Green Building Festival Presents
SUSTAINABLE BUILT ENVIRONMENT
CONFERENCE OF THE AMERICAS

September 19-20, 2016
Toronto Marriott Downtown Eaton Centre Hotel
Toronto, Canada

Regenerative & Resilient Urban Environments
#SBE16Toronto

PRESENTING PARTNERS:
Welcome to SBE16Toronto: Sustainable Built Environment Conference of the Americas including Green Building Festival

This year, we are very excited to combine the annual Green Building Festival with an international conference series sponsored by the International Initiative for the Sustainable Built Environment (iiSBE). The program features the finest examples and the leading practitioners of the green building movement. The SBE16 regional programming is intended to inform the international conference programme, leading up to next year’s international WSBE17 conference in Hong Kong.

This year’s theme is Regenerative and Resilient Urban Environments which continues the conversation around resiliency that the Green Building Festival first started in 2012. The SBE16 Conference series featured a Call for Papers which resulted in approximately 70 submissions. With a team of expert reviewers led by Professor Mark Gorgolowski of Ryerson University and Mr. Tom Ponessa of SBC, we have selected the very best of these papers for presentations and workshops.

As Co-Chairs for the Conference, we look forward to sharing in the dialogue and learning from these leading experts. We also look forward to meeting all of you. This promises to be a great experience for all.

For those of you who are visitors to Toronto, a huge welcome to you. There is much to see and do here so and we hope you get a chance to enjoy some of what Toronto has to offer. We also hope that you will join us for our networking reception on Monday evening, September 19th as we are featuring food and drinks that reflect our multicultural heritage.

Finally, a big thank you to all our sponsors, our hard working organizing team and all the volunteers who have generously given their time to ensure we have a great event.

Gordon Shymko
iiSBE Canada Team Leader

Constantine (Taki) Eliadis
Chair, Sustainable Buildings Canada
ANALYTICS IN THE CLOUD

INSIGHT ON THE GROUND

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EllisDon has been part of the construction landscape for more than 60 years. What was once solely a general contractor, EllisDon has transformed into a full life-cycle services company to help eliminate our clients’ risk every step of the way.

As Canada begins the transition towards a low carbon economy, EllisDon will be there.

We are committed to transforming our communities through resilient infrastructure, hyper-efficient net zero buildings, clean energy technology and more.

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TIME DETAILS

VENUE: Marriott Eaton Centre, 525 Bay Street, Toronto

7:30 – 8:30 | REGISTRATION, BREAKFAST AND NETWORKING

8:30 – 9:45 | WELCOME & KEYNOTE
- The Hon. Glen Murray, Ontario Minister of the Environment & Climate Change
- Dr. Ray Cole, Director of the Centre for Interactive Research on Sustainability, U. of British Columbia
  Regenerative Development: Reframing the Role of Buildings

9:45 – 10:15 | COFFEE BREAK

10:15 – 12:15 | PLENARY: What are the Realities of Building in the Age of Carbon Tax and Climate Change?
- Dr. Blair Feltmate, Head, Intact Centre on Climate Adaptation, Faculty of Environment, U. of Waterloo
  Weather Gone Wild: The Worst Is Yet to Come, So You Better Adapt
- Pamela Blais, Principal, Metropole Consultants
  Land Use Planning: Getting Serious About GHG Reduction
- Alec Hay, Principal in Risk, Resilience & Security Planning, Southern Harbour
  Challenges, Opportunities and Leadership In An Uncertain Future
- Alex Wood, Executive Director, Climate Change Directorate, Ontario Ministry of the Environment &
  Climate Change
  Government Policy on Carbon and the Effects of Cap-and-Trade on Buildings

12:15 – 12:30 | Nils Larsson, Executive Director, iiSBE
  SBE Series Update, COP21 Buildings Day & The Global ABC

12:30 – 13:45 | LUNCH AND NETWORKING

13:45 – 15:00 | SESSION 1 | WORKSHOPS AND TECHNICAL PAPERS
- Tenant Engagement Workshop | Active Energy Management Action Plan + Tenant Engagement =
  Measurably Improved Bottom Line
  Presenters:
  - Scott Rouse, Managing Partner, Energy@Work Inc.
  - Chantal Sylvestre, Green Associate Energy Analyst, Energy@Work Inc.
- Technical Papers | Energy Modelling and Metrics
  - Birgit Siber, Principal, Diamond Schmitt Architects
  - Mike Williams, Associate, Sustainability, RWDI Consulting Engineers
  - Nathan Kegel, Business Development Manager, IES
  - Saeran Vasanthakumar, Junior Intern Architect and Researcher, Perkins + Will
  Cactus: A Shape Grammar-Based Grasshopper 3D Plugin for Multi-Building Performance Optimisation

Thank you to our Sponsors
TIME DETAILS

VENUE: Marriott Eaton Centre, 525 Bay Street, Toronto

13:45 – 15:00 Resilient Communities Workshop | Triple Bottom Lines – How Do They Really Stack Up?
Presenters:
Peter Halsall, President & CEO, Canadian Urban Institute
Jenny McMinn, Sustainability Consultant, BuildGreen Solutions
Alex Spiegel, Windmill Developments
Jeff Westeinde, Windmill Developments

Technical Papers | Materials and Benchmarking
Edward Dromgool, Architectural Student, Victoria U. of Wellington
Kevin Sweet, Academic Staff / First Year Coordinator, School of Architecture, Victoria U. of Wellington
Rethinking A Global Junkyard: A Strategy To Reformulate Shipbreaking
Mark Bessoudo, Sustainability Consultant, WSP
GRESB: Infrastructure Opportunities and Benefits of Benchmarking
J. J. McArthur, Assistant Professor of Architectural Science Department, Ryerson U.
A. K. Azizi, B. Arch Sci, Ryerson U.
M. C. Gelowitz, M.A.Sc, Ryerson U.
Development of a Sustainable Material Alignment Framework

15:00 – 15:30 COFFEE BREAK

15:30 – 17:00 SESSION 2 | WORKSHOPS AND TECHNICAL PAPERS
Energy Modeling Workshop | Predicted vs. Actual Performance
Presenters:
Chris Jones, RWDI
Craig McIntyre, Vice President, Provident Energy Management Inc.
Michelle Xuereb, Senior Associate, Sustainability Strategist, Quadrangle Architects Ltd.
Liviu Craiu-Botan, Manager, Energy and Technical Services, Oxford Properties Group
Dave Ramsile, Principal, Integral Group
Gordon Shymko, President, GF Shymko & Associates Inc.
Moderator: Bob Bach, iiSBE Canada, Energy Profiles

Technical Papers | Indoor Environment
Ann Callaghan, Professor, Conestoga College
Dr. Shauna MalloryHill, Assistant Professor, Faculty of Architecture, U. of Manitoba
Biophilia and Nature-Based Features to Support Stress Reduction in Knowledge Workers
Ghazal Ebrahimi, Author, PhD Candidate, U. of British Columbia
Reflections on a Canadian Building Performance Evaluation Methodology
Simone Skopek, Energy and Sustainability Services Operations Manager, Jones Lang LaSalle
Smart, Green + Productive Workplace
**TIME DETAILS**

**VENUE: Marriott Eaton Centre, 525 Bay Street, Toronto**

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<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speakers</th>
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<tr>
<td>15:30 – 17:00</td>
<td>Technical Papers</td>
<td>Envelope and Energy</td>
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<td></td>
<td>Kelsey Saunders, Building Science &amp; Sustainability Coordinator, Sustainable.TO Architecture &amp; Building</td>
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<td>Craig Race, Architect, SUSTAINABLE.TO Architecture + Building</td>
<td>Mark Flynn, MASc Candidate, Ryerson U.</td>
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<td>Low Carbon Heating for Commercial Buildings Using Grid Supplied Electricity During Off-Peak Periods</td>
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<td>The Toronto Method of Construction: Re-Thinking How We Insulate Our Homes</td>
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<td>Jan Tywoniak, Deputy Head of Building Structures Department, Faculty of Civil Engineering, Czech Technical U. in Prague</td>
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<td>Antonin Lupisek, PhD, Czech Technical U. in Prague</td>
<td>Martin Volf, Czech Technical U. in Prague</td>
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<td>Michal Bures, Czech Technical U. in Prague</td>
<td>Petr Hejtmanek, Czech Technical U. in Prague</td>
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<td>Jiri Novacek, PhD, Czech Technical U. in Prague</td>
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<td>The Toronto Method of Construction: Re-Thinking How We Insulate Our Homes</td>
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<td>Charles Riddell, Building Science and Project Engineering, Ryerson U.</td>
<td>Dr. Miljana Horvat, Associate Dean, Graduate Studies, Faculty of Engineering &amp; Architectural Science, Ryerson U.</td>
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<td>Dr. Miljana Horvat, Associate Dean, Graduate Studies, Faculty of Engineering &amp; Architectural Science, Ryerson U.</td>
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<td>Raising The Roof: Making Contemporary Housing Developments Solar Ready</td>
<td>Dr. Miljana Horvat, Associate Dean, Graduate Studies, Faculty of Engineering &amp; Architectural Science, Ryerson U.</td>
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<td>Chibulu Luo, PhD Student, Department of Civil Engineering, U. of Toronto</td>
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<td>Improving the Resilience of Urban Buildings: An Integrated Approach to Measuring Optimum Demand Density</td>
<td>Dr. Paul Floerke, Associate Chair External and Mobility Director, Ryerson U.</td>
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<td>Dr. Paul Floerke, Associate Chair External and Mobility Director, Ryerson U.</td>
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<td>Sonja Weiss, Dipl.Ing., Architektin</td>
<td>Building In Existing Contexts – Densification</td>
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<td>17:00 – 18:15</td>
<td>Man-kit Leung, Sub-Committee Chairman, WSBE17 Hong Kong Scientific Committee</td>
<td>WSBE17 Hong Kong Update</td>
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<td>KEYNOTE</td>
<td>Professor Marc Swackhamer, Head + Associate Professor, School of Architecture, College of Design, U. of Minnesota and Principal, HouMinn Practice</td>
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<td>Hypernatural: Architecture's New Relationship with Nature</td>
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<td>18:45 – 22:30</td>
<td>WRAP UP</td>
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**VENUE: Arcadian Loft, 401 Bay Street, Toronto**

**EVENING RECEPTION AND NETWORKING**

This separately-ticketed event will be the networking highlight of the conference. Mingle with hundreds of green building professionals while enjoying a selection of Toronto’s famous and delicious multi-national tastes, and locally produced beers and wines. Tickets available now at [www.SBE16Toronto.com/register](http://www.SBE16Toronto.com/register).
TIME DETAILS

VENUE: Marriott Eaton Centre, 525 Bay Street, Toronto

7:30 – 8:30
REGISTRATION, BREAKFAST AND NETWORKING

SESSION 3 | WORKSHOPS AND TECHNICAL PAPERS

8:30 – 9:45

Tall Wood Workshop | Six Storey Wood Buildings in Ontario
Presenters:
Alex Lukachko, Principal, Senior Building Science Specialist, RDH Building Science Inc.
David Moses, Principal, Moses Structural Engineers Inc
David Petersen, Principal, Outside In Design & Build
Rick Roos, North American Codes, Standards and Fire Safety Manager, Business Development, ROXUL Inc.

2030 Workshop: Pittsburgh 2030 District and the 2030 District Network | Inspiring Communities Towards 2030 Goals with Voluntary Performance Benchmarking
Presenters:
Jeff Ranson, Executive Director, Toronto 2030 District
Megan Saunders, Executive Director, Stamford 2030 District

Technical Papers | Community Building
Anke Van Hal, Professor, Nyenrode Business Universiteit/TUDelft, Center for Entrepreneurship & Stewardship
The Third Success Factor of Energy Friendly Renovation Processes
Dr. Terri Peters, Post-Doctoral Fellow, U. of Toronto
Architectural Interventions for Social Sustainability: The Renovation of Modern Housing
Carolin Mees, Instructor, Parsons The New School
Participatory Planning, Design and Self-Built Structures for Public Urban Gardens: Community Gardens and Casitas in the South Bronx

Technical Papers | Energy and CO2 Reduction
Daniel Knapp, Energy Efficiency Expert, Arborus Consulting
When is Heat Recovery Cost Effective in Canadian Commercial Buildings?
Guri Krigsvoll, Assistant Professor, NTNU
Lca Based Zero Carbon Campus Development Framework: Case of Evenstad Campus in Norway
Dr. Umberto Berardi, Professor, Faculty of Engineering and Architectural Science, Ryerson U.
The Benefits of Green Roof Retrofits as Local Interventions for Mitigating the Urban Heat Island Effect in Toronto

Technical Papers | Occupant Behaviour
Frank Suerich-Gulick, Postdoctoral Researcher, CanmetENERGY – Natural Resources Canada
Post-Occupancy Evaluation of a High-Density Affordable Housing Complex with Innovative Mechanical Heating and Ventilation Systems
### TIME DETAILS

**VENUE:** Marriott Eaton Centre, 525 Bay Street, Toronto

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<th>Time</th>
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<tr>
<td>8:30 –</td>
<td>Technical Papers I Occupant Behaviour (CONTINUED)</td>
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<tr>
<td>9:45</td>
<td>Miles Roque, Projects K.K. Japan Planning Manager, Canadian Solar</td>
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<td>9:45</td>
<td>Vera Straka, Associate Professor, Ryerson U.</td>
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<td>9:45</td>
<td>Dr. Alan S. Fung, Associate Professor, Ryerson U.</td>
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<td>9:45</td>
<td>Occupant’s Household Energy Behaviour and Conservation Strategies in a High-Rise Residential Building in Toronto, Canada</td>
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<td>9:45</td>
<td>Mohamed Ouf, PhD Candidate, U. of Manitoba</td>
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<td>9:45</td>
<td>Dr. Mohamed H Issa, Assistant Professor, Department of Civil Engineering, U. of Manitoba</td>
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<td>9:45</td>
<td>The Effect of Occupant Behaviour on Real-Time Electricity Consumption in School Spaces</td>
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<td><strong>COFFEE BREAK</strong></td>
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<td>10:15</td>
<td><strong>KEYNOTE</strong></td>
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<td>10:15</td>
<td>Dr. Dianne Saxe, Environmental Commissioner of Ontario, Government of Ontario</td>
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<td>10:15</td>
<td>PLENARY: Energy and Thermal Innovations</td>
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<td>Jack Simpson, Vice-President, Generation, Toronto Hydro</td>
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<td>10:15</td>
<td>Energy Storage to Make Renewables More Viable: The Challenges and Opportunities</td>
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<td>Dr. Umberto Berardi, Faculty of Engineering and Architectural Science, Ryerson U., Toronto</td>
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<td>10:15</td>
<td>The Potential of Thermal Energy Storage in High Performance Buildings:</td>
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<td>10:15</td>
<td>Insights from Research Projects and Zero Energy Houses</td>
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<td>Steven Horwood, Vice President, Sales &amp; Operations, Neelands Refrigeration Ltd.</td>
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<td>10:15</td>
<td>CO2 – Business Resilience in Refrigeration Solutions</td>
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<td>12:00 –</td>
<td>LUNCH AND NETWORKING</td>
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<td>13:15</td>
<td><strong>PLENARY:</strong> Getting to the Next Level – A Road Map to Regenerative Buildings</td>
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<td>13:15</td>
<td>Building Biology – 7 Keys to Health and Resilience</td>
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<td>13:15</td>
<td>Jen Hancock, Director of Innovative Construction, CHANDOS</td>
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<td>13:15</td>
<td>Net-Zero in Edmonton: On Time and On Budget with Lean Integrated Project Delivery</td>
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<td>Shadi Aghaei, Vice-President, Times Group Corp.</td>
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<td>Donna Vakalis, 2 x Olympian, LEED AP BD+C and PhD Candidate, U. of Toronto</td>
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<td>13:15</td>
<td>Olympic Design &amp; Building for Performance</td>
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<td><strong>COFFEE BREAK</strong></td>
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### TIME DETAILS (CONTINUED)

Finding solutions that work with the environment, doesn’t have to be difficult.

Whether it’s improving building energy efficiency, comfort and sustainability, assessing and designing renewable energy systems, or determining your climate impact, let our experienced team of engineers and scientists transform the way you use energy and start realizing the benefits of seeing things in a completely new way.

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To learn more, contact Sean McCallum, Tremco Roofing’s Ontario Regional Manager, 416.845.8375 or smccallum@tremco.ca.

TUESDAY SEPTEMBER 20, 2016 | DAY 2

TIME DETAILS
VENUE: Marriott Eaton Centre, 525 Bay Street, Toronto

15:30 – 17:30
PLENARY: Urban Resilience — Community, Density and Ecosystems
Lloyd Alter, Adjunct Professor, Sustainable Design, Ryerson U.; treehugger.com; The Guardian
Learning from Goldilocks
Antonio Gómez-Palacio, Principal, Dialog
A Framework for Community Resilience Planning: the Moncton story
Gordon Harris, President & CEO, SFU Community Trust
UniverCity: A Living Lab for Resilient Development
Craig Applegath, Architect and Founding Principal, DIALOG Toronto
Jeff Schnurr, Executive Director, Community Forests International
Strengthening Symbiotic Flows: Valuing Ecosystem Services and Natural Capital

17:30 – 19:00
SBE16TORONTO WRAP UP AND 2030 DISTRICT’S TOWN HALL

ASSOCIATION PARTNERS:
Established in 1985, Provident Energy Management is a leading energy services provider.

Our core services include:

**ENGINEERING SERVICES:**
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**BUILDING AUTOMATION SYSTEMS & MONITORING:**
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Learn more at build.savingsbydesign.ca