



54th Annual CTRF Conference May 26-29, 2019

Pinnacle Harbourfront Hotel, Vancouver Canada

Change, Disruption and Innovation in Canadian Transportation: Navigating the New Normal

PRELIMINARY PROGRAM – 21/05/19

subject to change

DAY ONE		Sunday, May 26, 2019
1:00 pm		CTRF Board Meeting (closed)
3:00 pm	Hotel Lobby	Registration Desk Opens
5:30 pm	Vistas 360	<p align="center">President's Reception Reception Sponsor WSP Global Inc.</p>

DAY TWO		Monday, May 27, 2019
7:30 am	Grand Foyer	Registration
7:30 am	Cordova Foyer & Ballroom	Breakfast Buffet Opens
8:15 am	Cordova Foyer & Ballroom	Welcome remarks and announcements –Malcolm Cairns, President, CTRF
8:30 am - 10:15 am	Cordova Ballroom	<p align="center">Opening plenary: Innovation and Technology- Opportunity and Challenge (Moderator: Garland Chow) Panelists Eve Hou, Project Manager, New Mobility, TransLink John Niles, Western Regional Director, Harmonize Mobility, Inc. Kurt Ritcey, Consulting Partner, Deloitte Geoffrey Wood, Senior Vice President, Policy, Canadian Trucking Alliance</p>

10:15am	Cordova Foyer	Break: Canadian Canola Growers Association		
10:30 am - 12:00 pm Concurrent Sessions	Session 1.1 Electric Vehicles	Session 1.2 Public Transit Performance	Session 1.3 Traffic Analysis and Safety	Session 1.4 Analysis of Transportation Activity and Industry Location
	<i>Salon C</i>	<i>Salon D</i>	<i>Salon E</i>	<i>Salon F</i>
	Chair: Trevor Hanson	Chair: Mario Iacobacci	Chair: Mahmudur Fatmi	Chair: Matin Foomani
	Determinants of PHEV Purchase Intentions in a Canadian City Paul D. Larson, Xun Jiao	Transit Service Evaluation: A Time/Frequency-based Stop Accessibility Approach Gamal Eldeeb, Ahmed Osman Idris, Moataz Mohamed	A Research Guide to Using Efficiency of Technological Innovations in Automobiles for Establishing Unbiased Policies for Improvement of Minimum Safety Standards for Driver-Operated Motor Vehicles Adekunle Mofolasayo	Unknown to Known: Predicting Truck GPS Commodity using Machine Learning Mausam Duggal, Bryce Sharman, Rick Donnelly, Matthew Roorda, Sundar Damodaran, Shan Sureshan
	Towards Sustainable Regional Planning: Electric Vehicle Charging Infrastructure Expansion Scenario Mahmoud Salari, Roxana J. Javid, Ramina Jahanbakhsh Javid	What Constitutes Network Robustness? Analysis of the Canadian Bus Transit System Hatem Abdelaty, Moataz Mohamed, Mohamed Ezzeldin, Wael El-Dakhkhni	Evaluation of How Driver's Sight Lines Impact Available Stopping Distance for Conflicting Through and Left Turning Vehicles at Signalized Intersections Adekunle Mofolasayo	Big Data Analysis to Explore the Clustering of Truck Trips Patterns Across Canada Ayat Hussein, Hanna Maoh
	Understanding New Vehicle Dynamics: Developing Range Standards for Electric Bicycles Alexander Bigazzi	Public Transit Service Reliability Assessment Using GPS Data Seungho Yang, Afnan Ahmad, Peter Park, Gunho Sohn	<i>Macroscopic Fundamental Diagram Based Perimeter Control Considering Dynamic User Equilibrium</i> Qiangqiang Guo, Xuegang (Jeff) Ban, Steven Parks	<i>Canola Crushing: Location of a Footloose Industry</i> Barry Prentice
Presentation: An Open Data Framework for the New Mobility Industry in Metro Vancouver Hendrik Wolff	Canada's Public Transit Infrastructure: A Review Aya Hagag, Lawrence McKeown	<i>Real-Time Safety Performance Functions for Signalized Intersections</i> Mohamed Essa, Tarek Sayed	Presentation: Development of an AI Algorithm For Airport Security Screening" Chulung Lee	

12:00 pm 1:30 pm	Cordova Foyer & Ballroom	Lunch with Keynote Speaker <i>Craig Hutton, Director General, Strategic Policy and Innovation, Transport Canada</i>			
1:45 pm - 3:15 pm Concurrent Sessions	Session 2.1 Autonomous vehicles	Session 2.2 Cycling Mobility, Safety & Data 1	Session 2.3 Cross Border Transportation	Session 2.4 Air Travel, and Airport Management and Governance	
	<i>Salon C</i>	<i>Salon D</i>	<i>Salon E</i>	<i>Salon F</i>	
	Chair: John Niles	Chair: Brian Lee	Chair: Phil Davies	Chair: Trevor Heaver	
	A Multi-Objective Optimization of Autonomous Drones Solar Energy Charging Stations Utilizing BIPV Urban Upgrade Mohamed Elsayed, Moataz Mohamed	Trip Identification for Smartphone-Based Cycling GPS Data Elmira Berjisian, Alexander Bigazzi	Ontario-US Trade in Goods and Freight Services: Trends, Key Challenges/Issues and Policy Considerations Andrew Tam	Strategic Cooperation Between German Airports and their Airlines Sebastian Weber	
	Latency and Reliability-Aware Joint Optimization for Cooperative Vehicular Computing with Cooperative Communication * Xu Han, Daxin Tian, Xuting Duan, Zhengguo Sheng, He Liu, Yinsheng Gong, Victor C.M. Leung	Cycling To Work: Is Geography Destiny? Justin Tyndall	Asymmetric Effects of Exchange Rate Changes on Cross-Border Trade: Evidence from Canada-US Bilateral Freight Flows by Transport Mode Junwook Chi	Analysis of Airfares in an era of Significant Airline Ancillary Charges Jody Kositsky, Mike Tretheway	
	Who Is Ready for Autonomous Vehicles? – Analysis of Consumer Acceptance of Self-Driving Cars in Different European Regions Christina Edye, Wolfgang Schulz	Why Individuals Choose Dockless Bicycle-Sharing Services? Assessing the Effects of Built Environment and Land Use Attributes Muntahith Orvin, Mahmudur Fatmi	Modelling Truck Movement Across the Canada-US Border: A VISSIM Dynamic Traffic Assignment Application Sidra Anis, Hanna Maah	Canada's Airports: The Economic Basis for a Not-For-Profit Governance Structure William G. Morrison	
		Identifying the Factors Affecting the Preference of College Students Towards Electric Motorbikes Tzu-Ying Chen, Rong-Chang Jou	Analysis of the Arizona-Central Mexico International Trade and Transportation Corridor at the Supply Chain Level Juan Carlos Villa, Isabel Victoria-Jaramillo	Demand Analysis for Air Travels in Nigeria: An Expository Study Obioma R. Nwaogbe, Adebayo Monday, Oluwale S. Matthew, Victor Omoke, Ibeawuchi C. Nze	
3:15 pm	Cordova Foyer	Break: <i>Global Public Affairs</i>			

	Session 3.1 Cycling Mobility, Safety And Data 2	Session 3.2 Applying Integrated Urban Models to Measure Health and Sustainability Impacts	Session 3.3 Trucking Research Methods	Session 3.4 Transportation Infrastructure Investment and Operation 1
	<i>Salon C</i>	<i>Salon D</i>	<i>Salon E</i>	<i>Salon F</i>
	Chair: Justin Tyndall	Chair: Tor Oiamo	Chair: Lawrence McKeown	Chair: William Morrison
3:30 pm - 5:00 pm	Investigating the Impact of Bike Network Infrastructure Features on Cyclist Safety Using Network Theory Indicators Mohamed Kamel, Tarek Sayed	Implementation of the SMARTPLANS Integrated Urban Model For Halifax, Nova Scotia and London, Ontario Hanna Maoh, Terence Dimatulac, Tor Oiamo, Markey Johnson	Review of Existing Technologies (Vehicle Fuels and Devices): Applications, Benefits and Limitations Andrew Tam	Financial Analysis of the Improvement of Drainage Structures on Road Network to Relief Flood in Frequently Flooded Areas in Southern Thailand Pruethipong Xinghatiraj, , Attasit Sawatpanich
Concurrent Sessions	How do Perceived Safety and Experienced Incidents Influence Route Choice for Cyclists? Gurdiljot Gill, Alexander Bigazzi, Filippos Gkekas	Developing a Sustainability Indicator Weighting Scheme for Integrated Urban Modelling and Health Outcomes in SMARTPLANS Tor H. Oiamo, Lauren White, Hanna Maoh, Markey Johnson	Building Freight Shipments from GPS Data – Feasibility Studies Serge Godbout, Herbert Nkwimi Tchahou, Nathalie Hamel	Zinc Coatings for Sustainable Transportation Infrastructure Martin Gagné, Frank E. Goodwin, Bernardo Duran
	Unconstrained Cyclist Trajectory Simulation for Agent-Based Models Hossameldin Mohammed, Alexander Bigazzi, Tarek Sayed	Extending the SMARTPLANS Integrated Urban Modeling Framework to Evaluate the Impacts of Air Quality on Health Outcomes Hanna Maoh, Terence Dimatulac, Tor Oiamo, Markey Johnson, Dave	Transportation Taxonomy - Part 2 Bradley Hull, Charles Watts	Zinc Coated Rebar for Sustainable Concrete Infrastructure Martin Gagné, Frank E. Goodwin, Bernardo Duran
		Simulating the Future Impacts of Urban Transit System Improvements: Application to London, Ontario and Halifax, Nova Scotia Terence Dimatulac, Hanna Maoh, Tor Oiamo, Markey Johnson.		Non Traffic Volume-Based Collision-Prediction Regression Model for Intersections Safety Matin Foomani, Ciprian Alecsandru, Anjali Awasthi
5:00 pm - 8:00 pm	Cordova Ballroom	Bison Transport Reception & Debate <i>This House Resolves That More Oil Pipelines Should Be Built in Canada</i> Incumbents: Trevor Hanson & Adrian Lightstone ~ Challengers: Chris Bachmann & Joel Carlson		

DAY THREE		Tuesday, May 28, 2019			
7:00 am	Grand Foyer	Registration			
7:00 am	Cordova Foyer & Ballroom	Breakfast Buffet & CTRF Annual General Meeting			
8:30 am	Cordova Ballroom	Plenary 2: Moving Canada's Energy Resources to Global Markets (Moderator: Malcolm Cairns) <ul style="list-style-type: none"> • John Zahary, President & CEO, Altex Energy • Buck Rogers, Vice-President, Petroleum and Chemicals, CN • Marla Orenstein, Director- Natural Resources Centre, Canada West Foundation • Robert Lewis-Manning, President, BC Chamber of Shipping 			
10:15 am	Cordova Foyer	Break: International Zinc Association			
10:30 am - 12:00 am	Session 4.1 The Evolving Passenger Transportation sector: Taxis & Transportation Network Companies	Session 4.2 Green and Sustainable Transportation	Session 4.3 Data Sources and Travel Demand Models	Session 4.4 Urban freight	
	Salon C	Salon D	Salon E	Salon F	
Concurrent Sessions	Chair: Peter Harrison	Chair: John Lawson	Chair: Alex Bigazzi	Chair: Rod Taylor	
	Mining Web Data to Help Cities Understand the Impacts of Ride Sourcing Companies Amir Hassanpour, Alexander Bigazzi and Don MacKenzie	Electric Vehicles and the Carbon Tax: The Feasibility of Canadian GHG Mitigation Policies Anastasia Soukhov, Moataz Mohamed	Data Supply Chain for ARNOLD and Beyond James Meyer	Impact of E-commerce Logistics on Neighbourhoods and Communities in Peel Region, Ontario Deepa Mishra, Glareh Amirjamshidi, Elkafi Hassini, Matthew Roorda	
	The Evolution, Usage and Trip Chain Patterns of Taxis & Ridesourcing Services - Evidence From 2001, 2009 & 2017 US NHTS Survey Xiatian Wu, Don MacKenzie	Predictive Cordon Pricing to Reduce Ambient Air Pollution Shaghayegh Vosough, Hossain Poorzahedy	Developing a Comprehensive Database of Alternative Fuel Station Locations across Canada and the United States of America Johanna Levene, Stephen Lommele, Robert Eger, Wendy Dafeo	Rail Service Design for Mixed Passenger and Freight Transport Zhujun Li, Amer Shalaby, Matthew J. Roorda, Baohua Mao	
	Regulation and Competition in the Taxi Industry in Vancouver Joseph Monteiro, Barry E. Prentice	Decarbonisation of Transportation: Insights into Vehicle Autonomy, Electrification and Sharing Implications for British Columbia Orhan Atabay, Curran Crawford, Ned Djilalib	Assessing the Representativeness of Survey Respondents for Micro-Level Network Resilience Modeling Georgiana Madar, Hanna Maoh	Including all Users: Measuring Commercial Vehicle Envelopes on Urban Streets Anne Goodchild, Ed McCormack, Manali Sheth, David Hurwitz	

	More or Less Curb? Testing Strategies to Mitigate the Impact of Ride-Sourcing on Traffic <i>Anne Goodchild, Don Mackenzie, Andisheh Ranjbari, Jose Luis Machado-Leon, Giacomo Dalla Chiara</i>	Investigating the Effects of Automated Vehicle Driving Operations on Road Emissions and Traffic Performance <i>Christos Stogios, Marianne Hatzopoulou, Matthew Roorda</i>	A Prospectus for Improved Long-Distance Travel Demand Models <i>Eric J. Miller</i>	
12:00 pm - 1:30 pm	Cordova Foyer & Ballroom	Lunch with Keynote Speaker <i>Ted Gruetzner, Vice President Energy, Environment and Resources, Global Public Affairs</i>		
1:45 pm - 5:00 pm	Technical Tours	<ol style="list-style-type: none"> 1. Deltaport Container Terminal 2. Canada Post Pacific Processing Centre 3. TransLink Maintenance and Control Centre 4. Alliance Grain Terminal Ltd. 		
6:00 pm - 9:30 pm	Boarding - 6:00 pm Departure – 6:30 pm Return – 9:30 pm	Harbour Cruise & Awards Dinner Dinner Sponsor InterVISTAS Consulting Inc.		

DAY FOUR		Wednesday, May 29, 2019
7:00 am	Grand Foyer	Registration
7:00 am	Cordova Foyer & Ballroom	Breakfast Buffet & Preview of 2020 Montreal
8:30 am	Cordova Ballroom	<p>Plenary 3: The Asia-Pacific Gateway and Corridor – Challenges and Future Directions</p> <p>Moderator: Kirk LaPointe, Editor In Chief, BIV</p> <p>Panelists:</p> <ul style="list-style-type: none"> • Brad Johnston, General Manager, Marketing & Logistics, Teck Coal Limited • Brad Eshleman, President and CEO, Western Stevedoring and partner in G3 Terminal • James Clements, Vice-President, Strategic Planning and Transportation Services, Canadian Pacific Railway • Tony Pearkes, Director, Open Hatch / Box Fleet, Oldendorff Carriers

10:15 am	Cordova Foyer	Break			
10:30 am - 12:00 am Concurrent Sessions	<p align="center">Session 5.1</p> <p align="center">Canadian Gateway Cities: Four Reflections on Transportation Infrastructure, Global Value Chains and Urban Governance</p>	<p align="center">Session 5.2</p> <p align="center">Railway Economics</p>	<p align="center">Session 5.3</p> <p align="center">Challenge and Opportunities for Rural and Far North Transportation</p>	<p align="center">Session 5.4</p> <p align="center">Pricing and Economic Policy</p>	
	<i>Salon C</i>	<i>Salon D</i>	<i>Salon E</i>	Cordova Ballroom	
	Chair: Steve Pratte	Chair: Malcom Cairns	Chair: Joel Carlson	Chair: Derek Scrafton	
	Montreal: Value Chains, Economic Development and Urban Democracy Dorval Brunelle	Comparing Two Competing Models to Measure Annual Productivity Growth Rates in the Canadian Railway Industry Hakan Andic	The Northern Corridor Concept: A Connector Road from Northern Saskatchewan (La Loche, SK) to the Athabasca Oil Sands Region (Fort McMurray, AB)* Chris G. Moser	High Occupancy Toll Lanes: Hot or Not Angelo Pilla, Moataz Mohamed	
	Innovation Corridors and the Golden Horseshoe: Transportation Challenges and the Emergence of a Shared Regional Vision Jean Michel Montsion	Operating Ratio as a Measure of Railway Operating Efficiency Ryan Gallagher, François E.J. Tougas, Lucia Stuhldreier	Hudson Bay Railway and the Port of Churchill – A Balancing Act Paul D. Larson, Yufeng Lin, Adolf K.Y. Ng	Assessing Transportation Equity: From Concept to Evaluation Adrian Lightstone, Karin Brundell-Freij, Sally Rudd, Lee Failing	
	Vancouver: Stabilizing the Gateway Infrastructure Coalition Peter Hall	Observations on Rail Costing in Canada Mike Tretheway, Jody Kositsky, Robert Andriulaitis	Regulating Maritime Occupational Health and Safety in the Canadian Arctic Waters Desai Shan, Aldo Chircop, Barb Neis	Innovative Methods Towards Building and Evaluating Congestion Charging Scenarios: The Case of Metro Vancouver Fearghal King, Adrian Lightstone, Daniel Firth, Reid Keller	
Towards a Systemic Approach to Global Value Chains and Democratic Governance in Halifax Claudia De Fuentes	Impacts of High-Speed Rail on Airlines and Airport Traffic: A Survey of Recent Research Anming Zhang, Yulai Wan, Hangjun Yang	Learning from Rural Innovation: What can Volunteer Driver Programs Teach us About Planning for Autonomous Vehicles? David Copp, Trevor Hanson	Building the Case for Performance-Based Pricing in Transportation - The Rationale for User Cost Pricing on Roads and Transit in Metro Vancouver Peter Lipscombe, Fearghal King		

12:00 pm - 1:30 pm	Cordova Foyer & Ballroom	Joint Lunch: Canadian Transportation Research Forum - Chartered Institute of Logistics and Transportation Keynote Speaker: Shaun Stevenson, President and Chief Executive Officer Port of Prince Rupert			
Concurrent Sessions 2:00 pm - 3:30 pm	Session 6.1 Change and Challenge in the Maritime and Port Sector	Session 6.2 Transport Policy and Regulation	Session 6.3 Transportation Infrastructure investment and operation 2	Workshop Session 6.4 Canadian Gateway Cities: A workshop on Transportation Infrastructure, Global Value Chains and Urban Governance	
	Salon C	Salon D	Salon E	Cordova Ballroom	
	Chair: Darryl Anderson	Chair: Anming Zhang	Chair: Adolf Ng	Chair: Peter Hall	
	Governance and Engagement in Ocean Oil Spill Response Planning: International Comparisons with Planning in the Vancouver Region Trevor Heaver	A Review of Canadian Transportation Developments In 2018 Joseph Monteiro, Barry E. Prentice	Research on Transit Signal Priority Control Strategy Based on Real-Time Saturation Detection for a Single Intersection Tong Zhang, Baohua Mao, Qi Xu, Min Wang, Sijia Zhang, Yanqiang Yang	Workshop: <ul style="list-style-type: none"> • Dorval Brunelle UQAM • Claudia De Fuentes St. Mary's University • Jean Michel Montsion York University • Peter Hall Simon Fraser University 	
	Legal Status of an Onshore Remote Controller of Maritime Autonomous Surface Ships("MASS") under the Canadian Maritime Law and IMO International Conventions Jinho Yoo, Desai Shan	Western Canadian Grain Transportation and the Maximum Revenue Entitlement: Surveying the 17-Year Journey Towards Regulatory Modernization Steve Pratte	Stochastic Forecasting Methods When Key Variables are Politically Determined: Fuel Prices for Air Traffic and Ferry Forecasting Christopher Greer		
	Assessing the role of Port Efficiency as a Determinant of Maritime Transport Costs Qiao Lei, Chris Bachmann	Mobility as a Service: Governance Strategies for Impending Disruption Alec Knowles, Blair Underhill, Ray Wong, Adrian Lightstone	Estimating Airport Ground Transport Mode Choice Using Market Aggregate Data Wenyi Xia, Jong Hae Choi, Kun Wang, Anming Zhang		
Port Adaptation to Climate Change and Capacity Investments Under Uncertainty Wenyi Xia, Robin Lindsey		Optimal Operations of an Automated Vehicle Parking Lot Sina Bahrami, Matthew Roorda			

* Paper in proceedings and summarized by Session Chair for discussion.