



THE NEW NORMAL

2022 SLCAN SUSTAINABLE LABORATORY CONFERENCE
OCTOBER 24-26, 2022 IN VANCOUVER, BC



SCHEDULE AT A GLANCE

CHECK BACK REGULARLY FOR UPDATES

Monday, October 24, 2022

11:00 am – 4:30 pm

Exhibitor set-up

5:00 pm – 8:00 pm

Networking Reception in the Tradeshow Area



Tuesday, October 25, 2022

7:30 am – 8:15 am

Continental Breakfast in the Tradeshow Area



8:15 am – 8:30 am

Welcoming Remarks

8:30 am – 9:00 am

Keynote Presentation



Kear Portriss, Owner and Founder, Portriss Consulting Group

9:00 am – 10:00 am

Keynote Presentation



Labs2Zero: Accelerating the Global Transition to Net Zero Carbon Laboratories

Gordon Sharp, President, I2SL

From floods to fires, the impacts of climate change are becoming increasingly serious and even catastrophic. To prevent even worse climate impacts, the world needs to dramatically reduce carbon emissions, particularly from buildings. Labs2Zero is a multi-element, ambitious program begun by I2SL to accelerate efforts to decarbonize the world's laboratories. This program includes a newly internationalized Lab Benchmarking Tool (LBT), an Energy and Emissions Scorecard for labs, tools and reports to analyze, audit, and design low emissions laboratories, as well as a certification and accreditation program. Gordon will discuss the program as well as how the SLCan

community can participate in these efforts to help decarbonize Canadian and the rest of the world's laboratories.

10:00 am – 10:30 am

Refreshment Break in the Tradeshow Area

10:30 am – 12:00 pm

Concurrent Breakouts + Q&A Sessions



Stream 1A: Environmental Planning

Developing Laboratories Canada's First Environmental Strategy

*Elisabeth Girgis and Karissa Milbury
Laboratories Canada, Public Services and
Procurement Canada*

The objective of this presentation is to introduce Laboratories Canada's progress in developing our first environmental strategy. Our presentation will also describe the benefits of a federal labs environmental strategy. It is a key opportunity to connect with industry about our ambition and interest in the solutions they may be able to provide.

Climate Change Resiliency

Joel Good, RWDI

The objective of this presentation is to consider what changes are needed in our design process to minimize risk to our buildings and processes, and, to discuss potential mitigation measures that can lead to more resilient lab buildings.

Stream 2A: Facility Renewal/Upgrades

Master Planning for Science Facility Renewal and GHG Emissions Reduction

Janet Koshuta¹, Patrick Fleming², Warren Lesenko³

¹START Architecture Inc.

²CIMA+

³SMP Engineering

The objective of this presentation is to present findings of a renewal master plan for a large science facility on campus incorporating systems renewals and GHG reduction strategies aimed at achieving net zero performance.

McGill University Lyman Duff Building - A Major Upgrade of a Mid-Century Laboratory Complex

Yvon Lachance¹ and Magali Tremblay²

¹BGLA Inc.

²Pageau Morel et associés

The objective of this presentation is to share that a major infrastructure upgrade of laboratory buildings constructed in the 1950s or 1960s can be feasible, can be accomplished effectively, and can generate important sustainability benefits. It will also share some of the specific challenges associated with the upgrading of building systems of laboratory facilities with heritage significance, or which are located in a heritage preservation zone.

12:00 pm – 12:45 pm
Lunch



12:45 pm – 1:15 pm
Dessert Break in the Tradeshow Area

1:15 pm – 2:45 pm
Concurrent Breakouts + Q&A Sessions

Stream 1B: Facility Resilience

Warmer, Wetter, and Windier: Future Proofing Your Building Enclosure for Extreme Weather

Kenneth Roko, RWDI

The objective of this presentation is to identify changing climatic conditions that influence enclosure design of laboratory buildings and optimize laboratory-specific enclosure design strategies associated with occupant comfort.

Lab Resiliency: Case Study of the NRC Brookside Facility

Martin Kristensen¹ and Aaron Pollock²

¹*Diamond Schmitt Architects*

²*Number TEN Architectural Group*

The objective of this presentation is to cover, through the lens of resiliency, the construction of the National Research Council's newest facility in Winnipeg during the pandemic and discuss opportunities and the evolution of lab flexibility and adaptability as it occurred in real-time.

Stream 2B: Carbon Reduction

High Performance Laboratory Facilities: A Pathway to Zero Carbon Design

Charles Marshall and Neel Bavishi

DIALOG Design

The objective of this presentation is to provide an understanding of how zero carbon targets apply to laboratory buildings, and to provide real-world examples of facilities designed to achieve this goal.

Achieving Big Carbon Savings in Private Pharma Manufacturing

Kevin Shea¹ and Mike Misajon²

¹*Integral Group*

²*Precision Nano-Systems*

The objective of this presentation is to provide an understanding of how the private pharmaceutical industry can make significant carbon emissions reductions by designing with purpose.

2:45 pm – 3:15 pm
Refreshment Break in the Tradeshow Area



3:15 pm – 4:45 pm

Concurrent Breakouts + Q&A Sessions

Stream 1C: Energy Conservation

Energy and Safety Upgrade in SFU's LEED Gold Chemistry Building

Jaelim Jeon¹, Michelle Lin¹, Jo Chuan²

¹*Simon Fraser University*

²*Integral Group*

The objective of this presentation is to demonstrate a triple bottom approach in applying decarbonization strategy and energy efficient measures in the existing laboratories while enhancing safety.

Decentralized Demand Controlled Ventilation in Vivarium Spaces

James Montgomery¹ and Kevin Shelast²

¹*University of British Columbia*

²*Aqua Air*

The objective of this presentation is to highlight successful implementations of DCV systems serving vivarium spaces to transfer lessons learned for improvements to future installations across the sector.

Stream 2C: From Offices to Labs

RETHINKING OFFICES: How the Sciences Can Breathe New Life into Commercial Space

Heather Taylor¹, Jay Deshmukh², Jonathan Steel²

¹*University of Toronto*

²*IBI Group*

The objective of this presentation is to discuss the challenges and possibilities when rethinking spaces in downtown urban cores, learned from an office-to-lab retrofit which could serve as a model for future repurposing of commercial real estate for scientific research.

Exhaust and Intake Considerations for Converting Offices to Labs

Ryan Parker, RWDI

The objective of this presentation is to identify design planning strategies that can be used in early design stages to minimize re-entrainment issues and maximize lab tenant flexibility; and summarize the best practice tools used to evaluated exhaust and intake designs including developing applicable design criteria and mitigation strategies for reducing exhaust re-entrainment impacts.

4:45 pm – 9:00 pm

Dinner Event

: :Fundermax

Wednesday, October 26, 2022

7:30 am – 8:15 am

Continental Breakfast in the Tradeshow Area

7:30 am – 8:15 am

SLCan Annual General Meeting

8:15 am – 8:30 am

Welcoming Remarks

8:30 am – 9:00 am

Keynote Presentation



James Connelly, Chief Executive Officer, My Green Labs

One of the most influential leaders in the corporate sustainability and green building movement today, James Connelly is the Chief Executive Officer of My Green Lab. James is a frequent keynote speaker on regenerative design, sustainable business, and laboratory sustainability. He is an avid writer, and his research and commentary have been featured in news outlets such as China Dialogue, CGTN TV, Engineering News Record, Building Green, Trim Tab, Sustainable Brands, and GreenBiz.

Before joining My Green Lab, James was the Vice President of Strategic Growth for the International Living Future Institute, where he led international growth strategy and became a founding board member of Living Future Institute Europe. During his time at ILFI, James created several leading-edge sustainability programs, including Declare, an innovative ingredient transparency label for non-toxic building products, Living Product Challenge, the world's most advanced sustainability standard for building products, Just, a social equity label for organizations, and Zero Carbon Building Certification. James has won numerous scholarships and awards for his research and work; notably, he received a 2012 Fulbright Fellowship to research on green building rating systems in China, was selected as a Greenbiz 30 under 30 Sustainable Business Leader in 2016, and a Net Zero Energy Trailblazer in 2019.

9:00 am – 10:00 am

Panel Discussion

Case Studies and Lesson's Learned on the Zero Carbon Journey

Stay tuned for the panelist announcement!

10:00 am – 10:30 am

Refreshment Break in the Tradeshow Area



10:30 am – 12:00 pm
Concurrent Breakouts + Q&A Sessions

Stream 3A: More than Just Labs

More for Less - Lab Upgrades and Energy Retrofits

Mary On, Integral Group

The objective of this presentation is to examine retrofit strategies that support both lab expansion and energy reduction.

UBC Campus Living Labs: An Innovative Approach to the Collaborative Research

Angelique Pilon, University of British Columbia

The objective of this presentation is to provide an overview of our experiences with living labs at the University of British Columbia, an innovative and adaptive approach to experimentation beyond the traditional bounds of laboratories.

Stream 4A: Acoustics and Vibration

Acoustics for the Resilient Lab

Steve Titus, Aeroustics Engineering Limited

The objective of this presentation is to demonstrate acoustic design strategies for innovation and resilience in laboratory design.

A Performance-Based Design Approach for Balancing Risks and Construction Cost in Vibration-Sensitive Labs

Julia Graham, Motioneering

The objective of this presentation is to understand how vibration can affect sensitive lab equipment; and understand how various parameters influence predictions of footfall vibration.

Stream 5A: Sustainable Design Considerations

Efficiency First and the New Normal for Sustainable Lab Design

*Dan Diehl and Sarah Callahan
Aircuity, Inc*

The objective of this presentation is to educate on lab design to create a "new normal" from a sustainability perspective.

Wind Engineering: More Than Just Wind Turbines

*Jordan Beardy-Singh, Cermak Peterka
Petersen Wind Engineering Consultants*

The objective of this presentation is to provide a broad overview of wind engineering and the different modeling tools that can be used to contribute to a design's sustainability goals.

12:00 pm – 1:00 pm
Lunch

12:45 pm – 1:15 pm
Tour Presentation

1:15 pm – 1:30 pm
Closing Remarks

1:30 pm – 5:00 pm
Site Tour



Tour the University of British Columbia's Renewed Biological Sciences Complex

Peggy Theodore¹, Dennis Giobbe¹, Hilde Schepens², Matt Younger³, Zlatko Puljic³, Drew Kennedy³

¹*Diamond Schmitt Architects*

²*University of British Columbia*

³*AME*

The objective of this tour is to learn about the resiliency in design exhibited through renovation and new construction of new teaching and research facilities.