

# Berk Görgülü

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CONTACT DeGroote School of Business, DSB411  
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RESEARCH INTERESTS Service and healthcare operations, healthcare analytics, stochastic modeling and optimization, queueing theory, interpretable machine learning

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WORK EXPERIENCE **DeGroote School of Business, McMaster University**, Hamilton, ON, Canada  
*Assistant Professor* 2023 - 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

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WORKING PAPERS

1. **Approximate Dynamic Programming for Multiclass Scheduling under Slowdown.** With Jing Dong and Vahid Sarhangian. Working Paper.
2. **What Causes Delays in Admission to Rehabilitation Care? A Structural Estimation Approach.** With Jing Dong and Vahid Sarhangian. Under minor revision for *Manufacturing & Service Operations Management*.
  - Selected for presentation at the 2022 Healthcare Operations SIG at MSOM Conference.
3. **The Value of Advance Surgery Booking Information for Inventory Management of Surgical Supplies.** With Jacky Chan and Vahid Sarhangian. Under minor revision for *Manufacturing & Service Operations Management*.
4. **Column Generation Approach to Solve Classification Problems with Class Imbalance.** With Erhan Can Ozcan and Mustafa Gökçe Baydoğan. Under minor revision for *European Journal of Operations Research*.
5. **Intepretable Machine Learning for Personalized Breast Cancer Screening Recommendations.** With Sean Berry, Mucahit Cevik and Sait Tunc. Working Paper.
6. **Machine Learning-based Kidney Allocation for High-Risk Kidneys.** With Sean Berry, Mucahit Cevik and Sait Tunc. Working Paper.

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PUBLISHED  
PAPERS

1. **A Newsvendor Approach to Design of Surgical Preference Cards.** With Vahid Sarhangian. *Service Science*. 2022, forthcoming.
2. **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*, 2022, forthcoming.
3. **Randomized trees for time series representation and similarity.** With Mustafa Gökçe Baydoğan. *Pattern Recognition*, 120, 2021. pp. 108097.
4. **Explainable boosted linear regression for time series forecasting.** With Igor Ilic, Mucahit Cevik and Mustafa Gökçe Baydoğan. *Pattern Recognition*. 120, 2021. pp. 108144.
5. **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.
6. **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.
7. **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.

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HONORS AND  
AWARDS

<b>SGS Conference Grant</b>	2022
<b>MIE Teaching Assistant Award</b>	2021
<b>Doctoral Fellowship, Department of Mechanical &amp; Industrial Engineering, University of Toronto</b>	2018 - 2022
<b>University Dean's High Honor List</b> Placed in Dean's High Honor List for 8 consecutive semesters (all semesters)	2012 - 2017

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TEACHING  
EXPERIENCE

<b>University of Toronto</b> , Toronto, ON, Canada <i>Teaching Assistant</i>	
• MIE 360 - System Modelling & Simulation	Fall 2018, 2019, 2020, 2021, 2022
• MIE 335 - Algorithms & Numerical Methods	Winter 2019, 2020, 2021, 2022, 2023
<b>Boğaziçi University</b> , Istanbul, Turkey <i>Teaching Assistant</i>	
• 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

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CONFERENCE  
PRESENTATIONS

<b>Approximate Dynamic Programming for Multiclass Scheduling under Slowdown</b>	
• 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