



**CIM** may 4 - 7 mai  
**CONNECT** Montréal 2025  
convention + expo



# Technical Program

## Minerals, Innovation and the Energy Transition

This year's conference theme, "Minerals, Innovation and the Energy Transition," invites submissions that explore the critical role of minerals in driving innovation and supporting the global shift toward sustainable energy. We encourage you to share your insights and research, contributing to vital discussions that will shape the future of our industry.

Abstracts should be no more than 500 words and must align with the conference sub-topics.

**The call for abstracts is open until November 1, 2024. We strongly encourage you to review the sub-topic descriptions below carefully before submitting your abstract.**

[Submit your abstract here](#)

### The technical program offers two submission options:

Please note that all participants in the technical program—including panel organizers, panelists, moderators, and presenters—are required to pay the registration fee corresponding to their category.

#### 1. Presenter:

- Propose a 20-minute technical presentation on a specific topic and sub-topic.
- Submit a concise abstract of your presentation, not exceeding 500 words.
- Marketing presentations will not be accepted.

#### 2. Panel Organizer:

- You will coordinate a panel session with 3 to 5 panelists and a moderator.
- Choose the relevant topic and sub-topic for your panel session.
- Provide a detailed description of the panel session, including the names of some panelists if available.
- Panel sessions are 1 hour and 15 minutes in duration.
- Please note that marketing-related panels will not be accepted.

## Key Dates:

- Abstract submission deadline: November 1, 2024
- Email notification of acceptance: February 14, 2025
- Email confirming the date and time of your scheduled presentation: March 21, 2025
- Presenters' registration deadline: April 4, 2025

# Technical Topics

## Urbanization & Energy Transitioning

- **New Knowledge**
  - Technology advancements in urbanization affected by the energy transition
- **Green Equipment & Infrastructure**
  - Transparency in supply chain
  - Decarbonization in supply chain (Scope 3 Emissions)
  - Reduction of GHG Emissions
- **Decarbonization & Electrification & Energy Storage**
  - Peak power demand management, microgrids and smart system management
- **Nuclear Power Generation**
  - SMRs (300 MW)
  - VSMRs (1-10 MW)
  - How Will We Pay for All This
- **Urbanization, Energy Transition**
  - Post-mining land-use transitions / Leveraging mine-impacted lands for renewable energy
- **Renewable Energy Integration**
  - How is the traditional fossil fuel supply chain changing its products and strategy to supply energy?
  - How has the traditional fossil fuel group improved on emissions reductions and what are the future technology and products they have to offer
  - Electrification Impacts and innovations of fleets, grids, and generation
  - Integration of renewable energy sources in our cities and mining
  - What to Do with Our Coal - Consider The American Model
- **Integrated Supply Chain**
  - Batteries. Minerals, Post mining impacts, down stream industries
  - Upstream: Mineral Research hubs and investments
  - Global: Dependence on other nations
  - Global: Independence from other nations
  - How do we compete and compare with CHINA
- **Commodities In High Demand**
  - Urbanization: Iron & Steel, Copper, Zinc, Cement, Cobalt
  - Energy transition: Lithium, Graphite, Nickel, rare earths
  - Critical Minerals List update

## Digital Maturity & Transformation

- **Artificial Intelligence & Data**
  - AI applications in mining activities (such as operations, maintenance, H&S, costs, etc)
  - Big data analytics for operational efficiency
  - Opportunities for AI across operations, such as: water consumption, maintenance practices, ...
  - Use big data and AI to improve exploration maintenance and operation
- **Cybersecurity, Integration & Connectivity**
  - Protecting digital asset continuity through improved operational integration & connectivity
- **Automation & Robotics**
  - Autonomous vehicles and remote operations
- **Disruptive Trends**
  - Disruptive technological, social, and commercial trends reshaping the mining industry

## Innovation & Best Practices in Mining: Operations & Processing

- **Maintenance Practices**
  - Optimization
  - Materials
  - Handling Design & Maintenance
- **Hoist and Haul**
- **Innovations in Underground Mining and Tunneling**
  - Advanced drilling and tunneling technologies.
- **Innovations and Best Practice in Open Pit Mining**
  - Advancing and sharing papers that advance safe, productive open pit mining practices that minimize impact on the environment
- **Innovation and Best Practice in Tailings Management**
  - Advancing and sharing papers that advance safe, productive open pit mining practices that minimize impact on the environment
- **Process Flow Optimization**
  - Lean mining practices and digital twins
- **Silos and Breaking Down Barriers**
  - Cross-functional collaboration and data integration
- **Integrated Planning**
  - Holistic approaches to mine planning and scheduling
  - Mine Closure

- **R&D and Energy Optimization**
  - Research & Development to funding innovative projects and technologies
  - Opportunities to Reduce Mine/Mill Power Use
  - Grid Transmission Efficiency
- **Advances in Rock Mechanics and Rock Engineering**
  - New materials and techniques for ground control
  - Advanced in geotechnical data collection, integration, management and decision-making
  - Ground Failure Understanding and Characterization
  - Geomechanical considerations in mine planning and design
  - Innovative approaches for understanding & managing rock behavior
  - New materials & innovative techniques for better stability
- **Managing Risk**
  - Managing and mitigating risk innovations starting with designing it out of the process
  - Nationalization
  - Managing rising operating costs
  - Social contract
  - Supply chain risk
  - Future mineral prices and trends
  - Government intervention, legislative risk

## Sustainability & Culture

- **Green Mining Future**
  - Sustainable practices and green certification
  - Bioprocesses and genomics.
  - Green Iron
  - Low-carbon steel production.
- **Metal Recovery/Reprocessing**
  - Techniques for recovering valuable metals from mining tailings
  - Techniques for recovering valuable metals from mining and other industrial waste
- **Carbon Capture, Storage & Petroleum Transition**
  - Technologies for reducing carbon footprint.
  - Technologies aimed at reducing the carbon footprint of mining via capture process
  - Decarbonization Innovation in mine decarbonization and its impacts on urban areas
- **Health & Safety**
  - Innovations in Equipment Safety
  - Standards evolutions
  - Occupational Health: innovations in the total worker health, and medical aspects of mining
  - Mental Health innovations in the mental health and total worker health aspects of mining
  - SIF Prevention Preventing Serious Injuries and Fatalities via Critical Control Management Programs
  - BEV Safety: Battery Electric Vehicle Risk Management and Safety via Fire prevention, storage, handling
  - Leadership trends and operational practices to achieve positive safety performance

- **Governance**
  - Social
  - Health and Safety
  - Corporate
  - Engaging Our Indigenous, First Nations People
- **Culture**
  - Inclusive workplace and Workforce best practices
  - Related Guidelines and protocols regulating the Mining Industry (suggest we create space – things TSM protocols, Canada 50/30 Challenge and more are important initiatives in our country, Safety and health protocols)
  - Young professional recruitment and retention in the mining industry
  - Training up tomorrow's workforce
  - Women and Gender Equality
  - Inclusion for newcomers, immigrants, people with disabilities (equity seeking groups in the mining industry)
  - Workplace Culture (recognition, philosophies in practice, etc.)
  - Engaging Our Indigenous, First Nations People
- **Sustainability**
  - Sustainable prosperity initiatives and best practices
  - Greenwashing, greenwashing and greenhushing in the mining industry
  - Nature positive future
- **Green Iron**
  - Low-carbon steel production.

## Partnership & Community Engagement

- **Community and Indigenous Relations**
  - Building trust and collaboration with local communities.
  - Equity models for Indigenous ownership
  - The role of the Indigenous rights holder in planning for mine closure
  - Engagement of various equity seeking groups in Canada
  - Green Equipment Transparency in the equipment supply chain to build trust by collaborating with local communities & leveraging partnerships for sustainable development
  - Fostering a positive and inclusive workplace in the mining industry
- **Leveraging partnerships for sustainable development**
- **License to operate**
- **Bill-S211 – Modern Slavery Reporting**

## Investment & Financing to Meet the Energy Transition

- **Research & Development**
  - Funding innovative projects and technologies
- **Investment Strategies for a Sustainable Future**
- **ESG Reporting Standards**
  - Implementation of ESG standards in mining supply chains
- **Attracting Investment for Sustainable Canadian Mining Projects in the Face of Climate Change**

## Geological Innovations for Sustainable Mineral Exploration

- **Geological Innovations for Sustainable Mineral Exploration**
  - Resource and Reserve Estimation – Innovation and Best Practices
  - Evolving MRMR standards to regulate a changing industry
- **Silos and Breaking Down Barriers**
  - Integrating geological data and innovative exploration techniques
  - Cross function data integration, collaboration and innovative techniques

## Water and Environment

- **Environmental Stewardship**
  - Conservation
  - Climate Resilience
  - Biodiversity
  - Ecosystem preservation and regeneration
  - Innovative solutions for water use
  - Clean Technologies
  - Green Energy
- **Water Stewardship**
  - Innovative solutions for water treatment
  - Risk Management techniques
  - Mine Water Management
  - Water strategies for Mine Closure
  - Water Resources Modelling
- **Circular Economy**
  - Energy efficiency
  - Waste reduction and resource recycling
  - Metal Recovery/Reprocessing of Tailings