Pouria Shahmiri

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Sharif University of Technology,
Tehran, Iran

Education

P.hD in Industrial and Systems Engineering — Columbus, Ohio
Ohio State University
Advisor: Professor Guzin Bayraksan - Optimization — 2024–Current

M.Sc. in Industrial Engineering — Tehran, Iran
Sharif University of Technology
GPA: 4.00/4.00 (second out of 21 people)
Advisor: Professor Kourosh Eshghi - Systems Optimization — 2022–Current

- Thesis: "Modeling and Solving On-line Dial-a-Ride Problem with Constraints and Time windows"

B.Sc in Industrial Engineering — Tehran, Iran
Sharif University of Technology
GPA: 3.31/4.00 — 2017–2022
Advisor: Professor Moslem Habibi

- Thesis: "Improving airport passengers' customer experience by utilizing the concept of Smart Airports"

High School Diploma in Mathematics and Physics
GPA: 4.00/4.00 — 2013–2016

Publications

1. P. Shahmiri, and M. Habibi, "Improving airport passengers' customer experience by utilizing the concept of Smart Airports - Case study of IKAC International airport", *9th International Conference on Industrial and System Engineering, 2023*
2. P. Shahmiri, A. Sarvarian, and M. Varmazyar, "An altered heuristic column generation algorithm for solving the leveling required fleet problem in a demand-oriented network", *19th Iranian International Industrial Engineering Conference, 2023*
3. P. Shahmiri, M. Shahmoradi, and K. Eshghi, "A Time-Indexed Model for Online Ride-Sharing Optimization Benchmarking Online Algorithms", *10th Iranian International Industrial Engineering Conference, 2024*
4. (Working) "Optimization of Green Container Terminal Planning Problem using Reinforcement Learning", *2024*

Academic Projects

- B.Sc. Project: Improving airport passengers' customer experience by utilizing the concept of Smart Airports
  Upon reviewing customer experience documents and doing a thorough literature review, we identified and analyzed IKAC processes, collected customer data, and proposed improvement recommendations based on the smart airport concept. 2021-2022
- Course Project: Advanced Linear programming
  Extending, modifying, and developing a heuristic algorithm based on method and developing a heuristic algorithm for fleet assigning and leveling problem 2023
- Course Project: Stochastic Programming
  Coding, modeling, and solving a stochastic problem through scenario reduction and Nested L-Shaped Decomposition Methods 2022

- Course Project: Advanced Algorithms
  Developing Heuristic models such as Genetic, A*, and Simulated Annealing Algorithm
  Developing Optimization algorithms such as Gradient Descent
  Developing CSP Algorithms such as AC-3
  Developing Bayesian networks and Markov models and evaluating the performance of them
  2022
- Course Project: System Dynamics Analysis
  Developing a continuous event simulation model for American Airlines Income 2022
- Course Project: Simulation Principles
  Developing a discrete event simulation model for Queue Systems of a job-shop, considering its probability distributions, failure rates, and analyzing system performances due to statistical measurements and proposing improvement recommendations 2022

Honors & Awards

- Ranked 1 among approximately 4000 participants in the
  Iran's National University Entrance Exam for Master of Sciences in Industrial Engineering/System Optimization. 2022
- Ranked top 0.4% among approximately 150000 participants in the
  Iran's National University Entrance Exam in Mathematics and Engineering. 2017
- Ranked second among approximately 40 of most competent participants in the
  Iran's National Student Olympiad Exam in Industrial Engineering. 2022

Teaching Assistant

- **Teaching Assistant** at Sharif University of Technology Fall 2023
  Operation Research I
  Professor: Dr. Kourosh Eshghi
- **Teaching Assistant** at Sharif University of Technology Fall 2023
  Engineering Statistics
  Professor: Dr. Majid Khedmati
- **Teaching Assistant** at Sharif University of Technology Fall 2021
  Control Project
  Professor: Dr. Maryam Radman
- **Teaching Assistant** at Sharif University of Technology Fall 2021
  Transportation Planning
  Professor: Dr. Erfan Hassannayebi

Selected Courses

- Mathematics II (B.Sc.): 19/20
- Decision Theory (B.Sc.): 19.6/20
- Regression Analysis (B.Sc.): 18.8/20
- Time Series Analysis (B.Sc.): 19/20
- Simulation Principles (B.Sc.): 17/20
- Design Of Experiments (M.Sc.): 19/20
- Integer Programming (M.Sc.): 18.5/20
- Stochastic Programming (M.Sc.): 19.2/20
- Advanced Linear Programming (M.Sc.): 19.6/20

- Graph Theory (M.Sc.): 18.7/20
- Advanced Algorithms (B.Sc.): 18.3/20
- Queuing Theory (B.Sc.): 17/20
- System Dynamics Analysis (B.Sc.): 17.5/20

Research Interest

- **Online Programming**
- **Stochastic Programming**
- **Decomposition's Methods**
- **large-scale Linear Programming**
- **Scheduling and Vehicle Routing Problems**
- **Approximate, heuristic, and meta-heuristic algorithms**

Voluntary Activities

- Secretary of Sharif University Industrial Engineering Student Scientific Association
  Developing, promoting, and executing programs, both inside and outside of academia, that helped students to develop new skills and improve their abilities to work and study better. 2020-2022
- member of "Ideation and Game Making" Team in Gamein
  Gamein is a group game related to supply chain management which is developed by students in the Industrial Engineering department at Sharif University of Technology with thousands of participants 2020-2021

Work Experience

- Junior Project Control and Claim Specialist
  Accountable for monitoring the progress of projects at the central office at a company specializing in hospital construction; I received reports from the workshops, gathered their data, cleaned them, and made a summary of them to present to my superiors. Furthermore, I used the information gathered by my colleagues and me to make claims for damages and losses that had occurred during the projects. 2021-2022 (Tehran)

Technical Skills

- **Programming:** Python, Matlab, C, R
- **Optimization Tools:** Gams, Cplex, Gurobi
- **Documentation:** Microsoft Office, Latex

Languages

- **Language: English** Fluent
  - **TOEFL:** 107 (Reading: 28, Listening: 29, Speaking: 23, Writing: 27)
- **Language: Persian** Native