

CURRICULUM VITAE OF VAHID ROSHANA EI (PH.D., P.M.P.)

Tel: 647-865-3860

vahid.roshanaei@rotman.utoronto.ca

v.roshanaei@utoronto.ca

Office 419, 105 Saint George Street, Toronto, Canada, M5S 2E8

Last update: April 29, 2022

Academic positions

Assistant Professor, Teaching Stream, Rotman School of Management, University of Toronto, July 2020 -

Post-Doctoral Fellow & Lecturer, Rotman School of Management, University of Toronto, Sep 2017 - June 2020

Education

University of Toronto, Canada, Ph.D. in Operations Research Jan. 2013 - Aug. 2017

University of Windsor, Canada, M.A.Sc. in Industrial Engineering May 2010 - June 2012

Tehran Polytechnic, Iran, M.A.Sc in Systems Management & Productivity Sep 2006 - Dec 2008

Azad University of Tehran, Iran, B.A. in Management Science Sep 2001 - Oct 2004

Interests

Research

Methodologies: Combinatorial optimization, decision-making under uncertainty, operations analytics

Applications: Healthcare, manufacturing, and supply chain operations, project management

Teaching

Operations management, supply chain operations, management science, and statistical/machine learning

Teaching Experience

University of Toronto, Rotman School of Management

Commerce,

- RSM 270: Operations Management—Core

Fall 2020-2021

- RSM 370: Supply Chain Management—Elective

Winter/Fall 2021

MBA,

- RSM 1240: Operations Management—Core

Winter 2021/2022

- RSM 2405: Supply Chain Management—Elective

Summer 2020

Selected Referred Journal Papers ([google scholar](#): h-index=16, citations: 1,156)

E. Safari, V. Roshanaei, A. Rastpour, A robust optimization formulation for dynamic pricing of a web service with limited total shared capacity, In press, *Optimal Control Applications and Methods*, 2022.

B. Naderi, V. Roshanaei, M. Begen, D. Aleman, D. Urbach, Increased surgical capacity without additional resources: Generalized operating room planning and scheduling, *Production and Operations Management*, 2021 30-8 (2608-2635).

V. Roshanaei, B. Naderi, Solving integrated operating room planning and scheduling: Logic-based Benders decomposition versus Branch-Price-and-Cut, *European Journal of Operational Research*, 2021 293-1 (65-78).

B. Naderi, V. Roshanaei, Critical-path-search logic-based Benders decomposition approaches for flexible job shop scheduling, To appear in, *INFORMS Journal On Optimization*, 2021 4-1 (11-28).

H. Zohali, B. Naderi, V. Roshanaei, Solving type-2 assembly line balancing with setups using logic-based Benders decomposition, *INFORMS Journal on Computing*, 2021 34-1 (315-332).

B. Naderi, V. Roshanaei, Branch-Relax-and-Check: A tractable decomposition method for order acceptance and identical parallel machine scheduling, *European Journal of Operational Research*, 2020 286-3 (811-827)

V. Roshanaei, C. Luong, D. Aleman, D. Urbach, Reformulation, linearization, and decomposition techniques for balanced distributed operating room scheduling, *OMEGA*, 2020 93(102043).

V. Roshanaei, K. E. C. Booth, D. Aleman, D. Urbach, J. Christopher Beck, Branch-and-check methods for multi-level operating room planning and scheduling, *International Journal of Production Economics*, 2020 286-3 (811-827)

O. Baron, O. Berman, M. M. Fazel Zarandi, V. Roshanaei, Almost robust discrete optimization, *European Journal of Operational Research*, 2019 276(2) 451-465.

H. Zohali, B. Naderi, M. Mohammadi, V. Roshanaei, Reformulation, linearization, and a local search algorithm for lot sizing and sequencing in hybrid flowshop problems, *Computers & Operations Research*, 2019 104 127-138.

V. Roshanaei, C. Luong, D. Aleman, D. Urbach, Collaborative operating room planning and scheduling, *INFORMS Journal on Computing*, 2017 29(3) 558-580.

Honourable mention in Canadian Operational Research Society's (CORS/INFORMS) student best paper competition, Open Category, Montreal, Quebec, Canada, June 2015.

V. Roshanaei, C. Luong, D. Aleman, D. Urbach, Propagating logic-based Benders decomposition approaches for distributed operating room scheduling, *European Journal of Operational Research*, 2017 257(2) 439-455.

S. Wang, V. Roshanaei, D. Aleman, D. Urbach, A discrete event simulation evaluation of distributed operating room scheduling, *IIE Transactions on Healthcare Systems Engineering*, 2016 6(4) 236-245.

V. Roshanaei, H. ElMaraghy, and A. Azab, Mathematical modelling and metaheuristic for flexible job shop scheduling problems, *International Journal of Production Research*, 2013 20(51) 6247-6274.

B. Vahdani, M. Zandieh, V. Roshanaei, A hybrid multi-stage predictive model for supply chain network collapse recovery analysis: a practical framework for effective supply chain network continuity management, *International Journal of Production Research*, 2011 49(7) 2035-2060.

Working Papers

B. Naderi, V. Roshanaei, O. Baron, A comprehensive spreadsheet model for teaching classification using logistic regression, major revision in *INFORMS Transactions on Education*.

V. Roshanaei, B. Naderi, O. Baron, A spreadsheet model for teaching classification using KNN, In preparation for *INFORMS Transactions on Education* (Expected date: December 2022).

O. Baron, O. Berman, A. A. Cire, V. Roshanaei, An almost-robust approach for home healthcare network design, To be submitted to *Manufacturing & Service Operations Management* (Expected date: September 2022).

B. Naderi, R. Ruiz, V. Roshanaei, Mixed-integer programming versus constraint programming for shop scheduling problems: New results and outlook, major revision in *INFORMS Journal on Computing*.

B. Naderi, M. Begen, G. Zaric, V. Roshanaei, A novel and efficient exact technique for integrated staffing, assignment, routing, and scheduling of home care services under uncertainty, major revision in *OMEGA*.

B. Naderi, V. Roshanaei, A. Ardestani-Jaafari, Optimal elective surgery cancellation under uncertainty, In preparation for *Operations Research* (Expected date: May 2023).

A. Ardestani-Jaafari, Pooya Hoseinpour, Beste Kucukyazici, V. Roshanaei, Optimizing the integration of stroke telemedicine into rural areas, In preparation for *Manufacturing & Service Operations Management* (Expected date: September 2023).

Grants

University of Toronto, Toronto, Canada

- \$45,000, two years, **NSERC Postdoctoral Fellowship** Sep 2017 - Sep 2019
- \$35,000, two years, **NSERC Alexander Graham Bell Canada Doctoral Scholarship** Sep 2015 - Sep 2017
- \$15,000, Ontario Graduate Scholarship Sep 2014 - Sep 2015

Honors and Awards

University of Toronto, Toronto, Canada

- **Honourable mention** in Health Care Operations Research (HCOR) Special Interest Group (SIG) student presentation competition, Banff, Alberta, Canada May 2016
- **Honourable mention** in Canadian Operational Research Society's (CORS/INFORMS) student best paper competition, Open Category, Montreal, Quebec, Canada June 2015
- Ranked 10th among 6,000 participants in national graduate matriculation exam for Industrial Engineering major, Iran Sep 2006

Certificate

Project Management Professional (P.M.P.)

April 2010 - present

Professional services

Voluntary services

Session co-chair: Optimization Methods in Healthcare, CORS Conference, Toronto June 2021

Plenary speaker and final judge: Uber Eats Case Innovation Symposium, Rotman School of Management, University of Toronto March 28 2021

President elect: President of the Association of Mechanical & Industrial Graduate Engineering Students, University of Toronto June 2013 - June 2014

Conference organization

- **Organizer:** 5th symposium of Mechanical & Industrial Engineering, University of Toronto June 2014

Journal review

- **Reviewer:** Production & Operations Management, INFORMS Journal on Computing, European Journal of Operational Research, OMEGA, Mathematical Methods of Operations Research, International Journal of Production Economics