



Holiday Inn Sudbury, Ontario, Canada
October 21-24, 2024

MONDAY, OCTOBER 21, 2024

- 10:00 – 16:00 TECHNICAL TOUR – EPIROC SUDBURY (AM & PM)
17:00 - 19:00 CONFERENCE & WORKSHOP PRE-REGISTRATION & NETWORKING
17:00 – 20:00 EXHIBIT ROOM SET UP

TUESDAY, OCTOBER 22, 2024

07:30 CONFERENCE REGISTRATION AND BREAKFAST

08:30 SESSION 1: CONFERENCE OPENING CEREMONIES:

Welcome: *MDEC President Cheryl Allen (Vale)*

Organization: *Co-Chair MVPC Brent Rubeli (CanmetMINING)*

Introduction of Keynote Speaker: *J. Stachulak (MIRARCO)*

Keynote Address: S1P1 Keynote, "*The Impacts of Nanoparticles on Health and Their Interaction Mechanisms with Biological Systems*". Angela Violi – University of Michigan

Scholarship: *Co-Chair MVPC Brent Rubeli (CanmetMINING)*

10:00 COFFEE BREAK

10:30 SESSION 2: CSA M424 Mining Standards Review:
CHAIRPERSON: Brent Rubeli, (CanmetMINING)

Presentation S2P1 – CSA M424 Mining Mobile Equipment / M421 Electricity in Mines Standards Review – A. Andronescu (CSA Group)

Presentation S2P2 – M424.4 Electric Machines Revision Update – J. Le (CanmetMINING)

Presentation S2P3 – M424.3 Braking Performance Revision Update - C. Matikainen (MLITSD)

12:00 LUNCH

13:00 SESSION 3: Diesel Emission Control Technologies I
CHAIRPERSON: J. Stachulak (MIRARCO)

Presentation S3P1 – Optimizing DPF Performance for Minimum Downtime – R. Deayton (Mammoth)

Presentation S3P2 – Light Duty Mining Vehicle DPFi Systems – G. Anderson (MineTerra)

Presentation S3P3 – Electrically Heated Catalysts for NOx Control - M. Masoudi (Emissol)

14:30 COFFEE BREAK

15:00 SESSION 4: Battery Electric Powertrain Technology
CHAIRPERSON: Cheryl Allen (Vale)

Presentation S4P1 – Electrification of a 40-ton electric mining vehicle; from vision to demonstration – G. Imbleau Chagnon (NRC), P. Robitaille (IVI)

Presentation S4P2 – HudBay Mining BEV Field Study – John Le (CanmetMINING)

Presentation S4P3 – Vibration Levels Measured Near Mine Utility Vehicle Lithium-ion Batteries vehicles – D. Yantek (NIOSH)

16:30 ADJOURNMENT

17:30 – 19:30 RECEPTION & NETWORKING

WEDNESDAY, OCTOBER 23, 2024

07:30 REGISTRATION AND BREAKFAST

08:30 SESSION 5: Topics in Mining Machine Design
CHAIRPERSON: Kristie Tarr, (CanmetMINING)

Presentation S5P1 – Goldex Railveyor Study – E. Acuña-Duhart (CanmetMINING)

Presentation S5P2 – Renewable Diesel for Mining – C. McCraine (Mansfield Oil)

Presentation S5P3 – MDEC Student Scholarship Presentation - Camden Wilks (Komatsu)

10:00 COFFEE BREAK

10:30 SESSION 6: Measurement of and Occupational Exposure to Diesel Exhaust and Other Hazards / CHAIRPERSON: Kyle Watson (MLISTD)

Presentation S6P1 - Other Hazards in Mining in Addition to Diesel Emissions – K. Hedges (OHCOW), J. Nelson (Workplace Safety North)

Presentation S6P2 – Case studies of Reducing DPM in Underground Mining – D. Rose (Pinssar)

Presentation S6P3 - Soot and ash loading properties of exhaust filters with the DPG filter test system. – R. Mulholland (Cambustion)

12:00 LUNCH – Introduction of sponsors and awarding of door prizes

13:00 SESSION 7: Energy Storage Systems: Battery & Hydrogen
CHAIRPERSON: Michelle Levesque (CanmetMINING)

Presentation S7P1 – Energy Transition and Electric Vehicles – A. Majewski (DieselNet)

Presentation S7P2 – NRCan Hydrogen Roadmap Update – P. Nekoovaght (CanmetMINING)

Presentation S7P3 – Battery Life and Degradation Simulation for Mining Machine Cycles – Zhenhuan Xu (CanmetMINING)

14:45 COFFEE BREAK

15:00 SESSION 8: Diesel Emission Control Technologies II
CHAIRPERSON: Gaurav Mahajan (CanmetMINING)

Presentation S8P1 – The AeroSofd Initiative for DPM Reduction – L. Rubino (VERT)

Presentation S8P2 – Sintered Metal Filters in Passive and Active Regen Operation – F. Pelletier (Genuine), M. Mazzuca (Allied Reliability/TF Hudgins)

Presentation S8P3 – Vale DPF Trials and Selection – K. Watson, B. McLean (Vale)

15:45 MDEC Plenary Consultation, Brent Rubeli (Co-Chair MVPC)
 Summary of comments from MDEC 2023 survey
 Review of MDEC 2024
 Plans for MDEC 2025 and Final Remarks

16:00 ADJOURNMENT

THURSDAY, OCTOBER 24, 2024

07:30 – 08:00 WORKSHOP REGISTRATION & BREAKFAST

08:00 – 16:30 WORKSHOP: INTRODUCTION TO DIESEL EXHAUST OCCUPATIONAL EXPOSURE: HEALTH EFFECTS, MEASUREMENT AND CONTROL

Presentation WP1 – Introduction to Diesel Emissions Exposure in the Mining Environment – K. Hedges (OHCOW)

Presentation WP2 – Health Effects of Exposure to Diesel Exhaust – S. Dorman (CROSH - Laurentian)

10:00 COFFEE BREAK

Presentation WP3 – Monitoring and Measurement of Diesel Exhaust for Occupational Health – J. Nelson (Workplace Safety North)

Presentation WP4 – Control of DPM and Diesel Emissions Through Technology Retrofit – L. Rubino (VERT)

12:00 LUNCH

Presentation WP5 – Strategies for In-service Measurement of DPF Performance – B. Rubeli (CanmetMINING)