

TRACK 1		all Sessions in Regency C Room	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom	
8:30 am	Welcome Message & Opening Presentation with Dr. Kim Pressnail of University of Toronto 3rd Floor Ballroom		
10:00 am	Break & Tradeshow	Tradeshow Area	
	1.1 ARCTIC BUILDING ENCLOSURES <i>Session chair - Juergen Korn</i>		
10:30 am	37  Field Monitoring of Hygrothermal Performance of Attic Venting Systems in Extremely Cold Climates Hua Ge		
11:00 am	102  In Situ Thermal Performance of VIPs in Northern Canada Phalguni Mukhopadhyaya		
11:30 am	90  Attic Ventilation in Northern Canadian Climates Ahmad Kayello		
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom	
	<i>Introduction by BCIT</i> BUILDING ENCLOSURE ASSEMBLIES <i>Session chair - Kim Pressnail</i>		
1:00 pm	28   Field Evaluation of Hygrothermal Performance and Constructability of Vacuum-Insulated, Thin Wood-Frame Wall Assembly Mark Carver		
1:30 pm	53   Condensation in Wall Assemblies: Maintaining Low Levels of Risk through Non-Traditional Insulation Packages Jean-François Côté		
2:00 pm	114   An Overview of Studies to Assess the Thermal and Hygrothermal Performance of Highly Insulated and Zero-Ready Wall Assemblies Michael Bartko		
2:30 pm	Break & Tradeshow	Tradeshow Area	
	BUILDING ENCLOSURE ASSEMBLIES <i>Session chair - Anil Parehk</i>		
3:00 pm	1   Wood Preservation And Its Corrosive Effects on Metal Fasteners Wesley Narciso		
3:30 pm	3   The Effect of the Temperature Dependency of Building Insulation Conductivity and Energy Consumption Umberto Berardi		
4:00 pm	71   Window Sill Pan Flashings - Vapour Impermeable or Permeable? Michael Wilkinson		
4:30 - 6:00 pm	Reception	34th Floor	

TRACK 2		all Sessions in <i>Regency A Room</i>	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom	
8:30 am	Welcome Message & Opening Presentation with Dr. Kim Pressnail of University of Toronto	3rd Floor Ballroom	
10:00 am	Break & Tradeshow	Tradeshow Area	
2.1 BUILDING RETROFITS			
Session chair - Leslie Peer			
10:30 am	 7	Retrofitting Resilience into Buildings in a Mixed Humid Climate	
		Sarah Buffaloe	
11:00 am	 56	Restoration of a Heritage Log Church	
		Mike Rekker	
11:30 am	  76	Challenges Associated with High RSI-value Building Envelope Retrofits	
		Mark Carver	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom	
2.2 BUILDING RETROFITS			
Session chair - Leslie Peer			
1:00 pm	 120	The Best Made Plans: The Challenges of Retrofitting an Historic Single Family Home Using Nested Thermal Envelopes	
		Kim Pressnail	
1:30 pm	  79	Assessing the Economic and Environmental Case for Window Retrofits in Single Family Homes	
		Amy Chitilian	
2:00 pm	 119	Safe, Effective & Affordable Retrofits for Cold Climates	
		Robbin Garber-Slaght	
2:30 pm	Break & Tradeshow	Tradeshow Area	
2.3 PRESENTATION - BUILDING RETROFITS			
Session chair - Kevin Pickwick			
3:00 pm	 25	The Real Estate Hot Potato - Challenges and Solutions for Whole-Building Re-Cladding Projects	
		Scott Armstrong	
3:30 pm	 39	Hygrothermal Performance of Exterior Blanket Insulation	
		Tareq Baker	
4:00 pm	 59	Retrofitting Canadian Style Window Walls to Address Performance Failure and Increased Performance Need	
		George Torok	
4:30 - 6:00 pm	Reception	34th Floor	



TRACK 3		all Sessions in Regency B Room	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom	
8:30 am	Welcome Message & Opening Presentation with Dr. Kim Pressnail of University of Toronto	3rd Floor Ballroom	
10:00 am	Break & Tradeshow	Tradeshow Area	
	3.1 PRESENTATION - CASE STUDIES <i>Session chair - Catherine Lemieux</i>		
10:30 am	<div>5</div> Forensic Whole-Building Simulation <i>Alex McGowan</i>		
11:00 am	<div>40</div> Regal Place Hotel - Cost-Effective Heritage Facade Rehabilitation <i>Brenden David</i>		
11:30 am	<div>54</div> Comparing the Effectiveness of Reducing Interior Overheating with High Performance Low-E Glass versus Smart Shading Glass <i>Brennan Vollerling</i>		
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom	
	3.2 PRESENTATION - CASE STUDIES <i>Session chair - Catherine Lemieux</i>		
1:00 pm	<div>86</div> Scoring Big on Façade Without Skipping a Beat on Safety <i>Nicole Parsons</i>		
1:30 pm	<div>89</div> Implementing Compartmentalization and Ventilation Strategies in Tall Multi-Use Buildings to Control Stack-Effect Related Performance Issues <i>David De Rose</i>		
2:00 pm	<div>108</div> BC HYDRO HQ: Design and Construction Challenges on a Barrel Arch Canopy Replacement Project <i>Paul Creighton</i>		
2:30 pm	Break & Tradeshow	Tradeshow Area	
	<i>Introduction by CUFCA</i>	CUFCA	
	PRESENTATION - BUILDING TECHNOLOGY & EQUIPMENT <i>Session chair - Robbin Garber-Slaght</i>		
3:00 pm	<div>74</div> Real-Time Monitoring for Leak Locating with Wireless Moisture Content Sensors in Non-Combustible Construction <i>Jason Teetaert</i>		
3:30 pm	<div>109</div> Impact of Insulated Concrete Balcony Curb on Interior Concrete Surface Temperature <i>Chuck Murad</i>		
4:00 pm	<div>96</div> Monitoring of Various Non-Vented and Vented Vaulted Roofing Systems in Vancouver <i>Jason Teetaert</i>		
4:30 - 6:00 pm	Reception	34th Floor	

TRACK 1

all Sessions in **Regency C Room**




7:00 - 8:30 am	Registration	3rd Floor
7:30 - 8:30 am	NBEC Meeting	Regency A Room
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom
	<p><i>Introduction by American Chemistry Council</i></p> <p>4.1 INSULATION MATERIALS</p> <p><i>Session chair - Phalguni Mukhopadhyaya</i></p> <p> </p>	
8:30 am	106 State Of The Art Review of Unvented Sloped Wood-Framed Roofs in Cold Climates <i>John Straube</i>	
9:00 am	65 Long Term Performance: Unventilated Wood Framed Roofs Using Polyurethane Foam <i>Hamid Heidarali</i>	
9:30 am	112 Temperature-Dependent Apparent Thermal Conductivity of Insulation Materials for Transient Energy and Hygrothermal Simulations <i>Chris Schumacher</i>	
10:00 am	Break & Tradeshow	Tradeshow Area
	<p>4.2 PASSIVE HOUSE</p> <p><i>Session chair - Russell Richman</i></p>	
10:30 am	80 Structural Testing of Screws through Thick Exterior Insulation <i>Jun Tatara</i>	
11:00 am	87 Passive House Wall Assembly Performance - A Case Study <i>Robert Lepage</i>	
11:30 am	92 Determining Total-Assembly R-values <i>Alex McGowan</i>	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom
	<p>4.3 THERMAL COMFORT AND INDOOR ENVIRONMENT</p> <p><i>Session chair - Sophie Mercier</i></p>	
1:00 pm	63 A Compartmentalization and Ventilation Retrofit Strategy for High-Rise Residential Buildings in Cold Climates <i>Mathew Carlsson</i>	
1:30 pm	97 The Sound Transmission Loss of Wood-Frame Wall Assemblies with Rainscreen Cavity and Optional Split Insulation <i>Eduardo Stehling</i>	
2:00 pm	46 Achieving Comfort: Energy Model Validation of Historic Building Renovation <i>Mr. Jason Der Ananian</i>	
2:30 pm	Break & Tradeshow	Tradeshow Area
	<p>4.4 THERMAL COMFORT AND INDOOR ENVIRONMENT</p> <p><i>Session chair - Terry Meyer Boake</i></p>	
3:00 pm	10 It's Time to Change Bait: Why and How to use Thermal Comfort Analysis in Design Stage to Influence Enclosure and HVAC Designs <i>Robert Bean</i>	
3:30 pm	121 A Laboratory Study: Examining the Use of Mineral Fibre Insulation to Assist the Ventilation Drying of Internally Insulated Walls <i>David Wach</i>	
4:00 pm	32 Investigating Wintertime Thermal Comfort of Post-War Multi-Unit Residential Buildings Using Surveys and In-Suite Monitoring <i>Marianne Touchie</i>	
4:30 - 6:00 pm	Reception	34th Floor
6:00 - 9:00 pm	Dinner Gala with MC Erica Sigurdson & Keynote Speaker Colin Angus	3rd Floor Ballroom

TRACK 2		all Sessions in Regency A Room	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	NBEC Meeting	Regency A Room	
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom	
	5.1 BUILDING MECHANICAL SYSTEMS		
	Session chair - Mark Lawton		
8:30 am	45	Characterization of Space Heating Boiler Operation in Post-War Multi-Unit Residential Buildings	
		Helen Stopps	
9:00 am	60	Energy and Indoor Air Quality Impacts of DOAS Retrofits in Small Commercial Buildings	
		James Montgomery	
9:30 am	98	Experimental Investigation and Implementation of a Multiple-Inlet BIPV/T System in a Curtain Wall	
		Olesia Kruglov	
10:00 am	Break & Tradeshow	Tradeshow Area	
	5.2 ENERGY USE IN BUILDINGS - MODELING AND MEASUREMENTS		
	Session chair - Graham Finch		
10:30 am	15	Building Envelope Energy Optimization for Multistory Buildings	
		Robert Beckett	
11:00 am	29	Benefits of Latent Thermal Energy Storage in the Retrofit of Canadian High-Rise Residential Buildings	
		Umberto Berardi	
11:30 am	22	Energy Consumption in Low- to Mid-Rise Wood-Frame Multi-Unit Residential Buildings	
		Elyse Henderson	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom	
	5.3 ENERGY USE IN BUILDINGS - MODELING AND MEASUREMENTS		
	Session chair - Marianne Touchie		
1:00 pm	34	Dynamic Effect of Thermal Bridges on the Energy Demand of Residential Buildings in British Columbia	
		Hua Ge	
1:30 pm	52	Economic Optimization of Building Envelope for a High Performance Multi-Family Residential Building	
		Byron Enns	
2:00 pm	30	Experimental Investigation of Latent Thermal Energy Storage for Energy Retrofit in High-Rise Residential Buildings in Toronto	
		Shahrazad Soudian	
2:30 pm	Break & Tradeshow	Tradeshow Area	

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5.4 NUMERICAL SIMULATION - IAQ AND VENTILATION

Session chair - Hua Ge

3:00 pm	6	Impact of Heat and Moisture Transfer Through a Multilayer Wall on the Comfort Conditions of an Occupied Room
		Rudy Bui
3:30 pm	78	Numerical Study of the Effect of Window Configuration on the Convective Heat Transfer Rate of a Window
		Meseret Kahsay
4:00 pm	104	Using Airflow Modelling Software To Predict Airtightness Improvements in a High-Rise Residential Building: A Case Study
		David Stanton

4:30 - 6:00 pm	Reception	34th Floor
6:00 - 9:00 pm	Dinner Gala with MC Erica Sigurdson & Keynote Speaker Colin Angus	3rd Floor Ballroom



TRACK 3

all Sessions in **Regency B Room**

7:00 - 8:30 am	Registration	3rd Floor
7:30 - 8:30 am	NBEC Meeting	Regency A Room
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom
6.1 BUILDING AIRTIGHTNESS AND AIR LEAKAGE		
<i>Session chair - Gary Proskiw</i>		
8:30 am	23  Building Envelope Thermal and Air Leakage Characteristics of Canadian Housing <i>Julia Purdy</i>	
9:00 am	26  Critical Review of a Whole Building Air Leakage Testing Requirement <i>J. Lee Durston</i>	
9:30 am	48  Multivariate Statistical Analysis on Blower Door Testing Population <i>Bomani Khemet</i>	
10:00 am	Break & Tradeshow	Tradeshow Area
6.2 BUILDING AIRTIGHTNESS AND AIR LEAKAGE		
<i>Session chair - Rachel Smith</i>		
10:30 am	57  Airtightness Testing of Occupied, Multi-Unit Residential Buildings (MURBs) - Lessons Learned <i>Cory Carson</i>	
11:00 am	116  Impact of Air Intrusion on Moisture Performance of Semi-Fastened Mechanically Attached Roofing Systems <i>Sudhakar Molleti</i>	
11:30 am	58  An Improved Airtightness Test Procedure for Multi-Unit Residential Buildings <i>Gary Proskiw</i>	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom
6.3 WOOD BUILDINGS - MOVEMENT, MOISTURE AND WETTING		
<i>Session chair - Robert Lepage</i>		
1:00 pm	14  Moisture Buffering and Ventilation Strategies to Control Indoor Humidity in a Marine Environment: A Field Experimental Study <i>Shahrazad Pedram</i>	
1:30 pm	16  Wetting and Drying Performance of Wood-Based Assemblies related to On-Site Moisture Management <i>Jieying Wang</i>	
2:00 pm	11  Controlling Construction Moisture in Cross Laminated Timber Structures <i>Robert Lepage</i>	
2:30 pm	Break & Tradeshow	Tradeshow Area
6.4 WOOD BUILDINGS - MOVEMENT, MOISTURE AND WETTING		
<i>Session chair - Robert Lepage</i>		
3:00 pm	88  Vertical Movement and Moisture Performance Monitoring of Pre-Fabricated Cross Laminate Timber – Featured Case Study: UBC Tallwood House <i>Gamal Mustapha</i>	
3:30 pm	17  Field Measurement of Vertical Movement in Wood-Framed Buildings <i>Jieying Wang</i>	
4:30 - 6:00 pm	Reception	34th Floor
6:00 - 9:00 pm	Dinner Gala with MC Erica Sigurdson & Keynote Speaker Colin Angus	3rd Floor Ballroom

TRACK 1		all Sessions in Regency C Room	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	Breakfast for Attendees	3rd Floor Ballroom	
7:30 - 8:30 am	AGM for BCBC Members & Breakfast	3rd Floor Ballroom	
Introduction by RCABC			
7.1 ROOFING MATERIALS		Session chair - Suda Molleti	
8:30 am	31 Adhesion of Torch on and Self-Adhesive Asphaltic Membranes over Green Concrete	Laurence Matzek	
9:00 am	67 Thermal Resistance of Extruded Expanded Polystyrene (XEPS): Field Data from Western Canada	Colin Tougas	
9:30 am	95 Solutions to Address Osmosis and the Blistering Liquid Applied Waterproofing Membranes	Elyse Henderson/Graham Finch	
10:00 am	Break & Tradeshow	Tradeshow Area	
Introduction by RCI			
7.2 ROOFING ASSEMBLIES		Session chair - Suda Molleti	
10:30 am	101 The Advantages and Limitations of UAVs for External Thermographic Building Façade Inspections in Canada	Phalguni Mukhopadhyaya	
11:00 am	113 Impact of Heating and Cooling of Expanded Polystyrene and Stone Wool Insulations on Conventional Roof Performance	Lorne Ricketts	
11:30 am	117 Performance Assessment of Energy Positive Roofs	Sudhakar Molleti	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom	
7.3 NUMERICAL SIMULATION - EXTERIOR ENVIRONMENT		Session chair - Jieying Wang	
1:00 pm	33 Effect of Overhang on Wind-Driven Rain Load of a Mid-Rise Building: Field Measurements	Hua Ge	
1:30 pm	38 Impacts of Climate Change on Building Envelope Energy Efficiency	Paul Carter	
2:00 pm	43 Investigating Wind Catchers and Solar Chimneys to Improve Thermal Comfort for Multi-Unit Residential Buildings in India	Wei-Chih Huang	
2:30 - 3:30 pm	Closing Presentation with Terry Petkau of Habitat for Humanity Canada	3rd Floor Ballroom	
Goodbye Message		3rd Floor Ballroom	



TRACK 2

all Sessions in **Regency A Room**

7:00 - 8:30 am	Registration	3rd Floor
7:30 - 8:30 am	Breakfast	3rd Floor Ballroom
7:30 - 8:30 am	AGM for BCBECC Members & Breakfast	3rd Floor Ballroom
8.1 FENESTRATION		
<i>Session chair - Alex McGowan</i>		
8:30 am	62  Fenestration and Air Leakage - A Comparison of Field Measurements with Laboratory Tested Values <i>Negar Pakzadianmoghaddam</i>	
9:00 am	36  Study on the Improvement of Thermal Performance of Curtain Wall Spandrels <i>Jacee Tan</i>	
9:30 am	27  A Case History Review of ETFE on Today's Current Projects <i>J. Lee Durston</i>	
10:00 am	Break & Tradeshow	Tradeshow Area
8.2 FENESTRATION		
<i>Session chair - Alex McGowan</i>		
10:30 am	94  Quantifying the Benefit of Venting Glazing Spandrels to Reduce Glass Breakage and Control Moisture <i>Julien Schwartz</i>	
11:00 am	118  Impact of Fenestration on the Overall Thermal Performance of the Building Envelope <i>Robert Jutras</i>	
11:30 am	110  Guideline for the Two-Dimensional Simulation of Spandrel Panel Thermal Performance for Improved Accuracy and Consistency <i>Daniel Haaland</i>	
12:00 pm	Lunch & Tradeshow	3rd Floor Ballroom
8.3 FENESTRATION		
<i>Session chair - Christopher Black</i>		
1:00 pm	72  Fenestration Systems – It Is All About the Plumbing <i>Peter Adams</i>	
1:30 pm	81  Lessons Learned from Lab Testing Failures of Glazing Systems <i>Andy Lang</i>	
2:00 pm	2  Selection and Improvement of SHGC and U-Value in Locations with Cold Winters and Warm Summers <i>Mahmoud Jafari</i>	
2:30 - 3:30 pm	Closing Presentation with Terry Petkau of Habitat for Humanity Canada	3rd Floor Ballroom
	Goodbye Message	3rd Floor Ballroom

TRACK 3		all Sessions in Regency B Room	
7:00 - 8:30 am	Registration	3rd Floor	
7:30 - 8:30 am	Breakfast for Attendees	3rd Floor Ballroom	
7:30 - 8:30 am	AGM for BCBECE Members & Breakfast	3rd Floor Ballroom	
9.1 PRESENTATION – ENCLOSURE DESIGN AND MATERIALS			
Session chair - Lorne Ricketts			
8:30 am	18	Insulated Metal Panels -Design and Construction Challenges	
		Harold Louwerse	
9:00 am	68	Hygrothermal Performance of Hempcrete for Ontario (Canada) Buildings	
		Ujwal Dhaka	
9:30 am	70	Tall Wood Building Enclosures - A Race to the Top	
		Brian Hubbs	
10:00 am	Break & Tradeshow	Tradeshow Area	
9.2 CONSTRUCTION BUSINESS			
Session chair - Remi Charron			
10:30 am	20	Procuring Innovation in Construction: A Review of Models, Processes and Practices	
		Helen Goodland	
11:00 am	66	BC Housing Life-Cycle Quality: A Communication Platform	
		Lien Tran	
11:30 am	91	NBC 2015 Subsection 5.9.3 Other Fenestration Assemblies - The Intent Behind the New Code Provisions	
		David Kayll	
Lunch & Tradeshow			
3rd Floor Ballroom			
12:00 pm	9.3	HYGTROHERMAL MODELING	
Session chair - Wahid Maref			
	69	Enhanced Source and Sink Ventilation Model for WUFI	
1:00 pm		Stephen McNeil	
	85	Risk Assessment of Water Accumulation in Walls with Exterior Continuous Insulation	
1:30 pm		Theresa Weston	
	103	Design Limits for Framed Wall Assemblies Dependent on Material Choices for Sheathing Membranes and Exterior Insulation	
2:00 pm		Ivan Lee	
2:30 - 3:30 pm	Closing Presentation with Terry Petkau of Habitat for Humanity Canada	3rd Floor Ballroom	
Goodbye Message			
3rd Floor Ballroom			

