Maryam Daryalal

29 Hemlo Crescent, Kanata, ON K2T 1C7, Canada

www.maryamdaryalal.com daryalal@mie.utoronto.ca ☎ +1 (647) 939-3911

RESEARCH INTERESTS

Stochastic optimization, Robust optimization, Integer programming, Large-scale optimization

APPLICATION AREAS

Sequential decision-making under uncertainty, Telecommunications, Healthcare, Supply chain planning, Service systems staffing, Scheduling, Description logic

EDUCATION

- Ph.D., Industrial Engineering, University of Toronto (2018 - expected: 2022)
- M.Sc., Computer Science, Concordia University (2016)
- M.Sc., Industrial Engineering, Amirkabir University of Technology (2013)
- B.Sc., Industrial Engineering, Amirkabir University of Technology (2011)

RESEARCH EXPERIENCE

Under Review:

- **M. Daryalal**, H. Pouya. Network migration problem: A logic-based Benders decomposition approach driven by column generation and constraint programming. (under review at ***INFORMS Journal on Computing***). [pdf]

Journal Publications:

- **M. Daryalal**, M. Bodur, J. Luedtke. Lagrangian dual decision rules for multistage stochastic mixed integer programming. ***Operations Research***, accepted with minor revisions, 2021. [pdf]
- **M. Daryalal**, M. Bodur. Stochastic RWA and lightpath rerouting in WDM networks. ***INFORMS Journal on Computing***, accepted for publication, 2021. [pdf]
- B. Jaumard, **M. Daryalal**. Efficient spectrum utilization in large-scale RWA problems. ***IEEE/ACM Transactions on Networking***, volume 25, pp. 1263-1278, 2017. [pdf]

Refereed Conference Publications:

- B. Jaumard, **M. Daryalal**. Optimizing spectrum utilization in dynamic RWA. *IEEE International Conference on Optical Network Design and Modeling (ONDM)*, pp. 1-6, 2016. [pdf]
- B. Jaumard, **M. Daryalal**. Scalable elastic optical path networking models. *IEEE International Conference on Transparent Optical Networks (ICTON)*, pp. 1-4, 2016. [pdf]
- J. Vlasenko, **M. Daryalal**, V. Haarslev, B. Jaumard. A saturation-based algebraic reasoner for $\mathcal{ELQ}$. *International Joint Conference on Automated Reasoning (IJCAR)*, pp. 110-124, 2016. [pdf]
- B. Jaumard, **M. Daryalal**. Solving very large RWA data instances. *IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, pp. 1-6, 2016. [pdf]

Working Papers:

- A. Deza, **M. Daryalal**, C. Guo, M. Bodur. A multistage stochastic integer programming approach to distributed operating room scheduling. (in preparation for submission).

- B. Naderi, V. Roshanaei, **M. Daryalal**. Robust flexible job-shop scheduling problem. (in preparation for submission).
- **M. Daryalal**, M. Bodur. Integrated staffing and scheduling in service systems. (work in progress).
- **M. Daryalal**, M. Bodur, A. Arslan. Primal and dual bounding techniques for multistage adaptive robust optimization. (work in progress).
- **M. Daryalal**. An exact method for universal facility location problem with concave objective function. (work in progress).

AWARDS & HONORS

- **Judith Liebman Award**, INFORMS (2021)
- **MIE Teaching Assistant Award**, University of Toronto (2021)
- **Best Student Paper Finalist**, Canadian Operational Research Society (2021)
- **Discrete Choice Analysis Tuition Scholarship**, Massachusetts Institute of Technology (2021)
- **Seth Bonder Foundation Student Grant**, INFORMS (2020)
- **University of Toronto Advance Planning for Students Grant**, University of Toronto (2020)
- **SGS Conference Grant**, University of Toronto (2019)
- **MIE Graduate Student Travel Grant**, University of Toronto (2019)
- **Best Operations Research Poster**, MIE Graduate Research Symposium (2018)
- **Connaught International Scholarship Award**, University of Toronto (2017)
- **Concordia Merit Award**, Concordia University (2014)

ACADEMIC EXPERIENCE

Student Supervision:

- Haoyuan Xue (co-supervised, B.A.Sc. 2022)

Teaching Assistant:

- Algorithms & Numerical Methods, University of Toronto (undergraduate core; 2021, 2022)
- Integer Programming, University of Toronto (graduate; 2020)
- Stochastic Programming & Robust Optimization, University of Toronto (graduate; 2019, 2020)
- Operations Management, University of Toronto (undergraduate core; 2019)
- Mathematical Programming, University of Toronto (undergraduate core; 2019)
- Algorithms, Concordia University (graduate; 2015)
- Data Communication & Computer Networks, Concordia University (undergraduate core; 2015)
- Discrete Structures & Formal Languages, Concordia University (graduate; 2015)
- Simulation, Tehran Polytechnic (undergraduate elective; 2012, 2013)
- Design of Industrial Systems, Tehran Polytechnic (graduate; 2012, 2013)
- Stochastic Optimization & Risk Management, Tehran Polytechnic (graduate; 2013)

PROFESSIONAL EXPERIENCE

- Technology Analyst - Morgan Stanley, Montreal, Canada (2017)

PROFESSIONAL SERVICE

- President of INFORMS/CORS Student Chapter at University of Toronto, (2019-present)
  - INFORMS Student Chapter Award - Magna cum laude, 2021
  - INFORMS Student Chapter Award - Honorable mention, 2020
- Session chair, INFORMS Annual Meeting (2020, 2021)
- Lead of student volunteers, CORS Annual Conference (2021)
- Session chair, INFORMS Telecommunications and Network Analytics Conference (2020)

Ad-hoc Reviewer/Referee:

Mathematical Programming, Operations Research, INFORMS Journal on Computing, European Journal of Operational Research, IEEE Communications Letters, CPAIOR

TALKS & POSTERS

- Stochastic routing and wavelength assignment problem in WDM networks, *INFORMS Annual Meeting* (2021)
- Lagrangian dual decision rules for integrated staffing and scheduling in service systems, *CORS Annual Conference* (2021)
- Stochastic routing and wavelength assignment problem in WDM networks, *CIRRELT* (2021)
- Lagrangian dual decision rules for integrated staffing and scheduling in service systems, *INFORMS Annual Meeting* (invited, 2020)
- Stochastic routing and wavelength assignment problem in network defragmentation, *INFORMS Telecommunications and Network Analytics Conference* (2020)
- Integrated staffing and scheduling for service systems via multistage stochastic integer programming, *International Conference on Stochastic Programming*, Trondheim (2019)
- Lagrangian dual decision rules for multistage stochastic integer programming, *Optimization Days*, Montreal (2019)
- Integrated pricing and routing decisions, *INFORMS Revenue Management & Pricing*, Toronto (invited, 2018)
- Facility location problem with general objective functions, *MIE Graduate Research Symposium*, Toronto (poster, 2018)

REFERENCES

- **Merve Bodur** - Assistant Professor, University of Toronto
  - Phone: (416) 978-4739, E-mail: bodur@mie.utoronto.ca
- **James R. Luedtke** - Professor, University of Wisconsin-Madison
  - Phone: (608) 890-2560, E-mail: jim.luedtke@wisc.edu
- **Andre Cire** - Associate Professor,Rotman School of Management, University of Toronto
  - Phone: (416) 978-5454, E-mail: andre.cire@rotman.utoronto.ca
- **Ayse Nur Arslan** - Assistant Professor, Institut National des Sciences Appliquées de Rennes
  - E-mail: ayse-nur.arslan@insa-rennes.fr