Alireza Amanihamedani

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Education

- *Doctor of Philosophy,* Management Science & Operations Research
  London Business School, 2020-Present
  Advisor: Prof. Ali Aouad
  Thesis title: Dynamic Optimization of Modern Marketplaces

- *Master of Research,* Management Science & Operations Research
  London Business School, 2020-2022

- *Bachelor of Science,* Computer Software Engineering
  Minor: Mathematics
  Sharif University of Technology, 2014 - 2019

Research Papers

1. *Adaptive Approximation Schemes for Matching Queues*, with Ali Aouad and Amin Saberi, submitted to **Operations Research**, available online.

   - The conference version appeard in the 57-th ACM Symposium on Theory of Computing (**STOC'25**)

2. *Spatial Matching under Multihoming*, with Ali Aouad and Daniel Freund, **Operations Research** (major revision), available online.

3. *Improved Approximations for Stationary Bipartite Matching: Beyond Probabilistic Independence*, with Ali Aouad, Tristan Pollner, and Amin Saberi, in submission to **Mathematics of Operations Research**, available online.

4. *Governance of Social Welfare in Networked Markets*, with Fazli, **IEEE Transactions on Computational Social Systems**, available online.

5. *On the Maximum Order of Induced Paths and Induced Forests in Regular Graphs*, with Akbari, Mousavi, Nikpey, Sheybani, *Working paper*, available online.

Work in Progress

6. *Stationary Bipartite Matching with Stochastic Rewards*, with Ali Aouad and Amin Saberi, *in preparation.*

7. *Learning a Choice Model for Bundles via Neural Networks*, with Ali Aouad, Vincent Auriau, and Antoine Desir.

8. *Bayesian Learning in Online Stochastic Matching*, with Thomas Kesselheim and Amin Saberi.

9. *Curbing Cherry-picking through Priority Dispatch*, with Jiayu (Kamessi) Zhao.

Research Experience

- **Research Internship, Data Analytics Lab, ETH Zurich**   Summer 2018
  - Working on the connections between distributionally robust optimization, stochastic gradient descent, and deep learning

- **Research Internship, School of Computing, National University of Singapore**   Summer 2017
  - Working on semantic verification of programming languages

| **Teaching Experience** | • **Imperial College Business School** |
| | – Teaching assistant: Data Wrangling and Visualization |

• **London Business School**

   – Teaching assistant: Decision Analytics and Modeling, Applied Statistics, Data Science for Finance, Decision and Risk Analysis, Data Analytics for Management, Business Analytics

• **Sharif Unievrsity of Technology**

   – Teaching assistant: Discrete Structures, Data Structures Design, Stochastic Processes, Engineering Probability and Statistics, Design of Algorithms, Data Mining

• **Iranian Young Scholars Club**

   – National Olympiad in Informatics Instructor in several high schools and Young Scholars Club

Industry Experience

• **Data scientist, Cafe Bazaar Company**   Feb. 2020 - August 2020

   – On sponsored search auctions of CafeBazaar app marketplace

   – CafeBazaar is an Android app-store with more than 40 million users.

• **Quantitative analyst, Tosan Ofogh Hezareh**   Sep. 2019 - Jan. 2020

   – On stock price prediction with deep neural networks

   – Tosan Ofogh Hezareh is an investment management company that combines data-driven approaches with domain expertise.

• **Research intern, Cafe Bazaar Company**   Feb. 2019 - July 2019

   – On data-driven pricing in Divar online marketplace

   – Divar is an Iranian ads and E-commerce mobile app with more than 50 million users.

Honors and Awards

• Kavit Handa PhD Fellowship Award (2025-2026)

• Ph.D. Fellowship, London Business School (2020-2025)

• Bronze Medal in 23rd Iranian National Olympiad in Informatics, Tehran, Iran, September 2013

Invited Presentations

• Adaptive Approximation Schemes for Matching Queues

   – UK Workshop for Economics and Computation   June 2025

   – Canadian Operational Research Society Annual Meeting   June 2025

   – Tenth Marketplace Innovation Workshop   May 2025

   – University of Bonn Research Seminar on Algorithms and Complexity   May 2025

   – From Matching to Market. A Tale of Mathematics, Economics and Computer Science, Institut d'Etudes Scienfitiques, Cargèse,   May 2025

   – LSE Seminar on Combinatorics, Games and Optimisation   April 2025

   – Banff workshop on dynamic allocation and matching   Mar 2025

   – Swiss TCS winter school   Jan 2025

– London Business School OM seminar	May 2024

- Spatial Matching under Multihoming

– CIRM Conference "From matchings to markets"	Dec. 2023
– INFORMS Annual Meeting	Oct. 2023
– INFORMS Revenue Management & Pricing Conference	July 2023
– INFORMS Applied Probability Society Meeting	June 2023
– Eighth Marketplace Innovation Workshop (MIW)	May 2023
– INFORMS Annual Meeting	Oct. 2022

Skills Programming Languages: C/C++ and STL, Java, R, Python, TensorFlow, PyTorch, Spark, LaTeX, Stata, Visual Basic, HTML.

Languages Persian (Native), English (Fluent),
French (Intermediate)

References

- **Prof. Ali Aouad**
  Sloan School of Management
  Massachusetts Institute of Technology
  maouad@mit.edu

- **Prof. Amin Saberi**
  Department of Management Science and Engineering
  Stanford University
  saberi@stanford.edu

- **Prof. Daniel Freund**
  Sloan School of Management
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