



WORKSHOP AND FORUM

You are cordially invited to participate, contribute, discuss and explore with us:

Strategic Mine Planning and Holistic Optimization of Mining Complexes and Mineral Value Chains in a Changing and Uncertain World

Quebec-based Advanced R&D in Global Mine Optimization and Decision Support Systems

28 October 2016

GERAD, room 4488, 4th floor

Pavillon André-Aisenstadt, Campus de l'Université de Montréal

2920 Chemin de la Tour, Montréal, QC H3T 1N8

RSVP is mandatory

Given the economic changes over the past few years, the critical lesson is that mineral resource companies must improve their ability to plan and operate in conditions of uncertainty. We would like to examine with you, the Quebec mining industry, whether our current approaches are adequate to manage these emerging challenges, stressing the uncertainty in supply (orebodies being mined) and demand (markets), while seeking risk management, enhanced performance, and increases in productivity and value.

Through your active participation in our workshop/forum we can explore together core issues and relevant challenges faced by the Quebec mining industry today. This could start by examining possible changes in objectives for modelling and production planning, performance forecasting, valuation, and investment; continue with the suitability of existing technologies and R&D needed; and extend to a discussion of new mineral value chain optimization frameworks.

Key themes include

- Strengths, weaknesses and opportunities for strategic mine planning and optimization
- Increasing value and productivity in unforgiving market conditions
- Markets, orebodies and technology changes: *effects on reserves and mine planning optimization*
- Risk management:
 - *Part I - Quantifying supply and demand uncertainty through simulation*
 - *Part II - Integrating quantified supply and demand uncertainty in mineral value chain optimization*
- Long-term forecasting and optimization
- Short-term inventory and grade control optimization: *satisfying customers today*
- Geometallurgy in mine planning and mineral value chains
- Real-time mining and cloud computing

Program

(9:00am - 4:00pm)

Welcome and introduction

- The research team in mining optimization
- GERAD and COSMO

Welcome from

- Fonds de Recherche du Québec – Nature et Technologies (FRQNT): Maryse Lassonde
- Conseil de Recherches en Sciences Naturelles et en Génie du Canada (CRSNG): Hélène Fortier

Optimization in the Mining Industry

- What has been done in the last 20 years
- Examples of optimization applications and gains
- Open Discussion & Industry Perspectives

Optimization under Uncertainty: *Quantifying chances of success*

- Accounting for geological (grades and tonnages) uncertainty increases value
- Stochastic mine planning optimization
- Investment in research and expertise in this area in Montreal in the last 10 years
- Open Discussion & Industry Perspectives

Funding for Research with Industry (Partnership Industry-University)

- FRQNT
- NSERC
- MITACS
- A Québec Research Consortium

What Next in Mining Optimization: *Smart Mining Complexes – Holistic Optimization*

- Mining complex: an integrated business starting from the extraction of materials to sellable products
- Integration of strategic, tactical, and operational planning
- Real-time mining and model/plan updating
- Open Discussion & Industry Perspectives

Discussion on How Needs of the Quebec Mining Industry can be met: Research and Training

- Themes, specific topics – short-term and long-term
- How to structure cooperation and R&D collaboration on the topics of this workshop?
- A Quebec-based R&D consortium under GERAD?

Refreshments and lunch will be provided.

RSVP:

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