



CORS·SCRO

Canadian Operational Research Society

Société canadienne de recherche opérationnelle

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IN THIS ISSUE

Dear CORS members,

In this issue, we share updates as we prepare for the upcoming CORS annual conference in Kingston. Many of us will have the opportunity to reconnect in person before the next issue, and I look forward to the insightful presentations and plenary talks, including the Harold Larnder Award lecture by Martin Puterman.

We also highlight this year's award recipients and Practice Prize finalist projects, which showcase the strong impact of operations research across a range of real-world applications. From humanitarian logistics to national-scale systems and industry deployment, these contributions reflect the depth and relevance of our field.

You will also find details about the incoming Council and nominees for the next term, marking an important transition as we build on a year that has helped strengthen our community.

It is encouraging to also see the continued growth in student engagement, including competitions, chapter activities, and the introduction of the CORS OR Challenge. These efforts are helping to foster the next generation of our community.

Overall, this has been a year of strong momentum, and we now look ahead to the next phase with new leadership and continued energy.

All the best,

Niloofar

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Past President
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Houra Mahmoudzadeh
Majid Taghavi
Kent Kostuk
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Salimur Choudhury (25–27)
Amir Ardestani-Jaafari (25–27)
Hamid Arzani
Joe Naoum-Sawaya, Nadia Lahrichi

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Standing Committee Chairs

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Houra Mahmoudzadeh, Marco Bijvank,
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Amir Ardestani-Jaafari, Marco Bijvank
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Program

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Awards
Award of Merit

Houra Mahmoudzadeh
Anjali Awasthi, Jim Bookbinder
Vedat Verter

Equity, Diversity, and Inclusion

Anjali Awasthi, Eman Almehdawe (co-
chairs), Hamid Arzani

Practice Prize Competition

Peter Vanberkel

Student Paper Competition

(Open) Sébastien Le Digabel
(Undergraduate) Alexander Rutherford

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Bijvank, Houra Mahmoudzadeh

Industry

Marco Bijvank, Salimur Choudhury

Micro Events

Amir Ardestani-Jafaari, Marco Bijvank

Nominating
Traveling Speaker Program

Anjali Awasthi
Anjali Awasthi

Appointed Positions

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Bulletin Editor
IFORS Representative

Joe Naoum-Sawaya
Niloofar Akbarian-Saravi
Majid Taghavi

Administrative Coordinator

Erla Anderson (members@cors.ca)

2025–2026 CORS COUNCIL

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PRESIDENT'S MESSAGE

Dear members of CORS, colleagues, and friends,

As we wrap up the Winter semester and begin to embrace the longer days and renewed energy that Spring brings, it feels like a natural moment for reflection. This season of transition is particularly meaningful for me, as this will be my final message to you as President of the Canadian Operational Research Society.

Over the past year, I have had the privilege of witnessing the strength, engagement, and generosity of our community. One highlight has been the impressive series of Micro Event presentations, which remain key opportunities for members to connect, engage, and exchange ideas across the country and internationally throughout the year. Bringing together researchers, practitioners, and students, these events have reinforced a strong and vibrant community. They have showcased not only the breadth of operational research, but also the willingness of our members to share knowledge and engage with one another.



I would like to particularly thank our Past President, Anjali Awasthi, for her guidance and support, and to warmly welcome our incoming President, Houra Mahmoudzadeh. It has been a pleasure serving the Society alongside the entire CORS Council. I would like to take a moment to highlight a few individuals. First, many thanks to Carlos Zetina, who stepped into the Councillor role this past Fall after Ana María Anaya-Arenas had to step down due to personal circumstances. I would also like to thank Hamid Arzani for his contributions as Student Councillor. It is inspiring to see the energy and initiative the next generation brings to the Society.

My sincere thanks also go to Niloofar Akbarian-Saravi for her work this past year as new Editor of the CORS Bulletin. Stepping into a role that was held by Andrea Friars for over a decade was no small task, and Niloofar has done an excellent job keeping members informed and engaged. Finally, I would like to acknowledge Nadia Lahrichi, who has served on Council since 2021, first as Councillor and then as Education Chair. More broadly, I extend my thanks to all Council members who will continue in their roles in the coming year(s). Your dedication, professionalism, and collegiality have made it a pleasure to navigate both opportunities and challenges together.

I would also like to acknowledge the contributions of many others working behind the scenes: our Past Presidents, Special Interest Group (SIG) Presidents, Student Chapter Presidents, Local Section Presidents, and Diploma Coordinators. The progress and vitality of CORS are truly a collective effort, sustained by the dedication of so many volunteers.

Looking ahead, we are excited about the upcoming annual conference in Kingston. The conference will be an excellent opportunity to reconnect, exchange ideas, and celebrate achievements across our community. We will recognize outstanding work through several awards, including the many student

paper competitions. I strongly encourage you to attend these sessions where finalists are presenting, as the quality of submissions this year is exceptional.

In addition, there will be a rich set of student-focused activities, including a new CORS OR Challenge, this year inspired by the upcoming FIFA World Cup. I encourage you to read more about this initiative in this Bulletin and to share it with your students. The data-to-decision challenge will take place in the two weeks leading up to the conference, with presentations held during the conference itself. These initiatives reflect our continued commitment to fostering the next generation of operational research professionals.

I would like to thank Vedat Verter and Salimur Choudhury for their leadership as Conference Co-Chairs, as well as Mikhail Nediak and Samar Garrab as Program Co-Chairs. A special thanks also goes to Beste Kucukyazici for organizing the Canadian Healthcare Optimization Workshop (CHOW) on the Sunday before the conference, and to Nasrin Yousefi for organizing Analytics Days on the final day of the conference. These are excellent opportunities for members to engage with practitioners and discuss real-world challenges and solutions.

It has somewhat become a tradition for the President to announce the location and dates of the next CORS conference in the May edition of the CORS Bulletin. This year, I will break with tradition and leave you in a bit of suspense. For now, I encourage you to mark your calendars for May 17-19, 2027. The conference will be held in an amazing location where the CORS Conference has not been organized before. One that I am confident will leave a lasting impression.

As this is my final message as President, I would like to express my sincere gratitude for the trust you have placed in me and for the opportunity to serve this community. It has been an honour and a deeply rewarding experience. I look forward to continuing to engage with CORS in new ways and to seeing the Society thrive in its next chapter of leadership.

Wishing you all a productive and enjoyable Spring. I look forward to seeing many of you at the CORS 2026 Conference in Kingston, June 8-10, 2026.

Warm regards,

Marco Bijvank

President, Canadian Operational Research Society (CORS/SCRO)
marco.bijvank@haskayne.ucalgary.ca

2026 CORS ANNUAL CONFERENCE



Register for the 67th annual CORS conference in Kingston and book a room here: <https://site.phedloop.com/event/cors2026/venue>

Highlights



Harold Larnder Memorial Lecture:

Martin L. Puterman: Reflections on Markov Decision Processes
Monday, June 8



IFORS Distinguished Lecture

Craig Boutilier: On the Role of LLMs in Human Decision Making
Tuesday, June 9



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HAROLD LARNDER AWARD WINNER



Martin L. Puterman

Professor Emeritus
University of British Columbia Sauder School of Business

Martin L. Puterman is Professor Emeritus at the University of British Columbia Sauder School of Business having retired in 2014. While at UBC, his research focused on Markov decision processes, health care operations, sports analytics, and applied statistics. The rapid evolution of artificial intelligence has brought renewed prominence to his research; his seminal 1994 book, *Markov Decision Processes*, has surpassed 23,000 citations. To further engage with researchers and students in this expanding field, he has collaborated with Tim Chan on a new book, *Markov Decision Processes and Reinforcement*

Learning, soon to be released by Cambridge University Press. During his tenure at UBC, he founded and directed the UBC Centre for Health Care Management, the Centre for Operations Excellence, and the Biostatistical Consulting Service at BC Children's Hospital. He also consulted widely on health care operations and planning, statistical modeling, logistics, inventory control, forecasting, operations management, program evaluation, and management strategy. He is an INFORMS Fellow and recipient of the INFORMS Lanchester Prize, the Canadian Operations Research Society (CORS) Award of Merit, the CORS Practice Prize and the INFORMS Case Prize. He is also an avid golfer and has served on several not-for-profit boards of directors.

Reflections on Markov Decision Processes

This talk, inspired by insights gained while co-authoring my soon to be published book with Tim Chan, *Markov Decision Processes and Reinforcement Learning*, is divided into two parts.

First, I will provide a high-level introduction to the MDP model, highlighting its key results, fundamental algorithms, and some modern applications.

In the second part of the talk, I will share insights regarding:

- Expected total reward models and their relevance to task-oriented applications.
- Simple conditions to ensure convergence of value iteration in average reward models.
- A new take on partially observed Markov Decision (POMDPs).
- The use of value function approximations in MDPs.
- The foundational role of MDPs in reinforcement learning.

CORS OR Challenge – Call for Expressions of Interest

CORS is launching the **CORS OR Challenge**, a new graduate-student competition associated with the CORS Annual Conference. The challenge invites teams of **2–4 graduate** students to tackle a real-world Operations Research problem, demonstrating skills in problem structuring, model formulation, solution development, and clear communication.

2026 Theme: Sport Analytics & the FIFA World Cup

With Canada hosting the FIFA World Cup, this year's challenge focuses on a sports-analytics scheduling problem inspired by the 2026 tournament. Teams will analyze real-world data and propose a defensible OR-based solution.

Call for Expressions of Interest (EOI)

Students wishing to participate must submit an **EOI by May 24**, including:

- Team name;
- Names, email addresses, and affiliations of all team members;
- Proof of conference registration for at least **two team** members (at least two team members must attend the CORS Conference in Kingston).

The case will be released to participating teams on **May 25**, and teams will have until the conference to prepare and submit their solutions. The exact submission deadline will be communicated to registered teams.

Shortlisted teams will be invited to present their submissions in a dedicated session during the conference. The top three teams will receive certificates and awards during the awards banquet on June 9.

Please email EOIs to **Hamid Arzani** at hamid.arzani@rotman.utoronto.ca For any questions about the challenge or the EOI process, please contact Hamid at the same email address.

ANNOUNCEMENTS

Council Corner

This section of the CORS Bulletin highlights recent discussions by the CORS Council and motions of particular interest that have been passed.

- Our last Council meeting was held on April 24

CORS Membership

Renew your CORS membership for the period until 31 March 2027. Fees are due now.

You may be able to use an NSERC grant to pay membership dues for yourself and your graduate students.

Please renew your membership on the CORS website.

CORS Diploma

The CORS Diploma is awarded by the Canadian Operational Research Society, in association with participating Canadian universities, to recognize CORS members who have successfully completed a program of study which has included significant exposure to operational research in the following areas: OR techniques, probability and statistics, computers and systems, and applications of OR. The objective of the Diploma is to encourage students to pursue an educational program in the field of operational research and to recognize their achievement in successfully completing such a program. It benefits the university by highlighting the fact that a student can gain significant exposure to operational research through a particular course of study offered at that university. It benefits CORS by encouraging students to pursue a career in OR and by attracting new members. For more information, see the CORS website.

FUNDING OPPORTUNITIES

Traveling Speaker Program

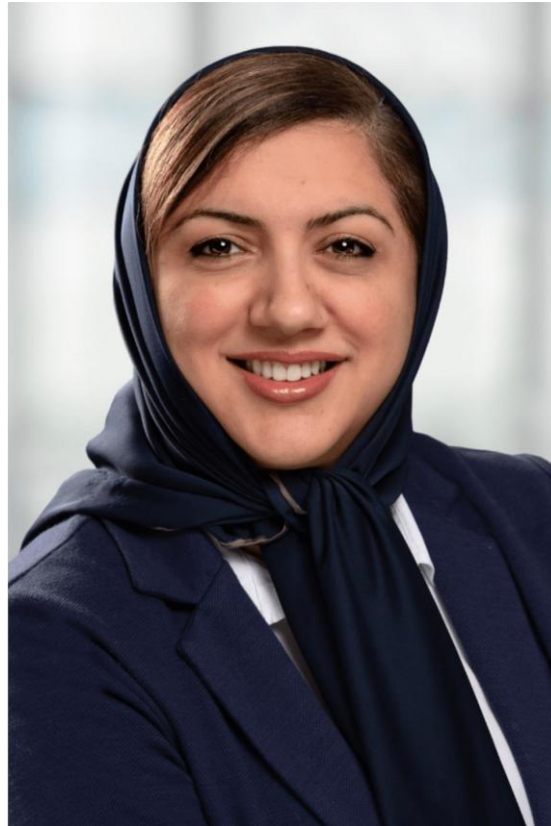
The Traveling Speaker Program (TSP) enables local sections to bring OR practitioners and researchers in Canada as speakers to their local events. To keep costs in line while maximizing the CORS national profile, CORS sponsorship will be limited to 50% of the total expenses, up to a maximum of \$500 per speaker or \$1000 for a single event (conference, workshop). Other expenses can be covered by the local section. The program of the event must acknowledge the contribution of CORS. The president of the local section must contact the TSP Coordinator to obtain approval for funding at least one month in advance of the event date. Payment will be made by the CORS Treasurer upon receipt of the Expense Form.

The president of the local section fills out the application form on the CORS website and submits the form to the TSP Coordinator Anjali Awasthi (pastpresident@cors.ca)

NOMINEES FOR 2026–2027 CORS COUNCIL

President: Houra Mahmoudzadeh

Houra Mahmoudzadeh is an Associate Professor in the Department of Management Science and Engineering at the University of Waterloo. Her research focuses on the theory and applications of large-scale optimization and data analytics in healthcare operations and medical decision-making. Her work has appeared in leading journals, including *INFORMS Journal on Optimization*, *INFORMS Journal on Computing*, *EJOR*, and *Medical Physics*, and has been supported by NSERC Discovery and Alliance grants. Houra has served CORS in multiple roles over the years, including councillor, healthcare track organizer, HCOR SIG communication officer, conference cluster chair, student chapter advisor, and, most recently, as vice-president. She looks forward to continuing her service as CORS President for the upcoming year.



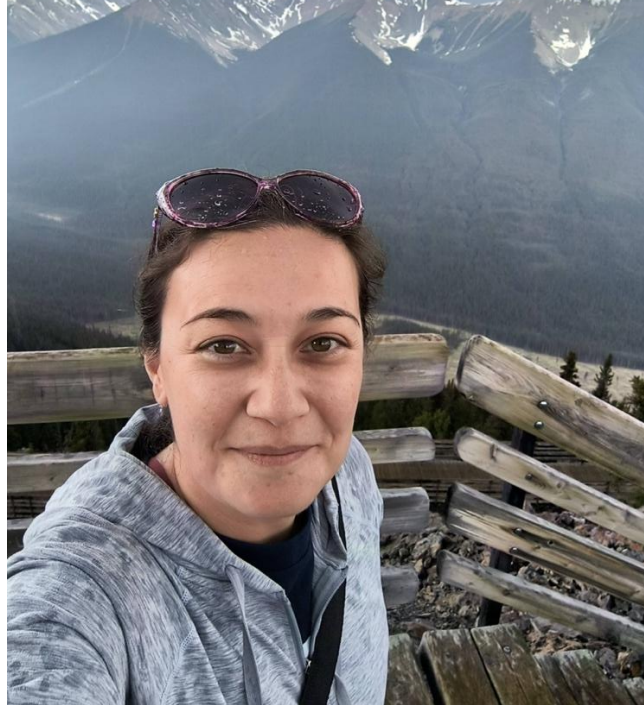
Vice-President: Majid Taghavi

Majid Taghavi is an Associate Professor at the Sobey School of Business, Saint Mary's University. His research leverages stochastic operational research and artificial intelligence to optimize healthcare operations, with support from funding bodies including NSERC and Research Nova Scotia. Majid has been an active member of the Canadian Operational Research Society (CORS) for several years, serving on the organizing committee for the 2018 annual conference in Halifax and as the track organizer for the Healthcare Operations Research Special Interest Group from 2018 to 2020. He subsequently served as a Councillor from 2020 to 2022. Following these roles, he has served CORS as Secretary since June 2023 and is now stepping into the Vice President role.



Secretary: Tiffany Bayley

I'm an Assistant Professor and Teaching Scholar at Ivey Business School, where I explore how pedagogical design impacts student learning and engagement in management science and operations management courses. My connection to CORS goes back a long way: I earned my CORS Diploma shortly after finishing my undergraduate degree in Industrial and Manufacturing Systems Engineering at the University of Windsor, and as a graduate student at Waterloo I served as CORS Waterloo Student Chapter President. Since then, I've had the pleasure of establishing the Teaching and Learning Special Interest Group and serving as Program Chair for the 2024 CORS Annual Meeting. I'm excited to now take on the role of Secretary and continue contributing to this community.



Education Chair: Eman Almehdawe

Dr. Eman Almehdawe is a Professor of Operations Management and Analytics at the Hill Levene School of Business, University of Regina. From January 2022 to December 2024, she also served as Associate Dean of Research and Graduate Programs. She holds a Bachelor of Science in Industrial Engineering, as well as a master's and PhD in Management Sciences from the University of Waterloo.

Dr. Almehdawe teaches courses in Operations Management, Business Analytics, and Project Management. Her research focuses on management sciences, supply chain management, decision support systems, and queuing theory. She has published in leading Operations Research journals, including the *European Journal of Operational Research*, the *International Journal of Production Economics*, and the *International Journal of Operational Research*, among others.



Her current research is funded by the Natural Sciences and Engineering Research Council of Canada (NSERC).

Since 2024, Dr. Almehdawe has served as an elected councillor of the Canadian Operational Research Society (CORS), where she chairs the Student Affairs Committee and co-chairs the Equity, Diversity, and Inclusion Committee. She is a licensed professional engineer in Saskatchewan (APEGGS) and an active member of several professional organizations, including INFORMS and MSOM.

Councillors: Kimia Ghobadi and Amir Rastpour



Kimia Ghobadi is a John C. Malone Assistant Professor in the Department of Civil and Systems Engineering at Johns Hopkins University. She is an associate director at the Center for Systems Science and Engineering (CSSE), a Chair faculty member of the Malone Center for Engineering in Healthcare, and a faculty member at the Data Science and AI Institute. Kimia completed her Ph.D. in Industrial Engineering at the University of Toronto, working with the Princess Margaret Cancer Centre, and her postdoctoral at the MIT Sloan School of Management, collaborating closely with the Massachusetts General Hospital.

She has served as past president of the CORS Toronto student chapter, the INFOMRS University of Toronto student chapter, and the University of Toronto's Operations Research Group (UTORG). She is a recipient of the INFORMS Judith Liebman Award and multiple fellowships, including the Canadian National Science and Engineering fellowship (NSERC). Her research interests are in human-centred decision-making support in health systems, using methods including math models, inverse optimization, analytics, and large language models.



I am an Associate Professor of Operations Management at Ontario Tech University, with a PhD in Operations Management from the University of Alberta. My research focuses on service systems, particularly healthcare operations, using queueing theory, stochastic modeling, and data analytics. My work has been published in leading journals and supported by external funding, including an NSERC Discovery Grant. I also contribute to teaching and curriculum development in business analytics, statistics, and supply chain topics.

I have been involved with the Canadian Operational Research Society (CORS) in different capacities, beginning as a student participant in 2010 and taking on active service roles since 2020. I currently serve as President of the Queueing and Applied Probability Special Interest Group (SIG), where I help organize conference clusters and coordinate the Student Paper Competition. I co-chaired the CanQueue conference, the flagship event of the SIG, in 2023. My contributions also include serving as Treasurer/Secretary of the Health Care Operational Research SIG and judging student paper competitions. Beyond CORS, I co-chaired the 12th International Conference on Matrix-Analytic Methods in Stochastic Models (MAM 12) in 2025. I regularly present my research at CORS and related conferences and contribute to the community through mentorship and collaboration.

Student Councillor: Camille Pinçon

Camille Pinçon is a PhD student in operations research at Polytechnique Montréal since 2023. She holds an engineering degree from Paris-Saclay University in France. Her research focuses on optimization methods for healthcare applications, with a particular emphasis on multi-objective scheduling problems in complex service systems such as hospitals. She has experience developing mixed-integer programming models as well as heuristic approaches for large-scale problems.

In addition to her research, Camille is actively involved in the CORS Montreal Student Chapter, contributing to the organization of events that connect students, researchers, and industry professionals. She is committed to fostering engagement within the operations research community and representing student perspectives at the national level.





2026 PRACTICE PRIZE FINALIST PROJETS

From Forecast to Coordinated Action: A Platform-Based Anticipatory Stock Repositioning Framework

Birce Adsanver^a, Burcu Balcik^b, Valerie Belanger^a, Marie-Eve Rancourt^a

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Project Summary

In partnership with the Emergency Supply Prepositioning Strategy (ESUPS), this project addresses anticipatory supply repositioning to enable rapid delivery in networks with vulnerable infrastructure. As anticipatory action remains an emerging concept, the humanitarian sector lacks effective decision-support tools. This work develops a data-driven optimization framework that integrates a prediction model with an optimization model within an optimal stopping formulation, determining where, when, and in what quantities to relocate prepositioned supplies under evolving cyclone forecasts and travel conditions. The framework is currently being integrated into ESUPS's STOCKHOLM platform to support partner organizations (e.g., UNICEF, IFRC) in making collaborative decisions. An extensive analysis based on a Madagascar case study demonstrates that anticipatory repositioning outperforms traditional reactive policies, which act only after disaster impacts are realized, and reveals additional gains from collaboration. The results highlight the value of the proposed framework for more effective and efficient disaster response, ultimately helping to reduce human suffering.

Application of Operations Research

- The anticipatory repositioning problem is formulated based on practitioner challenges and solved using predictive and prescriptive algorithms.
- A regression model predicts demand for relief supplies using variables available in data-scarce contexts, including cyclone wind speeds, population density, and relative wealth index. Demand scenarios are then generated to capture uncertainty and are used as input to the optimization model.
- A two-stage stochastic optimization model provides recommendations on supply relocations, ensuring both responsiveness and efficiency. The model uses network data, including road information from OpenStreetMap and warehouse and inventory data from the STOCKHOLM platform.
- The prediction and optimization models are embedded within an optimal stopping framework to determine repositioning timing based on the dynamic changes in cyclone forecasts and travel times.

Key Messages

- Anticipatory repositioning can reduce response time by up to 50% compared to reactive approaches and save up to 17 hours, a reduction that is critical in crisis situations.
- Reductions in response time are especially pronounced under scarce supply availability and deteriorated road conditions, a pattern commonly observed in developing countries.
- Inter-organizational collaboration emerges as a major factor affecting performance in anticipatory strategies, substantially enhancing system-wide outcomes.



- In the absence of collaboration, the effectiveness of anticipatory repositioning deteriorates sharply, with response time savings reduced by up to 44% and relocation inefficiencies increasing significantly (up to 227% in travel time).

Best Practices

- Adopt anticipatory action approaches to address the increasing impacts of climate change and reduce pressure on limited humanitarian resources.
- Embed operations research tools within digital platforms (e.g., STOCKHOLM) to translate forecasts into actionable, real-time decisions.
- Foster collaboration mechanisms, including data sharing and joint planning processes, to improve the efficiency and effectiveness of humanitarian operations.
- Use optimal stopping frameworks to enable dynamic adjustment of intervention timing.
- Invest in data storage to improve data availability and support predictive modeling.

A Network Planning Model for a National Blood Supply Chain: Canadian Blood Services Plans for the Future

John T. Blake^{1,2}, Matthew Neilson², Amanda Kovacs², Alana Robertson², Daniel Bartlet²

¹Dalhousie University

²Canadian Blood Services

Background. Following the end of COVID-19 restrictions in 2022, Canadian Blood Services (CBS) observed a significant shift in donor behaviour: individuals were less likely to become donors and, if they did donate, more likely to lapse. An internal analysis revealed that donor participation decays sharply with distance from collection sites — very few donors attend clinics more than 20 km from home. Combined with increased demand for packed red cells, the conversion of whole blood centres to plasma donation centres, and the arrival of third-party commercial plasma collectors, CBS faced a period of low national red cell inventory. These trends indicated that additional collection capacity, both fixed and mobile, would be needed to expand the donor base to meet future demand.

Methodology. We developed a multi-period, multi-objective mixed-integer linear program (MILP) to optimize the CBS blood supply chain across all Canadian provinces (except Quebec) over a ten-year planning horizon (2024–2033). The network model encompasses four echelons: collection facilities (permanent, mobile, and plasma-only, including third-party collectors), production facilities, distribution hubs, and hospitals. Donor availability is modelled at the Forward Sortation Area (FSA) level, with participation decaying as a function of travel distance to collection sites. The model employs a lexicographic objective structure, optimizing sequentially to: (1) minimize shortages of blood products at hospitals, (2) minimize wastage from over-collection, (3) minimize total system operating cost, and (4) minimize donor inconvenience measured by travel distance. The model was formulated in AMPL and solved using Gurobi 11.0.1 on a high-performance server. Uncertainty was addressed through scenario-based analysis, with decision-makers specifying alternative population growth, demand, and donor behaviour scenarios.

Key Findings. In addition to specifying the new network, we evaluated the effects of four operational factors: donor participation rate, donor attendance rate, plasma donation frequency, and whole blood donation frequency on infrastructure requirements. Donor participation emerged as the most influential



factor: a modest 2% increase above current participation levels offsets the cost impact of reducing whole blood donation frequency from 2.1 to 1.9 donations per donor per year (a policy under consideration to protect donor iron levels). Increasing plasma donation frequency from 8 to 12 times per year reduces the number of new plasma collection sites required by approximately 3. These results demonstrate that targeted operational policy adjustments — particularly improving donor engagement — can deliver substantial savings by reducing infrastructure expansion requirements.

Impact. This model is actively informing strategic planning at Canadian Blood Services by allowing infrastructure and policy decisions to be evaluated before committing irrevocable capital investment. It has supported evidence-based decisions on multi-million-dollar capital investments, including the selection of a new production facility in the Lower Mainland of British Columbia. To our knowledge, this study represents the first strategic, national-scale blood supply chain optimization applied in practice and documented in the literature.

Bridging the Practicability Gap: A Hybrid Optimization and Machine Learning DSS for Log Transportation at NRCan

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Log transportation accounts for as much as 40% of total operating costs in the Canadian forestry sector, yet operational adoption of optimization based decision support systems has remained limited. Existing tools are widely viewed as research oriented rather than operationally viable. They omit critical real world constraints, rely on hard coded rules that fail to evolve with operational realities, and offer no mechanism to recover from disruptions that routinely invalidate pre-established plans. As a result, Canadian dispatchers continue to build weekly transportation plans manually, each morning, using spreadsheets and phone calls.

Under the Digital Forest Value Chain Optimization (DFVCO) initiative, Polytechnique Montréal, UQAR, and Natural Resources Canada (NRCan) partnered with leading Canadian forest companies to design, implement, and validate a generic and adaptive end-to-end decision support system for large scale logtruck routing and scheduling. The four year engagement, sustained from 2022 to 2026, was grounded in intensive field work with planners and dispatchers across multiple companies. This diagnostic foundation was decisive: it determined the structure of the system, the choice of methods, and the evaluation criteria applied throughout.

The resulting platform, deployed as FOROP-T, integrates three tightly coupled components within a web based interface. A kernel component formulates the multi-period log-truck routing and scheduling problem as a large scale MILP on a time space network, capturing the full spectrum of forestry operational constraints including queuing management, loader truck synchronization, mixed truckloads, and driver work hour regulations within a single formulation. A tailored Relax-and-Fix decomposition delivers near optimal solutions within practical runtimes, work that was recognized with the David Martell Prize in



Forestry at the 2025 CORS Annual Conference. An implicit constraint learning component embeds trained machine learning predictors directly into the MILP as linear constraints, combining linear, tree based, and graph neural network learners through a stacking mechanism that allows the system to self-adjust to evolving planner preferences without manual re-engineering. A dynamic reoptimization component combines local branching with reinforcement learning to generate Pareto-optimal recovery plans within minutes after a disruption, while minimizing deviation from the original tactical plan. The DSS is currently deployed for a major Canadian forest company, with other deployment trials underway with two additional companies. Over a 50-week comparison against manual planning, the system delivered significant financial and environmental gains, generating approximately \$8 million CAD in annual savings and avoiding 4,800 tonnes of CO₂ per year. Projected nationally, adoption across the Canadian forestry sector is estimated to yield up to \$377 million in annual fuel savings and avoid more than 500,000 tonnes of CO₂, directly supporting Canada's net-zero objectives.

Three principles proved decisive in turning a research model into an adopted operational tool, and they generalize beyond forestry. First, ground every modelling decision in field engagement. The diagnostic phase with dispatchers shaped the architecture of the entire DSS and surfaced the very constraints that earlier optimization attempts had overlooked. Second, design for adaptability rather than completeness. Planners override even optimal plans when operational rules evolve, so the system must learn from executed plans rather than be re-engineered each time business conditions shift. Third, treat plan stability as a first order objective in disruption recovery. Dispatchers consistently favour balanced recovery plans, those that capture most of the cost improvement with limited deviation from the original schedule, and the reinforcement learning agent learns to identify them automatically. Together, these principles show how principled integration of mathematical optimization and machine learning, anchored in sustained industry collaboration, can bridge the gap between research and operational practice and deliver measurable, nationally scalable impact in natural resource logistics.

Menu Optimization for (Office) Meal Delivery Platforms

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The office meal delivery industry, a segment of the \$103B global catering market that provides individually packed, coordinated corporate lunches, is expanding rapidly yet operates on thin margins. Each day, a platform must choose the assortment of restaurants to offer each client firm, balancing employee appeal, delivery cost, and each restaurant's shared daily capacity.

In collaboration with one of the largest such platforms in North America, we developed and deployed an optimization framework for this daily menu decision. Our work proceeds in four stages: (i) a parsimonious capacitated joint assortment optimization model on a bipartite supply and demand graph; (ii) a complexity



analysis establishing APX hardness, together with three scalable approximation algorithms with provable guarantees, including a new polynomial time tractability result for the cardinality constrained fluid LP relaxation of the assortment problem; (iii) model calibration on historical order data covering restaurant utilities, firm size proxies, and per meal delivery costs; and (iv) a two-week field deployment in the Vancouver metropolitan area (April 15 to 26, 2024), evaluated via a Difference-in-Differences design against neighboring control cities.

The deployment is associated with an estimated profit increase of \$0.486 per unit increase in estimated number of employees per firm, per day, roughly a 14.5% lift in profit per employee over the baseline, with a comparable revenue effect of \$0.487 per unit increase in estimated number of employees per firm per day. The lift comes without degrading service quality: average delivery distance falls by 1.43 km (21.7%), average delivery time down by 2.61 minutes (10.1%), and menu variety, restaurant appeal, and capacity breach frequency all remain within the platform's baseline range. The framework generalizes to network-based delivery or matching applications with pair dependent rewards and capacitated supply.



SPECIAL INTEREST GROUPS

A SIG provides a mechanism to promote CORS, the SIG area, and the SIG members, as well as the opportunity for CORS members with common interests to interact and network. You can find the SIG webpages on the CORS website.

Analytics SIG

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Energy, Environment, & Sustainability SIG

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Forestry SIG

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Quantum Computing for Optimization SIG

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Queueing & Applied Probability SIG

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Teaching & Learning SIG

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University of Florida

Transportation & Logistics SIG

Okan Arslan, okan.arslan@hec.ca
HEC Montreal

If you would like to join a SIG, contact the people listed above, or indicate when you renew your CORS membership. CORS encourages members with common interest in an area within or related to operational research to form additional SIGs. More information can be found on the CORS website.

If you are interested in forming a SIG in a particular area
contact Houra Mahmoudzadeh (vicepresident@cors.ca)

SIG NEWS

Transportation and Logistics

Symposium on Digital Intelligence for Sustainable Mobility

On March 17, 2026, a half-day symposium entitled “*Digital Intelligence at the Service of Sustainable Mobility*” was held at HEC Montréal. The event was co-organized by the **Fonds de recherche du Québec – Nature et technologies (FRQNT)**, the **Groupe d’études et de recherche en analyse des décisions (GERAD)**, the **Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation (CIRRELT)**, and the **CORS**.

The symposium brought together researchers, practitioners, and public-sector stakeholders to explore how data-driven methods, optimization, and artificial intelligence can contribute to more sustainable and efficient transportation systems. Key themes included shared mobility, electrification, urban logistics, and emerging digital technologies for transportation planning. The scientific program featured the following presentations:

- **Martin Trépanier (Polytechnique Montréal)**
The Role of Carsharing in Urban Demotorization: Insights from Data-Driven Analysis
- **Emma Frejinger (Université de Montréal)**
User-Centric Design of Urban EV Charging Networks
- **Lijun Sun (McGill University)**
Seeing the Invisible: Solving Inverse Problems in Transportation
- **Francesco Ciari (Polytechnique Montréal)**
The Environmental Impact of Shared Autonomous Vehicles: How to Deal with Intercity Travel?
- **Jiangbo Yu (McGill University)**
Early-Stage Agentic Transportation Systems (AgTS): Networked AI Agents for Sustainable, Adaptive, and Human-Centered Urban Mobility
- **Maryam Darvish (Université Laval)**
Smart Mobility Solutions for the Last Mile

The event also featured an industry and policy panel with representatives from **GIRO Inc.**, **Transit App**, the **Autorité régionale de transport métropolitain (ARTM)**, and **Agence de mobilité durable (AMD)**, offering perspectives on the implementation of innovative mobility solutions in practice.

The symposium attracted **more than 50 participants in person and over 15 participants online**, highlighting strong interest from both academic and practitioner communities. Overall, the event provided a valuable forum for exchanging ideas at the intersection of operations research, transportation, and digital intelligence, and showcased the strength of the Canadian research ecosystem in transportation and logistics.

For more information, please consult the GERAD event webpage at <https://www.gerad.ca/en/events/2400> and a video recording of the symposium is also available at <https://www.youtube.com/watch?v=sSuoSYKgcxY>.

SECTION & CHAPTER NEWS

Montreal Student Chapter

- **From OR Ideas to Real-World Decisions: An Industry Panel with IVADO Labs – February 5**

We organized an industry panel in collaboration with IVADO Labs, an applied AI and analytics group supporting organizations worldwide in tackling complex decision-making problems using operations research.

The discussion focused on a critical transition point: how research ideas evolve into practical decision-support tools deployed in real-world settings.

Panelists shared insights on how projects are structured in consulting environments, how operations research integrates with machine learning and generative AI, and what it means to work on planning, routing, and resource allocation problems in industry.

The session provided valuable perspective on both the practical impact of OR and the career pathways available to students considering a move into industry.





- **Sustainable Mobility Seminar (1/2) – March 11**

GERAD launched a thematic semester dedicated to sustainable mobility, featuring a series of events leading up to Optimization Days in May in Montreal.

As part of this initiative, we organized a first seminar covering two key topics: ridesharing and electric vehicles.

- Ben Hudson presented work on incorporating user preferences (e.g., habits, safety, familiarity) into ridesharing systems.
- Nima Moradi discussed last-mile logistics through a multimodal system integrating electric vehicles, delivery robots, and pickup points.

- **Next event: Sustainable Mobility Seminar (2/2) – April 8**

As part of the GERAD thematic semester on sustainable mobility, we will host a second seminar focused on sustainable mobility analytics, with an emphasis on passenger flows and equity considerations.

Three students will present their research:

- Maria Laura Guerrero Balarezo: Equity in urban transportation and gendered travel differences in Canada
- Xiaoxu Chen: Bayesian spatiotemporal modeling of passenger trip assignment in metro networks
- Nagisa Sugishita: Congested facility location: efficiency and fairness under user equilibrium



Saskatoon Section



CORS
SASKATOON



EDWARDS
SCHOOL OF BUSINESS
UNIVERSITY OF SASKATCHEWAN



March 23, 2026

4:00 - 5:30 pm (MT)

ESB 46 & Online

Supply Chains in a Changing World: Trade, Geopolitics, and Innovation



Doug Romanuk
Managing Director, Mexico
Bison Transport Inc.

Abstract: Ongoing global events and geopolitical developments are influencing businesses and communities around the world, and supply chains remain a key part of that conversation. This interactive seminar explores how these developments are affecting real-world supply chains, trade, transportation, and business decisions. Topics include tariffs, geopolitics, CUSMA, and the evolving roles of Mexico and China in global trade, along with their implications for Canada. The seminar will also discuss how technology and innovation in freight movement are helping organizations respond to change and supporting the future of supply chain management.

Bio: Doug Romanuk is the Managing Director, Mexico at Bison Transport Inc. and a member of Bison Canada's Executive Committee. He has played an active role in both Sales and Operations for more than ten years. With over 40 years of experience in the transportation industry, Doug brings extensive practical insight and deep expertise in freight, logistics, and cross-border supply chain operations.



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**CORS Annual Conference
8–10 June 2026, Kingston, Ont.**



MEETINGS AND CONFERENCES

Business Meetings

11 June 2025	Meeting #1, Conference
19 Sep 2025	Meeting #2, Teleconference
14 Nov 2025	Meeting #3, Montreal, Que.
23 Jan 2026	Meeting #4, Teleconference
27 Mar 2026	Meeting #5, Teleconference, Financial Planning Committee
24 April 2026	Meeting #6, Teleconference
7 June 2026	Meeting #7, Conference, Kingston, Ont.
8 June 2026	Meeting #8, Conference, SIGs, Sections, Chapters
9 June 2026	Meeting #9, Conference, CORS AGM

CORS Annual Conferences

8–10 June 2026 Annual Conference, Kingston, Ont.

<https://site.phedloop.com/event/cors2026/home>

WWW Conference Listings

CORS: <https://www.cors.ca/content/cors-annual-conferences>

INFORMS: <https://www.informs.org/Meetings-Conferences>

IFORS: www.ifors.org/web

Netlib Conference Database: <ftp://ftp.cc.ac.cn/netlib/confdb/Conferences.html>

SIAM: www.siam.org/meetings/calendar.php

POMS: <https://pomsmeetings.org>

EURO: www.euro-online.org/web/pages/460/calendar



THE NEXT ISSUE

The next issue of the Bulletin will be published in **August**. Contributions to this issue, especially news on the activities of local sections or CORS members, should be submitted by **10 July 2026** to

Niloofer Akbarian-Saravi
Editor, CORS Bulletin
Email: Niloofer.akbarian@ubc.ca

The preferred method of submission is by an MS Word attachment to an email.

BULLETIN TRANSLATION POLICY

Items that are CORS business will be translated into English and French. All other items will be published in the language in which they are submitted.

BULLETIN ADVERTISING POLICY

Ads cost \$120 per page, proportional for fractional pages. Logos and prepared layouts can be accommodated. This fee also includes distribution of the advertisement on the CORS Mailing List. Direct inquiries to the Editor.

MAILING LIST

As a benefit of membership, members may use the CORS Mailing List to transmit messages, announcements, and job postings to the entire membership or to a targeted subgroup such as a local section. For example:

- messages regarding the activities and business of the society
- announcements about conferences, conference sessions, special journal issues, seminars, or other activities if these are related to operational research in its broadest sense
- job postings of general interest to CORS members

The Mailing List is not used for commercial purposes, and all messages are vetted before they are sent out. To submit items to the Mailing List, please email members@cors.ca

For non-members, a fee of \$60 is charged for the distribution of job postings and other announcements or messages of interest to the CORS membership.

The **Canadian Operational Research Society** was founded in 1958. Its goal is to advance the theory and practice of OR and to stimulate and promote contacts between people interested in the subject.

Publications: A quarterly scientific journal called *INFOR* and a news *Bulletin*.

Meetings: An annual national conference with an award ceremony, occasionally organized jointly with an international society (IFORS, INFORMS), and numerous local events organized by local sections.

Local Sections & Chapters: CORS has 11 local sections and 8 student chapters located throughout Canada.

Awards and Prizes: CORS presents the following annual awards and prizes at its conference:

Award of Merit for significant contributions to OR of a present or past member.

Harold Larnder Award to an individual who has achieved international distinction in OR.

Omond Solandt Award to an organization, private or governmental, that is deemed to have made an outstanding contribution to OR in Canada.

Practice Prize for the challenging application of the OR approach to the solution of applied problems.

Eldon Gunn Service Award for outstanding contributions of time and service to the society.

Student Paper Competition to recognize the contribution of a paper either directly to the field of OR through the development of methodology or to another field through the application of OR.

EDI Excellence Award to recognize outstanding commitment and achievements in advancing EDI within CORS.

EDI Event Fund to support initiatives that actively promote and celebrate EDI within CORS.

Student Member Leadership Award in recognition of exemplary leadership in service to the Society as a student member.

Student Chapter Recognition in recognition of members of student chapters in promoting OR in the student membership at the local and national levels.

Graduate Student Funding: CORS encourages attendance of graduate students at its conference by providing partial funding. Visit the CORS website for details.

CORS Diploma: This diploma is awarded to students graduating from a university curriculum comprising several OR courses. Criteria can be found on the CORS website.

Membership Directory: An online directory of CORS members is available as a membership benefit.

To join CORS: Go to the CORS website and join using the form found under membership.

Fees: Member \$170; Retired Member \$55; Student Member \$65 (including post-doctoral researchers)

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