



CORS SCRO 2024

65th annual
Canadian Operational Research Society conference

June 3 - 5th, 2024

London, Ontario
Canada

www.CORS.ca



Research and
Development

Energy Policy and
Management Centre

Scotiabank
Digital Banking Lab

Publishing

Monday, June 3, 2024 8:00AM – 9:30AM
Duke of Edinburgh
Analytics

Analytics I

1. Information Diffusion: Insights from Reddit Data (Ivan Belik)
2. Subject Matter Experts – How good are they and can we make them better? (Kent Kostuk)
3. Can AI Even Give Me an Explanation? (Stephanie Kelley)

Monday, June 3, 2024 8:00AM – 9:30AM
Duke of Albany
Competitions

CORS Student Paper Competition - Undergraduate Category

1. Optimizing Healthcare Delivery: A Data-Driven Approach to Panel Size Management for Enhanced Patient Care at Vancouver Coastal Health
2. Inventory Slotting Optimization for Stable Palletization in Distribution Centres

Monday, June 3, 2024 8:00AM – 9:30AM
Queen Victoria
Healthcare

Enhancing Emergency Services and Treatment Planning

1. An Overland Search and Rescue Problem with Search Area Selection and Path Optimization (Saeid Abbasiparizi)
2. Selection of helicopter bases and transport modes to minimize pre-hospital times in Iceland (Phuong Nguyen)
3. Optimizing Screening Policies for Hospital-Acquired Infections: Case of MRSA (Esma Akgun)
4. Light Pareto robust optimization for IMRT treatment planning (Danielle Ripsman)

Monday, June 3, 2024 8:00AM – 9:30AM
Prince of Wales
Optimization

New Horizons in Optimization

1. Investment and Financing of Roadway Digital Infrastructure for Automated Driving (Amir Ahmadian)
2. Navigating Intermittent Arc Availability: A Shortest Path Approach for UAV Routing Applications (Nazli Demir)

3. LATE CANCELLATION: A New Type of CEV Model: Properties, Comparison, and Application to Portfolio Optimization (Wei Li Fan)

4. GOALyze: Unveiling the Potential of Large Language Models in Formulating Mathematical Optimization Problems (Salimur Choudhury)
5. Fairly Popular Coalition Structure With Decentralized Preferences (Peash Saha)

Monday, June 3, 2024 8:00AM – 9:30AM
Windsor Club
Queueing and Applied Probability

Queuing Theory

1. A Uniform Approach for Analyzing Queues with Correlated Interarrival and Service Times (Qi-Ming He)
2. Staffing Service Systems with Cyclic Demand and Unreliable Servers (Abraham Amini)
3. Early Birds versus Last-Minute Arrivals: Empirical Evidence and Theoretical Analysis of Arrival Time Queueing Game (Xiangjie Zhao)

Monday, June 3, 2024 8:00AM – 9:30AM
Duke of Connaught
Supply Chain Management

Sustainable Supply Chain Management

1. Trade-Offs of Facility Location, Market Penetration and Long-Term Sustainability (Farhood Rismanchian)
2. How to achieve emission reduction target by coordinating gasoline vehicle and electric vehicle production? (Xina Li)
3. Managing Scope 3 Emissions in a Supply Chain: Sharing Accountability and Carbon Footprint Maps (Ji Young You)
4. Short vs. Long-Term Sustainable Human Resource Strategies in Agriculture: Adapting to Future Climate Challenges (Vahid Gholamzadeh)

Monday, June 3, 2024 8:00AM – 9:30AM
Suite 300
Transportation and Logistics

Transportation and Logistics

1. Improving order picking efficiency through storage assignment optimization in robotic mobile fulfillment systems (Yanling Zhuang)
2. Art of Modelling in Optimization: Application to next-generation quay crane scheduling (Omar Abou Kasm)

3. A Novel Stochastic Optimization Model for Sustainable and Resilient Containerized Transportation (Asefeh Hassani Goodarzi)
4. A relax-and-restrict matheuristic for supply chain network design (Maryam Darvish)

Monday, June 3, 2024 9:45AM – 10:45AM

Ballroom

Plenary

Welcome and Harold Larnder Memorial Lecture (Pinar Keskinocak)

Monday, June 3, 2024 11:00AM – 12:30PM

Duke of Edinburgh

Analytics

Analytics II

1. Enhancing E-Commerce Complaint Resolution: Adherence to ISO 10001:2018 with LSTM-Based Sentiment Analysis (Osama Alshareet)
2. Breaking Barriers: Unveiling Gender Disparities in Corporate Board Career Paths using Deep Learning (Yuhao Zhou)
3. Impact of covert dialectic prejudice in Large Language Model in Operations (Cecilia Ying)
4. Shaping Programmer Practices: Effective Strategies for Mitigating Bias in Machine Learning Algorithm Development (Mohammadreza Shahsahebi)

Monday, June 3, 2024 11:00AM – 12:30PM

Duke of Albany

Competitions

CORS Student Paper Competition - Open Category

1. Reducing Diagnostic Imaging Wait Times: Lessons from a Large-Scale Empirical Analysis (Benjamin Ravenscroft)
2. Online Stochastic Optimization for Real-Time Transfer Synchronization in Public Transportation Networks (Laura Kolcheva)
3. Queueing Causal Models: Comparative Analytics in Queueing Systems (Zhenghang Xu)
4. Superior and Light Pareto Robust Optimization (Danielle Ripsman)

Monday, June 3, 2024 11:00AM – 12:30PM

Duke of Connaught

Energy, Sustainability, Natural Resources and the Environment

Energy Systems

1. An Explainable Neural Network Model for DC-OPF Problem with Global Guarantees (Fuat Can Beylunioglu)
2. Peak Load Shaving Potential in Commercial Buildings: A Reinforcement Learning Framework for Load Management and Risk Analysis (Seyyedreza Madani)
3. A simulation-simplex-based approximate stochastic dynamic programming framework for hydropower system optimization (Luckny Zephyr)
4. Optimal Dispatch of Electric Storage for Energy and Reserve Markets Under Uncertainty (Mehrdad Pirnia)

Monday, June 3, 2024 11:00AM – 12:30PM

Windsor Club

Forestry

Operations Research Applications in Wildfire Management

1. Evaluation of Wildfire Evacuations Using Real Options (Daniel Guerrero Santaren)
2. Landscape Compartmentalization to Reduce Wildfire Risk - A Network Interdiction Approach (Denys Yemshanov)
3. Comparing Landscape Management Approaches for Wildlife Protection in Areas of Industrial Forestry Activities (Denys Yemshanov)
4. Optimizing the search for wildfires (David Martell)

Monday, June 3, 2024 11:00AM – 12:30PM

Queen Victoria

Healthcare

Game Theory Applications in Healthcare

1. Pharmaceutical Pricing and Access Policies: A Study on the Impact of Physicians' Imperfect Adherence to Prescribing Guidelines. (Rezvan Shahabbasi)
2. Promoting Home Dialysis for ESRD Patients: A Comparative Study of Incentive Models (Maryam Afzalabadi)
3. Risk-Sharing Agreements in Pharmaceuticals: A Strategic Analysis of Market Entry and Incumbent Responses (Soodabeh Asadi Dezaki)
4. Optimal contract policies for improving access to child and youth public services: the case of the Ontario Autism Program (Felipe Rodrigues)

Monday, June 3, 2024 11:00AM – 12:30PM

Prince of Wales

Revenue Management and Marketing Analytics

Recent Advances in Revenue Management I

1. Optimal Advertising Policy Under Bass Diffusion Model (Yusup Allyyev)
2. Subscription vs. Spot Pricing in OnDemand Economy (Zhoupeng (Jack) Zhang)
3. Sustainability-Driven Revenue Management: Optimizing Pricing, Greening, and Sales Effort Decisions in the Presence of Government Subsidies (Behrooz Khorshidvand)
4. Giveaway Strategies for a New Technology Product (Ali Lotfi)

Monday, June 3, 2024 11:00AM – 12:30PM

Suite 300

Transportation and Logistics

Network Design

1. Tactical to Operational Planning Policies for Consolidation-Based Freight Transportation (Saeedeh Dehghani)
2. Service Network Design with Uncertainty on Water Levels for Intermodal River Transport (Bita Payami Shabestari)
3. Data-driven Approach in Hub Network Design with Demand Uncertainty (Fahimeh Rahimi)
4. Strategic Expansion of Freight Transportation Hub Networks under Uncertainty (Sibel Alumur Alev)

Monday, June 3, 2024 1:45PM – 3:15PM

Duke of Edinburgh

Analytics

Analytics III

1. Data-driven Budget Allocation Optimization for Digital Marketing (Kai Huang)
2. Revenue Management Under a Price Alert Mechanism (Nanxi Zhang)
3. Diverse Assortments in Online Recommendations (Mahsa Hosseini)
4. Luxury brand product authentication in the resale market to combat counterfeiters (Atousa Akhlaghy)

Monday, June 3, 2024 1:45PM – 3:15PM

Duke of Albany

Competitions

CORS Practice Prize

1. Efficiency Gains in the Health Sector Through Data-Driven Patient Scheduling: The Case of Paediatric Rehabilitation Services
2. Scheduling and routing of home care services with periodic visits and time windows – A case study
3. Store-specific planogram optimization

Monday, June 3, 2024 1:45PM – 3:15PM

Duke of Connaught

Energy, Sustainability, Natural Resources and the Environment

Regulations and Business Models

1. Examining the Role of Regulatory Focus and Ethical Climate on Sustainable Supplier Selection (Huiqing Tian)
2. Impact of Climate Change on Battery Energy Storage: A Case Study of MISO (Zhenggao Wu)
3. Government Policies for Green Manufacturers Pricing and Producing under Subsidy Expiration, Learning-by-Doing and Escalating Competition (Lingling Shi)
4. Managing Payment Flexibility in Rent-to-Own Contracts (Elaheh Rashidinejad)

Monday, June 3, 2024 1:45PM – 3:15PM

Windsor Club

Forestry

Modeling and Solution Approaches for Planning in Forestry

1. Forest analysis and modelling to support forest policy development in Ontario (Wenbin Cui)
2. Carbon pricing policies in biomass supply chain optimization (Taraneh Sowlati)
3. Two-stage stochastic programming for landscape level strategic planning in forestry (Jules Comeau)

Monday, June 3, 2024 1:45PM – 3:15PM

Queen Victoria

Healthcare

Healthcare Delivery and Patient Choice

1. Modelling Trade-offs in Efficiency, Equity, and Fairness in Public Defibrillator Placement (Ben Leung)
2. Reducing Surgical Wait Times: A Collaborative Approach with Community Hospitals (Suting Yang)
3. Exploring Dual Practice Dynamics in Healthcare Operations Management (Fateme Tehranikia)

- Patient preferences in a centralized referral network (Michael Pavlin)

Monday, June 3, 2024 1:45PM – 3:15PM
Prince of Wales

Revenue Management and Marketing Analytics

Recent Advances in Revenue Management II

- Giving Deep Attention to Consumer Preferences with Large Language Models (Joshua Foster)
- Implications of Worker Classification in On-Demand Economy (Zhoupeng (Jack) Zhang)
- Beyond the Big Screen: Secondary Channel Releases and Their Impact on the Theatrical Market (Kyle Maclean)
- Digital Goods Reselling: Implications on Cannibalization and Price Discrimination (Yang Li)

Monday, June 3, 2024 1:45PM – 3:15PM
Suite 300

Transportation and Logistics

Electric Vehicle Logistics

- Electric Vehicle user’s decision on when to charge – From a Canadian revealed preferences study (Yili (Kelly) Tang)
- Spatial-temporal passenger commuting patterns with mixture of electric and diesel buses (Yili (Kelly) Tang)
- Strategic Network Design and Planning for Electric Vehicle Battery Swapping Paradigm (Ajinkya Tanksale)
- Transition to Green Products: Taxing Manufacturers Versus Taxing Consumers (Gal Raz)

Monday, June 3, 2024 3:30PM – 5:00PM
Queen Victoria

Healthcare

Blood, Sweat, and Cancer

- Study of Inventory Management Strategies for Low Titer O Group Whole Blood: A Simulation-Based Approach (Soroush Soroush)
- Designing the Canadian Blood Services Network for the Future (John T Blake)
- Optimal post-treatment recurrence surveillance: the case of head and neck cancer. (Narges Mohammadi)
- Constraint Inferencing for Radiotherapy Using Robust-Inverse Optimization (Bradley Hallett)

- Robust CVaR Chance Constraints in Radiotherapy Treatment Planning for Prostate Cancer (Stoyan Hristov)

Monday, June 3, 2024 3:30PM – 5:00PM
Prince of Wales

Optimization

Theoretical Advancements in Optimization

- Conformal Inverse Optimization (Bo Lin)
- An Interior Point Approach to Integer Inverse Optimization (Goksu Ece Okur)
- An Efficient Approach to Handle Uncertainty in Robust and Distributionally Robust Binary Quadratic Programming (Fahimeh Rahimi)
- Proving the Hirsch conjecture for half-integral polytopes with an optimization-enhanced algorithm (Moira MacNeil)

Monday, June 3, 2024 3:30PM – 5:00PM
Windsor Club

Queueing and Applied Probability

Queueing Applications

- Formulation and validation of a model of a call centre with stochastic agent availability (Arash Asgari)
- Leveraging Data Contributors to Enhance Social Welfare Through Crowdsensing (Elham Heydarigharaei)
- Formulating a queueing model for the Electric Vehicles Charging patterns based on real data analysis (Elham Soufiani)
- Staffing heuristics for loss systems that have cyclic demands (Armann Ingolfsson)

Monday, June 3, 2024 3:30PM – 5:00PM
Duke of Albany

Special Event

Grants and Funding Information Session

- NSERC News and Program Updates
- Mitacs - Supporting Research Partnerships

Monday, June 3, 2024 3:30PM – 5:00PM
Duke of Connaught

Supply Chain Management

Supply Chain Contract

- Cost sharing and revenue sharing contracts for collaborative quality improvement in a supply chain with product recall (Amirhossein Jafarzadeh Ghazi)

2. Public-private collaborations in humanitarian relief supplies: incentive reserve contracts (Yijing Cao)
3. Designing public procurement contracts for vaccine production capacity buildings against sudden outbreaks of novel diseases (Hongmei Sun)
4. Channel Structure of Online Retail Platforms: Impact of Asymmetric Information and Capacity Constraints (Hasan Shorakaei)

**Monday, June 3, 2024 3:30PM – 5:00PM
Duke of Edinburgh**

Teaching and Learning

Teaching and Learning Classroom Activities

1. An Interactive Web-based Learning Platform for Understanding Two-Echelon Vehicle Routing Solutions (Ghazaleh Mohseni Hosseinabadi)
2. TSP-Interactive: A Web-Based Tool for Engaging Exploration of the Traveling Salesperson Problem (Mehdi Nourinejad)
3. VRP-Gen: An Interactive Tool for Teaching Stochastic Capacitated Vehicle Routing Problems (Behnaz Naeimian)

**Monday, June 3, 2024 3:30PM – 5:00PM
Suite 300**

Transportation and Logistics

Machine Learning in Logistics

1. Using Machine Learning to Predict the On-Time Performance of a Flight Schedule (Navjot Singh)
2. A gas pipeline surveillance problem solved with a two-phase iterative approach using machine learning techniques (Martin Cousineau)
3. Solving log truck scheduling problem (Abdellaoui Abdelhakim)
4. A contextual framework for learning routing experiences in last-mile delivery (Okan Arslan)

**Monday, June 3, 2024 5:00PM – 6:00PM
Prince of Wales**

Healthcare

HCOR SIG Meeting

**Monday, June 3, 2024 5:00PM – 6:00PM
Windsor Club**

Student Event

Panel Discussion: The Academic Job Market

**Monday, June 3, 2024 5:00PM – 6:00PM
Suite 300**

Transportation and Logistics

Transportation and Logistics SIG Meeting

**Monday, June 3, 2024 6:00PM – 7:30PM
Ballroom**

Student Event

CORS Student Chapter Networking Reception

**Tuesday, June 4, 2024 8:00AM – 9:30AM
Windsor Club**

Forestry

David Martell Student Paper Prize in Forestry

1. Collaboration between carrier companies using truck platooning: an application in the forestry industry (Saba Gazran)
2. LATE CANCELLATION: Model and solution approach to coordinate production-inventory strategies considering nonlinear price-sensitive demand: application to Canadian pulp and paper industry (Elaheh Ghasemi)
3. Scheduling of log logistics using a metaheuristic approach (Salar Ghotb)

**Tuesday, June 4, 2024 8:00AM – 9:30AM
Queen Victoria**

Healthcare

Machine Learning Applications in Healthcare

1. A Decision Tool for Early Identification of ALC Patients (Mahsa Pahlevani)
2. Forecasting Overcrowding in the Emergency Department 24 hours in advance using Machine Learning Models (Ilitea Kina)
3. Developing hybrid meta-heuristic machine learning algorithms for type II diabetes early diagnosis with feature selection for EHRs (Fatemeh Navazi)
4. Quality of Reporting in Studies Using Machine Learning to Predict Diabetes (Greg Zaric)

**Tuesday, June 4, 2024 8:00AM – 9:30AM
Duke of Albany**

Military and Defence Applications

Military and Defence Applications

1. ORIGAME Fleet Capacity Evaluation Tool: Supporting the RCN in optimizing its fleet's ability to face future challenges. (Edwin Mariano Moreno Arias)

2. A location-routing problem involving military aeromedical evacuation assets and field hospitals in anti-aircraft threat environments (Kai Huang)
3. Validation and Processing of Canadian Armed Forces Marital Status Data to Gain Insights into Service Couples (Ingrid Lai)

Tuesday, June 4, 2024 8:00AM – 9:30AM

Prince of Wales

Optimization

Sustainable Solutions

1. Optimal Performance of Second-Life Batteries in an Electric Vehicle Charging Network (Kaila Neigum)
2. Optimizing Electric Vehicle Fleet Operations for Sustainable Last-mile Delivery Under Uncertainty (Jaehee Jeong)
3. Ride-Share to Care: A Sustainable Approach to Food Donation Delivery (Ahana Malhotra)
4. Evaluating the Impact of 3D Printing on Spare Parts Logistics Considering Quality Difference of Two Sourcing Options (Parang Zadtootaghaj)

Tuesday, June 4, 2024 8:00AM – 9:30AM

Duke of Connaught

Supply Chain Management

Competitive Supply Chain and Fairness

1. Fairness in Accessibility of Public Service Facilities (Nooshin Salari)
2. Influencing Customers and Product Returns (Reza Nazari Khanmiri)
3. The Logistics Last Mile Problem (Yael Deutsch)
4. Enhancing social responsibility in supply chains: Overcoming competition and visibility challenges (Amirmohsen Golmohammadi)

Tuesday, June 4, 2024 8:00AM – 9:30AM

Duke of Edinburgh

Teaching and Learning

Tutorial: Developing and Publishing Effective Pedagogical Resources for Teaching Analytics (Matthew Drake)

Tuesday, June 4, 2024 8:00AM – 9:30AM
Suite 300

Transportation and Logistics

Emerging Logistics Applications

1. Predicting Drone Delivery Efficiency in Urban Areas using Graph Neural Networks (Bahar D Viniche)
2. Subscription and Per-Order Pricing Programs in Temporally-Consolidated Last-Mile Delivery (Behnaz Naeimian)
3. Worker Pool Size Planning in Crowdsourced Delivery: Balancing Service Level and Driver Compensation Standards (Sahil Bhatt)
4. Effectiveness of supply-side financial incentives in ride-hailing networks with spatial demand imbalance and strategic drivers (Philipp Afèche)

Tuesday, June 4, 2024 9:45AM – 10:45AM

Ballroom

Plenary

The Flawed Genius of William Playfair: The Father of Statistical Graphics (David Bellhouse)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Duke of Edinburgh

Analytics

Analytics IV

1. On Incentivizing Units in Centrally Managed Systems (Mostafa Davtalab Olyaie)
2. Deep learning-assisted appointment scheduling under uncertainty (Amirhossein Moosavi)
3. An Antifragile Strategy for Redundancy Allocation (Aliakbar Eslami Baladeh)
4. Data Analytics in Empirical Operations Management Research to Study Practice Variation in Resource Utilization: A Case Study in Emergency Departments (Marco Bijvank)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Duke of Albany

Energy, Sustainability, Natural Resources and the Environment

Green Network Design

1. Green Supply Chain Network Design with Nonlinear Emission Functions and a Carbon Footprint Cap. (Ensieh Ghaedyheidary)
2. The Impact of Local Conditions on Optimal Subsidies for Electric Vehicle Adoptions (Michael Blair)
3. A Bi-level Programming Model for Locating the Urban Hydrogen Refueling Stations Problem (Mina Valaei)

4. Planning and Operation of Electric Aircraft for Domestic Canadian Flights (Maria Hanna)
5. Robust Optimal Design of Sustainable Aviation Fuel Supply Chain (Ali Keyvandarlian)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Duke of Connaught

Finance and FinTech

Advanced Modelling in Finance

1. LATE CANCELLATION: Risk Assessment in the Dynamic Turkish Retail Sector: A Pythagorean Fuzzy MCDM Approach (Esra Ekinici)
2. A critical analysis of the Weighted Least Squares Monte Carlo method for pricing American options (Xiaotian Zhu)
3. Using Reinforcement Learning to Hedge American Put Options (Yuri Lawryshyn)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Queen Victoria

Healthcare

Patient Appointment Scheduling

1. Appointment Scheduling with Random Service Durations: A Greedy Solution (Sina Khosravinia)
2. LATE CANCELLATION: Improving patients' access to nuclear medicine: a stochastic programming approach and a discrete event simulation (Rym M'Hallah)
3. Improving real-time scheduling decisions for surgical services (Sara Mesgari)
4. Improving Access to Stroke Prevention Consults through Enhanced Capacity Planning and Appointment Scheduling (Shahryar Moradi)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Windsor Club

Queueing and Applied Probability

Queueing and Applied Probability Best Student Paper Competition

1. Mass Vaccination Scheduling: Trading off Infections, Throughput, and Overtime (Shanshan Luo)
2. Dynamic Transfer Policies for Parallel Queues (Jangwon Park)
3. The Cost of Impatience in Dynamic Matching: Scaling Laws and Operating Regimes (Angela Kohlenberg)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Prince of Wales

Revenue Management and Marketing Analytics

Revenue Management

1. Riding Through Rallies: Will You Tip More? (Zhoupeng (Jack) Zhang)
2. Willingness-to-Pay Estimation and Pricing Optimization for Airline Seat Assignment (Sajad Aliakbari Sani, Si Chen)
3. On Airline Flight Cancellation, Loadfactor, and Weather (Fredrik Ødegaard)
4. Diversified Learning: Bayesian Control with Multiple Biased Information Sources (Xinyuan Zhang)

Tuesday, June 4, 2024 11:00AM – 12:30PM

Suite 300

Transportation and Logistics

Uncertainty in Transportation and Logistics

1. Scalable Stochastic Model for Sea Cargo Revenue Management with Empty Container Transportation (Aliaksandr Nekrashevich)
2. Pricing and Service Management in Containerized Shipping Markets: Addressing Competition in an Uncertain Market (Mehdi Najafi)
3. A Robust Routing Problem for Heavy-Duty Electric Trucks in the Face of Energy Uncertainty (Hossein Zolfagharinia)

Tuesday, June 4, 2024 1:45PM – 3:15PM

Duke of Edinburgh

Analytics

Analytics V

1. Decoding the Manufacturer-Platform Standoff: Strategic Implications of Exiting Threats (Amirhossein Adhami)
2. Data-Driven Machine Learning Approach to Support Long- and Intermediate-Term Strategic Network Planning (Tianjiao Liu)
3. Learning Generation Z and Millennial Preferences in Sustainable Fashion through Machine Learning (Armita Tehranchi)
4. Vehicle-Based Hub Network Design with Routing: Exact and Learning-based Approximation (Saleh Farham)
5. Managing Product-reusability under Supply Disruptions (Prashant Chintapalli)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Duke of Albany
Energy, Sustainability, Natural Resources and the Environment

Green Value Chains

1. Dynamic Identification of Price Shock Transmission Network Structure in the Industry Chain: A Case Study of Cobalt as an Energy Mineral (Yiran Zhao)
2. Integrated Biomass Value Chains for Cost-Efficient Biorefinery Supply: A Canadian Case Study (Seyyedeh Rozita Ebrahimi)
3. Navigating the Paradox: The Emergence of the Green Veblen Effect in Pollution Management (Stan Dimitrov)
4. Win4 Solar Policy: A Multi-Stakeholder Approach (Saman Teymoorianmottl)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Queen Victoria
Healthcare

Demand Forecasting in Healthcare

1. Clustering-based Demand Forecasting with an Application to Immunoglobulin Products (Zhaleh Rahimi)
2. Defining Surge Levels in Emergency Medical Services Using Unsupervised Machine Learning (Qixuan Zhao)
3. Understanding Factors affecting Treatment Duration: An Empirical Analysis of Pediatric Rehabilitation Dynamics (Benjamin Ravenscroft)
4. Interpretable Models for Predicting Heart Attack Incidence Using Demographic Data (Amir Rastpour)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Prince of Wales
Optimization

Healthcare and Social Impact

1. Retirement decision making: When is the right time? (Mehrnaz Behrooz)
2. Equitable Resource Allocation in Healthcare (Emanuele Blasioli)
3. Optimal Administration of Vascular Access Devices with Multiple Catheter Types (Atahan Bayir)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Windsor Club
Queueing and Applied Probability

Queueing Models in Healthcare Operations

1. Maximizing Patient Satisfaction in Walk-In Clinics with an Oligopolistic Market Structure (Leila Rabiei Fard)
2. Dynamic Transfer Policies for Parallel Queues (Jangwon Park)
3. Approximate Dynamic Programming for Multiclass Scheduling Under Slowdown (Berk Gorgulu)
4. Beyond the Queue: Rethinking MRI Waitlist Dynamics for Backlog Management (Adam Diamant)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Duke of Connaught
Supply Chain Management

Supply Chain Resilience, Inventory Management, and Supplier Selection

1. Strategic Integration of Delivery in Food Waste Reduction Initiatives (Erfan Rafieikia)
2. A distribution-free solution to a multi-period inventory problem with perishable inventory and backlogged demand (Yun Zhou)
3. A supply disruption resilient model under economic volatility for efficient supplier selection and order allocation planning (Samiul Islam)
4. On Sustainable Supplier Selection and Order Allocation using Combinatorial Auctions (Sadeque Hamdan)
5. Multi-Scenario Supplier Selection with Data Envelopment Analysis (Mazyar Zahedi-Seresht)

Tuesday, June 4, 2024 1:45PM – 3:15PM
Suite 300

Transportation and Logistics

Gilbert Laporte Student Paper Award

1. Risk-based shelter network design in flood-prone areas: An application to Haiti (Maedah Sharbaf)
2. Machine Learning-Augmented Optimization of Large Bilevel and Two-stage Stochastic Programs: Application to Cycling Network Design (Bo Lin)
3. Crowdkeeping in Last-Mile Delivery (Xin Wang)
4. Online Stochastic Optimization for Real-Time Transfer Synchronization in Public Transportation Networks (Laura Kolcheva)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Duke of Edinburgh
Analytics

Analytics VI

1. Dynamic inventory and pricing control of a perishable product with multiple shelf life phases (Mohammad Moshtagh)
2. Predicting demand for wildfire suppression resources (Yasser Zeinali)
3. Railroad Transportation of Dangerous Goods in Canada: Data-Driven Risk Analysis and Emergency Management (Marjan Izadpanah)
4. Advanced Sustainable Logistics With HSR for the Development-In City Groups (Yonglin Ren)
5. Assessing Completion Time of Rescue Missions in the Canadian Arctic (Parsa Rezaei)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Duke of Albany
Energy, Sustainability, Natural Resources and the Environment

Sustainable Nature

1. Saving Whales with Optimal Control (Yu Gong)
2. Optimal Learning and Management of Threatened Species (Jue Wang)
3. Mitigating fire risk towards critical and residential structures near a high ignition area using Critical Node Detection (Valérie Bélanger)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Windsor Club
Forestry

Modeling for Decision Support in Forestry

1. Nature-based decarbonization opportunities for the mining and forest sectors (Elaheh Ghasemi)
2. Modelling the forest-based biomass solution space in BC (Salar Ghotb)
3. Modelling carbon emissions from forest ecosystems, forest sector supply chains, and forest products: results and insights from two recent projects (Gregory Paradis)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Queen Victoria
Healthcare

HCOR SIG Student Paper Competition

1. Optimizing Inter-Hospital Patient Transfer Decisions During a Pandemic: A Queueing Network Approach (Jangwon Park)

2. Dynamic Service Allocation with Returns: Application to Admission and Discharge Control with Readmission in Hospital (Xinyuan Zhang)
3. Superior and Light Pareto Robust Optimization (Danielle Ripsman)
4. Guiding Physicians with Time-dependent Patient Selection Policies Under Shift Work (Mahdi Shakeri)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Prince of Wales
Optimization

Network Analysis

1. Enhancing critical node detection with beam search: a heuristic-agnostic approach (Faraz Khoshbakhtian)
2. Two-Stage Distributionally Robust Optimization for Network Balancing Problems (Aliaa Alnaggar)
3. Delay-Aware Lifetime Maximization for Connected Alpha Coverage in Wireless Sensor Networks (Elif Zeynep Serper)
4. Facility Location Optimization for Peroxide Distribution Company (Anthony McCreery)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Duke of Connaught
Supply Chain Management

Supply Chain Optimization

1. Sustainable and Viable Design for Intertwined Supply Networks (Mohaddeseh Heidarpour Roshan)
2. Optimizing Feedstock Deliveries in a Pulp and Paper Supply Chain: A Tactical Planning Model (Zahra Homayouni)
3. Optimizing Wood Flow Management: Exploring Feasible Levels of Flexibility in Transportation Fleet Capacity to Enhance Delivery Precision and Lead Time (Niloofer Jahani)
4. LATE CANCELLATION: A goal programming approach for joint decision making of inventory lot-size, warehouse layout and intralogistic vehicles (Cansu Dagsuyu)
5. Clustering Neural Genetic Algorithm for Large-Size Distributed Supply Chain Optimization (Behrang Bootaki)

Tuesday, June 4, 2024 3:30PM – 5:00PM
Suite 300

Transportation and Logistics

Applications of Transportation and Logistics

1. Navigating Climate Extremes: Strategic Adaptations for Aviation Supply Chains in Northern Canada (Niloofer Gilani Larimi)
2. Autonomous and Connected Vehicles Canadian Market Comprehensive Readiness Assessment (Anjali Awasthi)
3. An interactive Planning Platform for Automated Speed Enforcement Technology (Mandana Hedayati)
4. Decarbonizing commercial long-haul MHDVs by considering charging stations and catenary technology (Mehdi Nourinejad)
5. Carrier Visibility Into Future Spot Market Shipment Requests: Blessing or Curse? (Michael Haughton)

Tuesday, June 4, 2024 5:00PM – 6:00PM
Prince of Wales

Analytics

Analytics SIG Meeting

Tuesday, June 4, 2024 5:00PM – 6:00PM
Windsor Club

Forestry

Forestry SIG Meeting

Tuesday, June 4, 2024 5:00PM – 6:00PM
Duke of Edinburgh

Teaching and Learning

Teaching and Learning SIG Meeting

Wednesday, June 5, 2024 9:15AM – 10:45AM
Duke of Edinburgh

Healthcare

OR Applications in Healthcare

1. Operating Room Time Allocation and Simulation (Fatih Bilen)
2. Reducing Diagnostic Imaging Wait Times: Lessons from a Large-Scale Empirical Analysis (Benjamin Ravenscroft)
3. Resilience and Adaptation: Assessing the Effects of COVID-19 on Hospital Efficiency and Quality (Utkarsh Verma)

Wednesday, June 5, 2024 9:15AM – 10:45AM
Queen Victoria

Industry

Big Data Analytics in Practice

1. Elevating Patient care and engagement using Process Discovery and Analytics (Raji RV)
2. Optimizing Data Collection for Machine Learning (Rafid Mahmood)
3. Analytics & AI – Industry Solutions Using SAS (Pat Valente)
4. Leveraging innovation in big data analytics and AI for supply chain through academic partnerships (Paulo Carvalho)

Wednesday, June 5, 2024 9:15AM – 10:45AM
Prince of Wales

Optimization

Strategic Decisions in Operations and Logistics

1. Airline Crew Pairing Optimization with Learning (Aniket Biswal)
2. Dynamic Workload Balancing in Flight Dispatcher Scheduling (Serkan Turhan)
3. Last-mile delivery with lockers and local crowd-shippers: The Study of TELUS Data for Good (Mehrnaz Behrooz)
4. Optimality and Generality Performance of a Genetic Algorithm-based Approach for the International Timetabling Competition 2019 (Sina Abdipoor)

Wednesday, June 5, 2024 9:15AM – 10:45AM
Duke of Connaught

Supply Chain Management

Reverse and Closed-Loop Supply Chains

1. Maximizing Cell Phone Returns: Strategies for Return Rates and Refurbish Quality (Abdul Aziz Ibrahim)
2. Enhancing Fashion Supply Chain Resilience: A Stochastic Optimization Approach for Closed-Loop Fashion Supply Chain (Sara Shoarinejad)
3. Shipping Container Imbalance and Supply Chain Disruptions: Lessons from the Pandemic (Sudipendra Nath Roy)
4. Design and Optimization of an E-waste Closed-Loop Supply Chain Network Using Multi-Objective Programming (Saman Hassanzadeh Amin)

Wednesday, June 5, 2024 9:15AM – 10:45AM

Duke of Albany

Teaching and Learning

Teaching and Learning Assessment

1. Role-Playing as a Teaching Technique: Enhancing Software User-Developer Communication and Debugging Skills in Aggregate Production Planning (Sara Babae)
2. Aligning Academic Curricula with Industry Demands in Supply Chain Management (Sara Babae)
3. Computerized Exams and Customized Grading for Business Statistics Classes (Mohua Podder)

Wednesday, June 5, 2024 9:15AM – 10:45AM

Suite 300

Transportation and Logistics

City Logistics

1. Optimizing Bike-Sharing Networks through Continuous Approximation: A Model for Enhancing Mobility and Sustainability (Ghazaleh Mohseni Hosseinabadi)
2. Order bundling and dispatching optimization approach for instant food delivery service (Yanling Zhuang)
3. Are Online Shoppers Ready to Use Smart Mobile City Bus Lockers? (Si Liu)
4. LATE CANCELLATION: Promote Self-Balance of Bicycle Sharing Systems (Chengyao Wang)
5. Adaptive Parking Pricing using Graph Neural Network (Fateme Sadeghi)

Wednesday, June 5, 2024 9:15AM – 10:45AM

Windsor Club

Transportation and Logistics

Vehicle Routing Problems

1. Exploring the intersection of Capacitated Vehicle Routing and Centroid-Based Clustering (Abdellaoui Abdelhakim)
2. A Comparison of Evolutionary Crossover Operators for Real-World Vehicle Routing Problems with Simultaneous Pickup and Delivery with Time Windows (Beatrice Ombuki-Berman)
3. Smart Report-Based Waste Collection System and its Potential for Czech Villages (František Zapletal)
4. Operational Route Planning Integrating Multiple Value Chains: A Literature Review for the Bioenergy Sector (Asudeh Shahidi)

Wednesday, June 5, 2024 11:00AM – 12:30PM

Duke of Albany

CANCELLED: Energy, Sustainability, Natural Resources and the Environment

Green Logistics

1. Optimization-Simulation Approach to Last-Mile Delivery Using Electrical and Classical Vehicles (Busra Tumay)
2. Optimizing the Pickup for Perishable Foods Using Goal Programming (Seyda Taskinirmak)
3. Integrated Pythagorean Fuzzy AHP-VIKOR Framework for Efficient Landfill Location Selection: A Case Study in Izmir, Turkey (Murat Oturakci)
4. The Relationship Between Green Financing, Green Technology Innovation, and CO2 Emissions: Implications For Sustainable Development Goals (Anum Shahzadi)

Wednesday, June 5, 2024 11:00AM – 12:30PM

Duke of Edinburgh

Healthcare

Patient Flow and Resource Allocation Planning

1. An Integrated Patient Flow and Resource Allocation Planning Framework Using Machine Learning Approach (Tasquia Mizan)
2. Dynamic Service Allocation with Returns: Application to Admission and Discharge Control with Readmission in Hospital (Xinyuan Zhang)
3. Guiding Physicians with Time-dependent Patient Selection Policies under Shift Work (Mahdi Shakeri)
4. Long-Term Blended Workforce Planning in Healthcare (Saha Malaki)

Wednesday, June 5, 2024 11:00AM – 12:30PM

Queen Victoria

Industry

Healthcare Analytics in Practice

1. Reducing nursing turnover using analytics (Neal Kaw)
2. Real-time Wait Time Prediction System for Emergency Departments in Ontario (Shabnam Balamchi)
3. Automating Nursing Assignments at St. Michael's ED through Optimization. (Neil Mistry)
4. Surgery in the Digital Age: Navigating Complexity with AI (Jean-Pierre Eskander)

Wednesday, June 5, 2024 11:00AM – 12:30PM
Windsor Club
Industry
 Demo – Advanced Analytics Using SAS

Wednesday, June 5, 2024 11:00AM – 12:30PM
Prince of Wales
Revenue Management and Marketing Analytics
 Assortment Optimization and Dynamic Pricing

1. Augmented Reality Investment and Assortment Planning in Omnichannel Retail Systems (Amin Aslani)
2. Demand Estimation With Product Bundles (Xianfeng Meng)
3. Dynamic Pricing with Demand Learning and Product Return (Amin Shahmardan)
4. The Value of Flexibility in Dynamic Pricing (Shreyas Sekar)

Wednesday, June 5, 2024 11:00AM – 12:30PM
Suite 300
Transportation and Logistics
 Hazmat Transportation

1. A Robust Optimization Model for Rail-Truck Intermodal Network Design in the Presence of Disruptions (Zahra Mashayekhi)
2. A Centralized Approach to Configure Rail-truck Intermodal Network for Dangerous Goods Shipments (Nishit Bhavsar)
3. Estimating spatial-temporal probabilities of transportation accidents on railroads (Maryam Mashayekhi)
4. Strategic Risk and Cost Reduction in Transportation Networks: A Data-Driven Optimization Approach (Zeinab Vosooghi)

Wednesday, June 5, 2024 12:30PM – 1:45PM
Ballroom
Plenary
 AI, Analytics and the Future of Business: Trends, Predictions, & Ruminations (Seamus Blackmore)

Wednesday, June 5, 2024 1:45PM – 3:15PM
Queen Victoria
Industry
 Operations Management in Practice

1. Reducing Inventory at Bruce Power with Data-Driven Solutions (David Eddie)
2. Making Healthcare Better: Why People Matter as Much as the Mathematics (Daphne Sniekers)
3. LATE CANCELLATION: IEDI performance in operations management areas of service provider (Farnoosh Bagheri)
4. Optimizing Healthcare Access in Rural Areas: An Application of Self-serve Kiosks (Gohram Baloch)

Wednesday, June 5, 2024 1:45PM – 3:45PM
Duke of Edinburgh
Special Event
 Case Teaching Masterclass

Wednesday, June 5, 2024 3:30PM – 5:00PM
Queen Victoria
Student Event
 Panel Discussion: The Industry Job Market

Wednesday, June 5, 2024 5:00PM – 6:00PM
Windsor Club
Student Event
 Industry Networking Reception

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