EERI-BC Chapter's
2025 One-Day Symposium

Toward Resilience: Preparing for the Big One Cascadia Megathrust Earthquake

Thursday, December 11 , 2025
UBC Robson Square, Vancouver, BC

EERI-BC Chapter's
2025 One-Day Symposium
Toward Resilience: Preparing for the Big One

Thanks to our Sponsors !

DIAMOND

Klohn Crippen Berger

ConeTec

Geotech DRILLING
A ConeTec Group Company

PLATINUM

BASIS

THURBER

GOLD

TETRA TECH

wsp

SILVER

Associated Engineering

BGC

TYLin

KONTUR GEOTECHNICAL CONSULTANTS inc.

EERI-BC Chapter's 2025 One-Day Symposium

The Earthquake Engineering Research Institute – BC Chapter (EERI-BC) is pleased to invite you to the 3rd Annual One-Day Symposium, taking place on Thursday, December 11, 2025, at UBC Robson Square in downtown Vancouver, BC.

Our inaugural symposium in 2023 and the second annual symposium in 2024 were great successes, well attended and well received. We are excited to announce our third symposium with an exciting program and hope you will join us

This year's symposium will focus on our theme: "Toward Resilience: Preparing for the Big One – Cascadia Megathrust Earthquake." The event will bring together a diverse community of professionals, including structural and geotechnical engineers, geoscientists, planners, government representatives, and academic researchers. The program will feature keynote and invited lectures and an expert panel discussion.

As in previous years, attendance will be free for all accepted delegates to ensure the event remains accessible. We encourage broad participation from students, researchers, and practitioners across disciplines. Please note that advance registration and acceptance are required to attend the symposium.

This year, we are excited to feature keynote lectures by Dr. John Cassidy from Natural Resources Canada (NRCan) and Prof. Perry Adebar from the University of British Columbia.

Experts will present invited lectures on topics aligned with or complementary to our theme, and will participate in a panel discussion focused on earthquake resilience in BC's infrastructure—covering buildings, bridges, dams, and tailings storage facilities.

Attendees will gain insights into BC's resilience to a megathrust earthquake from a leading seismologist at NRCan, and learn about emerging challenges in seismic design of buildings from an academic expert. The symposium will also include presentations on BC Hydro's dam safety projects and management systems by its Director of Dam Safety, BC's post-disaster response plan from a BC Housing official, and earthquake early warning systems from NRCan's seismologist. Additional talks will address the seismic resilience of BC's bridges from consultants involved in code development, and the challenges of ensuring earthquake resilience in tailings storage facilities.

Speakers for the invited lectures include Alison Bird (NRCan), Pat Cullen (BC Housing), Bruce Hamersley (Basis), Behzad Hassani (BC Hydro), Don Kennedy (AE), Andrew Watson (BC Hydro), Bryan Watts (formerly KCB), Paul Wilson (Thurber), and Li Yan (BC Hydro)

The EERI-BC Chapter's Annual General Meeting will be held at the end of the session. If you require further information please contact us at 2025EQSymposium@klohn.com

Date and Time
December 11, 2025 (Thursday) : 8:30 am – 5:00 pm

Venue
UBC Robson Square
800, Robson Street,
Vancouver, BC Canada V6Z 3B7

Registration
Attendance at the symposium requires prior registration and formal acceptance by the Symposium Committee via email. Accepted registrants can attend free of charge and will receive complimentary morning refreshments, a boxed lunch, and snacks and beverages during scheduled coffee breaks. Please complete the attached registration form and email it to 2025EQSymposium@klohn.com OR fill out the form available at https://eeri-bc.wildapricot.org/ under the upcoming events page.

Symposium Committee:
Thava Thavaraj, James Williams, Jonathan Foote, Iman Roshanzamir and Jackson Hamersley

Symposium Program

08:00 - 08:30	**Registration**
08:30 – 08:35	**Opening Remarks and Welcome Address** ***Thava Thavaraj**, Klohn Crippen Berger Ltd. (Symposium Co-Chair)*
08:35 – 09:20	**Keynote Lecture** **Dr. Perry Adebar,** P.Eng., Professor, University of British Columbia *"Seismic Resilience of Highrise Buildings in BC"* *Chair: Jonathan Foote, Thurber Engineering Ltd.*
09:20 – 10:10	**Invited Lectures – Session 1** **Don Kennedy,** P.Eng. , Senior Bridge Engineer, Former VP, Associated Engineering Ltd *Title: TBA ("… On Bridges…")* **Alison Bird**, MSc**,** Earthquake Seismologist, Natural Resources Canada *"Canada's Earthquake Early Warning System Contributes to Seismic Resilience in High-Risk Regions of the Country"* *Chair: Jackson Hamerseley, Basis Engineering Ltd.*
10:10 – 10:30	**Coffee Break**
10:30 – 12:00	**Invited Lectures – Session 2** **Paul Wilson,** P.Eng., Partner and Senior Geotechnical Engineer, Thurber Engineering Ltd. *"Perceptions of Performance and Resilience"* **Bruce Hamersley,** P. Eng., President, Basis Engineering Ltd. *"Structural Foundation Solutions for Bridges in Liquefiable Soils"* **Andrew Watson**, P.Eng., Director of Dam Safety & Generation Asset Planning, BC Hydro *"Engineering Seismic Resilience: Update on BC Hydro's Dam Safety Projects and Management Systems"* *Chair: Iman Roshanzamir, Klohn Crippen Berger Ltd.*
12:00 – 13:00	**Lunch Break**

Symposium Program (Contd.)

13:00 – 13:40	**Keynote Lecture** **Dr. John Cassidy**, Earthquake Seismology Section Lead, Natural Resources Canada *"The Science of Megathrust Earthquakes and Applications to Building Resilient Communities"* *Chair: Tyler Southam, Tetra Tech*
13:40 – 14:05	**Invited Lectures – Session 3** **Bryan Watts**, P.Eng., EIC, Consultant, Former President and CEO, Klohn Crippen Berger Ltd. *"Flow Liquefaction Evaluation of Tailings Dams – Static and Seismic Triggers"* *Chair: TBA*
14:05 – 15:15	**Expert Panel Discussion** *"Toward Earthquake Resilience in BC – Preparing for Strong Earthquakes"* **Panel Members** ***(****Additional members to be announced****)*** **Perry Adebar**, Ph.D., P. Eng., Professor, University of British Columbia **John Cassidy**, Ph.D., Earthquake Seismology Section Lead, Natural Resources Canada **Bruce Hamersley**, P. Eng., President, Basis Engineering Ltd. **Bryan Watts**, P.Eng., EIC, Consultant, Former President and CEO, Klohn Crippen Berger Ltd. **Paul Wilson**, P.Eng., Partner and Senior Geotechnical Engineer, Thurber Engineering Ltd. *Chair and Moderator:* **Tyler Southam,** P.Eng., Tetra Tech
15:15 – 15:35	**Coffee Break**
15:35 – 16:40	**Invited Lectures – Session 4** **Dr. Li Yan**, P.Eng., Principal, and **Dr. Behzad Hassani**, P.Eng., Seismologist, BC Hydro *"Non-Ergodic Hard Rock Correction to Address Seismic Response of Hard Rock Sites"* **Patrick Cullen,** Security and Emergency Services Coordinator, BC Housing *"BC Housing Rapid Damage Assessments and Post Disaster Preparedness"* **Featured Lecture** **Vicki Nguyen,** P. Eng., Senior Engineer and Technical Lead, Klohn Crippen Berger Ltd. *"Modeling Subduction Zone Earthquakes in Seismic Hazard and Design"* *Chair: TBA*
16:40 – 16:45	**Closing Remarks** ***Jonathan Foote****, Thurber Engineering Ltd. (Symposium Co-Chair)*
16:45 – 17:15	**EERI-BC AGM**

Note: The schedule is subject to change.

Registration Form for the Symposium

Please fill out the form below and email it to 2025EQSymposium@klohn.com OR fill out the form available at https://eeri-bc.wildapricot.org/ under the upcoming events page.

Attendance at the symposium requires prior registration and formal acceptance by the Symposium Committee via email. Accepted registrants may attend free of charge and will receive complimentary morning refreshments, a boxed lunch, and snacks and beverages during scheduled coffee breaks..

Salutation (Dr/Mr/Ms)[(a)]	
First Name	
Last Name	
Email Address	
Job Title/Designation	
Organization/Company	
Dietary preference for Boxed-Lunch[(b)] Vegetarian / Non-Vegetarian	
Emergency Contact Name and Phone number/Email	

Note: (a) This field is not mandatory; (b) Other food choices (Gluten free/Dairy free/Vegan etc.) may be available, however, we are unable to provide any details now.

Key Dates for Registration

Item	Date
Registration Open	October 06, 2025
Registration Close	November 14, 2025
Registration Acceptance Notification by Email	November 21, 2025

Presenter's Bio

***Perry Adebar, Ph.D., P. Eng.**, is a Professor of Structural Engineering at UBC and a leading expert in the seismic design of concrete buildings. Perry recently became chair of technical committee CSA A23.3 Design of Concrete Structures and continues to chair the technical subcommittee on Seismic Design (Clause 21), a position he has held since 2009. He served as Chair of the NBC Standing Committee on Earthquake Design (SC-ED) from 2019 to 2024, is currently a member of the National Model Code Committee on Seismic Design, which replaced SC-ED, and is chair of the NRC Task Group on Seismic Analysis and Design. Perry's academic honours include research awards from ACI (1998) and EGBC (2004), and teaching awards from UBC (2013) and EGBC (2015). He served as Associate Dean of UBC Engineering from 1999 to 2008, and Head of UBC Civil Engineering from 2014 to 2019. He is a structural collapse specialist on Canada Task Force 1 Heavy Urban Search and Rescue Team.*

***Alison Bird, MSc,** has been an Earthquake Seismologist with Natural Resources Canada since 2000. For two decades, she analyzed and researched western Canada's earthquakes and responded to major events like the 2012 Haida Gwaii earthquake. More recently, she contributed to a national risk assessment initiative. Alison routinely responds to significant earthquakes and has given over 1,000 media interviews. Since 2020, she has served as Liaison & Outreach Officer for Canada's Earthquake Early Warning project. She actively promotes seismic safety, public education, and mitigation practices, and serves on the BC Earthquake Alliance Board and ShakeOut BC Organizing Committee.*

***John Cassidy, Ph.D.,** is an Earthquake Seismologist and Senior Research Scientist with Natural Resources Canada (NRCan) in Sidney, BC, and an adjunct professor at the University of Victoria. He leads the Geological Survey of Canada's national "Assessing Earthquake Hazard and Risk Project," specializing in earthquake hazard and earth structure studies. Over the past 30 years, he has published more than 250 scientific articles. John served as Co-Chair of the BC Seismic Safety Council for 12 years and was part of the Canadian Earthquake Engineers Reconnaissance Team in Chile following the 2010 M8.8 earthquake and tsunami. He was elected to the Board of Directors for the Canadian Association for Earthquake Engineering in 2021 and 2025, and currently serves on the National Research Council's Seismicity and Site Response Working Group for the 2030 National Building Code of Canada (NBCC). John works closely with engineers and emergency management organizations to apply earthquake science in reducing impacts of future earthquakes.*

Patrick Cullen (TBA)

***Behzad Hassani, Ph.D.**, is a specialist engineering seismologist at BC Hydro, Generation Stations Civil Engineering, with over 15 years of experience in seismic hazard analysis. His work focuses on the development of ground motion models for different tectonic settings, site-specific seismic hazard analysis for critical structures, and the utilization of site-specific ground motion data to characterize non-ergodic site effects."*

***Bruce Hamersley, P.Eng.** is the President of BASIS Engineering and has 40 years of experience with a focus on bridge design, soil-structure interaction, and construction engineering. His diverse design background includes project management of large transportation projects, highway and railway bridge designs, seismic retrofit and rehabilitation of major bridges, and construction engineering for bridge erection. Bruce has been a member of the committee that developed the MOT Supplement to the Canadian Highway Bridge Design Code. He was also one of the primary authors of EGBC's Guidelines for Performance-Based Seismic Design of Bridges in BC.*

***Donald Kennedy, P.Eng.** is Senior Bridge Engineer and Former VP at the Associated Engineering Ltd. Don has 35 years of seismic and bridge experience in seismic criteria, design, performance assessment, retrofit design and construction. He is a ~20-year member of the seismic section of the Canadian Highway Bridge Design Code, and is current chair of that sub-committee. He has authored and presented papers and seminars on seismic retrofit and rehabilitation, seismic criteria and assessment, new bridge design, and performance-based seismic design. Don was a member of the Canadian reconnaissance team for the 1994 Northridge earthquake, is a Director of the Canadian Association of Earthquake Engineers, Chairman of the Seismic chapter for the Canadian bridge code and was Technical Co-Chair of the 2015 11th CCEE. He was a co-author of the 2018 EGBC design practice guideline for performance-based seismic bridge design in BC and has co-authored the BC MoTI criteria and Supplement to the CHBDC for seismic retrofit and design since 2005.*

***Vicki Nguyen, P.Eng.,** is Senior Geotechnical Engineer and Technical Lead at the Klohn Crippen Berger Ltd in Calgary, AB. She has over 15 years of experience and has led probabilistic and deterministic seismic hazard assessments and deformation models in FLAC 2D and 3D to assess and design slope stabilization measures, estimate seismic deformations, and calibrate model parameters based on*

field and instrumentation data for tailings facilities, dam structures, and slope stabilization projects around the world. Notable projects include 3D deformation modelling and parameter calibration for the Site C project in British Columbia and developing a comprehensive 3D calibrated deformation model to predict future displacements at Gardiner Dam in Saskatchewan.

Andrew Watson, P. Eng. *is the Director of Dam Safety & Generation Asset Planning for BC Hydro. In this position, he oversees BC Hydro's Dam Safety Program, with accountability for over 80 dams and associated water conveyance facilities, including compliance, risk management, asset management, and capital project planning. Previously, he served as Director of Design Engineering for the Site C Clean Energy Project leading in-house and consultant design teams from conceptual design and planning through reservoir filling and commissioning. Andrew has worked at BC Hydro for over 24 years and is a Professional Engineer.*

Bryan Watts, P. Eng., EIC*, is an Independent Consultant and the Former President and CEO of Klohn Crippen Berger Ltd. Bryan has over 45 years' experience in geotechnical engineering in tailings, hydroelectric and water dam design and construction in Canada and abroad. Bryan's professional background includes design and construction engineering, project management, third party reviews, and participation on review boards for a wide variety of projects. He was part of the forensic investigation teams for the Omai, Los Frailes, Mount Polley, and Fundão tailings dam failures. He sits on Tailings Review Boards for many mining companies. Bryan is Past-President of the Canadian Geotechnical Society. He received the EIC Fellowship in 1997 and the VGS Award in 2014. In 2016, he was honored with the EIC's K.Y. Lo Medal for his international engineering contributions*

Paul Wilson, P.Eng*. is a Partner and Senior Geotechnical Engineer at Thurber Engineering in their Vancouver office. Paul is engaged in major transportation, oil and gas, and building projects in BC. Paul is actively involved in design guidelines and code development, including the CHBDC and EGBC Guidelines for school seismic retrofits, seismic site response analysis, and seismic design of dikes. Paul is current chair of CHBDC Section 6, Foundations and Geotechnical Systems.*

Li Yan, Ph.D., P.Eng. *is a Principal Engineer with BC Hydro, Generation Stations Civil Engineering, with over 35 years' experience in geotechnical and earthquake engineering. He has worked in various roles and projects at BC Hydro, including design practice lead in Engineering for project delivery, geotechnical team lead, project engineering for multi-discipline projects, embankment dam design and construction, performance assessment, seismic design and analysis, risk assessment and mitigation for hydroelectric generation/transmission facilities and dam safety projects. He was the review task force member for EGBC's guidelines on Site Characterization for Dam Foundations in BC and Performance-Based Seismic Design of Bridges in BC. Recently, he co-led the writing of the 5th edition (2023) Canadian Foundation Engineering Manual: Earthquake-resistant Design chapter."*

THE UNIVERSITY OF BRITISH COLUMBIA

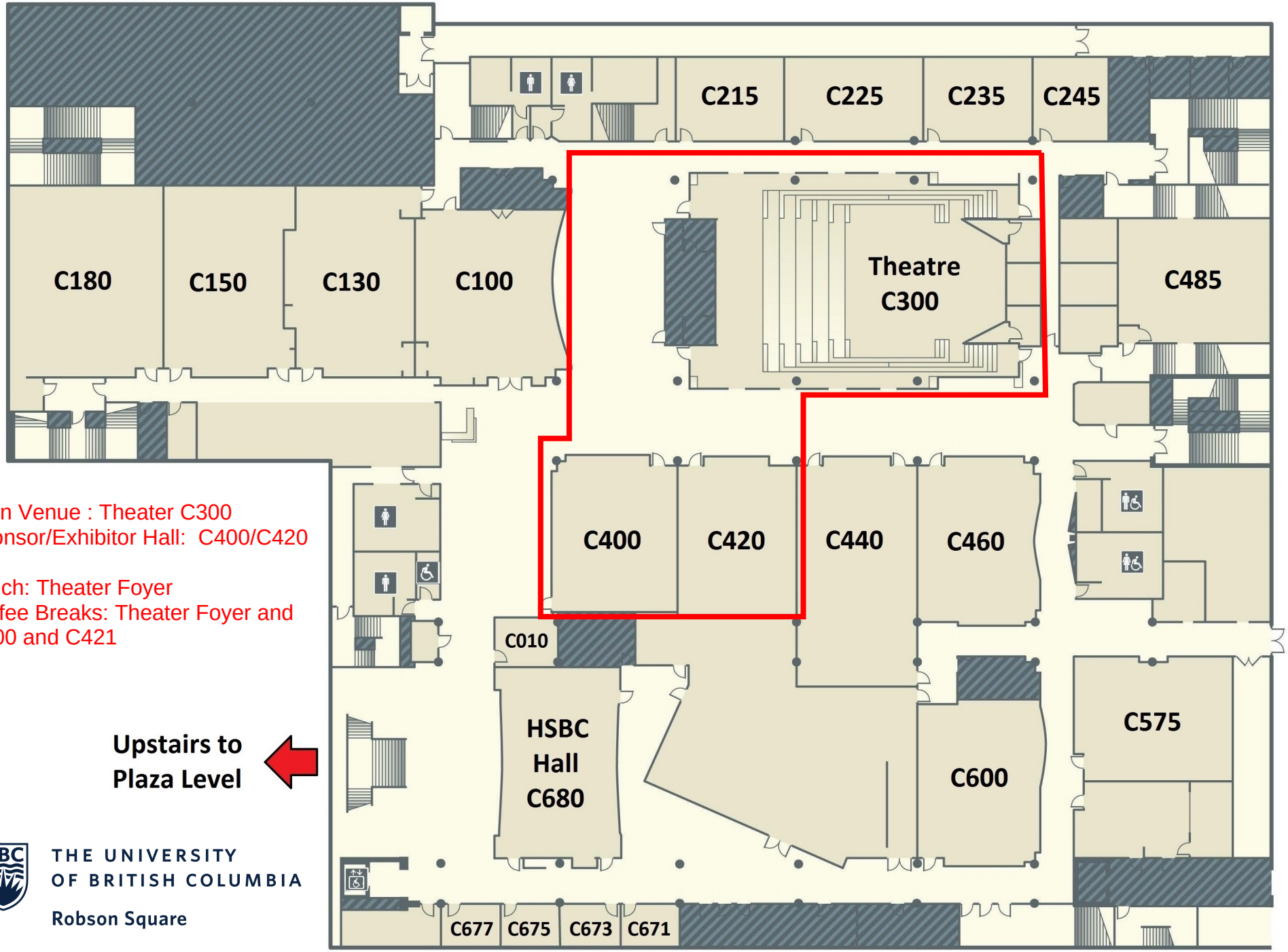
Robson Square

UBC Robson Square is located in downtown Vancouver on Robson Street between Hornby and Howe Street. The campus entrance is located on the Plaza Level and may be accessed by stairways on either side of Robson at Howe Street, or by the elevator from the underground parkade. There is a wheelchair accessible entrance on the corner of Hornby and Robson Street that connects to all levels of the campus.

By Car: In Vancouver's downtown core, turn south onto Howe Street – a one-way street. The underground parkade is located on Howe at the corner before Nelson Street (right hand side). Hourly parking charges apply. Please visit the Westpark website for updates and more information on payment methods, monthly rates and parking regulations. There is also limited meter street parking on Howe and Hornby Street. (Indigo neo app, Lot 189: $3.75/hr; $16/daily)

By Public Transit: The Burrard, Granville, and Vancouver City Centre SkyTrain stations are located within walking distance of the campus. Buses stop near the campus on Burrard, Georgia, and Howe Streets. The SeaBus from the North Shore docks is within walking distance. Visit the Translink website at www.translink.bc.ca to plan your route.

By Bicycle: A bicycle rack is located outside our front doors on the plaza level. They are to the left of the doors as you come inside.



Main Venue : Theater C300
Sponsor/Exhibitor Hall: C400/C420

Lunch: Theater Foyer
Coffee Breaks: Theater Foyer and C400 and C421

THE UNIVERSITY OF BRITISH COLUMBIA
Robson Square