Amirhossein Moosavi

Curriculum Vitae

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Training and Education

Michigan Data Science Fellow
University of Michigan 2024 – Present

Postdoctoral Fellow
University of Ottawa 2024

PhD in Management
University of Ottawa (Graduated with Honors) 2019 – 2023

MSc in Industrial Engineering
Azad University (Highest-ranked student in cohort) 2014 – 2017

BSc in Industrial Engineering
Azad University 2009 – 2014

Research Interests

Healthcare Operations Management: Resource allocation and scheduling; Patient flow and capacity planning; Supply chain and inventory management; Decentralized healthcare network coordination.

Medical Decision-Making: Organ transplantation; Personalized treatment selection; Chronic disease management; Diagnostic decision support.

Data-Driven Optimization: Learning-based optimization; Predict and/then optimize; Markov decision-processes; Distributionally robust optimization; Heuristics.

Grants

Under Review

1. From waitlist to transplantation: data-driven decisions to save more kidneys and lives, **Principal Investigator**, Career Development Award – K99/R00, *National Institute of Health.*

Teaching Experiences

Teaching Mentor

Center for Healthcare Engineering & Patient Safety, *University of Michigan* 2024 – Present

Instructor

Applications of Predictive Models in Healthcare (80-100 students),

University of Michigan 2025

Instructor

Applications of Statistical Methods in Business (80-100 students, 4.6/5),
University of Ottawa 2022, 2024

Teaching Assistant

Applications of Statistical Methods in Business, *University of Ottawa* 2019 – 2023

Queuing Theory, *Azad University* 2016

Multi-Criteria Decision-Making Methods, *Azad University* 2016

Publications

Refereed Journal Articles

1. **Moosavi, A.**, Ozturk, O., Patrick, J. (2025). Dynamic distributed ambulatory care scheduling. *Productions & Operations Management* [IF=4.8], forthcoming.

2. **Moosavi, A.**, Huang, S., Vahabi, M., Motamedivafa, B., Tian, N., Mahmood, R., Liu, P., Sun, C. (2024). Prospective human validation of artificial intelligence interventions in cardiology: A scoping review. *JACC: Advances*. DOI.

3. **Moosavi, A.**, Ozturk, O., & Patrick, J. (2022). Staff scheduling for residential care under pandemic conditions: The case of COVID-19. *Omega* [IF=6.7], 112, 102671. DOI.

4. **Moosavi, A.**, & Ebrahimnejad, S. (2020). Robust surgery scheduling considering upstream and downstream units: A new two-stage heuristic algorithm. *Computers & Industrial Engineering* [IF=6.7], 143, 106387. DOI.

5. Nikfarjam, A., & **Moosavi, A.** (2020). An integrated $(1, T)$ inventory policy and vehicle routing problem under uncertainty: An accelerated Benders decomposition algorithm. *Transportation Letters* [IF=3.3], 13(2), 104-124. DOI.

6. **Moosavi, A.**, & Nikfarjam, A. (2019). A multi-path routing-inventory problem for a closed-loop supply chain considering the heterogeneous fleet of vehicles. *International Journal of Sustainable Engineering* [IF=3.6], 12(3), 174-188. DOI.

7. Erfani, B., Ebrahimnejad, S., & **Moosavi, A.** (2019). An integrated dynamic facility layout and job shop scheduling problem: A hybrid NSGA-II and local search algorithm. *Journal of Industrial and Management Optimization* [IF=1.2], 1317-1336. DOI.

8. Rezaei, N., Ebrahimnejad, S., **Moosavi, A.**, & Nikfarjam, A. (2019). A green vehicle routing problem with time windows considering the heterogeneous fleet of vehicles: Two metaheuristic algorithms. *European Journal of Industrial Engineering* [IF=1.9], 13(4), 507-535. DOI.

9. **Moosavi, A.**, & Ebrahimnejad, S. (2018). Scheduling of elective patients considering upstream and downstream units and emergency demand using robust optimization. *Computers & Industrial Engineering* [IF=6.7], 120, 216-233. DOI.

In-Progress Articles

1. **Moosavi, A.**, Ozturk, O., & Patrick, J. Deep-learning assisted appointment scheduling under uncertainty. Under review: *INFORMS Journal on Data Science*.

2. **Moosavi, A.**, Rhyan, C., Lavieri, M., Hutton, D., Parikh, N., Haakinson, D., Magee, J. & Lu, Y. Assessing Post-Transplant Outcomes in Marginal Kidney Transplants at the Center Level. Under review: *American Journal of Transplantation*.

3. Luke, D., Liu, K., **Moosavi, A.**, Lavieri, M. Synchronizing multiple chronic conditions. Under review in *Productions & Operations Management*.

4. **Moosavi, A.**, Lavieri, M., & Helm, J. Time for Accountability: Are Readmission Responsibility Windows Too Long? Target journal: *Operations Research*.

5. **Moosavi, A.**, Erfani, B., & Sauré, A. Storage location assignment problem for heterogeneous customers.

Conference Articles

1. Blanton, A., He, A., Uy, J., Venkatasubramanian, K., Ghrayeb, L., Loffredo, V., **Moosavi, A.**, Cohn, A., & Peahl, A. Transforming American prenatal care delivery through discrete event simulation. *Winter Simulation Conference 2025*.

2. Nikfarjam, A., **Moosavi, A.**, Neumann, A., & Neumann, F. Computing High-Quality Solutions for the Patient Admission Scheduling Problem using Evolutionary Diversity Optimisation. *17th International Conference on Parallel Problem Solving from Nature*.

3. **Moosavi, A.**, & Ebrahimnejad, S. (2017). A new multi-objective mathematical model for supplier selection in uncertain environment. *13th International Conference on Industrial Engineering*.

4. **Moosavi, A.**, & Ebrahimnejad, S. (2017). Synchronous scheduling of elective and emergency patients at the operational decision-making level using robust optimization (in Persian). *First International Conference on Systems Optimization and Business Management*.

Journal Review Experiences

Computers & Operations Research, **one** submission refereed

JACC: Advances, **two** submissions refereed

Expert Systems with Applications, **one** submission refereed

Computers & Industrial Engineering, **ten** submissions refereed

Production Planning & Control, **two** submissions refereed

Transportation Letters, **three** submissions refereed

International Journal of Logistics, **three** submissions refereed

International Journal of Production Research, **one** submission refereed

Information Systems and Operational Research, **three** submissions refereed

International Journal of Sustainable Engineering, **four** submissions refereed

Winter Simulation Conference, **two** submissions refereed

Invited Talks and Presentations

1. Center-level disparities of marginal kidney outcomes. *World Transplant Congress 2025.*
2. Learning-based dynamic ambulatory care scheduling. *INFORMS Annual Meeting 2025.*
3. Dynamic distributed ambulatory care scheduling. *INFORMS Healthcare Conference 2023.*
4. Deep-learning assisted appointment scheduling under uncertainty. *2023 CORS Conference.*
5. Residential care scheduling under pandemic conditions. *2022 CORS/INFORMS International Conference.*
6. Entropy-based Evolutionary Diversity Optimization for the Patient Admission Scheduling Problem. *2022 CORS/INFORMS International Conference.*

Service Experiences

Mentorship

Yizhen Han (BSc) and Yizhe Dai (BSc), *University of Michigan* 2025 – Present

Yili Wang (PhD) and Kuofu Liu (PhD), *University of Michigan* 2024 – Present

Azita Jafarbigloo (MSc) and Sandra Amyot (MSc), *University of Ottawa* 2019 – 2021

Behrad Erfani (MSc), and Adel Nikfarjam (MSc), *Azad University* 2016 – 2019

Leadership

The Postdoctoral Affairs Co-Chair, *University of Michigan* 2025 – Present

Student Liaison, *Healthcare Application Society, INFORMS* 2025 – Present

The Student's Association Board Director, *University of Ottawa* 2020, 2021

Others

Conference Session Chair, *INFORMS Annual Meeting* 2024, 2025

Assistant for creating a charity mobile kindergarten, *Renault Pars* 2017, 2018

Awards & Honors

Thesis Presentation Competition (2nd place), *University of Ottawa*	2023
PhD Engagement Award ($5,000), *University of Ottawa*	2022, 2023
Ontario Graduate Scholarship ($15,000), *University of Ottawa*	2020, 2021
Admission Scholarship ($18,000), *University of Ottawa*	2021 – 2023
Excellence Scholarship ($10,000), *University of Ottawa*	2020
International Doctoral Scholarship ($60,000), *University of Ottawa*	2019 – 2023
Publication Award ($1,000), *Azad University*	2018, 2020
Exempted from the PhD university entrance exam (GPA: 19.63/ 20), *Azad University*	2017
Best Thesis Award ($2,000), *Azad University*	2017
Selected as the best MSc student of the university out of more than 2000 MSc students, *Azad University*	2016

Additional Skills

Programming knowledge

Expert knowledge: Python, MATLAB, GAMS, LaTeX

Intermediate: C++, Java, R

Library/Software knowledge

Expert knowledge: Gurobipy, Doceplex, Tensorflow, Torch, Numpy, Pandas, Minitab, Design Expert, EndNote, Microsoft Office

Language

Farsi (native), English (fluent)

References

Dr. Mariel Lavieri Associate Professor
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Dr. Amy Cohn Full Professor
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Dr. Antoine Sauré Associate Professor
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Dr. Jonathan Patrick Full Professor
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Last updated: July 21, 2025
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