

# DD2024

12<sup>th</sup> International Conference on Permafrost

Integrating Perspectives of Permafrost Thaw, Change, and Adaptation

June 16-20, 2024 📝

Yukon University, Whitehorse, Yukon, CANADA

# Sponsorship and Exhibition Opportunities











### INVITATION

Dear Friends,

With great pleasure and honour, the Canadian Permafrost Association (CPA) and the International Association of Permafrost (IPA) invite you to attend the 12<sup>th</sup> International Conference on Permafrost (ICOP2024), which will be held in Whitehorse, Yukon, Canada, from Sunday June 16 to Thursday June 20, 2024. The principal objective of the conference is to provide opportunities to share scientific research results and technical information, engagement with members from northern and indigenous communities, and for the professional development of delegates. It has been 26 years since Canada hosted the 7th ICOP in Yellowknife, Northwest Territories. Since then, permafrost science has grown, both in terms of the depth of our understanding and the breadth of topics covered. The impacts of climate change and economic development have significantly changed the Arctic, in recent decades, resulting in a wealth of research initiatives and challenging engineering projects. The City of Whitehorse, Yukon, is the ideal place to showcase these recent developments and the current challenges firsthand, and its location in Canada's North offers the perfect environment to learn and exchange ideas.

The conference, with its theme of "Integrating Perspectives of Permafrost Thaw, Change, and Adaptation", will address, through general and parallel sessions, keynote lectures, technical presentations, workshops, short courses and field trips, the most recent developments and stimulate engaging technical and scientific discussions among academics, professionals, contractors, suppliers, and students.

The conference organizing committees are confident that ICOP2024 will provide an excellent opportunity to present recent experience and developments to an audience of engineers and scientists from the public and private sector, with local, national and international backgrounds, and to all those involved in research and practice related to permafrost around the world.

The conference venue is Yukon University, the first University in Canada's North, located on the Traditional Territories of the Kwanlin Dün First Nation and of the Ta'an Kwäch'än Council, and situated in the City of Whitehorse, the capital of Yukon.

We look forward to welcoming you to what is sure to be a great conference!

Yours sincerely,

**Lukas Arenson** 

ICOP 2024 Conference Chair



### **CONFERENCE VENUE**

Yukon University (formerly Yukon College) is a public university in the Canadian territory of Yukon. Conference will be held at the University's main campus, based in Whitehorse. The university traces its history to the founding in 1963 of the Whitehorse Vocational and Technical Training Centre (soon after renamed the Yukon Vocation and Training Centre), located on the banks of the Yukon River in downtown Whitehorse. College status was granted in the spring of 1983 when the Yukon Vocational and Technical Training Centre became Yukon College, and in 1988 the Whitehorse campus moved from downtown to its current location. In spring of 2020 Yukon College was granted university status and all thirteen campuses were renamed Yukon University. The university's main campus, also referred to as Ayamdigut, is located about 4 km north of downtown Whitehorse, situated on a plateau that slopes to the east, south, and west. The campus property is 97 hectares, although most areas outside the central core of the property remains undeveloped. The main campus may be accessed through University Drive, which diverges westward from the main road, and climbs steadily towards the campus. Institutions adjacent to the campus include the Yukon Archives and the Yukon Arts Centre.



### **ORGANIZATIONS**

### The Canadian Permafrost Association

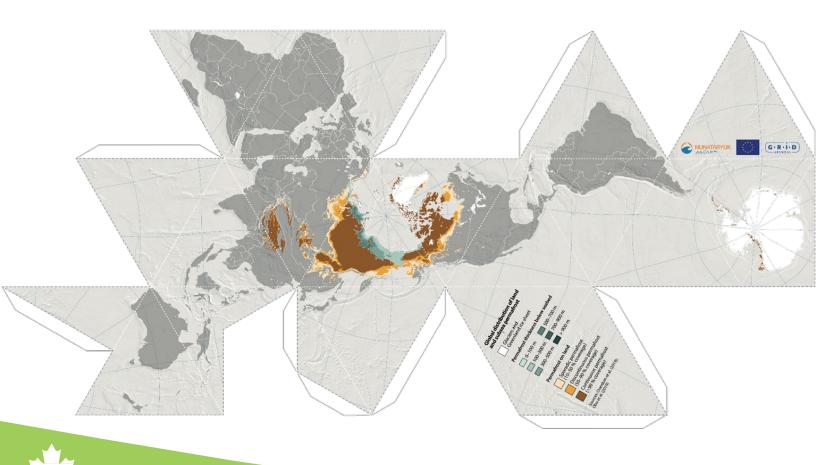


The Canadian Permafrost Association was founded in 2018 to bring together academics, practitioners, policy-makers, communities and indigenous organizations to help understand and address challenges, such as: rising costs of infrastructure construction and maintenance on permafrost; impacts of changing permafrost on ecosystems and food security; development of landslides and other hazards on thawing permafrost; release of greenhouse gases to the atmosphere as organic matter decomposes following permafrost thaw; stability of housing constructed on permafrost; changes in water quantity and quality relating to permafrost; and sustainable resource development in permafrost areas

# The International Permafrost Association (IPA)



The IPA was founded during the 4<sup>th</sup> International Conference on Permafrost held in Fairbanks, Alaska, in July 1983. The founding countries were Canada, The People's Republic of China, U.S.A. and U.S.S.R (Russia). Today, the IPA has 27 member countries. The mission of the International Permafrost Association (IPA) is to promote research in permafrost and permafrost-related fields within the global scientific and engineering communities, to support the activities of researchers in these disciplines, and to disseminate findings concerning permafrost to the decision-makers, the general public and educators.



# **GENERAL OUTLOOK**

The International Conference on Permafrost has long history and tradition, the first ICOP was held in 1963 in West Lafayette, USA. The conference has always been the best opportunity to show science and research developments to world experts.

Title: 12<sup>th</sup> International Conference on Permafrost – ICOP2024

Dates: 16-20 June 2024

Venue: Yukon University, Whitehorse, Yukon, Canada

Theme: Integrating Perspectives of Permafrost Thaw, Change, and Adaptation

Organized by: Canadian Permafrost Association (CPA)

Under the Auspices of: International Permafrost Association (IPA)

Homepage: www.ICOP2024.org

Expected Attendance: 450 delegates from all over the world (in person) and more than 300 online

Program: Keynote Lectures, Oral and Poster Presentations, Social Program, Young

Researcher Events, Technical Field Trips, Public Event, Exhibition, Meeting

the Industry, Short Courses, Business Meetings

### CONFERENCE ROADMAP

# **Important Dates**

Full Paper Abstract Submission: May 15, 2023

Full Paper Submission: August 31, 2023

Final Full Paper Submission: January 31, 2024

Extended Abstract Submission: January 31, 2024

### **Important Dates for Sponsorship and Exhibition**

Deadline for Sponsorship Applications March 31, 2024

Note: The earlier your application is received the more exposer the sponsorship will get leading to the conference.

Deadline for Exhibition Applications December 31, 2023





### **ICOP2024 COMMITTEES**

### **National Organizing Committee**

Lukas Arenson (Conference Chair, BGC)

Ryley Beddoe (RMC)

Barb Fortin (TetraTech)

Brian Horton (Yukon Government)

Kumari Karunaratne (NTGS)

Fabrice Calmels (Yukon University)

Peter Morse (CGS)

Nick Brown (Carlton University)

Joe Young (University of Alberta)

Aaron Weber (BGC)

### **Local Organizing Committee**

Fabrice Calmels (Chair)

Louis Philippe Roy

Panya Lipovsky

Idrees Muhammed

Grant Zazula

Chris Stephens

### **Technical Program Committee**

Ryley Beddoe (Chair)

Kumari Karunaratne

Asley Rudy

Élise Devoie

Earl de Guzman

### **Publications Committee**

Kumari Karunaratne (Chair)

Ryley Beddoe

Karen MacFarlane

Sarah Gervais

### **Field Trips Committee**

Fabrice Calmels (Chair)

Barbara Fortin

Toni Lewkowicz

**Duane Froese** 

Steve Kokelj

Peter Morse

### **International Scientific Committee**

Andreas Kaeaeb (Denmark)

Andreas Kellerer-Pirklbauer (Austria)

Anna Liljedahl (USA)

Annett Bartsch (Germany)

Antoine Sejourne (France)

Arne Instanes (Norway)

Britta Sannel (Sweden)

Christian Hauck (Switzerland)

Dario Trombotto Liaudat (Argentina)

Ed Yarmak (USA)

Francesca Casini (Italy)

Frederick Nelson (USA)

Gonçalo Vieira (Portugal)

Guido Grosse (Germany)

Hanne Christiansen (Norway)

Hugues Lantuit (Germany)

Isabelle Gärtner-Roer (Switzerland)

Jambaljav Yamkhin (Mongolia)

Jeanette Noetzli (Switzerland)

John Zarling (USA)

Lothar Schrott (Germany)

Margaret Darrow (USA)

Mauro Guglielmin (Italy)

Megan Balks (New Zealand)

Michael Krautblatter (Germany)

Norikazu Matsuoka (Japan)

Paul Overduin (Germany)

Pavel Talalay (China)

Phlippe Schoeneich (France)

Regula Frauenfelder (Norway)

Thomas Douglas (USA)

Thomas Ingeman-Nielsen (Denmark)

Vladimir Romanovsky (USA)

Ylva Sjöberg (Denmark)



### **CONFERENCE TOPICS**

### ICOP 2024: Integrating Perspectives of Permafrost Thaw, Change, and Adaptation

The session themes will refer, however are not limited, to the following topics:

### Community

- 1A Permafrost in Community: Collaboration and Geohazard Mitigation Strategies.
- 1B Applied Permafrost Geomorphology in Support of Northern Communities
- 1C Permafrost and People: Social, Industrial, Economic, and Food Systems

### Education

- 2A Permafrost Education and Outreach for Everyone in a Warming World
- 2B Arctic K-12 STEM Education: Experiences, Practices, and Challenges
- 2C Launching the International Permafrost Internship Service

### **Permafrost Environments**

- 3A Antarctic Periglacial Environment
- 3B Characteristics of Permafrost in the Andes
- 3C Yedoma Landscapes in the Past, Present and Future
- 3D Paleo and Relict Permafrost
- 3E Extra-Terrestrial Permafrost: from Geology to Technology Development for Resource Utilization
- 3F Polar Coastlines in Transition: Arctic, Antarctic, Offshore and Shelf Perspectives

### **Permafrost Geomophology and Hazards**

- 4A Open Session on Rock Glaciers
- 4B Periglacial Geomorphology
- 4C Rock Slope Stability in Mountain Permafrost Environments
- 4D Permafrost Temperature, Active Layer Thickness, and Rock Glacier Velocity
- 4E Permafrost Mass-Wasting Processes and Slope Hazards

### **Permafrost Carbon Feedback**

- 5A Carbon Cycles in Cold Regions: Modeling and Observations
- 5B Monitoring, Modelling, and Remote Sensing of the Permafrost Carbon Feedback
- 5C Reducing Uncertainties for Permafrost Carbon Feedbacks

### **Permafrost Hydrology and Wetland Dynamics**

- 6A Implications of Thawing Permafrost on Water Resources in Cold Regions
- 6B Drained Lake Basins in Lowland Permafrost Regions
- 6C Arctic Wetlands in a Changing Climate
- 6D The Hydrology of Mountain Permafrost

### **Permafrost Infrastructure**

- 7A Permafrost Railways
- 7B Foundations and Infrastructure on Permafrost: Case Studies and Innovations
- 7C Permafrost and Infrastructure Dynamics Along the Inuvik-Tuktoyaktuk Highway, NT
- 7D Permafrost Engineering, Geomorphology, Hydrology for Northern Linear Infrastructure Resilience and Safety



### **Cold Region Engineering Modelling, Observations and Testing**

- 8A Vulnerability of Cold-Region Infrastructure to Permafrost Degradation in a Changing Climate
- 8B Advances in Numerical Modelling of Permafrost
- 8C Geomechanics and Engineering Geophysics for Permafrost Characterization
- 8D Investigating Permafrost Using Geophysical Techniques
- 8E Drilling Operations in Frozen Rocks and Soils
- 8F Laboratory Modelling and Testing of Permafrost Soils

### **Microbial Ecology in Permafrost**

- 9A Permafrost Microbiology: Combining -omics with Ecological Theory
- 9B Microbial Pattern and Process in Permafrost Affected Ecosystems

### **Remote Sensing of Permafrost**

- 10A Remote Sensing of Permafrost Processes and Impacts on the Environment
- 10B High Resolution Remote Sensing Applications in Permafrost Studies

### **Permafrost Data Management and Cyberinfrastructure**

- 11A Permafrost Climate Services
- 11B Permafrost Data: Systems, Sharing, and Interoperability

### **Waste Containment in Permafrost**

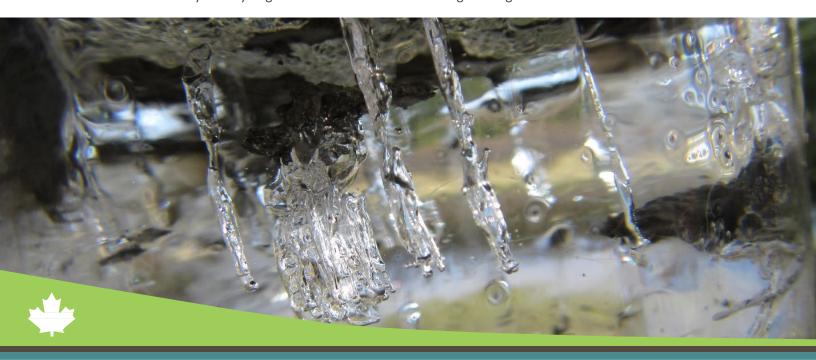
- 12A Mining Geotechnics and Reclamation in a Changing Climate
- 12B Contaminant Behaviour and Nuclear Waste Safety in Transitional Climates

### **Monitoring Permafrost Conditions and Processes**

- 13A Monitoring Techniques and Feedback of Snow, Vegetation, and Permafrost
- 13B Exploring the Roles of Ground Ice on Permafrost Dynamics
- 13C Sentinels of Permafrost Thaw Across Natural and Human Systems
- 13D Multiscale Observations of Permafrost Landscape Dynamics

### **Open Session**

- 14A Permafrost Thaw, Change and Adaptation
- 14B Uncanny Geocryological Matters and Loose Ends Engineering



# Tentative Conference Program

The program will include plenary keynote sessions hosting distinguished invited lecturers. Papers and extended abstracts submitted by participants will be presented during parallel technical sessions and poster sessions.

Time	Friday 14/6	Saturday 15/6	Sunday 16/6	Monday 17/6	Tuesday 18/6	Wednesday 19/6	Thursday 20/6	Friday 21/6
8:00 8:15				Registration	Registration	Registration	Registration	
8:30 8:45 9:00 9:15				Opening Ceremony	Keynote	Keynotes	Keynotes	
9:30 9:45 10:00				Keynote	Technical Sessions	Coffee	Technical Sessions	
10:15 10:30				Coffee Break	Coffee Break	Technical Sessions	Coffee Break	
10:45 11:00 11:15 11:30 11:45 12:00				Technical Sessions	Technical Sessions	Coffee Break	Technical Sessions	
12:15 12:30 12:45 13:00 13:15	Field Trip		IPA Council Meeting / Short Course(s) / Field Trip	Lunch	Lunch		Lunch	
13:30 13:45 14:00 14:15 14:30 14:45		PYRN Workshop / Short Course(s) / Field Trip		Technical Sessions	Technical Sessions		Technical Sessions	Field Trip
15:00				Coffee Break	Coffee Break	Lander Medical	Coffee Break	
15:15 15:30 15:45 16:00 16:15 16:30				Technical Sessions	Technical Sessions	Local Field Trip	Technical Sessions	
16:45 17:00 17:15 17:30			Conference Registration	Posters	Posters		Closing Ceremony	
17:45 18:00 18:15 18:30 18:45	PYRN / Short Course Registration			Industry Networking	Industry Networking			
19:00 19:15 19:30 19:45 20:00 20:15 20:30 20:45 21:00	PYRN Ice Breaker		lce Breaker	Social Event / PYRN Sport Event	Grad Student Event	Social Event	Social Event	



### SPONSORSHIP OPPORTUNITIES

The conference organizing committee has prepared various sponsorship packages and opportunities believed to be of great interest and value to industry and other partners. A small expo area will be available during the conference with limited opportunity for companies to present products and services related to the world of permafrost engineering and science. The area will further be an interesting opportunity to engage with conference participants.

The conference will be an occasion for the industry to strengthen its position in the field of permafrost science and engineering and to build strategies, strengthen relations with existing and new partners and promote services to new customers.

ICOP2024 offers a wide variety of sponsorship opportunities that have been created to allow organizations to showcase their strengths and enhance their own brand awareness at a level that best suits their budget.

# **Sponsorship Packages**

Sponsorship Level <sup>+</sup>	Łuk Cho	Akłaq	Denyák	Vadzaih
Amount	\$ 25,000	\$ 15,000	\$ 7,500	\$ 5,000
Identification as partner on all items and official publications of the Meeting	Х	Х	Х	Х
Logo on conference website sponsor page, listing status at sponsorship level	large	medium	small	small
Mentioning on conference social media announcements	х	х	x	Х
Banner link in E-Newsletter	x	x	x	x
Organization acknowledgement in E-Newsletter	large	medium	small	small
Advertisement in electronic conference program	1 page	1 page	1/2 page	-
Logo in electronic conference program and proceedings	large	medium	small	small
Logo on sponsor signage at venues	large	medium	small	small
Logo on lanyard	х	-	-	-
Screen saver in session rooms	large with info	medium	small	-
Organization provided banner displayed at venue	х	х	-	-
Insert to be placed into the delegate package	х	х	х	-
Booth space (depending on availability)	Х	х	-	-
Registration: Free full registration	3	2	1	1
Conference gala dinner ticket	3	2	1	1

<sup>+</sup> The names of the sponsorship levels Salmon, Brown Bear, Moose and Caribou are in Hän, Northern Tutchone, and Gwich'in, which are spoken by the Tr'ondëk Hwêch'in, Nacho Nyak Dun, and Vuntut Gwitchin First Nations, respectively.



# **Additional Sponsorship Opportunities**

Item / Opportunity	Amount	Comment
Conference delegate bags	\$ 4,000	Logo on outside of the delegate bag; plus flyer, company brochure, swag, etc.
Conference delegate bags insert	\$ 750	Include flyer, company brochure, swag, etc.
Advertisement in electronic conference program 1 p.	\$ 1,500	
Advertisement in electronic conference program 1/2 p.	\$ 1,000	
Conference App	\$ 4,000	Sponsor be named in relation to the conference app.
Gala and Award Dinner	\$ 3,500	Sponsor to be named in relation to the gala / award dinner; Display of company logo
Ice Breaker	\$ 3,000	Sponsor to be named in relation to the ice breaker; Display of company logo
Restaurant Tour	\$ 3,000	Sponsor to be named in relation to the planned restaurant tour; Display of company logo
Permafrost Young Researchers Network (PYRN) Sports Event	\$ 2,000	Sponsor to be named in relation to the PYRN Sport evening; Display of company logo
Coffee Break for one day	\$ 1,250	Sponsor logo will be shown during coffee breaks, along with announcement of name
Lunch Break for one day	\$ 2,000	Sponsor logo will be shown during lunch, along with announcement of name
Conference Wi-Fi	\$ 4,000	Sponsor logo will be shown during login, along with announcement of name
Local Field Trip	\$ 3,500	Sponsor logo will be displayed in the field guide along with announcement of name

For individual options, including booth space or general questions, please reach out to the conference organizers at ICOP2024@CanadianPermafrostAssociation.ca.



# APPLICATION PROCEDURE

- 1. Please fill out the sponsorship application form below.
- 2. E-mail it to the ICOP2024 Secretariat (ICOP2024@CanadianPermafrostAssociation.ca)
- 3. Deposit a minimum 50 % of the total amount within 30 days after submission of the sponsorship application form. Single payment in full is preferred.
- 4. Pay the balance by March 31, 2024.
- 5. All payments should be transferred to the following bank account:

Account holder: Canadian Permafrost Association

Bank name: RBC Royal Bank

Bank address: Hornby & Nelson RBC Branch Full Bank account (IBAN): 003 1021393 06720

Bank account: 1021393 BIC/SWIFT: ROYCCAT2

Organization

Address	City			
Province/State	Country	Postal Code / Zip Cod		
Name of contact person	Email	Phone Number (incl. country		
Snonsorshin Level / Item(s)		Total Amount CA		
Sponsorship Level / Item(s)		Total Amount CA		
Sponsorship Level / Item(s) Signature		Total Amount CA		