



**Hilton Toronto Airport Hotel, Ontario, Canada
October 4-6, 2022**

MONDAY, OCTOBER 3, 2022

17:00 - 19:00 CONFERENCE & WORKSHOP PRE-REGISTRATION & NETWORKING

18:00 – 22:00 EXHIBIT ROOM SET UP

TUESDAY, OCTOBER 4, 2022

07:30 CONFERENCE REGISTRATION AND BREAKFAST

08:30 SESSION 1: CONFERENCE OPENING CEREMONIES:

Welcome: *MDEC President Cheryl Allen (Vale)*

Scholarship: *J. Stachulak (MIRARCO)*

Introduction of Keynote Speaker: *Glenn Staskus (Ret.)*

Keynote Address: KEY1 - Mining at Depth and Transition to Electric Vehicles

Peter Xavier (Glencore)

Organization: *Co-Chair MDEC Conference David A Young (CanmetMINING)*

10:00 COFFEE BREAK

**10:30 SESSION 2: Diesel Emission Control Technologies I
CHAIRPERSON: (Joe Stachulak, MIRARCO)**

S2P1 – Vale/Mammoth DPF Secondary emissions – B. Rubeli (CanmetMINING)

S2P2 – DPFi™ Electrically Regenerated Particulate Filter System– S. Mack (Johnson Matthey)

S2P3 – SCR System Failure Diagnostics – R. Deayton (Mammoth Equipment)

12:00 LUNCH

13:00 SESSION 3: Battery Electric Powertrain Technology
CHAIRPERSON: (Kyle Watson, MLITSD)

S3P1 – BEV Program Design Journey– A. Griffiths (MacLean)

S3P2 – BEV Relay Light Utility Performance Bench Marking Field Test – G.Li (CanmetMINING)

S3P3 – Sandvik Batteries For Hauling Equipment: Design & Safety – H. Blinn (Sandvik)

14:30 COFFEE BREAK

15:00 SESSION 4: Health and Diesel Particulate Matter
CHAIRPERSON: (Cheryl Allen, Vale)

S4P1 – The Past, Present & Future: Diesel Exhaust Exposures in Mining – A Tool to Assess Lung Cancer Risk – K. Hedges (OHCOW)

S4P2 – Health Effects of Diesel Exhaust Exposure – S. Dorman (Laurentian University)

15:45 MDEC 2022 Scholarship

SCH1 – Mining Engineering Student Cooperative Work Projects – D. Campbell (UBC)

16:00 ADJOURNMENT

16:30 – 18:30 RECEPTION & NETWORKING

WEDNESDAY, OCTOBER 5, 2022

07:30 REGISTRATION AND BREAKFAST

08:30 SESSION 5: Standards Development
CHAIRPERSON: (David Young, CanmetMINING)

S5P1 – Standards update CSA M424 Series on Underground Mobile Mining Equipment
– A. Andronescu (CSA)

S5P2 – Battery handling working group update – C. Allen (Vale)

S5P3 – Braking system working group update – S. Holmik (Glencore)

10:00 COFFEE BREAK

10:30 SESSION 6: Alternative Fuel and Energy Technologies:
CHAIRPERSON: (Vani Kandulapati, Cummins)

S6P1 – Cummins Fuel Agnostic Engine – T. Hovis (Cummins)

S6P2 – Fuel Cell Electric Vehicles in Mining – J O'Sullivan (Cummins)

S6P3 – Hydrogen ICE Research - B. Rubeli (CanmetMINING)

12:00 LUNCH - Introduction of sponsors and award of draw prizes

13:00 SESSION 7: Emissions Monitoring Techniques and Field Studies
CHAIRPERSON: (Ginette Anderson, Mineterra)

S7P1 – Revision of the MAPTEST Protocol – B. Rubeli (Canmet)

S7P2 – Adaptation of EPA Method 5 for Raw Diesel Exhaust Sampling– S. Mullin (Canmet)

S7P3 – Emission Reduction for Container Ships at Port Docks – M. Mazzuca (TF Hudgins)

14:45 COFFEE BREAK

15:00 SESSION 8: Diesel Emissions Control Technologies II
CHAIRPERSON: (Philip Bousquet, OMA)

S8P1 - Optimization of SCR emissions control with electrically heated catalyst system – Rob Crawford (ATES)

S8P2 – Performance Evaluation of Diesel Particulate-Filter Low NO2 CRT – J Stachulak (MIRARCO)

MDEC Plenary Consultation, David Young (Co-Chair MDEC Conference)

Summary of comments from MDEC 2020 survey

Review of MDEC 2021

Review of MDEC 2022

Plans for MDEC 2023 and Final remarks

16:00 ADJOURNMENT

THURSDAY, OCTOBER 6, 2022

07:30 – 08:00 WORKSHOP REGISTRATION & BREAKFAST

08:00 – 14:30 WORKSHOP: CSA M424 Standards Review (2022 version)
CHAIRPERSON: (Gaurav Mahajan, CanmetMINING)

12:00 - LUNCH

14:45 – 16:30 ROUNDTABLE: – The State of BEVs/EVs Development for the Canadian Underground Mining Industry – Moderator: G. Mahajan (CanmetMINING)