Berk Görgülü

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	Hamilton, ON L8S 4M4	

RESEARCH INTERESTS

Service and healthcare operations, healthcare analytics, stochastic modeling and optimization, queueing theory, interpretable machine learning

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WORK EXPERIENCE

McMaster University, Hamilton, ON, Canada

Assistant Professor, *DeGroote School of Business*	2023 - current
Member, *Computational Science and Engineering*	2023 - current
Associate Member, *Computing & Software*	2024 - current

Toronto Metropolitan University, Toronto, ON, Canada

Adjunct Professor, *Mechanical, Industrial, and Mechatronics Engineering*	2025 - current

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EDUCATION

University of Toronto, Toronto, ON, Canada

Ph.D. in Mechanical and Industrial Engineering	2018 - 2023

- Advisors: Vahid Sarhangian and Jing Dong
- GPA: 4.00/4.00

Boğaziçi University, Istanbul, Turkey

M.S. in Industrial Engineering	2017 - 2018

- Advisor: Mustafa Gökçe Baydoğan
- GPA: 4.00/4.00

B.S. in Industrial Engineering	2012 - 2017

- GPA: 3.70/4.00

Minor in Management (Finance)	2012 - 2017

- GPA: 4.00/4.00

WORKING PAPERS

1. **Approximate Dynamic Programming for Multiclass Scheduling under Slowdown.** With Jing Dong and Vahid Sarhangian. Working Paper.

2. **Intepretable Machine Learning for Personalized Breast Cancer Screening Recommendations.** With Sean Berry, Mucahit Cevik and Sait Tunc. Working Paper.

3. **Machine Learning-based Kidney Allocation for High-Risk Kidneys.** With Sean Berry, Mucahit Cevik and Sait Tunc. Working Paper.

PUBLISHED PAPERS

1. **Inventory Management with Advance Booking Information: The Case of Surgical Supplies and Elective Surgeries.** With Jacky Chan and Vahid Sarhangian. *Manufacturing & Service Operations Management.* 26.3, 2024. pp. 931-951.

2. **What Causes Delays in Admission to Rehabilitation Care? A Structural Estimation Approach**. With Jing Dong and Vahid Sarhangian. *Manufacturing & Service Operations Management.* 26.2, 2024. pp. 465-484.

   - Selected for presentation at the 2022 Healthcare Operations SIG at MSOM Conference.

3. **Column generation-based prototype learning for optimizing area under the receiver operating characteristic curve**. *European Journal of Operational Research.* With Erhan Can Ozcan and Mustafa Gökçe Baydoğan. 314.1, 2024. pp. 297-307.

4. **Association Between Delayed Discharge from Acute Care and Rehabilitation Outcomes and Length-of-Stay: A Retrospective Cohort Study**. With Jing Dong, Karen Hunter, Krista M. Bettio, Betty Vukusic, Jonathan Ranisau, Gary Spencer, Terence Tang and Vahid Sarhangian. *Archives of Physical Medicine and Rehabilitation.* 104.1, 2023. pp. 43-51.

5. **A Newsvendor Approach to Design of Surgical Preference Cards**. With Vahid Sarhangian. *Service Science.* 14.3, 2022. pp. 213-230.

6. **Randomized trees for time series representation and similarity**. With Mustafa Gökçe Baydoğan. *Pattern Recognition,* 120, 2021. pp. 108097.

7. **Explainable boosted linear regression for time series forecasting.** With Igor Ilic, Mucahit Cevik and Mustafa Gökçe Baydoğan. *Pattern Recognition.* 120, 2021. pp. 108144.

8. **Augmented out-of-sample comparison method for time series forecasting techniques.** With Igor Ilic and Mucahit Cevik. *Canadian Conference on Artificial Intelligence.* 2020. pp. 302-308.

9. **An Adaptive Large Neighborhood Search Heuristic for Jointly Solving Storage Location Assignment and Picker Routing**. With Necati Aras. *Operations Research Proceedings 2018: Selected Papers of the Annual International Conference of the German Operations Research Society (GOR)*, 2018. pp. 301-308.

10. **A Data Adaptive Biological Sequence Representation for Supervised Learning**. With Hande Cakin, Mustafa Gökçe Baydoğan, Na Zou and Jing Li. *Journal of Healthcare Informatics Research*, 2(4), 2018. pp. 448-471.

HONORS AND AWARDS

NSERC Discovery Grant   2025/04 – 2030/04
Source Agency: Natural Sciences and Engineering Research Council of Canada (NSERC)
Amount: $202,500
Title: Control of Stochastic Queueing Networks with Endogenous Effects

SSHRC Explore   2024/01 – 2026/01
Source Agency: McMaster University
Amount: $7,000
Title: Reducing Delays in Admission to Rehabilitation

DeGroote School of Business Research Support   2023/10 – present
Source Agency: DeGroote School of Business, McMaster University
Amount: $25,000

DeGroote School of Business Faculty Start-up Grant   2023/10 – present
Source Agency: DeGroote School of Business, McMaster University
Amount: $50,000

SGS Conference Grant   2022

MIE Teaching Assistant Award   2021

Doctoral Fellowship, Department of Mechanical & Industrial Engineering, University of Toronto   2018 - 2022

University Dean's High Honor List   2012 - 2017
Placed in Dean's High Honor List for 8 consecutive semesters (all semesters)

McMaster University, Hamilton, ON, Canada
Instructor

- Commerce 3DA3 - Predictive Analytics — Fall 2024
- IBH 2AD3 - Statistical Data Analysis — Winter, Fall 2024
- BUS Q773 / CSE 776 - Mathematical Programming: Theory and Algorithms — Winter 2024

University of Toronto, Toronto, ON, Canada
Teaching Assistant

- MIE 360 - System Modelling & Simulation — Fall 2018, 2019, 2020, 2021, 2022
- MIE 335 - Algorithms & Numerical Methods — Winter 2019, 2020, 2021, 2022, 2023

Boğaziçi University, Istanbul, Turkey
Teaching Assistant

- IE 360 - Statistical Forecasting & Time Series — Winter 2018
- IE 312 - Facility Design & Planning — Fall 2016, Winter 2017, Fall 2017
- IE 306 - System Simulation — Fall 2015

Approximate Dynamic Programming for Multiclass Scheduling under Slowdown

- INFORMS Annual Meeting, Seattle, WA — October 2024
- MSOM Annual Conference, Minneapolis, MN — July 2024
- CORS Annual Meeting, London, ON — June 2024
- INFORMS Annual Meeting, Phoenix, AZ — October 2023
- INFORMS Healthcare, Toronto, ON — July 2023
- M&SOM Conference, Montreal, QC — June 2023

What Causes Delays in Admission to Rehabilitation Care? A Structural Estimation Approach

- INFORMS Healthcare, Toronto, ON — July 2023
- INFORMS Annual Meeting, Indianapolis, IN — Oct. 2022
- INFORMS Annual Meeting, Online — Nov. 2021
- CORS Annual Meeting, Online — July 2020
- MSOM Annual Conference, Online — June 2020
- INFORMS Annual Meeting, Seattle, WA — Nov. 2019
- INFORMS Annual Meeting, Phoenix, AZ — Nov. 2018

A Newsvendor Approach to Design of Surgical Preference Cards

- CORS Annual Meeting, Online — July 2020
- INFORMS Healthcare Conference, MIT, Cambridge, MA — July 2019

Randomized trees for time series representation and similarity

- INFORMS Annual Meeting, Phoenix, AZ — Nov. 2018