

SMSB 2022 PRESENTATION SCHEDULE

Final – July 15, 2022

Day	Session time	Session No.	Session title	Room name	Paper time	Paper ID	Presentation Title	Authors	Presenter	Session Chair
Wednesday, July 20, 2022	10:20 - 12:00	A1	CSA-S6 special session	Civic Ballroom North	10:20	103	Integrating Climate Change Adaptation into the Canadian Highway Bridge Design Code	Kevin Williams, Katherine Hikita and Saidur Rahman	Kevin Williams and Saidur Rahman	Mark Braiter
				Civic Ballroom North	10:40	105	Advancing Canadian Highway Bridge Design Code Hydrotechnical Provisions	Alexander Wilson, John van der Eerden, Katherine Hikita, Kevin Williams, Luc Chouinard and Saidur Rahman	Kevin Williams	
				Civic Ballroom North	11:00	407	New CSA Guideline on The Design of Pedestrian, Cycling and Multiuse Bridges – CSA S7	Jianping Jiang and Mark Braiter	Braiter, Mark	
				Civic Ballroom North	11:20	408	Advancing durable bridge design – a preview of forthcoming changes to Durability and Sustainability provisions in CSA S6	Konstantinos Mermigas	Mermigas, Konstantinos	
				Civic Ballroom North	11:40	424	Calibration of New Design Wind and Ice Loads for Canadian Highway Bridge Design Code Based on Ultimate Return Period and Considering Climate Change Effects	H.P. Hong, D. Kennedy, Z. Lounis, D. Gagnon and D Evans	Hong, H.P.	
Wednesday, July 20, 2022	10:20 - 12:00	A2	Aesthetics and Historical Bridges	Provincial	10:20	392	Enhancing the Design of Ontario's Bridges #2: An Architect's Perspective	Mark Langridge	Langridge, Mark	Qi Zhang
				Provincial	10:40	39	West Coast Trail – Managing Structural Assets on Canada's Wild Coast	Matthew Bowser, Brady Davis and Rashedul Kabir	Bowser, Matthew	
				Provincial	11:00	311	Prince Edward Viaduct Inspection, Assessment, and Renewal	Dan MacDonald-Lockhart, Farzad Nikfar, Sarvejit Nagi and Don Kennedy	Dan MacDonald-Lockhart	
				Provincial	11:20	46	Lower Brewers Swing Bridge Replacement- Rideau Canal	Craig Williams, Laura Cumming and Andy Huctwith	Cumming, Laura	
				Provincial	11:40	27	Canadian Engineering Ingenuity in the Royal Alexandra (Interprovincial) Bridge	Mike Bartlett	Bartlett, Mike	
Wednesday, July 20, 2022	10:20 - 12:00	A3	Advanced Composite, Hybrid and New Materials	Simcoe / Dufferin	10:20	17	Reliability of Reinforced Concrete Bridges Considering Measured Material Properties	Adrián-David García-Soto, Alejandro Hernández-Martínez and Jesús-Gerardo Valdés-Vázquez	García-Soto, Adrián-David	Torríe, Mark
				Simcoe / Dufferin	10:40	36	Strengthening of Conventional Concrete Beams using Ultra-high Performance Concrete (UHPC)	Antony Kodsy and George Morcous	Khalid Al-Kady	

				Simcoe / Dufferin	11:00	50	Behavior of Corbels Reinforced with GFRP Bent Bars under Monotonic Loading.	Ankit Borgohain and Ehab F. El-Salakawy	Ankit Borgohain	
				Simcoe / Dufferin	11:20	75	Testing of lightweight self-consolidating concrete bridge-deck slabs reinforced with different GFRP bar sizes	Mahdi Aflakisamani, Salaheldin Mousa, Hamdy M. Mohamed, Ehab A. Ahmed and Brahim Benmokrane	Aflakisamani, Mahdi	
				Simcoe / Dufferin	11:40					
Wednesday, July 20, 2022	10:20 - 12:00	A4	Bridge Analysis and Design	Kent	10:20	16	Evaluation of the CHBDC Simplified Method of Analysis for Timber Bridges	Riley Nader, Kyle Tousignant, John Newhook and Vidya Limaye	Nader, Riley	Dixon, Doug
				Kent	10:40	32	Nonlinear steady-state dynamic response analysis of bridges with self-centering precast concrete piers and with viscous dampers	Shoma Kitayama, Cancan Yang and Haifeng He	He, Haifeng	
				Kent	11:00	35	Simplified Analysis of Integral Bridge Abutments	Lindsey Li, Mike Bartlett and Timothy Newson	Li, Lindsey	
				Kent	11:20	60	The Kâhasinîskâk footbridge in Edmonton: Parametric design for user comfort	Sebastien Cote and Pierre-Louis Cons	Sebastien Cote and Pierre-Louis Cons	
				Kent	11:40	87	Torsional behavior of concrete bridge box girders reinforced with GFRP bars	Ibrahim Mostafa, Salaheldin Mousa, Hamdy Mohamed and Brahim Benmokrane	Ibrahim Mostafa	
Wednesday, July 20, 2022	10:20 - 12:00	A5	Bridge Failures, Demolition and Replacement	Civic Ballroom South	10:20	59	ABC Bridges in remote area - Little Long Dam Safety	Sébastien Verger Leboeuf and Caroline Giroux	Sébastien Verger Leboeuf	Cusson Benoit
				Civic Ballroom South	10:40	68	Dyck Memorial Road Bridge Collapse in a Saskatchewan Rural Municipality	Daniel Segal and Alexander Udey	Segal, Daniel	
				Civic Ballroom South	11:00	63	Investigation of Five Bridges Following a Bridge Collapse in a Saskatchewan Rural Municipality	Brian Bolingbroke	Bolingbroke, Brian	
				Civic Ballroom South	11:20	301	Hidden Corrosion and Failed Members in Steel Truss Bridges	Duane Vangeest, Arih Struger-Kalkman, Brian Ellis and Darryl Bakker	Bakker, Darryl	
				Civic Ballroom South	11:40	246	Emergency replacement of modular bridge truss panels damaged by vehicle impacts in a remote Northern Ontario location	Ataur Rahman and Kristin Aikman	Kristin Aikman	
Wednesday, July 20, 2022	10:20 - 12:00	A6	Structural Dynamics and Seismic Design	Huron	10:20	71	Seismic Behaviour of GFRP-RC Bridge Columns Under Combined Loading Including Torsion	Yasser Selmy and Ehab El-Salakawy	El-Salakawy, Ehab	Mark Kaczinski
				Huron	10:40	89	Modeling and analysis of a post-tensioned straddle bent integral with a multi-span light rail bridge superstructure	Pierre-Luabeya Mukendi, Juan Manuel Macia, Ashton Martyn and Maurice Mansfield	Macia, Juan Manuel	
				Huron	11:00	361	Vibration suppression of highway bridges using passive and semi-active isolators controlled using replicator dynamics and genetic algorithm	Zahrasadat Momeni and Ashutosh Bagchi	Zahrasadat Momeni	

				Huron	11:20	374	Lateral Load-Drift Prediction of Hybrid GFRP-Steel Reinforced Concrete Bridge Columns	Sherif Osman, Saif Aldabagh, Shahria Alam and Shamim Sheikh	Osman, Sherif	
				Huron	11:40	389	Influence of corrosion on the blast response of reinforced concrete beams	Wesam Njeem, Hassan Aoude, Beatriz Martin-Perez and Ahmad Jrade	Beatriz Martin-Perez	
Wednesday, July 20, 2022	10:20 - 12:00	A7	Bridge Management System and Service Life Implementation	Kenora	10:20	4	Mores Creek Bridge Asset Management Plan	Brian Leshko	Leshko, Brian	Du, Helen
				Kenora	10:40	20	Road Network Bridge Rating and Management System	Abdoul Salam Bah, Kotaro Sasai, Xuande Chen, David Conciatori, Luc Chouinard, Gabriel John Power and Nicolas Zufferey	Bah, Abdoul Salam	
				Kenora	11:00	69	00535 Spuzzum Creek Bridge Case Study - Fatigue Vulnerability of Double-Angle Stringer-Floorbeam Connections	Arman Shahnaz, Casey Leggett and Gabriel Leung	Arman Shahnaz	
				Kenora	11:20	92	Accelerated Superstructure Replacement: the Hoboken Viaduct	Thomas Zink, William Van Ruyven and Edgar Restrepo	Thomas Zink	
				Kenora	11:40	323	Management Policies for Infrastructure Facilities Considering Life Cycle Cost Minimization and Annual Cost Leveling	Shunichi Fukuyama, Yuto Nakazato and Daijiro Mizutani	Fukuyama, Shunichi	
Wednesday, July 20, 2022	13:30 - 15:10	B1	Bridge Analysis, Design and Construction	Provincial	13:30	241	Design & Construction of Bay of Quinte Skyway Rehabilitation I	Ben Huh	Huh, Ben	Metha, Tapan
				Provincial	13:50	76	Benefits of Using a 3D Model for Routine Integral Abutment Bridge Design	Todd Barkhouse and Xi Chen	Barkhouse, Todd	
				Provincial	14:10	94	Optimal Sensor Placement in Acceleration-Based Axle Detection for Bridge Weigh-In-Motion Systems	Ethan MacLeod, Jeremy Bowmaster, Kaveh Arjomandi and Josiah Matthews	MacLeod, Ethan	
				Provincial	14:30	177	Building Information Modelling for the Kingston Third Crossing	Svetozar Majstorovic, Radek Falar, Majella Anson-Cartwright and Biljana Rajlic	Svetozar Majstorovic, Majella Anson-Cartwright and Biljana Rajlic	
				Provincial	14:50	404	Review on Current Status of Building Information Modeling (BIM) Utilization for Transportation Infrastructure	Borhan Ghasemzadeh, Tolga Celik and John Matthews	Ghasemzadeh, Borhan	
Wednesday, July 20, 2022	13:30 - 15:10	B2	Codes, Standards and Specifications	Simcoe / Dufferin	13:30	297	Scope and Impact of CHBDC 2019 Changes to Differential Shrinkage on Precast Box Girder Bridges: Sagging or Hogging	Martin Krall	Krall, Martin	Jean-Michel Lamy
				Simcoe / Dufferin	13:50	393	Scope and Impact of CHBDC 2019 Changes to Differential Shrinkage on Precast NU Girder Bridges: Sagging and Hogging	Martin Krall	Krall, Martin	
				Simcoe / Dufferin	14:10	98	Heavy vehicle-pier collision performance of Canadian reinforced concrete bridges	Mingsai Xu, Wenbiao Sun, Cancan Yang, Wei Fan and Erum Mohsin	Xu, Mingsai	

				Simcoe / Dufferin	14:30	195	Seismic Evaluation and Retrofit of Two S6-00 Era Highway Bridges	Behrad Zibania and Casey Leggett	Zibania, Behrad	
				Simcoe / Dufferin	14:50	84	Optimal Active Learning Kriging Predictor Configuration for Calculating the Reliability Index of Bridge Piers	Elizabeth Buckley, Koosha Khorramian and Fadi Oudah	Oudah, Fadi	
Wednesday, July 20, 2022	13:30 - 15:10	B3	Environmental Loads, Extreme Events and Climate change	Civic Ballroom North	13:30	18	Key Environmental Exposure Parameters for Durability Design of Steel Bridges and Components against Atmospheric Corrosion	Jieying Zhang, Istemi Ozkan and Dario Markovinovic	Zhang, Jieying	Islam, Shahid
				Civic Ballroom North	13:50	34	Developing Performance Limit States for Medium Span Coastal Bridges Subjected to Wave Loads	Jesika Rahman and Muntasir Billah	Rahman, Jesika	
				Civic Ballroom North	14:10	38	Evaluation of R.C bridge elements reinforced with external CFRP under static load with considering environmental conditioning	Mohamed Ahmed, Slimane Metiche and Radhouane Masmoudi	Mohamed Ahmed	
				Civic Ballroom North	14:30	62	Simplified Model to Estimate Behavior of Bonded Prestressed High Strength Concrete Sections during Exposure to Fire	Yi Mao, Maged Youssef and Salah El-Fitiany	Mao, Yi	
				Civic Ballroom North	14:50	419	A Case Study for Seismic Isolation Design of Bridges in Cold Climates	Murat Dicleli and Zeki Harputoğlu	Dicleli, Murat	
Wednesday, July 20, 2022	13:30 - 15:10	B4	Inspection, Evaluation, and Rehabilitation Strategies	Kent	13:30	10	Substructure Rehabilitation using Galvanic Encasement of the Frederick G Gardiner Expressway	Doug Dixon, Haixue Liao, and Muhammad Suleman	Dixon, Doug	Mark Scanlon
				Kent	13:50	54	Assessment of Live Load Distribution Factors in Skewed Press-Brake-Formed Tub Girders	Karl Barth, Greg Michaelson and Robert Tennant	Barth, Karl	
				Kent	14:10	66	GeoSpray Case Studies for Corrugated Steel Pipe Culvert Rehabilitation	H. Liao, J. Jin and S. Ghatrehsamani	Haixue, Liao	
				Kent	14:30	72	Lower Liard Suspension Bridge Strengthening – and a Tribute to “Gallop in Gertie”	Gurpreet Sohal, Matthew Bowser and Alex Taheri	Gurpreet Sohal	
				Kent	14:50					
Wednesday, July 20, 2022	13:30 - 15:10	B5	Bridge Analysis and Design	Huron	13:30	61	Field Study of Stable Unbonded-Fiber Reinforced Elastomeric Bearings	Mark Torrie, Dan MacDonald-Lockhart, Zachary van Galen, Michael Tait and Tony Angelo	Mark Torrie and Zachary van Galen	Saif Aldabagh
				Huron	13:50	88	Modeling and analysis of the Rail-Structure-Interaction of a 242m curved multi-span bridge with Continuous Welded Rail with no rail joints	Pierre-Luabeya Mukendi and Nicolas Turcotte	Mukendi, Pierre-Luabeya	
				Huron	14:10	310	Westbrook Pedestrian Bridge – A Hybrid Precast/Steel Arch	Geoff Kallweit and Jacqueline Grabowski	Geoff Kallweit	

				Huron	14:30	236	The use of UHPC piles at Lily River Detour Bridge near Kapuskasing, Ontario: Challenges and Lessons Learned	Philip Loh, Don Gardonio and Emad Booya	Philip Loh	
				Huron	14:50	434	Design, Fabrication and Testing of Ultra-high Performance Concrete (UHPC) Decked I Beam in Ontario, Canada	Philip Loh and Don Gardonio	Philip Loh	
Wednesday, July 20, 2022	13:30 - 15:10	B6	Large Projects and Innovative Design and Construction	Civic Ballroom South	13:30	5	Samuel de Champlain Bridge Light Rail System – Railway Expansion Joints and Safety Derailment System	Deniz Kerner, Christian Braun, Mark Kaczinski and Stefan Vollert	Christian Guckel	Karn Kalra
				Civic Ballroom South	13:50	19	Environmental Life Cycle Assessment of the Bayfield River Bridge Replacement Project - A Case Study	Farzad Jalaei, Jieying Zhang, Craig McLeod, Kris Mermigas and Spiro Pollalis	Farzad Jalaei and Jieying Zhang	
				Civic Ballroom South	14:10	42	The Brighton Road Swing Bridge: A Movable Bridge within a Historic Canal	Matthew Bowser, Chris Suffern and Doug Dixon	Chris Suffern	
				Civic Ballroom South	14:30	391a	The Samuel De Champlain Bridge - Part 1	Marwan Nader and Guy Mailhot	Guy Mailhot	
				Civic Ballroom South	14:50	391b	The Samuel De Champlain Bridge - Part 2	Marwan Nader and Guy Mailhot	Guy Mailhot	
Wednesday, July 20, 2022	13:30 - 15:10	B7	Research and Development - I	Kenora	13:30	29	Redefining Flexibility and Rigidity of Fully and Semi Integral Abutments	Mohammad Saifuzzaman, Hassan Yassin and Matthias Schueller	Saifuzzaman, Mohammad	Ahmad Rahmzadeh
				Kenora	13:50	65	Galvanic Cathodic Protection for Accelerated Bridge Construction	Jerry Wang, Liao Haixue, David Whitmore and Adriano DiRienzo	David Whitmore and Jerry Wang	
				Kenora	14:10	73	Behavior Of Precast Concrete Tunnel Segments Reinforced with GFRP Bars Under Punching Loads	Ahmed Elbady, Salaheldin Mousa, Hamdy Mohamed and Brahim Benmokrane	Ahmed Elbady	
				Kenora	14:30	97	A mechanics-based analytical model for designing precast concrete member sockets	Haifeng He and Cancan Yang	He, Haifeng	
				Kenora	14:50					
Wednesday, July 20, 2022	15:40 - 17:20	C1	Pedestrian, Rail Bridges, and Buried Structures	Kent	15:40	11	Buried Bridges, More Resilient & Sustainable	Ray Wilcock	Paul Proctor	Qi Zhang
				Kent	16:00	82	Experimental Study on GFRP-Reinforced Precast Concrete Tunnel Lining Segments Made with Normal and High Strength Concretes	Seyed Mohammad Hosseini, Salaheldin Mousa, Hamdy M. Mohamed and Brahim Benmokrane	Hosseini, Seyed Mohammad	
				Kent	16:20	403	Performance Assessment and Design Guidelines for RC Buried Bridges	Hesham El Naggat and Safwat Ramadan	Safwat Ramadan	
				Kent	16:40	307	Buried Approach slab experience in Ontario	Ben Huh	Ben Huh	

Wednesday, July 20, 2022	15:40 - 17:20	C2	Research and Development - II	Huron	15:40	9	Development and Calibration of A New Design Truck for The Quebec Forest Bridges	Jean-Michel Lamy, Claude Vallée and Daniel Bernard	Claude Vallée	Cancan Yang
				Huron	16:00	70	Flexural Cyclic Testing of GFRP Reinforced Precast Normal- and High- Strength Concrete Segmental Tunnel Linings	Basil Ibrahim, Salaheldin Mousa, Hamdy M. Mohamed and Brahim Benmokrane	Basil Ibrahim	
				Huron	16:20	74	Behavior of Circular GFRP-RC Hollow Columns under Axial Compression	Mohammed Gamal Gouda, Hamdy M. Mohamed, Allan C. Manalo and Brahim Benmokrane	Gouda, Mohammed Gamal	
				Huron	16:40	173	Constructability Consideration for Bridge Design and Optimization	Helen Du and David Harvey	Du, Helen	
				Huron	17:00	411	Testing Full-Size Concrete Bridge Deck Reinforced with GFRP Rebar under Rolling Load	Chongxi Gao and Amir Fam	Fam, Amir	
Wednesday, July 20, 2022	15:40 - 17:20	C3	Sustainability, Durability, and Resilience	Simcoe / Dufferin	15:40	40	Implementation of Epoxy Coated Strands in Bridge Post-Tensioning	Shahid Islam and Roger Frenn	Islam, Shahid	Tamer El-Maaddawy
				Simcoe / Dufferin	16:00	56	St. Andrews Lock and Dam Bridge Deck Replacement and Strengthening	Justine Meyers and Craig Schaper	Justine Meyers and Alex Lyon	
				Simcoe / Dufferin	16:20	57	Opening the Jacques-Cartier bridge bike path during winter – A focus on sustainability and durability	Maxime Bellefeuille, Omar Moussa and Moctar Sidibe	Maxime Bellefeuille and Mohammadreza Moradian	
				Simcoe / Dufferin	16:40	22	Targeted Corrosion Protection for Bridge Structures	Liao Haixue, Wendy Ding and Lawrence Yu	Lawrence Yu	
				Simcoe / Dufferin	17:00					
Wednesday, July 20, 2022	15:40 - 17:20	C4	Structural Dynamics and Seismic Design	Kenora	15:40	409	Testing Full-Size Concrete Bridge Deck Reinforced with Steel Rebar and GFRP Stay in Place Forms Under Rolling Load	Chongxi Gao and Amir Fam	Fam, Amir	Mark Scanlon
				Kenora	16:00	6	Seismic Isolator, Damper and Expansion Joint System for Two Viaducts of Toluca – Mexico City Intercity Train	Peter Huber, Deniz Kerner and Mark Kaczinski	Kaczinski, Mark	
				Kenora	16:20	67	Degree of sophistication required for the dynamic modeling of a steel-aluminum hybrid bridge with extruded aluminum orthotropic deck.	Papa Mamadou Diop, Ehsan Bazarchi, Benoit Cusson and Charles-Philippe Lamarche	Papa Mamadou Diop	
				Kenora	16:40	400	Seismic Response of a Bridge Incorporating a Post-Tensioned Base Rocking Steel Pier	Ahmad Rahmzadeh, Shahria Alam and Robert Tremblay	Rahmzadeh, Ahmad	
				Kenora	17:00	12	Designing and detailing a GMAW welded aluminum deck on steel girders for CSA S6-19 traffic loads	Benoit Cusson	Cusson, Benoit	
Wednesday, July 20, 2022	15:40 - 17:20	C5	Modern Applications of	Civic Ballroom South	15:40	30	Innovative Integral Bridges	Matthias Schueller, Tina Wang and Mohammad Saifuzzaman	Saifuzzaman, Mohammad	Mansfield, Maurice

			Accelerated Bridge Construction (ABC) techniques	Civic Ballroom South	16:00	302	A State-of-The-Art, Flexible, Easy-to-Replace Plug-Type Expansion Joint for The Delaware Memorial Bridge	Forest Kovach, Gianni Moor and Dominik Ortmann	Kovach, Forest	
				Civic Ballroom South	16:20	58	Pinecrest Road Rigid Frame Accelerated Bridge Construction using Lateral Slide Technology	Adriano DiRienzo, Scott Linde, Ali El-Husseini and Maurice Mansfield	Scott Linde	
				Civic Ballroom South	16:40	354	Design of precast bridge columns and abutments meeting seismic performance requirements for ABC	Bruno Massicotte, Simon Bourget, Lewis Gabriel, Camille Renaud-Laprise and Philippe Darveau	Simon Bourget	
				Civic Ballroom South	17:00	306	Methods and Technologies for Evaluating and Minimising Noise From Road Bridge Expansion Joints	Rodrigo Miranda, Gianni Moor and Simon Hoffman	Miranda, Rodrigo	
Wednesday, July 20, 2022	15:40 - 17:20	C6	Bridge Analysis and Design	Provincial	15:40	356	Using linear and nonlinear finite element analysis in bridge evaluation	Bruno Massicotte, Mahdi Ben Ftiam and David Conciatori	Massicotte, Bruno	Saqib Khan
				Provincial	16:00	33	Strut and Tie Modeling of Integral Abutment Bridges	Karn Kalra and Mike Bartlett	Kalra, Karn	
				Provincial	16:20	235	Replacement of Duchesnay Creek Timber Bridge	Richard Krutzler, Mohammed Rashed and Sergiy Morozevych	Krutzler, Richard	
				Provincial	16:40	364	A Framework for Modelling and Analysis of Bridges Considering SSI	Mohamed Sayed and Oh-Sung Kwon	Mohamed Sayed	
				Provincial	17:00					
Wednesday, July 20, 2022	15:40 - 17:20	C7	Inspection, Evaluation, and Rehabilitation Strategies	Civic Ballroom North	15:40	47	Structural Monitoring Along One of Canada's Heaviest Haul Roads	Christopher Morgan	Morgan, Christopher	Keith Holmes
				Civic Ballroom North	16:00	55	The Rehabilitation of The Covered Bridge Leclerc (P-00249) Passing Over the Bouchard Stream in LaSarre, Qc	Nairy Kechichian	Kechichian, Nairy	
				Civic Ballroom North	16:20	385	Middle Road Bridge Rehabilitation	Christine Beard, Raymond Lau and Tara Jenkins	Beard, Christine	
				Civic Ballroom North	16:40	401	Performance of Non-Destructive-Based Inspection for Concrete Bridge Decks	Sherif Abdelkhalek and Tarek Zayed	Tarek Zayed	
				Civic Ballroom North	17:00					
Thursday, July 21, 2022	10:20 - 12:00	D1	The Gordie Howe International Bridge	Civic Ballroom South	10:20	418	Contemporary Minimalism Inspired Design for the Gordie Howe International Bridge	Karey Thatcher, Nazish Fatima and Johnathan Quijano	Nazish Fatima , Karey Thatcher and Johnathan Quijano	

			Special session	Civic Ballroom South	10:40	431	The Gordie Howe International Bridge – Procedure Development and Unique Requirements	Claire Heumann, Shawn Woodruff and Zaher Yousif	Zaher Yousif, Claire Heumann and Shawn Woodruff	Zaher Yousif
				Civic Ballroom South	11:00	430a	Gordie Howe International Bridge Design Overview and Challenges	Barry Chung and Dipal Vimawala	Barry Chung	
				Civic Ballroom South	11:20	430b	Gordie Howe International Bridge Design Overview and Challenges	Barry Chung and Dipal Vimawala	Dipal Vimawala	
				Civic Ballroom South	11:40	429	Superstructure Erection Method for The Gordie Howe International Bridge	Gang Jiao	Jiao, Gang	
Thursday, July 21, 2022	10:20 - 12:00	D2	Inspection, Evaluation, and Rehabilitation Strategies	Kent	10:20	373	Nondestructive and Structural Acoustics for Bridge Reliability Evaluation	Wael Megid and D. Robert Hay	Wael Megid	Mansour, Rami
				Kent	10:40	165	Highway 14 Parkinson Hill Slope Rehabilitation Project - No Room for Error	Matthew Ridley	Ridley, Matthew	
				Kent	11:00	293	Effect of Adhesive Type on Flexural Behavior of FRP-Strengthened Steel Beams	Ayman Okeil, David Huval and Ahmed Elshoura	Okeil, Ayman	
				Kent	11:20	188	New Life for Aging Infrastructure	Katrin Habel and David Harvey	Habel, Katrin	
				Kent	11:40	189	Fires, Floods, & Ice Jams - A Decade of Bridge Asset Management & Disaster Recovery in Fort McMurray, AB	Sara Wadlow	Wadlow, Sara	
Thursday, July 21, 2022	10:20 - 12:00	D3	Aesthetics and Historical Bridges	Civic Ballroom North	10:20	21	Double-Double - The History of Bailey Bridges Built by the Royal Canadian Engineers	Linda Newton and Ken Holmes	Newton, Linda	Turcotte, Nicolas
				Civic Ballroom North	10:40	156	Design of an "S" Curved Bridge for a Reserved Bus Lane at Turcot Interchange	Francois Dallaire, Juan Manuel Macia and Maxime Forget	Dallaire, Francois	
				Civic Ballroom North	11:00	163	Hamlet Swing Bridge and Fixed Bridge Replacement	Aboubaker Farah, Jeff Keyt, Jack Ajrab and Natalie Ho	Farah, Aboubaker	
				Civic Ballroom North	11:20	388	Chippawa Power Canal Culvert – A Comprehensive Investigation and Evaluation of Rock/Structure Behaviour	Joe Ostrowski, Mark Telesnicki, Gregory Louisy, Wei Wang and Tony Sangiuliano	Joe Ostrowski	
				Civic Ballroom North	11:40	252	Improving The Design of Pedestrian and Cyclist Underpasses in Urban Settings	Jackson Lee, Andres Jarrin, John Lam, Saidur Rahman and Andrew Cheung	Jackson Lee	
Thursday, July 21, 2022	10:20 - 12:00	D4	Advanced Composite, Hybrid and	Simcoe / Dufferin	10:20	331	Performance of RC Continuous Beams Strengthened in Sagging regions using PBO-FRCM Composites	Ahmed Mandor and Ahmed El Refai	El Refai, Ahmed	El Refai, Ahmed

			New Materials	Simcoe / Dufferin	10:40	111	Effect of Shear Span-to-Depth Ratio and Secondary Reinforcement on the Behaviour of Headed-end GFRP-RC Corbels	Matthew Allen and Ehab El-Salakawy	Allen, Matthew	
				Simcoe / Dufferin	11:00	149	Time-Dependent Reliability Based Assessment of Bridge Decks in Nova Scotia Reinforced Using GFRP	David Idemudia, Fadi Oudah and John Newhook	Oudah, Fadi	
				Simcoe / Dufferin	11:20	377	Effect of FRCM strengthening on the compressive strength of short RC columns	Farid Abed, Noor Al Huda Tello, Yazan Alhoubi, Ahmed El Refai and Tamer El-Maaddawy	Ahmed El Refai	
				Simcoe / Dufferin	11:40	369	Use of ASTM A1035 High Strength and Corrosion Resistance Reinforcement in sustainable bridge construction	Salem Faza and Hans Geber	Hans Geber	
Thursday, July 21, 2022	10:20 - 12:00	D5	Large Projects and Innovative Design and Construction	Provincial	10:20	304	The Samuel De Champlain Bridge, Structural Health Monitoring System and Sensors Design and Benefit	Andrea Paciacconi, Gianni Moor and Forest Kovach	Gianni Moor	Khorasani, Milad
				Provincial	10:40	133	Transporting and Erecting a Fully Fabricated Steel Arch Bridge from Dartmouth to Toronto – Cherry Street North Bridge Fabrication and Erection	Thomas McNutt, Robbie Fraser and Stuart Herlt	McNutt, Thomas	
				Provincial	11:00	146	Highway 400 Finch Ave West Overpass - Rapid Bridge Replacement	Shahzal Nisar, Yen Wu and Ken Bontius	Yen Wu	
				Provincial	11:20	151	The Duggan Bridge Replacement	Rowan Shields	Shields, Rowan	
				Provincial	11:40	152	Widening of the Anthony Henday Drive North Saskatchewan River Bridge	Lathan Arasaratnam and Michael Paulsen	Drew Teal	
Thursday, July 21, 2022	10:20 - 12:00	D6	Codes, Standards and Specifications - I	Huron	10:20	181	An assessment of the development length equation in CSA S806-12	Omar Gouda, Hassanein Ahmed and Khaled Galal	Omar Gouda	Brown, Stephen
				Huron	10:40	312	FRP bridges - recent applications and design codes	Dritan Topuzi and Shamim Sheikh	Topuzi, Dritan	
				Huron	11:00	317	Study of Maintenance Vehicle Loads used for Multi-Use Bridge Design in Canada	Sadegh Kazemi	Kazemi, Sadegh	
				Huron	11:20	427	Simplified Equations for Moment and Shear Values in Bridge Girders Resulting from CHBDC and AASHTO Truck Loading	Ahmed Diab, Khaled Sennah and Seyedshayan Barary	Ahmed Diab	
				Huron	11:40					
Thursday, July 21, 2022	10:20 - 12:00	D7	Codes, Standards and Specifications - II	Kenora	10:20	110	Evaluating the Adequacy of the Elastic Force Factor in CSA S6-19 for Capacity-Protection under the 6th Generation Seismic Hazard Values	Sepideh Ashtari, Thierry Chicoine and Carlos Ventura	Ashtari, Sepideh	Haixue Liao
				Kenora	10:40	432	Refined Deformation Limit States for Circular Reinforced Concrete Bridge Columns	Saif Aldabagh, Faroque Hossain, Alireza Ahmadnia and M. Shahria Alam	Aldabagh, Saif	
				Kenora	11:00	278	Design guidelines for Spatial Arch Bridges with inferior deck considering the effect of thermal loads and variability in arch and deck geometry	Martin Hudecek, Nigel Shrive and Kip Skabar	Hudecek, Martin	

				Kenora	11:20	280	Seismic Shear Design of Reinforced Concrete Columns in The CHBDC	Rico J. Massa, Denis Mitchell, Don Kennedy and William D. Cook	Rico J. Massa	
				Kenora	11:40					
Thursday, July 21, 2022	13:30 - 15:10	E1	Modern Applications of Accelerated Bridge Construction (ABC) techniques	Provincial	13:30	155	Replacement of the F.G. Gardiner Expressway Superstructure – Innovative Accelerated Bridge Construction	Jeff Smith, Easton Gordon and Hangang Li	Smith, Jeff	Jiang, Jianping
				Provincial	13:50	357	Accelerated Bridge Construction (ABC) via PC/PS NU girders, PC deck panels, UHPC joints and GFRP Reinforcement	Salameh, Reem, Abdalla, Maria, Khalil, Rewan, Abosief, Youssef, Ahmad, Lama, Mohamed, Lina, Salib, Sameh, and Sennah, Khaled	Lama Ahmad	
				Provincial	14:10	239	Accelerated Bridge Construction to Replace Mosquito Creek Bridge	Anna Lemaire and Meena Venkataraman	Lemaire, Anna	
				Provincial	14:30	294	Software Development Automation to Simulate the Seismic Response of a Bridge with Rocking Steel Piers	Faroque Hossain, Ahmad Rahmzadeh, M. Shahria Alam and Robert Tremblay	Faroque Hossain	
				Provincial	14:50	410	Modeling Full-Size Bridge Deck with Novel GFRP SIP Formwork and GFRP Rebar under Moving Load	Chongxi Gao, Akram Jawdhari and Amir Fam	Fam, Amir	
Thursday, July 21, 2022	13:30 - 15:10	E2	Bridge Analysis and Design	Civic Ballroom North	13:30	128	Technical Challenges in Design of the Kingston Third Crossing Signature Span	Rami Mansour, Edouard Rennvelle and Zachary McGain	Mansour, Rami	Yen Wu
				Civic Ballroom North	13:50	174	Technical Solutions and Innovations to Challenges in Design of the Approach Spans for the Kingston Third Crossing	Biljana Rajlic, Majella Anson-Cartwright, Radek Falar and Robert Short	Robert Short, Majella Anson-Cartwright and Biljana Rajlic	
				Civic Ballroom North	14:10	139	An analytical Study on Steel-GFRP Hybrid Reinforced Concrete One-way Slab Sections	Mostafa Ibrahim, Alireza Asadian and Khaled Galal	Mostafa Ibrahim	
				Civic Ballroom North	14:30	145	A transportation link over an active transitway and an arterial	Jack Ajrab and Patrick Mergel	Ajrab, Jack	
				Civic Ballroom North	14:50	164	Design and Construction Challenges of The Widening of an Existing Bridge with Prestressed and Post-Tensioned Concrete Deck	Armin Sadeghian, Amirhossein Vosogh and Munzer Hassan	Armin Sadeghian	
Thursday, July 21, 2022	13:30 - 15:10	E3	Large Projects and Innovative Design and	Civic Ballroom South	13:30	119	Deck Replacement for the Simon Fraser Steel Truss Bridge	Scott Loptson, Carl Wong and David Wei	Carl Wong and Nathan Lepoudre	Bolduc, Sean-Philip
				Civic Ballroom South	13:50	112	Construction of the Lachine Canal Bridge	Melanie Choi, Xiuhui Jin and Bertrand Voutaz	Choi, Melanie	

			Construction	Civic Ballroom South	14:10	122	Phased Construction Bridges: Field Monitoring of Traffic-Induced Vibration and Large-Scale Experimental Testing	Khalid Al-Kady	Al-Kady, Khalid	
				Civic Ballroom South	14:30	131	River Road over Ironstone Brook - The Industry's First Folded Steel Plate Girder Bridge	Thomas Zink, William Van Ruyven and Agnieszka Lapinski	Van Ruyven, William	
				Civic Ballroom South	14:50	135	High Load Multi-Rotational Disk Bearings for The Short Span Bridges at Laguardia Airport	Ronald Watson	Watson, Ronald	
Thursday, July 21, 2022	13:30 - 15:10	E4	Research and Development	Kent	13:30	132	Axial Resistance of Single Angle Diagonals connected by one leg to multiple gusset plates: Case Study of the Load Evaluation for Pinware River Bridge in Labrador	Todd Puddicome and Mitchell Warren	Puddicome, Todd	Magdy Samaan
				Kent	13:50	137	Design of concrete members strengthened in shear with vertical bonded bars	Mathieu Fiset, Josée Bastien and Denis Mitchell	Fiset, Mathieu	
				Kent	14:10	170	Assessing and Mitigating Owner's Risks in Design-Bid-Build Procurement Projects	Farel Miankodila and Jeff Nelson	Miankodila, Farel	
				Kent	14:30	186	Algorithmic and Parametric Modelling for The Port Lands Bridges	Jonathan Werner, Misha Vickar and Navan Chawla	Chawla, Navan	
				Kent	14:50					
Thursday, July 21, 2022	13:30 - 15:10	E5	Environmental Loads, Extreme Events, and Bridge Monitoring	Huron	13:30	178	Highway Bridge Retrofit vs Replacement Greenhouse Gas Emissions	Casey Leggett, William Phillips and Meredith Fyfe	Abdelbadie, Abdullah	Brian Bolingbroke
				Huron	13:50	291	A reliability-based framework for establishing load factors for thermal gradient effects on continuous prestressed concrete slab-on-girder bridges	Ayman Okeil and Ahmed Elshoura	Okeil, Ayman	
				Huron	14:10	406	Fatigue Testing and Modelling of Flare Bevel Groove Welded Aluminum Joints for Pedestrian Bridge Applications	Abdullah Abdelbadie and Scott Walbridge	Abdullah Abdelbadie	
				Huron	14:30	433	Structural Health Monitoring as a Tool to Address Bridge Design and Load Rating Challenges	Ayman Okeil	Ayman Okeil	
				Huron	14:50	106	Bridge Surface Damage Detection using Convolutional Neural Network	Palisa Arafin, Anas Issa and Ahm Muntasir Billah	Arafin, Palisa	
Thursday, July 21, 2022	13:30 - 15:10	E6	Inspection, Evaluation, and Rehabilitation Strategies	Simcoe / Dufferin	13:30	107	JC Van Horne Bridge Approach Truss Bottom Chord Repair	Sarah Hardy, Sascha Schreiber, Christopher Mantha and Riccardo Ciccarelli	Sarah Hardy	Chris Haines
				Simcoe / Dufferin	13:50	115	Instrumentation of a 55-Year-Old Multi-Span Continuous Concrete Bridge to Assess the Performance of Bearings	Campbell Bryden, Mitchell MacFarlane, Diego Padilha and Kaveh Arjomandi	Bryden, Campbell	
				Simcoe / Dufferin	14:10	134	Lessons Learned in The Design and Commissioning of High-Speed Data Acquisition Systems for Structural Health Monitoring of Bridges in Canada	Vincent Le Borgne, Saunders Wesley, Alexandre Cosentino and Siamaki Ali	Siamaki Ali	

				Simcoe / Dufferin	14:30	138	Rehabilitation of the Waterton River Bridge	Adam Hoag, Darrel Gagnon and Mathieu Angers	Adam Hoag	
				Simcoe / Dufferin	14:50	23	Highway 71 Reed Narrows Bridge – Repair of Pipe Piles with Microbial Induced Corrosion	Laura Donaldson and Sabrina Dexter	Laura Donaldson	
Thursday, July 21, 2022	13:30 - 15:10	E7	Sustainability, Durability, and Resilience	Kenora	13:30	325	Elements of Bridge Deterioration and Failure	Kenneth Crawford	Crawford, Kenneth	Keith Holmes
				Kenora	13:50	161	Resetting the Clock on Corrosion while Preserving the Aesthetics of Historical Bridges with Electrochemical Treatments	Scott McCulloch and Sarah Whitmore	Sarah Whitmore	
				Kenora	14:10	176	Long Term Performance of UHPC Shear Keys	Ali Semendary, Evangeline Murison, Jim Lukashenko and Dagmar Svecova	Semendary, Ali	
				Kenora	14:30	192	Bulkley River Bridge —Engineering path for prolonging the service life of a 55-year old timber bridge	Nima Mohajer Rahbari, Steven Page, Julien Henley and Dale Harrison	Julien Henley, Steven Page	
				Kenora	14:50	114	Doubling the Service Life of the Taft Creek Bridge	Scott Loptson, Joseph Adom and Marie Wood	Scott Loptson	
Thursday, July 21, 2022	15:40 - 17:20	F1	Large Projects and Innovative Design and Construction	Provincial	15:40	168	Precast deck systems of the Turcot Interchange	Maxime Forget, Thomas Montiel and Vimal Patel	Forget, Maxime	Newton, Linda
				Provincial	16:00	171	Rehabilitation of Four Bridges on One of the Busiest Saskatchewan Highway Corridors	Jeff Nelson, Farel Miankodila and Daniel LeMay	Jeff Nelson	
				Provincial	16:20	172	Widening of Westbound Stoney Trail Crossing Over the Bow River	Drew Teal, Lathan Arasaratnam and Michael Paulsen	Teal, Drew	
				Provincial	16:40	86	Confederation Line Extension – Ottawa’s largest infrastructure project	Maurice Mansfield, Adriano DiRienzo, Mina Sedarous and Nara Sampaio	Maurice Mansfield and Mina Sedarous	
				Provincial	17:00					
Thursday, July 21, 2022	15:40 - 17:20	F2	Advanced Composite, Hybrid and New Materials	Civic Ballroom North	15:40	182	Effect of concrete cover and bar diameter on the deflection and deformability of RC beams reinforced with ribbed GFRP bars	Omar Gouda, Alireza Asadian and Khaled Galal	Omar Gouda	Kazemi, Sadegh
				Civic Ballroom North	16:00	286	International Projects using Ultra-High Performance Concrete Overlays for Bridge Rehabilitation	Peter Seibert, Gil Brindley, Jerry Reece and Laurent Borion	Peter Seibert	
				Civic Ballroom North	16:20	303	The Sustainable Rehabilitation & Upgrading of Bridges with UHPC Overlays	Vic Perry	Perry, Vic	
				Civic Ballroom North	16:40	226	A Parametric Study on Recycled Steel Fiber Reinforced Concrete	Mehdi Shokouhian and Tiyobistiya Tsegaye	Shokouhian, Mehdi	
				Civic Ballroom North	17:00	227	Sagging and Hogging Strengthening of Continuous Reinforced Concrete Girders with PBO-FRCM Composites	Nouman Khattak, Tamer El-Maaddawy and Najif Ismail	El-Maaddawy, Tamer	

Thursday, July 21, 2022	15:40 - 17:20	F3	Large Projects and Innovative Design and Construction	Civic Ballroom South	15:40	191	Fore River Lift Bridge: How We Lift a Bridge	Sean-Philip Bolduc	Bolduc, Sean-Philip	Amir Fam
				Civic Ballroom South	16:00	193	The Design Challenges of the new Haisla Bridge Replacement	Winnie Li, Jason Dowling, Nik Cuperlovic and Erhard Behrens	Li, Winnie	
				Civic Ballroom South	16:20	197	Highway 21 Bayfield River Bridge Part 1: Design Concept and Execution of a Freestanding Steel Arch Bridge	Craig McLeod and Alex Stuart	Alex Stuart	
				Civic Ballroom South	16:40	198	Context Sensitive Aesthetically Driven Park Bridges: The Milne Creek and Milne Dam Bridges	Andrew Lehan and Stephen Brown	Andrew Lehan	
				Civic Ballroom South	17:00	199	Extradosed Design in Steel: The Dalewood Bridge	Andrew Lehan and Stephen Brown	Andrew Lehan	
Thursday, July 21, 2022	15:40 - 17:20	F4	Structural Dynamics and Seismic Design	Kent	15:40	124	00565 Wildwood Bridge – Evaluation, Seismic Retrofit and Condition Renewal	Arman Shahnaz	Shahnaz, Arman	Oudah, Fadi
				Kent	16:00	130	An Integrated Model for Resiliency Analysis of Bridge Infrastructure Against Seismic Hazard	Md Saiful Arif Khan, Golam Kabir, Muntasir Billah and Subhrajit Dutta	Md Saiful Arif Khan	
				Kent	16:20	141	Seismic resilience assessment of isolated bridges equipped with different isolation systems	Vahid Aghaeidoost and Ahm Muntasir Billah	Aghaeidoost, Vahid	
				Kent	16:40	336	A comparison of bridge seismic design requirements in British Columbia with other major seismic design codes	Samson Lee and Milad Khorasani	Samson Lee	
				Kent	17:00	78	Damage Index Based Performance Evaluation of Retrofitted Bridge Bent	Abu Obayed Chowdhury, AHM Muntasir Billah, M Shahria Alam	Abu Obayed Chowdhury	
Thursday, July 21, 2022	15:40 - 17:20	F5	Bridge Analysis and Design	Simcoe / Dufferin	15:40	365	Overview of Correlation Methods for Rapid Military Bridge Evaluation Software	Andrew MacDonald and Gordon Wight	MacDonald, Andrew	Ashtari, Sepideh
				Simcoe / Dufferin	16:00	366	Design of a Lateral Bridge Slide with Integral Abutments	Matthew McFadden, Douglas Raby and Michael Matthews	McFadden, Matthew	
				Simcoe / Dufferin	16:20	166	Little Pashkokogan Culvert - Replacement of a Structural Culvert in a Rockfill Embankment	Derek Simms and Bala Tharmabala	Simms, Derek	
				Simcoe / Dufferin	16:40	183	Numerical simulation of concrete beams reinforced with glass-fibre reinforced polymer (GFRP) bars	Omar Gouda, Alireza Asadian and Khaled Galal	Gouda, Omar	
				Simcoe / Dufferin	17:00					
Thursday, July 21, 2022	15:40 - 17:20	F6	Inspection, Evaluation, and Rehabilitation	Huron	15:40	25	Beechwood Road Underpass - Emergency Evaluation and Repair of Precast Girder following Over-Height Impact	Joel Covert and Augustin Yun	Covert, Joel	Smith, Jeff
				Huron	16:00	314	CFRP-Reinforced UHPC Overlay for Flexural Strengthening of RC Beams	Akram Jawdhari and Majid M. A. Kadhim	Jawdhari, Akram	

			on Strategies	Huron	16:20	353	Photogrammetry POC	Stephen Schorn and Patrick Meinecke	KROELY Benoit	
				Huron	16:40	315	Numerical Study on Strengthening RC Beams Using Side Near Surface Mounted FRP (SNSM-FRP) Technique	Ali Hadi Adheem, Majid M. A. Kadhim and Akram Jawdhari	Jawdhari, Akram	
				Huron	17:00	382	Pi-Bracket Sensor for Crack Detection Near Stiffeners for Steel Girder Bridges	Boris Telehanic, Aftab Mufti, Douglas Thomson, Basheer Algoji and Riccardo Belli	Boris Telehanic	
Thursday, July 21, 2022	15:40 - 17:20	F7	Research and Development	Kenora	15:40	327	Deterioration modeling with an inhomogeneous continuous time Markov chain: A latent state approach with analytic transition probabilities	Daijiro Mizutani and Arnold Yuan	Arnold Yuan	Christine Jacques
				Kenora	16:00	329	Overview of Bridge Element Weights From Multi Perspectives	Marwa Ahmed and Benoit Kroely	Ahmed, Marwa	
				Kenora	16:20	348	The Calibration of Observational Engineering and p-y Curves Saves Time and Money. Bridge Foundations Salvaged by Enhanced Pile/Soil Evaluation	Carlos Villate, Gregory Louisy, Paul Dittrich and Tony Sangiuliano	Carlos Villate	
				Kenora	16:40	99	Static and Cyclic Behaviour of Precast Concrete Truss Girder Connection Reinforced with Steel or FRP Double-Headed Bars	Ali Ebrahimi Emamieh, Mamdouh El-Badry and Maziar Jamshidi	Ali Ebrahimi Emamieh	
				Kenora	17:00	121	Use of Shape Memory Alloys in Civil Infrastructures: A Review of Literature	Apurwa Rastogi and Anant Parghi	Parghi, Anant	
Friday, July 22, 2022	10:20 - 12:00	G1	Large Projects and Innovative Design and Construction	Civic Ballroom South	10:20	320	Centennial Road Overpass - Design Challenges and Practical Solutions	Matthias Yu, Samson Lee and Adam Neale	Matthias Yu	Jack Ajrab
				Civic Ballroom South	10:40	358	Analysis and Design of Landmark Bridge with Continuous Steel Truss Girders of Variable Depth	Elias Zaarour, Sameh Salib, Khaled Sennah, Dana Bonner, Mohamad Dalati, Jad Krisht, Dante Rinaldo and Steven Santaguida	Bonner, Dana	
				Civic Ballroom South	11:00	359	Design of Bridges for the Kicking Horse Canyon Phase 4 Project in Canada	Yulin Gao, Patricio Padilla, Kent LaRose and Chris Koop	Gao, Yulin	
				Civic Ballroom South	11:20	371	Rehabilitation of Section 2 of the F. G. Gardiner Expressway	Brent Archibald, Jack Ajrab and Sherif Sidky	Brent Archibald	
				Civic Ballroom South	11:40	28	Gunghi Creek Culvert Replacement – Design and Construction	David R. C. Amorim, Kamran Ata and Riaz Abbas	David R. C. Amorim	
Friday, July 22, 2022	10:20 - 12:00	G2	Inspection, Evaluation, and	Civic Ballroom North	10:20	333	Hwy 406 over 12 Mile Creek – Rehabilitation of MTO’s only Precast Segmental Concrete Bridge after 30 Years in Service	Konstantinos Kris Mermigas and Yongming Xu	Mermigas, Konstantinos Kris	

			Rehabilitation Strategies	Civic Ballroom North	10:40	340	Forensic Analysis and Replacement of Laminated Elastomeric Bearings with Shear Delamination Failure after a Year in Service	Konstantinos Kris Mermigas and Lynn Piening	Mermigas, Konstantinos Kris	Young, Jason
				Civic Ballroom North	11:00	349	Renewal of Historic Blackfriars Bridge: Challenges Encountered and Lessons Learned	Chris Haines	Haines, Chris	
				Civic Ballroom North	11:20	352	Notch stress approach to assess the fatigue behaviour of aluminum welded extrusions	Mahmoud Trimech, Charles-Darwin Annan and Scott Walbridge	Mahmoud Trimech	
				Civic Ballroom North	11:40	368	Bond Behavior of CFRP Reinforcement System For RC Bridges Rehabilitation	Ahmed Kallel, Slimane Metiche, Radhouane Masmoudi, Benoit Bissonette and Marcelin Joanis	Ahmed Kallel	
Friday, July 22, 2022	10:20 - 12:00	G3	Research and Development	Kent	10:20	394	Spatial Variability-Based Reliability Analysis Framework for Concrete Bridge Girders	Koosha Khorramian, Sahand Salili and Fadi Oudah	Oudah, Fadi	Dicleli, Murat
				Kent	10:40	395	Structural Evaluation of Pedestrian Bridges-Challenges and Opportunities	Reza Sadjadi and Ramin Rameshni	Sadjadi, Reza	
				Kent	11:00	396	Placement of Free-of-Axle Detectors (FAD) for A Bridge-Weigh-In-Motion (BWIM) System on A Concrete Slab-Girder Highway Bridge	Jeremy Bowmaster, Kaveh Arjomandi and Ethan MacLeod	Jeremy Bowmaster	
				Kent	11:20					
				Kent	11:40					
Friday, July 22, 2022	10:20 - 12:00	G4	Large Projects and Innovative Design and Construction	Provincial	10:20	399	St. Andrews Lock and Dam Bridge Rehabilitation and Widening – Construction Stage Analysis and Jacking Design	Raj Singh, Saqib Khan, Craig Schaper and Robert Lacasse	Khan, Saqib	Mamdouh El-Badry
				Provincial	10:40	423	Conceptual and Detailed Design of Bridges Over The Future Site C Hydroelectric Reservoir	Sean O'Hagan, Jacek Doniec and Jianping Jiang	Sean O'Hagan	
				Provincial	11:00	414	Seismic Isolation Design of Bridges in Turkey In Compliance With Newly Developed Design Specifications	Murat Dicleli, Burak Kurtman and Ali Salem Milani	Dicleli, Murat	
				Provincial	11:20	185	Hanger Welding Sequence for The Port Lands Bridges	Jonathan Werner, Navan Chawla, Misha Vickar, Stuart Herlt, Blair Nakatsu, Robbie Fraser, Thomas McNutt and Michael Meschino	Chawla, Navan	
				Provincial	11:40	148	Post-tensioning Investigation in Voided Slab Bridges	Jovan Vukotic, David Whitmore and Liao Haixue	Liao Haixue and David Whitmore	
Friday, July 22, 2022	10:20 - 12:00	G5	Climate Resilient Built Environment-Adaptation	Simcoe / Dufferin	10:20	258a	NRC-CRBCPI-Climate Resilient Highway Bridge Infrastructure Project (2018-2021): Overview And Achievements	Husham Almansour	Almansour, Husham	Cusson, Daniel
				Simcoe / Dufferin	10:40	258b	NRC-CRBCPI-Climate Resilient Highway Bridge Infrastructure Project (2018-2021): Overview And Achievements	Husham Almansour	Almansour, Husham	

			for Bridge Infrastructure I	Simcoe / Dufferin	11:00	305	Resilience of Existing Highway Bridges under Changing Climate	Husham Almansour and Zoubir Lounis	Almansour, Husham	
				Simcoe / Dufferin	11:20	116	Experimental Evaluation of Shear Strength of RC Beams Subjected to Different Levels of Stirrups Corrosion	Bessam Kadhom, Husham Almansour, Jieying Zhang, Dennis Krys and Abdullah Al-Bayti	Kadhom, Bessam	
				Simcoe / Dufferin	11:40	143	Assessment of Safety and Serviceability of Aged Box Girder Bridges Subjected to Extreme Climate Loads	Amina Mohammed and Husham Almansour	Almansour, Husham	
Friday, July 22, 2022	10:20 - 12:00	G6	Bridge Analysis and Design	Huron	10:20	405	Comparison Among Concentrically Loaded Composite Columns	Ibrahim Abdelwahed, Zainab Abdelshafy and Mohamed Fahmy	Ankit Borgohain	Magdy Samaan
				Huron	10:40	167	Field Investigation and Behavioural Assessments of Press-Brake-Formed Steel Tub Girders	Gregory Michaelson, Karl Barth and Robert Tennant	Gregory Michaelson	
				Huron	11:00	376	Optimized Design for The Rutherford Road Grade Separation Structure	David Lai, Nathan Kranendonk, Karam Albazi and Jason Alfred	David Lai	
				Huron	11:20	379	Introducing composite dowels for bridge beams in Australia - Case study of three constructed bridges	Wolfram Schwarz and Nimal Jayasekera	Schwarz, Wolfram	
				Huron	11:40					
Friday, July 22, 2022	10:20 - 12:00	G7	Bridge Evaluation and retrofits	Kenora	10:20	203	Highway 427 over Highway 407 Widening	Stephen Brown, Jason Jelinek, Andrew Lehan and David Hubbell	Brown, Stephen	Mohammad Saifuzzaman
				Kenora	10:40	266	Design and Construction & De launch of the Truss Span Removals at Groundhog River Bridge, Fauquier, Ontario.	Ryan Donaldson, Kyle Boudreau, Ryan Wilbur, Matthew Fenos, Don Gardonio and Philip Loh	Ryan Donaldson	
				Kenora	11:00	274	Crash wall design for a Highway ramp structure supported on single load path integral piers	Han Choi	Choi, Han	
				Kenora	11:20	287	St. Joseph Island Skyway Bridge: Using Hydrodemolition in a Major Rehab	Neil Brockman	Brockman, Neil	
				Kenora	11:40	15	An evaluation of distortional thin-walled beam formulations for elastic buckling analysis of highway bridge girders	Emre Erkmen and Istemi Ozkan	Istemi Ozkan	
Friday, July 22, 2022	13:30 - 15:10	H1	Inspection, Evaluation, and Rehabilitation Strategies	Civic Ballroom South	13:30	378	Retrofitting the Mactaquac Dam – Inlet Channel Bridge	Jason Young	Young, Jason	Mohammad Saifuzzaman
				Civic Ballroom South	13:50	383	Pooley Bridge Reconstruction	Stewart Tennant	Haroon Ashraf	
				Civic Ballroom South	14:10	387	Crowchild Trail Bridge over Bow River - Widening and Rehabilitation	David Nagy and David Harvey	David Nagy	
				Civic Ballroom South	14:30	240	Sensor Based Monitoring of Bridge Assets – A Survey of Industry and Academia	Millar Coveney, Joshua Woods, Neil Hoult, Philip Murray and Biljana Rajlic	Millar Coveney	

				Civic Ballroom South	14:50					
Friday, July 22, 2022	13:30 - 15:10	H2	Climate Resilient Built Environment- Adaptation for Bridge Infrastructure II	Simcoe / Dufferin	13:30	179	Satellite Monitoring of Bridges Using Radar- & Optical-Band Images – Validation on Champlain Bridge in Montreal, Canada	Daniel Cusson, Istemi Ozkan, Juan Hiedra Cobo, Fernando Greene Gondi, Peter Oliver and Helen Stewart	Cusson, Daniel	Almansour, Husham
				Simcoe / Dufferin	13:50	224	Load Resistance Decline of A Slab on Steel I-Girder Bridge Due to Corrosion Progression With Climate Change Effects	Istemi Ozkan, Dario Markovinovic and Husham Almansour	Ozkan, Istemi	
				Simcoe / Dufferin	14:10	117	Experimental Evaluation of Residual Loading Capacity of RC Bridge Deck Slab Subjected to Service Load Coupled with Accelerated Corrosion	Bessam Kadhom, Husham Almansour, Jieying Zhang, Roger Smith and Antal Prigli	Kadhom, Bessam	
				Simcoe / Dufferin	14:30	339	High performance Climate Adaptation CFRP Laminate System for Strengthening of Existing Bridge Columns	Adel Barakati, Hassan Aoude and Husham Almansour	Aoude, Hassan	
				Simcoe / Dufferin	14:50					
Friday, July 22, 2022	13:30 - 15:10	H3	Bridge Analysis and Design	Kent	13:30	415	Low Cycle Fatigue Life Estimation of Steel H Piles via Finite Element Approach	Murat Dicleli and Memduh Karalar	Dicleli, Murat	Saif Aldabagh
				Kent	13:50	416	Improving The Fatigue Performance of Integral Bridge Steel H-Piles via Special Design Detailing	Murat Dicleli and Memduh Karalar	Dicleli, Murat	
				Kent	14:10	421	Applicability of Design charts for Transverse Vertical Shear on Continuous Span Bridges	Hosam Sennah, Khaled Sennah and Reza Kianoush	Sennah, Hosam	
				Kent	14:30	422	Effect of design-critical variables on the required amount of internal GFRP reinforcement for concrete beams	Borna Hajimiragha, Christopher D. Brown, Alireza Asadian, Maryam Mahmoodi, Babak Hajimiragha and Amir Tabatabaei	Asadian, Alireza	
				Kent	14:50					
Friday, July 22, 2022	13:30 - 15:10	H4	Design Optimization	Civic Ballroom North	13:30	201	Design Optimization of Pedestrian Truss Bridges Using Artificial Neural Network	Navid Nourian, Mamdouh El-Badry and Maziar Jamshidi	Navid Nourian	Hadi Aghahassani
				Civic Ballroom North	13:50	202	Highway 407 over Goreway Drive, Rapid Semi-Integral Abutment	Stephen Brown and Tony Angelo	Angelo, Tony	
				Civic Ballroom North	14:10	284	Predicting Condition of Bridges using Neuro-Fuzzy Models - A Path to an Automated Artificial Intelligence Based Bridge Management System	Maryam Tagh Bostani and Brian Leshko	Maryam Tagh Bostani	
				Civic Ballroom North	14:30	267	Riding Comfort of Light Railway Train Using the Inter-System Iteration Method - A Case Study	Oussama Ben Kreira Hanchour, Francois Dallaire and Rola Assi	Oussama Ben Kreira Hanchour	

				Civic Ballroom North	14:50	268	Reinforcing of steel I-beams in the negative moment region with welded cover plates	Masoud Mohammadzadeh and Anjan Bhowmick	Masoud Mohammadzadeh	
Friday, July 22, 2022	13:30 - 15:10	H5	Bridge joints and bearings	Huron	13:30	298	Parametric Study on Transverse Vertical Shear In Shear-Connected Precast Concrete Beam Bridges	Nouman I. Chatha and Khaled Sennah	Chatha, Nouman I.	Haixue Liao
				Huron	13:50	7	Expansion Joints and Bridge Bearings as Smart Monitoring Devices	Christiane Butz, Deniz Kerner and Mark Kaczinski	Kaczinski, Mark	
				Huron	14:10	245	Internet of Things Monitoring System for Bridge Bearing Movement	Isabel Heykoop, Josh Woods, Neil Hoult, Heshan Fernando and Dylan Neves	Heykoop, Isabel	
				Huron	14:30	270	Jacking and Bearing Replacement of Hwy 407 ETR Bridges	Jason Jelinek and Tony Angelo	Angelo, Tony	
				Huron	14:50	263	Improving the flexural performance of girders with revolutionary materials	Benjamin Forrest, Raafat El-Hacha and Julien Michels.	Forrest, Benjamin	
Friday, July 22, 2022	13:30 - 15:10	H6	Bridge retrofit and replacement	Kenora	13:30	237	Design and Construction of Engineered Cementitious Composite (ECC) Deck Overlay at Curry Avenue Bridge, Windsor, Ontario.	Don Gardonio, Steve Volpatti, Emad Booya and Philip Loh	Booya, Emad	Gao, Yulin
				Kenora	13:50	221	Use of MSE True Abutment for Mewburn Road Bridge Replacement	Bill Brockbank, Brian Ellis and Duane Vangeest	Brockbank, Bill	
				Kenora	14:10	222	Development of a Decision-Making Tool for Bridge Preservation and Maintenance	Ruel Sabellano and Mehdi Shokouhian	Ruel Sabellano	
				Kenora	14:30	234	Buried Structure Selected as Alternate to Short Span Bridge Replacement	Marc-Andre Carrier, David Ma and Shahriar Mirmirani	David Ma	
				Kenora	14:50	49	Substructure Design of Highway 401 Grand River Bridge in Ontario	Yonghai William Wan, Max Nie and Steven Huang	Wan, Yonghai William	
Friday, July 22, 2022	13:30 - 15:10	H7	Seismic design and assessment	Provincial	13:30	204	Comparison of Seismic Design Approaches for Continuous Bridge Substructure	Asif Iqbal	Iqbal, Asif	Mathieu Fiset
				Provincial	13:50	205	Seismic Assessment and Retrofit of New Zealand Highway Bridges	Asif Iqbal	Iqbal, Asif	
				Provincial	14:10	206	Performance-based Seismic Assessment and Design of Concrete Deck Arch Bridges	Saif Aldabagh, Saqib Khan and Shahria Alam	Aldabagh, Saif	
				Provincial	14:30					
				Provincial	14:50					
Friday, July 22, 2022	15:40 - 17:20	I1	Bridge analysis and design	Kent	15:40	210	Analysis of Restrained Load for Rigid Frame Concrete Bridge under Thermal Conditions	Ting Chuen Lam, Gurparam Kang and Justin Chen	Kang, Gurparam	William Wan
				Kent	16:00	425	Truck Load Distribution Factors in Precast Shear-Connected Voids Slab Beam Bridges	Monish Lad and Khaled Sennah	Lad, Monish	
				Kent	16:20	426	Skew Correction Factors for Precast Shear-Connected Voids Slab Beam Bridges	Monish Lad and Khaled Sennah	Lad, Monish	

				Kent	16:40	299	Parametric Study on Load Distribution Among Shear-Connected Precast Concrete Beam Bridges Due to CHBDC Truck Loading for CHBDC 2025	Nouman I. Chatha, Khaled Sennah and Yu Zhao	Chatha, Nouman I.	
				Kent	17:00	380	Design of a Structural Steel Tub Girder Bridge without Permanent External Intermediate Cross-Frames	Jovan Vukotic, Hyun Woo Kim and Konstantinos Kris Mermigas	Kim, Hyun Woo	
Friday, July 22, 2022	15:40 - 17:20	12	Durability of bridges	Provincial	15:40	211	A Case Study of Cover Assessment of Bridge Components in City of Toronto	Ting Chuen Lam, Savio DeSouza and Nima Mahmoudi	Lam, Ting Chuen	Cancan Yang
				Provincial	16:00	262	Three-Dimensional Micro-Scale Analysis of Natural Corrosion and Damage Mechanisms Using μ ct Imaging of Various Concrete Mixtures	Mustafa Alhusain and Adil Al-Mayah	Alhusain, Mustafa	
				Provincial	16:20	265	Toward Image-Based Microstructural Finite Element (FE) Modeling of Reinforcement Corrosion	Mustafa Alhusain and Adil Al-Mayah	Alhusain, Mustafa	
				Provincial	16:40	136	Controlling Vortex-Induced Oscillations of Low Frequency Deck Modes	Shayne Love, Mark Feero and Guy Larose	Love, Shayne	
				Provincial	17:00					
Friday, July 22, 2022	15:40 - 17:20	13	Advanced materials - I	Huron	15:40	212	Quantifying the Margin Safety Factors of The Hybrid Composite Beam Girder FRP Hull	Mohamed Abdel-Ghani, Mohamed Ali, Abdelrahim Dessouki and Ashraf Osman	Omar Gouda	Almansour, Husham
				Huron	16:00	213	Evaluating The Efficiency of Different Analytical Techniques for Quantifying The Equivalent Properties of Webbed Core Bridge Deck	Ehab Elsayy, Mostafa Sleem, Moustafa Essa and Ashraf Osman	Omar Gouda	
				Huron	16:20	281	Experimental Assessment of the Bond Behaviour between Thermoplastic FRP Lattice and Concrete	Amer Sabsabi, Maged Youssef, Christopher Oberste and Agha Hasan	Amer Sabsabi	
				Huron	16:40					
				Huron	17:00					
Friday, July 22, 2022	15:40 - 17:20	14	Advanced materials - II	Kenora	15:40	259	Performance of Shape Memory Alloy (SMA) Reinforced Concrete Bridge Columns Subjected to Vehicle Collision	Gholamreza Gholipour and Muntasir Billah	Vahid Agaheidoost	David Lai
				Kenora	16:00	288	Embedded Through Section FRP Rod Method for Strengthening of Concrete Bridges: Key Parameters and Theoretical Bond Model	Amir Mofidi, Andrew Doyle and Omar Chaallal	Mofidi, Amir	
				Kenora	16:20	180	Rehabilitation of Post-Tensioned Concrete Bridge Cantilever Wing Slabs with NSM Prestressed CFRP Rods	Faraj Shahrstan and Pedram Sadeghian	Sadeghian, Pedram	
				Kenora	16:40	256	Experimental study on composite steel girders with precast deck panels with shear bucket filled with UHPC	Mohit Gyawali and Khaled Sennah	Gyawali, Mohit	
				Kenora	17:00	249	Experimental Study on the Behavior of Full-scale FRC Bridge Barrier using Synthetic Fibers	Morteza Fadaee and Khaled Sennah	Khaled Sennah	

Friday, July 22, 2022	15:40 - 17:20	15	Thermal and shrinkage loads on bridges	Civic Ballroom North	15:40	242	Thermal Effect on Stresses of Concrete Beams Reinforced with Two Overlapped FRP Bars Under Low Temperatures	Ali Zaidi, Hizia Bellakehal, Radhouane Masmoudi, Oumelkhir Terbagou and Naima Nia	Radhouane Masmoudi	Saif Aldabagh
				Civic Ballroom North	16:00	273	Bridge Decks Under Cold Waves: Implications of temperature effects on thermal expansion coefficient	Saad Saad, Rashid Bashir and Stavroula Pantazopoulou	Saad, Saad	
				Civic Ballroom North	16:20	238	Structural Assessment of an ASR-Affected Hollow-Core Deck Bridge	Konstantinos Tsiotsias, Dimitrios Nikolaidis, Anca Ferche and Stavroula J. Pantazopoulou	Konstantinos Tsiotsias	
				Civic Ballroom North	16:40	228	The Effect of Shrinkage, Creep, and Thermal Differentiation on Continues Composite Highway Bridges	Khaled Alrade, Ezzat Razzouk and Muhammad Imran	Alrade, Khaled	
				Civic Ballroom North	17:00					
Friday, July 22, 2022	15:40 - 17:20	16	Design and construction case studies	Civic Ballroom South	15:40	31	Crab Creek Bridge	Schaun Valdovinos, Chelene Wong and Christine Jacques	Christine Jacques and Chelene Wong	Han Choi
				Civic Ballroom South	16:00	269	Rehabilitation of Post-tensioned Multiple Cell Box Girder Bridges: A Case Study	Saeideh Fallah Nafari, Chand Khushiram, Shahab Afhami and Bo Hu	Chand Khushiram	
				Civic Ballroom South	16:20	285	Réseau Express Métropolitain Straddle Bents: Design, Detailing, and Construction	Jason Salonga	Salonga, Jason	
				Civic Ballroom South	16:40	218	Case Study: Ramp SW over Tamiami Canal, Curvilinear Flaring Flat Slab Bridge with Soldier Pile End Bent Walls	Joseph Losaria	Losaria, Joseph	
				Civic Ballroom South	17:00					
Friday, July 22, 2022	15:40 - 17:20	17	Bridge testing, assessment and retrofit	Simcoe / Dufferin	15:40	275	Bridge Inspections Using Established RPAS Workflow	Chris Schmelzle	Schmelzle, Chris	Sepideh Ashtari
				Simcoe / Dufferin	16:00	209	City of Moose Jaw Thunderbird Viaduct Rehabilitation	Stephen Chiasson and Alex Lyon	Chiasson, Stephen	
				Simcoe / Dufferin	16:20	243	Seismic Assessment of Roger Pierlet Bridge	Kiarash Kaveh, Jason Dowling and Alireza Ahmadnia	Kaveh, Kiarash	
				Simcoe / Dufferin	16:40	255	Post-tensioning Investigation in Precast Segmental Bridges	Rebecca Huang, Liao Haixue and Scott Leitch	Haixue, Liao	
				Simcoe / Dufferin	17:00					