

# Mohammad Reza Aminian

## Curriculum Vitae/Resume

The University of Chicago, Booth School of Business

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5807 S Woodlawn Ave, Chicago, IL 60637

### Research Interests

Algorithms, Game Theory, Learning Theory, Optimization

### Education

2021 - Present **Ph.D. in Business: Management Sciences / Operations Management,**  
*The University of Chicago, Booth School of Business, Chicago, IL, USA*

Advisor: Prof. Rad Niazadeh

Expected Graduation Date: July 2026

2018 - 2021 **B.S. in Computer Science,** *Sharif University of Technology, Tehran, Iran.*

2016 - 2021 **B.S. in Electrical Engineering,** *Sharif University of Technology, Tehran, Iran.*

### Selected Honors and Awards (since 2012)

2021 - 2023 **K.D.M. Fellowship Award,** *The University of Chicago, Booth School of Business*

2021 - 2027 **Booth Doctoral Fellowship Award,** *The University of Chicago, Booth School of Business*

2019 **Top Second Prize Winner at International Mathematics Competition for university students,** *Bulgaria*

2016 **Honorary admission for Bachelor of Electrical Engineering,** *Sharif University of Technology, Tehran, Iran*

2016 **Silver medalist at 57th International Mathematical Olympiad (IMO), and the top mark of the Iranian team,** *Hong Kong*

2015 **Gold medalist at 33rd National Mathematical Olympiad,** *Iran*

2014 **Silver medalist at International Mathematics Competition (KIMC),** *South Korea*

2014 **Second Runner up Group prize at International Mathematics Competition (KIMC),** *South Korea*

2014 **Second Runner up Team prize at International Mathematics Competition (KIMC),** *South Korea*

2014 **Silver medalist at 32nd National Mathematical Olympiad,** *Iran*

2014 **Gold medalist at 15th National Mathematics Competition (KIMC),** *Iran*

2014 **Membership of National Elite Foundation,** *Iran*

2013 **Selected as a member of the Iranian Team at International Zhaitykov Olympiad (IZHO),** *Iran*

2013 **Gold medalist at 14th National Mathematics Competition (BIMC),** *Iran*

2013 **Gold medalist at 3rd Mathematical Olympiad of Iranian Teenagers,** *Iran*

2012 **Merit medalist at International Mathematics Competition (TAIMC),** *Taiwan*

2012 **Gold medalist at 13th National Mathematics Competition (TAIMC),** *Iran*

## Research Experience

### 2022 - Order Consolidation

Present Finding an approximation algorithm for order consolidation with a tight competitive ratio  
Co-authors: Prof. Will Ma (Columbia GSB), Prof. Linwei Xin (Chicago Booth)

### 2021 - Fair Markovian Search

Present Incorporating demographic parity fairness notion in different aspects and variations of the sequential search problem, SSRN: 4347447

Co-authors: Prof. Vahideh Manshadi (Yale SOM), Prof. Rad Niazadeh (Chicago Booth)

### 2020 - 2021 Research Assistant at the *Sharif University of Technology, Tehran, Iran.*

Graph Auto-Encoder with capability of reconstructing any weighted adjacency matrix

Supervisor: Prof. Saber Saleh Kaleybar

### 2019 Research Assistant at the *Sharif University of Technology, Tehran, Iran.*

Finding the maximum flow spanning tree when each node has a limitation on the sum of the power usages of its descendants on the spanning tree divided by its degree

Supervisor: Prof. Saber Saleh Kaleybar

### 2017 Research Assistant at *Ambient Intelligence Research Lab (AIR Lab), Sharif University of Technology, Tehran, Iran.*

Signal Processing on the EEG data

Supervisor: Prof. Hamid K. Aghajan

## Teaching and Work Experience

Aut. 2022 T.A. for the Linear Programmig Ph.D. course at Chicago Booth

Sum. 2019 Management of Electrical Power Distribution Networks, Internship

2015 - 2021 Math Olympiad Teacher and Tutor

## Invited Talks

Aut. 2022 Fair Markovian Search, *Informis 22*, Indianapolis, IN, USA

## Languages

**Human** Persian: Native, **English**: Advanced, **Arabic**: Intermediate, **Turkish**: Intermediate

**Computer** Matlab, Python, R, Java, C++, C,  $\text{\LaTeX}$

## Extracurricular Activities

Swimming, Hiking, Cycling, Table Tennis, Ecotourism, Watching Movie and Anime

## Selected Courses

**Graduate** Market Design, Large Scale Optimization, Learning and Game Theory, Supply Chain, Dynamic Programming, Econometrics 2 and 3, Online Optimization 1 and 2, Approximation Algorithms, Stochastic Processes, Linear Programming, Advanced Microeconomics Analysis, Microeconomics 2 and 3, Graph Representation Learning, Deep Learning, Machine Learning, Causal Inference, Distributed Systems, Data Networks, Principles of Entrepreneurship, Convex Optimization 2, Queuing Theory (Both Sharif and Booth)

**Under Graduate** Artificial Intelligence, Introduction to Machine Learning, Graph Theory, Linear Algebra, Design Algorithms, Convex Optimization 1, Stochastic Processes, Probability and Statistics, Data Structures, Automata and Languages Theory, Numerical Analysis 1 and 2, Math Logic, Introduction and Advanced Programming, Math Analysis, Discrete Math, Differential Equations, Principles of Economy, Combinatorics