



DISTINGUISHED LECTURERS 2023-2024

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THE PROGRAM

The Distinguished Lecturers program is offered to 31 CIM Branches, 11 Technical Societies and 8 Student Chapters. Universities can also request a lecture.

The CIM Distinguished Lecturers program started in 1968 and has continuously provided a lineup of individuals who have shared their knowledge with the mining community for over five decades.

Every year, the lecturers are elected by their peers through the CIM Awards program and hold the title for a complete season (September to June).

CIM is privileged to count more than 260 of the industry's finest as its lecturers. Because the motto "once a lecturer, always a lecturer" defines our pride and dedication in ensuring that the learning curve is endless, a complete list of past lecturers is available at www.cim.org, where you can benefit from the ever-growing pool of expertise that the program has to offer.

LECTURERS ARE AVAILABLE FOR YOUR ONLINE OR IN-PERSON EVENTS.



The CIM Foundation's generous support allows the CIM Distinguished Lecturers Program to connect CIM members with leading industry expertise. The CIM Distinguished Lecturers program is owned and operated by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM).



DORIS HIAM GALVEZ

SENIOR ADVISOR, HATCH

DESIGNING SUSTAINABLE PROSPERITY (DSP)

DSP is a practical and structured method to enable the creation of future sustainable societies. It is a collaborative process with practical steps, where interested parties, including members of the local population, define specific types of enterprises needed to establish the pillars of a future diversified economy. A different way of thinking is required to achieve this. The big shift is to focus on the long-term prosperity of the region rather than the short term. The process begins by embarking on a transformative journey to unlock the true potential of the people and the region by empowering individuals, promoting the right skills, fostering collaboration and responsibly leveraging the region's strengths. The business cases serve as catalyst for attracting new investors. The mining industry can facilitate the transition to a diversified economy as a basis for a sustainable society.

About DORIS

Doris Hiam-Galvez is a visionary transformational leader with a track record of empowering teams to achieve extraordinary results. She consistently inspires teams to reach new heights and fosters an environment where everyone can thrive. She is currently Senior Advisor at Hatch, Board Director for PDAC and champion of sustainable development.

She has a PhD in Metallurgy with broad senior level experience in transforming organizations and driving significant expansion globally focused on value creation.

For the past 15 years as a Director at Hatch, Doris has made a significant impact. Major activity involved building organizations and creating new and innovative businesses to expand the company in Australia, South America, Europe and North America. She led the operations of Hatch Peru and Hatch Europe, driving their successful growth. Before joining Hatch, she was Chief Technology Officer for Novelis, a major global metal manufacturer. She was also Chair of the 2022 CIM Convention.

Working with clients around the world who were struggling with sustainability inspired her to develop "Designing Sustainable Prosperity (DSP)".



GARY POXLEITNER

PRINCIPAL (MINING) CONSULTANT/PRACTICE LEADER, SRK

CUT-OFF GRADE — THE IMPACT OF GETTING IT RIGHT

Cut-off grade (COG) or Cut-Off Value (COV), is a standard, industry-accepted method used to determine which part of a mineral deposit to include in a Mineral Resource or a Mineral Reserve estimate, or potentially in an operation's Life of Mine plan (LOM). It is the minimum grade (or value) at which mineralized material can be economically mined or processed.

Selecting the correct COG is essential. It affects the mine plan, cash flow, mine cost, sustainability and profitability of the operation. However, the work required to generate the optimum COG is often not given the requisite attention and diligence.

The widely adopted method to calculate the COG is a break-even methodology. This approach accepts mining material which will generate revenue from the sale of the finished product that is equal to the cost of certain modifying factors, such as mining, processing, G&A, and ESG among others. The pitfall here is that the method does not clearly outline what specific modifying factors to apply. The decision is often left to the judgement or personal opinion of mine professionals. Therefore, depending on the inclusion of certain factors, there is a wide implication on the future and the profitability of the mine.

In determining which common modifying factors are used in the industry, a survey of approximately 100 global mines and projects were accessed. We found much common ground although there were items where opinions varied widely.

This lecture presents common modifying factors used in the industry, a case study demonstrating the impact on value of various modifying factors used on a deposit and provides guidance on which factors should be applied at your mine.

About GARY

Gary has been involved in the mining industry for over 30 years since graduating from the Mining Engineering program at Laurentian University in 1991. He has worked in operations, engineering and capital projects at numerous mines and multiple commodities globally, including diamonds at Kimberley mine in South Africa, zinc and copper at Myra Falls on Vancouver Island, gold at Giant mine in the Northwest Territories and multiple base metal mines within the Sudbury Basin. During his 11 years consulting, he has been involved with hundreds of projects on every continent in over 50 countries, with a focus in areas of due diligence, operational improvement, cost estimation and mine design. His primary interest is in increasing value in the industry through cut-off grade determination and optimization, mine innovation, mine cost estimation and economic evaluation, balancing economics with a sensitivity to the environmental impact.

Gary is a Practice Leader for SRK Consulting Ltd, Chair of the CIM National Guidelines, Standards and Leading Practice Directorate for CIM National. He has also served as a Board Member of SRK, Chair of the CIM Sudbury Board Membership, Chair of the CIM Underground Mining Society, Vice-Chair of Camiro and on CIM National Council.



HANI MITRI

PROFESSOR OF MINING ENGINEERING,
MINING AND MATERIALS ENGINEERING DEPARTMENT, MCGILL UNIVERSITY

BREAKING ROCKS WITHOUT EXPLOSIVES – A MINE SAFETY PARADIGM SHIFT

This lecture reviews the results of a four-year project sponsored by Natural Resources Canada with support from CANMET Mining, Newmont and the Ministry of Economics and Innovation of Quebec. The project aim was to develop an explosive-free method for hard rock breakage in mines using expansive cement. Phase 1 of 3 was concerned with small-scale laboratory tests for peak expansive pressure measurement in steel cylinders and fracture length estimation in granite blocks. Phase 2 encompassed large-scale tests of one-metre-square panels from concrete and granite subjected to biaxial confinement. Numerical modelling was used extensively to design and analyze the drill hole patterns. In Phase 3, field validation tests were carried out at two underground mines, Hoyle Pond and Éléonore owned by Newmont. They included boulder fragmentation and slashing of drift intersection. Future research focusing on applications for narrow vein mining and boulder fragmentation in subzero temperature will be discussed.

About HANI

Hani is founder of McGill's Mine Design and Numerical Modelling Laboratory. In his career, he has made technical and scientific contributions as an educator, researcher and consultant in mining, rock mechanics, ground control safety and mine design. He has published more than 250 papers and supervised to completion more than 60 master's and PhD students. He is the recipient of the J.A. Franklin Award by the Canadian Geotechnical Society and the CIM Rock Mechanics Medal. He is a registered professional engineer and a Fellow of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM)



MUSTAFA KUMRAL

ASSOCIATE PROFESSOR, MINING AND MATERIALS ENGINEERING DEPARTMENT, MCGILL UNIVERSITY

MINING POLICY, STRATEGY AND INNOVATION IN THE TRANSITION TO THE DECARBONIZATION AGE

The mineral industries are on the brink of a new era. Emerging technologies to fight climate change require a multitude of mineral resources. The transition to renewable energy cannot be managed without the mineral industries. Consequently, this transition brings significant opportunities and challenges to mining stakeholders (e. g., mining corporations, governments, policymakers, regulators, local and Indigenous communities, and investors). Many governments have their critical and strategic minerals list. How these minerals will become available is not clear. Novel exploration, mining and processing techniques will be needed to meet increasing demand. There is not yet a detailed strategy on how, and under what rules, these mineral resources can be accessed. This lecture will discuss why it is necessary to establish an international policy and will focus on the need to develop responsible mining indicators, standards and best practices to achieve decarbonization. The industry needs to harmonize legal and regulative frameworks internationally. Policy and strategy development must be done in collaboration with sustainability and ecology initiatives. Finally, a robust innovation strategy will be required to keep a competitive edge for sustainable mining.

About MUSTAFA

Mustafa is the principal investigator of the Mineral Economics, Mine Reliability and Asset Management Laboratory at McGill and has extensive experience in research and teaching in the mining engineering discipline. . He has taught courses, such as mineral economics, surface mining and reliability analysis of mining systems, over 20 years. In line with his teaching profile, his research focuses on mineral economics, asset management and mine planning and design, and has been funded by both Canadian funding agencies and mining corporations. Mustafa has published his research outcomes in various technical journals. He has supervised more than 20 master's and PhD students to completion. He holds a PhD from the University of Leeds. Mustafa is an executive member of the CIM's Maintenance, Engineering and Reliability Society.



NANCY WILK

ENVIRONMENTAL HEALTH AND SAFETY FELLOW,
MINE, WATER AND ENVIRONMENT, WSP CANADA INC.

TOTAL WORKER HEALTH® – AN APPROACH TO OCCUPATIONAL DISEASE PREVENTION AND IMPROVED WORKER WELL-BEING IN MINING

Global estimates of the work-related burden of disease and injury indicate that each year 1.9 million people die from exposure to occupational risk factors, 81% of these fatalities resulting from non-communicable, occupational diseases. This data underestimates the true burden of occupational disease. The classical approaches to occupational safety and health and risk management are not effectively preventing occupational disease and related fatalities. There is an urgent need for alternative strategies to prevent occupational illness and advance well-being. Total Worker Health® (TWH®), introduced by NIOSH in 2011, offers an approach for consideration that could serve as a model in sectors such as mining and across geographies, to improve worker well-being, mitigation of risk and, ultimately, prevention of occupational disease and related fatality. Nancy, as the 2023-2024 Chair of the AIHA TWH Advisory Group, will share her insights into TWH®, disease prevention and worker well-being, related areas of practice and research, and potential applications to mining.

About NANCY

Nancy, a Certified Industrial Hygienist, has 36 years of experience in occupational hygiene. She has worked as an Ontario provincial enforcement officer, a consultant, Risk Management Director for McMaster University, and was the Global Vice President of HSSE for Golder Associates from 2012 to 2017. Nancy has worked with the mining sector since 1987, providing industrial hygiene and environmental health and safety expertise and support to exploration, operations, processing and mine remediation nationally and internationally. Nancy is a past Board Member and Past President for the Occupational Hygiene Association of Ontario, past Board Member and Treasurer of ACGIH, current Director on the International Occupational Hygiene Association Board, and current Vice-Chair of the AIHA Total Worker Health® Advisory Group. Nancy is the recipient of the 2020 Hugh Nelson Award of Excellence in Occupational Hygiene and the AIHA 2022 Aileen Yankowski Outstanding Leader of the Year Award.



PRITI WANJARA

PRINCIPAL RESEARCH SCIENTIST, NATIONAL RESEARCH COUNCIL CANADA

CHALLENGES AND OPPORTUNITIES OF METAL ADDITIVE MANUFACTURING

Additive technologies are permeating game-changing innovations in manufacturing. Presently, the status quo in metal additive manufacturing is centred on the fabrication of small parts with optimization performed for weight savings and performance using mainly laser powder-bed 3D printing technology. For the production of large parts, the manufacturing approach entails migrating to higher deposition rate 3D printing. In this regard, wire-fed electron beam additive manufacturing (EBAM) is gaining momentum as an enabling technology for the fabrication of near net shape metallic components through a rapid layer by layer deposition process. Specific advantages of the EBAM process are the relatively large build envelope – that becomes infinite for in-space production – combined with the near 100% material efficiency of the wire-feed into the melt pool and high bulk material deposition rates. This lecture explores some of the additive research at the National Research Council Canada to address the different underlying challenges presently facing the global scientific and research communities for introducing, producing and qualifying materials and structures fabricated through an additive approach.

About PRITI

Priti is recognized internationally as a leading material scientist in advanced manufacturing technologies, specializing in developing welding process design and additive manufacturing solutions for aerospace, automotive and power generation industries. She obtained her B. Eng. and PhD from McGill University in Materials Engineering and is the author of 250 refereed articles and 140 technical reports. She currently serves on the Neutrons Canada Board and the Scientific Advisory Committee of the NSERC network for Holistic Innovation in Additive Manufacturing. Within CIM, Priti has been a contributing member for 30 years. She is a Past President of the Metallurgy and Materials Society and an elected Fellow of CIM, ASM International, Canadian Aeronautics and Space Institute, Canadian Welding Bureau, and the Canadian Academy of Engineering. Her prestigious recognitions from the Metallurgical Society of CIM include the Brimacombe Award, Silver Medal and Distinguished Scientist Award.



ROY SLACK

DIRECTOR, CEMENTATION AMERICAS

40 YEARS OF SAFETY SHARES – SAFETY

Based on 40 years of experience in the mining industry, a number of safety stories will be presented with lessons learned, ideas and things to think about.

INDUSTRY CHALLENGES: OBSERVATIONS & OPINIONS – GENERAL

This lecture offers some non-technical opinions and observations on environmental and social responsibility, diversity and inclusion, and the public's perception of mining.

STARTING OFF YOUR CAREER IN THE MINING INDUSTRY – SCHOOLS/STUDENT NIGHTS

An overview of current trends in the mining industry and some practical tips for students and newcomers to the industry will be presented.

SHAFT SINKING 101- SCHOOLS & MINE DEVELOPMENT

An overview of traditional, current and future shaft sinking methods in North America from the author of the chapter on shaft sinking in the latest edition of the SME UG Mining Handbook.

BEER TASTING - SOCIAL

In which a "Cranky Old Man" teams up with a local pub or brewery to host a social with some questionable advice on beer tasting.

About ROY

Roy Slack is a professional engineer and a graduate of Queen's University in Kingston, with a degree in Mining Engineering. In 1998, he started Cementation's operations in North America, providing design build mine construction services to the mining sector. He retired from the company in 2019 but remains on the board. He is also on the board of Torex Gold Resources. In 2008, he was awarded the Engineer's Medal for Entrepreneurship by the Professional Engineers of Ontario. In 2013, he was appointed to the Province of Ontario's first Prevention Council to advise the government on workplace safety. In 2017 Nipissing University bestowed upon him an honorary doctorate. He served as President of CIM in 2019 -2020 and remains active in CIM as an executive in the Health & Safety Society and the Northern Gateway Branch, as well as an Associate Editor for *CIM Journal*.