Alireza Amanihamedani

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Education

- *Doctor of Philosophy,* Management Science & Operations Research
  London Business School, 2020-2026 (expected)
  Advisor: Prof. Ali Aouad
  Thesis: "Operations of Modern Marketplaces:
           A Tale of Optimization, Learning, & Incentives"

- *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. *Near-optimal Adaptive Policies for Dynamic Matching Markets*, 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. *Stationary Bipartite Matching with Stochastic Rewards*, with Ali Aouad and Amin Saberi, *draft available upon request*.

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

6. *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

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.

Honors and Awards

- **Google PhD Fellowship in "Algorithms and Optimization"** 2025
- Kavit Handa PhD Fellowship Award (2025-2026)
- Fully funded attendance, NUS Next-Gen Scholar's Symposium 2025
- Ph.D. Fellowship, London Business School (2020-2025)
- Bronze Medal in 23rd Iranian National Olympiad in Informatics (2013)

Research Experience	• **Research Internship, Data Analytics Lab, ETH Zurich** Summer 2018

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  – 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 University 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.

Invited Presentations

• Adaptive Approximation Schemes for Matching Queues

  – National University of Singapore (Next-Gen Scholar's Symp.) Sep 2025

  – European Technology, Operations, & Management Seminar Sep 2025

  – ACM Symposium on Theory of Computing July 2025

  – 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 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)

Service Reviewer for *Operations Research Letters*, *European Symposium on Algorithms* (ESA).

References

- **Prof. Ali Aouad**
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  Massachusetts Institute of Technology
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- **Prof. Amin Saberi**
  Management Science & Engineering Dept.
  Stanford University
  saberi@stanford.edu

- **Prof. Daniel Freund**
  Sloan School of Management
  Massachusetts Institute of Technology
  dfreund@mit.edu

- **Prof. Neil Walton**
  Operations Management Department
  Durham University
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