Mohammad Fazel-Zarandi

CONTACT INFORMATION	MIT Sloan School of Management Massachusetts Institute of Technology Cambridge, MA	*Website: http://mitmgmtfaculty.mit.edu/mzarandi* *Email:* fazel@mit.edu

ACADEMIC POSITION

MIT Sloan School of Management	July 2018 - present
Senior Lecturer and Research Scientist	
Yale School of Management	Sept. 2016 - June 2018
Postdoctoral Associate	

EDUCATION

Rotman School of Management, University of Toronto, Canada	2016
Ph.D., Operations Management	
Department of Mechanical and Industrial Engineering, University of Toronto, Canada	2010
M.S., Industrial Engineering	
Department of Industrial Engineering, Amirkabir University of Technology, Iran	2008
B.S., Industrial Engineering	

RESEARCH INTERESTS

Analytics, Machine Learning, Optimization, Public Sector Operations

HONORS & AWARDS

MIT Sloan School Teacher of the Year	2025
Frank E. Perkins Award for Excellence in Graduate Advising	2025
Selected by the graduating MBA Class to deliver the MIT Sloan Last Lecture	2025
Best Paper Award, *Risk Analysis*	2024
MIT Sloan School Teacher of the Year	2024
MIT Sloan Outstanding Teacher Award	2023
MIT Graduate Teaching Award	2023

PUBLICATIONS

1. "Early Detection of Opioid Over-Procurement: A Machine Learning Approach," with D. Bertsimas and P. Petridis, under 3rd round of review at *M&SOM*, 2025.

2. "Why did US urban homicide spike in 2020? A cross-sectional data analysis for the largest American cities" with A. Barnett, *Risk Analysis*, 44(7), 1616-1629, 2024.

   - **Risk Analysis Best Paper Award**, recognizing the publication with "the most significant impact on the theory or practice of risk analysis" among all articles published in 2024.

3. "Integrating Machine Learning into Immigration Enforcement: Optimizing Decisions through Data" with D. Bertsimas, under review at *PNAS Nexus*, 2024.

4. "Can Firms Benefit from Competition?," with I. Horstmann and F. Mathewson, *International Journal of Industrial Organization*, 76, 102740, 2021.

5. "Almost Robust Discrete Optimization," with O. Baron, O. Berman, V. Roshanaei, *European Journal of Operational Research*, 276(2), 451-465, 2020.

6. "Truthful Cheap Talk: Why Operational Flexibility May Lead to Truthful Communication," with O. Berman and D. Krass, *Management Science*, 65(4), 1624-1641, 2019.

7. "Approximating the First-Come, First-Served Stochastic Matching Model with Ohm's Law," with E. Kaplan, *Operations Research*, 66(5), 1423-1432, 2018.

8. "The Number of Undocumented Immigrants in the United States: Estimates Based on Demographic Modeling with Data from 1990-2016," with E. Kaplan and J. Feinstein, *PLOS ONE*, 13(9): e0201193, 2018.

9. "Solving a Stochastic Facility Location/Fleet Management Problem with Logic-Based Benders Decomposition," with O. Berman and J.C. Beck, *IIE Transactions*, 45(8), 896-911, 2013.

10. "Using Logic-Based Benders Decomposition to Solve the Capacity and Distance Constrained Plant Location Problem," with J.C. Beck, *INFORMS Journal on Computing*, 399-415, 2012.

11. "Solving a location-allocation problem with logic-based Benders' decomposition." with J.C. Beck, *Proceedings of the International Conference on Principles and Practice of Constraint Programming*, 344-351, 2009.

PAPERS IN
PREPARATION

12 "Beyond Single-Cycle Prediction: Dynamic Modeling of IVF Patient Journeys," with S. Dong.

13 "Optimal Scheduling of Circular Container Flows in Drayage Operations," with K. Hu and R. Levi.

14 "Interpretable Machine Learning for Policy Analysis: The Case of National Immigration Policy," with D. Bertsimas.

TEACHING
EXPERIENCE

MIT Sloan School of Management

• Analytics of Operations Management	Fall 2021, 2022, 2023, 2024
• System Optimization and Analysis	Summer 2023, 2024
• Stochastic Models in Business Analytics	Fall 2021,2022, 2023, 2024
• Statistical Thinking and Data Analysis	Spring 2019, 2020, 2021, 2022, 2023
• Engineering Statistics and Data Science	Summer 2019

Yale School of Management

• Revenue Management	Spring 2018
• Supply Chain Management	Spring 2017, Fall 2017

Rotman School of Management

• Operations Management	Fall 2015

Op-Eds

- " Prior estimates of undocumented immigrants in the US were way off," *The Hill.*

- "How many undocumented immigrants there really are, and why the number matters," *New York Daily News.*

Other coverage

- *Boston Globe*: "Undocumented population is twice as large as previously thought."
- *Los Angeles Times*: "Number of immigrants in U.S. illegally could be double the widely accepted estimates, study suggests."
- *Bloomberg*: "MIT-Yale Study Doubles Estimates of U.S. Undocumented Immigrants."
- *New York Times*: "Trump's Statistics About Undocumented Immigrants Are Questioned by Experts."
- *Fox News*: "Number of illegal immigrants in US may be twice what's reported: Yale-MIT study."
- *The Hill*: "Yale, MIT study: 22 million, not 11 million, undocumented immigrants in US."
- *Politico*: "New study estimates 22M undocumented immigrants reside in the U.S."
- *Daily Mail*: "Study finds there are over 22million undocumented immigrants in the US - more than double previous estimate."
- *Washington Post*: "President Trump tweets nonsensical figures on illegal immigration."
- *NPR*: "Yale-MIT study suggests number of undocumented immigrants may be double earlier estimates, we discuss methodology."
- *Mother Jones*: "A Study Says the Undocumented Population May Be Twice as Big as We Thought. Be Skeptical."
- *National Review*: "Yale Study: Twice as Many Undocumented Immigrants as Previously Thought in U.S."

- Sloan School of Management, Massachusetts Institute of Technology
- Operations Research Center, Massachusetts Institute of Technology
- Yale School of Management, Yale University
- Heinz College of Information Systems and Public Policy, Carnegie Mellon University
- School of Public and International Affairs, Princeton University
- H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology
- Naveen Jindal School of Management, University of Texas at Dallas
- Rotman School of Management, University of Toronto
- Ivey Business School, Western University