

---

# Arman Rouhani

a.rouhani@maastrichtuniversity.nl ■ arman.rouhani.gm@gmail.com  
armanrhn.github.io ■ www.linkedin.com/in/arman-rouhani  
Maastricht, The Netherlands

## Education

### Maastricht University (UM)

Ph.D. Candidate

Maastricht, The Netherlands

September 2021-Present

#### Projects:

Approximate Mechanism Design Without Money for Facility Location Problem

An Improved Bound For the Price of Anarchy for Related Machine Scheduling

Fixed Order Scheduling with the Minimum Number of Machines

Santa Claus on a Budget

**Projects Domain:** Optimization, Algorithmic Game Theory, Operations Research

**Supervisor:** Prof. Tjark Vredeveld, Dr. André Berger

---

### Institute for Advanced Studies in Basic Sciences (IASBS)

M.Sc. (Master of Science) in Computer Science

Zanjan, Iran

2018-2021

**GPA:** 19.49/20.00, total 37 credits completed, class rank: 3 of 14

**Thesis Title:** Path Planning with Objectives Minimum Length and Maximum Clearance

**Supervisor:** Dr. Mansoor Davoodi Monfared

**Relevant Courses:** Advanced Algorithms, Approximation Algorithms, Computational Geometry, and Robot Motion Planning

---

### Institute for Advanced Studies in Basic Sciences (IASBS)

B.Sc. (Bachelor of Science) in Information Technology Engineering

Zanjan, Iran

2014-2018

**GPA:** 18.21/20.00, total 210 credits completed, class rank: 3 of 46

**Thesis Title:** Persian Word Sense Disambiguation Based on Expert Systems

**Supervisor:** Dr. Mansoor Davoodi Monfared

**Relevant Courses:** Data Structures, Discrete Mathematics, Operations Research, and Probability & Statistics

## Publications

#### Journals:

- Berger, A., Rouhani, A., and Schröder, M. (2024). An improved bound for the price of anarchy for related machine scheduling. arXiv preprint arXiv:2401.05740. Submitted to the Discrete Optimization journal.

#### Book Chapters:

- Davoodi, M., Rouhani, A., Sanisales, M. (2020). Path Planning with Objectives Minimum Length and Maximum Clearance. In Topics in Theoretical Computer Science: Third IFIP WG 1.8 International Conference, TTCS 2020, Tehran, Iran, July 1-2, 2020, Proceedings (Vol. 12281, p. 101). Springer Nature.

## Teaching Experience

---

### Tutor:

- **Java Programming** (2021, 2022, 2023, 2024), Maastricht University, Maastricht, Netherlands
  - Dr. André Berger, School of Business and Economics
- **Operations Management** (2022, 2024), Maastricht University, Maastricht, Netherlands
  - Dr. Christof Defryn, School of Business and Economics
- **Operations and Supply Chain Management** (2023), Maastricht University, Maastricht, Netherlands
  - Dr. Lars Rohwedder, School of Business and Economics
- **Quantitative Methods III** (2022), Maastricht University, Maastricht, Netherlands
  - Prof. Dr. Ir CPM van Hoesel, School of Business and Economics

### Teaching Assistant:

- **Algorithm Design** (2018 - 2020), IASBS, Zanzan, Iran
  - Dr. Mansoor Davoodi Monfared, Department of Computer Sciences and Information Technology
- **Data Structures** (2018 - 2020;), IASBS, Zanzan, Iran
  - Dr. Mansoor Davoodi Monfared, Department of Computer Sciences and Information Technology
- **Artificial Intelligence** (2017), IASBS, Zanzan, Iran
  - Dr. Parvin Razzaghi, Department of Computer Sciences and Information Technology
- **Data Structures** (2015), IASBS, Zanzan, Iran
  - Dr. Mehdi Khosravian, Department of Computer Sciences and Information Technology

## Skills

---

**Languages:** English (Fluent), Persian (Native Speaker), Azeri (Native Speaker), Dutch (A1)

**Programming Languages:** Python, C++, Java, C#, JavaScript, PHP, Erlang

**Application Software:** MATLAB, Unity, Blender

**Databases:** SQL, NoSQL

## Research Interests

---

- |                              |                            |
|------------------------------|----------------------------|
| - Algorithmic Game Theory    | - Approximation Algorithms |
| - Combinatorial Optimization | - Operations Research      |
| - Game Theory                | - Computational Complexity |

## Conferences and Schools

---

- The 17th International Symposium on Algorithmic Game Theory (SAGT) - September 2024 (Amsterdam, The Netherlands)
  - Paper entitled "An Improved Bound for the Price of Anarchy in Related Machine Scheduling" presented at SAGT
- 16th Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP) - June 2024 (Kolding, Denmark)
  - Paper entitled "Fixed-Order Scheduling with Deadlines and Minimum Number of Machines" presented at MAPSP
- 49th Conference on the Mathematics of Operations Research - January 2024 (Soesterberg, The Netherlands)
  - Paper entitled "An Improved Bound for the Price of Anarchy in Related Machine Scheduling" presented at LNMB
- Dutch Seminar on Optimization - November 2023 (Paper talk given; Maastricht, The Netherlands)
- 13th Day on Computational Game Theory - June 2023 (Amsterdam, The Netherlands)
- 48th Conference on the Mathematics of Operations Research - January 2023 (Soesterberg, The Netherlands)
- ALGO conference - September 2022 (Potsdam, Germany)

- ALOP Autumn School on Bilevel Optimization - October 2020 (Online; Zanzan, Iran)
- The 32nd Canadian Conference in Computational Geometry (CCCG) - August 2020 (Online; Zanzan, Iran)
- The Third IFIP International Conference on Topics in Theoretical Computer Science (TTCS) - July 2020, Tehran, Iran
  - Paper entitled "Path Planning with Objectives Minimum Length and Maximum Clearance" presented at TTCS
- The International Conference on Contemporary Issues In Data Science (CIDAS) - March 2019, Zanzan, Iran
- The 11th Winter School on Computational Geometry (WSCG) - February 2019, Tehran, Iran
- The 4th International Conference on Nonlinear Analysis and Optimization - June 2018, Zanzan, Iran

## Extracurricular and Volunteer Experience

---

### **Robotics and Computational Geometry Research Laboratory (RoboCG), 2018-2019, Zanzan, Iran**

RoboCG strives to be a leading developer of mathematical tools and algorithms for computational geometry and motion planning of robots, visualization, simulation, optimization, and theoretical analysis of algorithms.

-Key Responsibilities: Scientific presentations and organizing weekly sessions

-Directors: Dr. Bahram Sadeghi Bigham and Dr. Mansoor Davoodi Monfared

### **AvaNama, 2017-Present**

AvaNama is a software for translating text and voice to Persian Sign Language, with the goal of improving communication between the deaf and hearing.

-Key Responsibilities: Team leadership, word sense disambiguation, and application development

-Website: [www.avanama.org](http://www.avanama.org)

## Honors and awards

---

- Selected as the **Special Talent** for Master of Science, Department of Computer Science and Information Technology, IASBS, Zanzan, Iran, August 2018

## References

---

### **Prof. Tjark Vredeveld**

Professor at Planning and Scheduling, School of Business and Economics, Maastricht University (UM), Maastricht, The Netherlands.

[t.vredeveld@maastrichtuniversity.nl](mailto:t.vredeveld@maastrichtuniversity.nl), [www.maastrichtuniversity.nl/nl/t-vredeveld](http://www.maastrichtuniversity.nl/nl/t-vredeveld), (+31) 43 3883911

### **Dr. André Berger**

Associate Professor at Quantitative Economics, School of Business and Economics, Maastricht University (UM), Maastricht, The Netherlands.

[a.berger@maastrichtuniversity.nl](mailto:a.berger@maastrichtuniversity.nl), [www.maastrichtuniversity.nl/a.berger](http://www.maastrichtuniversity.nl/a.berger), (+31) 43 3884894

### **Dr. Marc Schröder**

Assistance Professor at Quantitative Economics, School of Business and Economics, Maastricht University (UM), Maastricht, The Netherlands.

[m.schroder@maastrichtuniversity.nl](mailto:m.schroder@maastrichtuniversity.nl), [sites.google.com/view/mschroder/home](https://sites.google.com/view/mschroder/home)

### **Dr. Mansoor Davoodi Monfared**

Assistant Professor at Department of Computer Science and Information Technology, Institute for Advanced Studies in Basic Sciences (IASBS), Zanzan, Iran.

[mdmonfared@iasbs.ac.ir](mailto:mdmonfared@iasbs.ac.ir), [www.iasbs.ac.ir/~mdmonfared](http://www.iasbs.ac.ir/~mdmonfared)