics to Misinformation

Education

Stanford University.

2018–2024 *Ph.D., Management Science and Engineering (Operations Research)*
Advisor: Amin Saberi
Thesis: *Learning from Network Data: Algorithmic Insights into Epidemic Prediction and More*

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

Sharif University of Technology, Iran.

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

Research Interests

My research centers on learning and decision-making using network data. Using tools from applied probability, algorithms, and the theory of graph limits, I aim to develop practical solutions for pressing real-world challenges.

Publications

Published Papers – Journals

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.

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

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

Yeganeh Alimohammadi, Christian Borgs, Remco van der Hofstad, and Amin Saberi, *Epidemic Forecasting on Networks: Bridging Local Samples with Global Outcomes*,
Major revision, **Operations Research**.

Yeganeh Alimohammadi, Aranyak Mehta, and Andres Perlroth, *Incentive Compatibility in the Auto-bidding World*,
Major revision, **Management Science** (extended abstract appeared in ACM EC'23).

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*,
Submitted.

Yeganeh Alimohammadi, Luana Ruiz, and Amin Saberi, *A Local Graph Limits Perspective on Sampling-Based Graph Neural Networks*,
Submitted.

Yeganeh Alimohammadi, Senem Isik, and Amin Saberi, *Local Limits of Small-World Networks*,
Submitted.

Published Papers – Conference Proceedings

Yeganeh Alimohammadi, Aranyak Mehta, and Andres Perlroth, *Incentive Compatibility in the Auto-bidding World*,
ACM Conference on Economics and Computation **(EC'23)**.

Yeganeh Alimohammadi, Christian Borgs, and Amin Saberi, *Algorithms Using Local Graph Features to Predict Epidemics*,
ACM-SIAM Symposium on Discrete Algorithms **(SODA'22)**.

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)**.

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)**.

Industry Experience

Summer 2022 **Google**, *Research Intern*
Host: Aranyak Mehta
Project: Incentive Compatibility in the Auto-bidding World

Summer 2021 **DE Shaw & Co.**, *Quantitative Analyst Intern*
Host: Sam Lichtenstein
Project: Predicting Brokers Behavior in the Futures Market Using Advanced Time-Series Analysis and Statistical Learning Techniques

Talks

Graph Neural Networks: A Local Graph Limit Perspective.
Oct. 2024 INFORMS Annual Meeting, (*Invited Speaker*)

Epidemic Prediction and Control: Insights from Network Data.
Jan. 2024 University of Southern California, Operations and Data Science Seminar, (*Invited Speaker*)
Jan. 2024 Columbia University, (*Invited Speaker*)
Jan. 2024 Unicersity of Chicago, Booth School of Business, (*Invited Speaker*)
Jan. 2024 New York University, Stern School of Business, (*Invited Speaker*)
Jan. 2024 Cornell University, (*Invited Speaker*)

Dec. 2023 University of Michigan, (*Invited Speaker*)
Nov. 2023 Georgia Institute of Technology, (*Invited Speaker*)
Oct. 2023 INFORMS Annual Meeting, (*Invited Speaker*)
Jul. 2023 ACM Economics and Computation, **(*Rising Star*)**
Jun. 2023 INFORMS Biannual Applied Probability Society Meeting
May 2023 University of Chicago Booth, Brown Bag Seminar, (*Invited Speaker*)
May 2023 The Fields Institute for Research in Mathematical Sciences, Workshop on Algorithms and Models for the Web Graph, **(*Plenary Speaker*)**
Incentive Compatibility in the Auto bidding World.
Aug. 2023 Stanford Institute for Theoretical Economics, (*Invited Speaker*)
Jul. 2023 ACM Economics and Computation, (*Conference Talk*)
Feb. 2023 Stanford Theory Seminar
Sep. 2022 Google Research, Market Algorithm Seminar
A Few Local Samples to Predict Epidemics on Networks.
Mar. 2023 London School of Economics, Statistics Seminar, (*Invited Speaker*)
Nov. 2022 Duke Fuqua, Workshop on Operations Research and Data Structures, (*Invited Speaker*)
Oct. 2022 Cornell University, ORIE Young Researcher Workshop, (*Invited Speaker*)
Oct. 2022 INFORMS Annual Meeting
Oct. 2022 Cornell University, Computer Science Theory Seminar, (*Invited Speaker*)
Sep. 2022 Simons Institute for the Theory of Computing, UC Berkeley, (*Invited Speaker*)
Mar. 2022 21st Annual Trans-Atlantic Doctoral Conference, London School of Business, (*Invited Speaker*)
Feb. 2022 Rutgers University, Computer Science Theory Seminar, (*Invited Speaker*)
Jan. 2022 ACM-SIAM Symposium on Discrete Algorithms, (*Conference Talk*)
Oct. 2021 Stanford Women in Theory Forum Inaugural Meeting, (*Invited Speaker*)
Locality of Random Digraphs on Expanders.
Oct. 2022 Simons Institute for the Theory of Computing, UC Berkeley
Nov. 2020 Stanford Theory Lunch
The Value of Excess Supply in Spatial Matching Markets.
Jul. 2022 ACM Conference on Economics and Computation, (*Conference Talk*)
Oct. 2021 INFORMS Annual Meeting, (*Invited Speaker*)
Mar. 2021 London School of Economics, Highlights of Algorithms
Mar. 2021 London Business School, Operations Research Seminar, (*Invited Speaker*)
Feb. 2021 Simons Institute for the Theory of Computing, UC Berkeley, (*Invited Speaker*)
Network Models for School Reopening during COVID-19.
Jul. 2023 INFORMS Healthcare Meeting, (*Invited Speaker*)
Apr. 2023 Brin Mathematics Research Center, University of Maryland, (*Invited Speaker*)
Jul. 2021 INFORMS Healthcare Meeting, (*Invited Speaker*)

Honors & Awards

2024 ***University of California President's Postdoctoral Fellowship***.
2019-2023 ***Dantzig-Lieberman Operations Research Funds***, Stanford University.
2022 ***Simons Institute for the Theory of Computing***, *Research Fellowship*, UC Berkeley.
2021-2022 ***Myron J. Stolaroff Fellowship***, Stanford University.
2014 ***Bronze Medal*** in the 55th International Mathematical Olympiad.

2013 ***Gold Medal*** in the 32th Iranian National Mathematical Olympiad.

Teaching Experiences

Winter 2022 **CS 265: Randomized Algorithms and Probability Methods**, Stanford University,
Running in-class problem sessions.
Designing and grading homework.
Running 2 hours of office hours per week.

Fall 2020 **MS&E 235/337: Network Structure and Epidemics**, *Stanford University*,
Reading and commenting on the final paper.
Designing and grading homework.
Running 1.5 hours of office hours per week.

Summer 2019 **CS 161: Design and Analysis of Algorithms**, Stanford University,
Proof-reading and grading homework and final exam of 100 undergraduates.
Running 2 hours of office hours per week.

Service

Reviewer **Journals**, *Annals of Applied Probability, Computational and Applied Mathematics, Operations Research, Management Science, Review of Economics Studies*.

Conferences, *ACM Symposium on Theory of Computing (2020), Symposium on Discrete Algorithms (2021, 2022, 2023, 2024), Innovations in Theoretical Computer Science (2022), European Symposium on Algorithms (2019, 2022), World Wide Web (2022)*.

Program Committee **Conference on Economics and Computation (EC)**, *2023*,
In charge of reviewing several papers in applied modeling and theory tracks.

Conference on Web and Internet Economic (WINE), *2024*.

Seminar Organization **MS&E Operations Research Student Seminar**, *2021-2022*,
Co-founding a student seminar in operations research at Stanford.

Mentoring and Outreach

2021–present **Mentor, Women in Operations Research and Management Science**, *INFORMS*,
Supported master's students from underrepresented minorities in their academic and professional paths.

2021 **Mentor, MS&E Undergraduate Diversity in Research**, *Stanford University*,
Guided undergraduate students from diverse backgrounds in research on epidemics and health policy.

2019–2021 **Board Member and Mentor, Women in Math Mentoring**, *Stanford University*,
Organized over 10 events fostering a supportive community for women in computational sciences. Mentored students for over 3 years, with several now pursuing PhD programs. Actively participated in initiatives aimed at bridging the gender gap in computational sciences.

2021–2022 **Mentor, Math Directed Reading Program**, *Stanford University*,
Guided undergraduates in exploring linear algebra applications in algorithm design.

2022 **Mentor, CS Mentoring Program**, *Stanford University*,
Assisted undergraduate students from diverse backgrounds in navigating computer science.

2020–2021 **Board Member, Persian Student Association**, *Stanford University*,
Facilitated cultural integration through events while supporting Iranian students.

2014-2016 **Co-founder, Math Magazine for Female High School Students**, Iran,
Launched a monthly publication aiming to inspire and support female high school students in pursuing STEM. Featured accessible math puzzles, research questions, and interviews with accomplished women in science to make STEM fields more relatable and approachable.