



59th Annual CTRF Conference May 12 - 15, 2024

Hotel Eldorado, Kelowna, BC

Mobilizing Transportation Research in Canada

Preliminary Program (subject to change)

DAY ONE		Sunday, May 12, 2024
3:00 pm	Registration Desk Opens	
6:00 pm	<p align="center">President's Reception Roof Top, Hotel Eldorado Sponsor: VIA Rail</p>	
DAY TWO		Monday, May 13, 2024
7:00 am	Registration Desk Opens	
7:00 am	Breakfast Buffet Opens	
8:00 am	Welcome remarks and announcements – Trevor Hanson, President, CTRF	
8:15 am - 10:00 am	<p align="center">Plenary I: Mobilizing the transportation sector for economic prosperity – examples from Western Canada</p> <p align="center">Moderator Mark Hemmes, Quorum Corporation</p> <p align="center">Panelists François Tougas, McMillan LLP Elizabeth Hucker, CPKC Shaun Stevenson, Port of Prince Rupert Authority Cecilia Lei, Transport Canada</p>	

10:00 am	Coffee Break & Networking Waterfront II/III Sponsor: CPCS			
10:15 am - 12:20 pm Concurrent Sessions	Session 1.1 Supply Chain <i>Sponsor: Quorum</i>	Session 1.2 Transportation modelling & emerging issues	Session 1.3 Policy, Equality and Sustainability	Special
	Waterfront II/III	Lake Room	Library	WF I
	Chair: Malcolm Cairns	Chair: Robin Lindsey	Chair: Gord Lovegrove	
	A Comparative Analysis of West Coast vs. East Coast Routing of Grain to Global Destinations Warren Bohm, Mark Hemmes	A Canadian Survey on Transportation Mode Choice and Automation Nick Tepylo, Jeremy Laliberté	The Important Regulatory Developments in Canadian Transportation In 2022 and 2023 Sanjay Castelino, Joseph Monteiro, Barry E. Prentice	Aviation and Airports Research Committee Chair: Jody Kositsky
	A Data-Driven Optimization Approach for Operational Efficiency and Environmental Impact Reduction in the Plastic Industry Razieh Larizadeh, Babak Mohamadpour Tosarkani	Multi-Modal Travel Demand and its Variability Through Different Phases of Covid Using Statistical and Machine Learning Time Series Models: A Case Study of Montreal Bitu Farokhian, Catherine Morency	Facilitating Paradigmatic Shifts in Mobility Solutions through Strategic Economic System Architectures Lessons from Europe's GAIA-X Projects for Canadian Transportation Policy Wolfgang H. Schulz, Oliver Franck, Henrik Kleis	
	Optimizing Plastic Bottle Recycling: A Data-Driven Approach to Closed-Loop Supply Chain Design Mohsen Roytvand Ghiasvand, Babak Mohamadpour Tosarkani	Healthcare Accessibility in Seismic Events: A Metro Vancouver Case Study Matilda Lucas, Amy Kim, Kiranjot Kaur, Carlos Molina Hutt	Transport Poverty in Canada : Prioritizing public transport investments Maria Laura Guerrero Balarezo, Geneviève Boisjoly, Martin Trépanier, Léa Ravensbergen, Steven Farber	
	A New Strategy for Supply Chain Data in Canada Lawrence Mckeown, Zahra Aback	Investigating the Impacts of Telecommuting Using an Agent-based Transport Demand and Network Simulation Model Bijoy Saha, Mahmudur Rahman Fatmi, Nazmul Arefin Khan	Removing Barriers to Accessibility in the Canadian Transportation System Sonya Sula, Kirk Goodlet	
The Develop of the EV Battery Supply Chain in North America: Implications for Canada Garland Chow	How Individuals Spend Time in Travel- and Tele-activities? Evidence from a Time Use Survey in British Columbia, Canada Mahmudur Fatmi	On Sustainable Rural Logistics and Transportation: Perils and Prescriptions From a Quadruple Bottom-Line Perspective Derya Parmaksız, M. Ali Ülkü, Heidi Weigand, Denise Hinds		

12:20 pm - 1:30 pm	<p style="text-align: center;">Lunch with Eric Harvey, VP Legal CN “Rethinking how Market Interventions in Transportation Policy are Managed” Waterfront II/III</p>			
<p style="text-align: center;">1:30 pm - 3:20 pm</p> <p>Concurrent Sessions</p>	<p style="text-align: center;">Session 2.1 Rail Freight and Ridership</p>	<p style="text-align: center;">Session 2.2 Air Transportation</p>	<p style="text-align: center;">Session 2.3 Data and Technology</p>	<p style="text-align: center;">Special</p>
	<i>Waterfront II/III</i>	<i>Lake Room</i>	<i>Library</i>	<i>WF I</i>
	<i>Chair: Mark Hemmes</i>	<i>Chair: Chris Greer / Anna Robak</i>	<i>Chair: Matthew Roorda</i>	
	<p>The Development of Private Freight Rail Cars in North America Malcolm Cairns</p>	<p>Fallout of the covid-19 pandemic: Air Cargo Boom and Bust Barry Prentice, Narendra Malalgoda, John Wilms</p>	<p>WiFi Sensors and Artificial Intelligence in Crowd Management and Forecasting Saba Sabet, Bilal Farooq</p>	<p>Research committee: Trucking Chair: Julien Lépine</p>
	<p>Consequences or Conjectures: The Impacts of Extended Railway Interswitching Limits Lucia Stuhldreier, Ryan Gallagher, François Tougas</p>	<p>Building Resilience in the Face of Future Shock Events: A Systematic Methodology for Airports Christopher Greer, Ian Kincaid</p>	<p>From Conventional Simulation To Virtual Reality: A Novel Tool For Investigating Truck-Friendly Measures In Freight Traffic Management Ahmad Mohammadi, Joseiry Marrero Rivas, Tanvir Chowdhury, Peter Y. Park, Greg Pereira</p>	
	<p>Yours Or Mine: A History of Interswitching In Canada Conner Wylie, Lucia Stuhldreier</p>	<p>Air Freight Demand Forecasting using CNN-LSTM Model Hongting Zhou, Saiedeh Razavi</p>	<p>Pavement rutting quantification using mobile lidar data Ali Faisal, Suliman Gargoum</p>	
	<p>Setting the Record Straight: FAIR Rail Coalition’s Response to Public Claims and Analyses Regarding International Rail Freight Rate Comparisons Ryan Gallagher, Lucia Stuhldreier, François Tougas</p>	<p>Canada and Ukraine: A Comparison of Opportunities for Sustainable Aviation Fuel Maryna Klymchuk, Robert Parsons, Paul D. Larson</p>	<p>Enhancing Traffic Flow Prediction: Integrating Neural Temporal Relational Network (NTRN) with Missing Data Imputation Ali Ardestani, Hao Yang, Saiedeh Razavi, Zhao Zhang</p>	
	<p>Exploring Factors Affecting Rail Ridership In The US: A Comprehensive Analysis Harshini De Silva, Narendra Malalgoda</p>	<p>Building a Model for Safe Integration of RPAS into Low-Level Canadian Airspace Teresa Krings, Josh Chang, Iryna Borschchova, Jeremy Laliberte</p>	<p>Developing a parking choice model using the fusion of limited data: The case of commercial vehicles in Toronto Farah Ghizzawi, Matthew J. Roorda</p>	

3:20 pm	<p align="center">Coffee Break & Networking Waterfront II/III Sponsor: St. Lawrence Seaway Management Corporation</p>			
<p>3:30 pm - 5:35 pm</p> <p>Concurrent Sessions</p>	<p align="center">Session 3.1 Aviation and Maritime: Big Picture Sponsor: Nanaimo Port Authority</p>	<p align="center">Session 3.2 Improving Urban Air Quality</p>	<p align="center">Session 3.3 Sharing, Hailing and Volunteering</p>	<p align="center">Special</p>
	<p align="center">Waterfront II/III</p>	<p align="center">Lake Room</p>	<p align="center">Library</p>	<p align="center">WF I</p>
	<p align="center">Chair: Ryan Gallagher</p>	<p align="center">Chair: Robin Lindsey</p>	<p align="center">Chair: Julien Lépine</p>	
	<p>Solving the Housing Crisis In Northern Canada: Year-Round Cargo Airship Service Barry E. Prentice, Ross Prentice, and David Willis</p>	<p>Quantifying the Impact of Transportation on the Air Quality of the City of Vancouver through a PMF Analysis of Year-round PM2.5 Samples Seyed Hamid Delbari, Vahid Hosseini</p>	<p>The ride-hailing service supply forecasting with a deep learning approach Shuoyan Xu, Jing Li, Eric J. Miller</p>	<p align="center">Research Committee: Supply Chains and Logistics Chair: Garland Chow</p>
	<p>Becoming a Liability Rather Than an Advantage: 30 Years of the National Airports Policy Jody Kositsky, Kirk Goodlet</p>	<p>Exploring factors affecting emissions on all types of Ontario's highways: A multivariable regression approach Amir Hossein Karbasi, Hao Yang</p>	<p>Assessing the variability of usage of carsharing services in Montreal Emilie Savard, Martin Trépanier, Catherine Morency</p>	
	<p>Maritime Labour Convention, 2006 Amendments: Lessons For Canada Desai Shan, Cory Ochs, Evan Mackenzie</p>	<p>Using Dispersion Modeling And Low-Cost Sensor Monitoring To Estimate Neighborhood-Level Air Pollution From Urban Transport In Strathcona, Vancouver Rei Bertoldi, Yasamin Sharifi, Rivkah Gardner-Frolick, Sakshi Jain, Nika</p>	<p>Prediction of bike-sharing demand at cluster level and distance travelled using machine learning Seyed Ali Azimi, Amir Shabani, Vahid Hosseini</p>	
	<p>Navigating Seamless Connectivity: A White Paper On Canada's Need For A Maritime Single Window Rishi Luthra</p>	<p>Real-Time Air Quality Prediction Using Traffic Videos and Machine Learning Laura Deveer, Laura Minet</p>	<p>Can I Automate It? - Artificial Intelligence and its Use in Volunteer Driver Programs Romaine Morrison</p>	
	<p>Investigation of Heavy-cargo Drones for Last-mile Delivery Ahmed Moussa, Elkafi Hassini, Mohamed Ezzeldin, Wael El-Dakhakhni</p>	<p>Beyond the Horizon: A Study on the Influence of Cruise Ship Activities on Traffic Patterns and Local Air Quality Laura Deveer, Laura Minet</p>	<p>How good is the Montreal transit network? An evaluation based on quality thresholds of transit options Catherine Morency, Hubert Verreault</p>	

6:30 pm – 8:00 pm	Bison Transport Reception & Debate Waterfront II/III Sponsor: Bison Transport
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DAY THREE	Tuesday, May 14, 2024
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7:30 am	Registration Desk Opens
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7:30 am	Breakfast Buffet & CTRF Annual General Meeting
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8:15 am – 10:00 am	Plenary II: Mobilizing the transportation sector for equity: Urban and rural mobility Moderator Catherine Morency, Polytechnique Montreal Panelists Bart Walman, BC Transit Stan Leyenhorst, Universal Access Design (remote) Todd Litman, Victoria Transportation Policy Institute Erin Toop, Economic Trust of the South Interior (ETSI-BC)
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10:00 am	Coffee Break & Networking Waterfront II/III Sponsor: InterVistas
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	Session 4.1 Logistics	Session 4.2 Getting to Net Zero	Session 4.3 Household Choice	Special
	<i>Waterfront II/III</i>	<i>Lake Room</i>	<i>Library</i>	<i>WF I</i>
	<i>Chair: Garland Chow</i>	<i>Chair: Malcolm Cairns</i>	<i>Chair: Barry Prentice</i>	
10:15 am - 12:45 pm	Transforming Urban Logistics: Demand-Centric Policy Impacts on Freight Efficient Land-Uses Carlos Rivera-Gonzalez, Matthew Roorda	Meeting the European Union’s zero-CO2-emissions target for cars in France André de Palma, Robin Lindsey, Yannik Riou	Good News from the 2022 CRD Travel Survey: Less Driving, More Non-Auto Travel, And Potential For More Efficient And Equitable Transportation Todd Litman	<p style="text-align: center;">Research Committee: Sustainability and Equity</p> <p style="text-align: center;">Chair: Carly MacEachern</p>
Concurrent Sessions	Decarbonizing City Logistics: A Systematic Review With a Focus On Sustainability Doğukan Toktaş, M. Ali Ülkü, M. Ahsan Habib	Systematic approach to estimate GHG reductions of transport/land-use scenarios: The case of Quebec City Hubert Verreault, Catherine Morency	A Consequential Framework to Quantify the Climate Impacts of Household Travel Alexander Bigazzi	
	Mobility Impact of Implementing Dedicated Truck Left Lanes at Signalized Intersections on Urban Arterial Roads Jowel Akkeh, Tanvir Chowdhury, Peter Y. Park & Sabrina Khanc	Framework for Emission Analysis of Transportation Infrastructure: A Data-Driven Approach With a Freight Movement Case Study Yunfei Ma, Elkafi Hassini, Saiedeh Razavi	Microsimulation of Households’ First Vehicle Purchase Timing and Type Choice Decisions Within an Integrated Urban Transportation Model Md Shahadat Hossain, Mahmudur Fatmi, Mohamad Ali Khalil	
	A Data-Driven Model for Electric Cargo Cycle Battery Performance Adonai Garcí, Kevin Gingerich	Comparison of Strategies for Decarbonizing Heavy Vehicles in Canada Julien Lépine	Household Level Vehicle Type Choice Decision: An Econometric Modelling Approach Hasan Shahrier, Muhammad Ahsanul Habib	
	A Bikeability Index for Last-Mile Electric Cargo Cycles David Tran, Kevin Gingerich	Gridlock in the Dugout: Quantifying the Impacts of Induced Demand by Toronto Blue Jays Jacob Klimczak, Carlos Rivera-Gonzalez, Matthew Roorda	School Location Choice Modelling for the Montreal Metropolitan Area Usman Ahmed, Mohamed Saoudi Hassani, François Tomeo, Eric Miller	
	What Should Be Expected From The Crystal Ball Of Advanced Load Information? Michael Haughton and Alireza Amini	Enhancing On-Road Emission Quantification: A Comparative Analysis Using US EPA MOVES Maha Shehadeh, Vahid Hosseini	Investigating the Impact of Residential Parking Types on Activity Scheduling Ladan Berahman, Mohammad Haghighi, Eric J. Miller	

<p>12:45 pm - 2:00 pm</p>	<p style="text-align: center;">Lunch with Keynote Speaker Waterfront II/III</p>			
<p>2:30 pm - 5:30 pm</p>	<p>Technical Tours</p> <ol style="list-style-type: none"> 1. KF Aerospace 2. City of Kelowna Active Transportation 	<p>Workshop: Travel demand modelling: What’s changing? Host: UBC Integrated Transportation Research Lab Room: Waterfront II/III</p>	<p>Workshop: Mobilizing knowledge Room: Lake Room</p>	
<p>6:30 pm - 9:30 pm</p>	<p style="text-align: center;">Annual Conference Dinner Waterfront II/III</p>			

DAY FOUR		Wednesday, May 15, 2024		
7:30 am	Registration Desk Opens			
7:30 am	Breakfast Buffet & Preview of 2025 Ottawa Conference			
8:30 am - 10:35 am Concurrent Sessions	Session 5.1 Danger! Crashes and hazardous goods	Session 5.2 Active and Green Transportation	Session 5.3 Business Cases & Pricing	Special
	<i>Waterfront II/III</i>	<i>Lake Room</i>	<i>Library</i>	<i>WF I</i>
	<i>Chair: Eric Hildebrand</i>	<i>Chair: Larry McKeown</i>	<i>Chair: Mark Hemmes</i>	Research committee: Passenger Rail Chair: Damien Auger
	Optimizing Wildfire Evacuation Strategies in Small Canadian Communities: An Integrated Agent-Based Simulation Approach Ehsan Hassanzadeh, Amy Kim	Canadian Bikeway Comfort and Safety Classification System & Spatial Access Measures: Combining Spatial Accessibility and Comfort Gil Armand Aluning, Yanick Clement-Godbout, Christina Vietinghoff	A Business Case for Raising Intercity Public Transport Service Quality Todd Litman	
	Analytics based approach to estimate dangerous goods moving on Canadian highways Nishit Bhavsar, Elkafi Hassini, Manish Verma	Enhancing Sustainable Mobility: Spatial Measures of Access to Amenities via Active and Public Transport in Canada Eiad El-Fateh, Jean Pamphile, Matthew Quance, Yanick Clement-Godbout, Bjenk	Housing Prices in Metro Vancouver and Okanagan Region: Comparing Pre-, During-, and Post-COVID-19 Pandemic Periods Muntahith Orvin, Mahmudur Fatmi	
	A machine learning-optimization application in risk and cost reduction of hazmat railroad transportation Zeinab Vosooghi, Manish Verma	Travel Behaviour and Greenhouse Gas Impacts of the Saanich E-Bike Incentive Program Alexander Bigazzi, Amir Hassanpour	Dynamic Parking Levies versus Tolls to Manage Road Traffic Congestion under Various Market Arrangements ZhiYuan Chua	
	A Simulation-Based Study on Enhancing Traffic Safety and Efficiency using Traffic Signal Countdown Timers at Signalized Intersections Vadhul Krishnan Veerakumar, Chris Lee	Cyclists' Typology: Who are Dedicated and Casual Riders? Elmira Berjisian, Alexander Bigazzi	Toll Policy Evaluations for Reducing GTHA Transportation GHG Emissions Kevin Porras, Marianne Hatzopoulou, Eric J. Miller	
	Optimal Electric Bus Transit System with Energy Consumption Uncertainty and Battery Degradation Ali Shehabeldeen, Moataz Mohamed	Modelling Pedestrian Crossing And Violation Behaviour as a Pathfinding Process Christopher Lehmann Skelton, Bruce Hellinga, Chris Bachmann	Unveiling Crowd Shippers' Behaviour Through a Two-Sided Market Approach Azin Golrizkhatami, Chi-Guhn Lee, Matthew Roorda	

10:30 am	Coffee Break & Networking Sponsor: Western Stevedoring			
	Session 6.1 Minimizing Disruption	Session 6.2 Electric Vehicles	Session 6.3 Emerging Urban Transportation Issues	Special
	<i>Waterfront II/III</i>	<i>Lake Room</i>	<i>Library</i>	<i>WF I</i>
	<i>Chair: Jody Kositsky</i>	<i>Chair: Barry Prentice</i>	<i>Chair: Gord Lovegrove</i>	
10:45 am - 12:50 pm	To What Extent Bus Systems Can Mitigate the Impact of Short Term Metro Disruptions in Metropolises? <i>Kaveh Rezvani Dehaghani, Catherine Morency</i>	Strategic Planning for Electric Vehicle Charging Stations in Sustainable Urban Transportation <i>Mohammad Reza Khodoomi, Babak Mohamadpour Tosarkani, Eric Ping Hung Li</i>	What about Auto-Besity? Various perspectives on the transformation of the car fleet <i>Catherine Morency, Jean-Simon Bourdeau</i>	Research Committee: Data Chair: Larry McKeown
Concurrent Sessions	The Impact of Spatial Characteristics on the Duration of Hazard Disruptions in Transportation Networks <i>Paula Cid Ornelas, Amy Kim</i>	EVs and Gas Stations: Insights from a Travel Demand Model <i>Mwendwa Kiko, Eric J. Miller</i>	Multi-Year Trend in Volume and Speed for 27 Types of Personal Mobility Devices: Implications for Vehicle Regulation, and Facility Design <i>Amir Hassanpour, Alexander Bigazzi</i>	
	Optimizing rail-truck intermodal network and routings in the presence of random disruptions <i>Zahra Mashayekhi, Manish Verma</i>	Integrating Vehicle Evaluation and Fuel Type Choices for Emission Modeling (or Choice or emissions) <i>Kashfia Nahrin Nokshi, Muhammad Ahsanul Habib</i>	Do E-Scooters Zoom Everywhere? A Geospatial Analysis of E-Scooter Trip Patterns in Calgary <i>Laura Welj, Adam Weiss</i>	
	Cycle Queue Length Estimation at Signalized Intersections: A Learning-Driven Approach <i>Yuhang Gu, Saiedeh Razavi, Saeid Habibi</i>	More electricity for heavier cars: the trends in electromobility in Quebec <i>Amaury Philippe, Frédérik Lavictoire, Martin Trépanier, Normand Mousseau</i>	Analysis of Distracted Driving Behaviour and Its Relationship with Driver Characteristics <i>Aimee-Larissa Dushime, Chris Lee, Kathryn Lafreniere, Kenneth Cramer</i>	
	Freeway Non-Recurring Congestion Forecasting: A Multi-Step-Ahead and Spatio-Temporal Approach <i>Jing Li, Hao Yang, Saiedeh Razavi</i>	Synthesis of Select Canadian Jurisdictional Practices for Designating a Railway Grade Crossing for Pedestrians who use Assistive Devices <i>William Morrison, Trevor Hanson</i>	Investigating Anticipated Post-COVID Transit Ridership Using a Pseudo-Panel Approach <i>Hamed Malekzadeh, Catherine Morency</i>	

**12:20 pm -
1:30 pm**

Awards Lunch and Closing Remarks — Trevor Hanson, President, CTRF
Best Paper Award Sponsor: Railway Association of Canada