



Pittsburgh Section Presents

Second Annual Spring Seminar Series

The SME Pittsburgh Section is offering the Second Annual Spring Seminar Series. This year, the Series consists of eight, 90-minute virtual sessions beginning on Tuesday, April 4th and continuing thereafter on a Tuesday/Thursday schedule for 4 weeks (April 4, 6, 11, 13, 18, 20, 25, and 27). All Seminars will begin at 1:00 PM EDT and will conclude at 2:30 PM. During each session, a total of 4 papers will be presented at 20-minute intervals. Additional time has been set aside for questions at the end of each session.

The Seminar Series is offered for free and PDH certificates will be available at 1.5 hrs/session or a total of 12 hrs for the complete series at a cost. **Attendees must register for each Seminar AND separately for PDHs if desired.**

**THE SERIES SCHEDULE AND A LISTING OF THE
PRESENTATIONS ARE ATTACHED**

REGISTRATION FOR THE SEMINARS: <https://tinyurl.com/43dbuppm>

Once you have successfully registered, you will be sent a Zoom Seminar link and a copy of the Seminar Series Program Document will be available on the SME Pittsburgh web page at www.smepittsburgh.org

FOR PDH CERTIFICATES PLEASE CONTACT MARY DELROSSO BY APRIL 6, 2023:
via email at mary412d@comcast.net or phone at 412-835-7387

If you have any questions or desire additional information, please contact the Seminar Coordinator: Dr. Heather Dougherty, PE, at PittSME.Seminar@gmail.com

2023 SPRING SEMINAR SERIES PRESENTATIONS

Tuesday, April 4, 2023 - Health and Safety

Are Fatigue and Sleepiness the Same? A Brief Introduction to the Differences and Similarities and Their Implications for Work Safety by Max Barham, NIOSH, Spokane Mining Research Division, Email: pqj9@cdc.gov

Using Near-Miss Events to Create Training Videos by Jennica Bellanca, NIOSH, Pittsburgh Mining Division, Email: JBellanca@cdc.gov

Do Metatarsal Boots Change Walking Patterns? by Lydia Kocher, NIOSH, Pittsburgh Mining Division, Email: LKocher@cdc.gov

Field-Based Respirable Crystalline Monitoring Approach by Milan Yekich, NIOSH, Pittsburgh Mining Research Division, Email: vgz7@cdc.gov

Thursday, April 6, 2023 – Ground Control I

Contribution of Individual Support Components to Roof Stability in a Longwall Gateroad by Zoheir Khademian, NIOSH, Pittsburgh Mining Research Division, Email: opv9@cdc.gov

Cemented Rockfill Size Effect Study with Specific Focus on Different Sample Preparation Techniques by Josef Bourgeois, PhD, NIOSH, Spokane Mining Division, Email: qso2@cdc.gov

Forecasting Seismic Events in a Deep Longwall Coal Mine: An Update by Mark Van Dyke, NIOSH, Pittsburgh Mining Division, Email: mso2@cdc.gov

A Case Study of Potential Geologic Factors Affecting the Occurrence of Massive Strata Collapses in an Underground Limestone Mine in Southwestern Pennsylvania by Nicole Evanek, NIOSH, Pittsburgh Mining Research Division, Email: kri5@cdc.gov

Tuesday, April 11, 2023 – Methane Gas and Mine Ventilation

A Perspective of Gas Drainage from Gassy Coal Mines through Directional Drilling and Carbon Dioxide Gas Fracturing by Shimin Liu, PhD, The Pennsylvania State University, Email: szl3@psu.edu

Longwall-Induced Deformations and Shale Gas Well Casing Stresses-Ground Control Principles and Guidelines by Peter Zhang, PhD, NIOSH, Pittsburgh Mining Division, Email: nmb2@cdc.gov

Permeability Values After First Panel Mine-By Under Shallow and Deep Cover by Marcia L. Harris, NIOSH, Pittsburgh Mining Division, Email: ztv5@cd.gov

Development of Air Quantity Estimator (AQE 2.0) Software for Estimating Airflow Requirements for Diluting Diesel Particulate Matter by Vasu Gangrade, NIOSH, Pittsburgh Mining Research Division, Email: VGangrade@cdc.gov

Thursday, April 13, 2023 – Technology Developments

Conveying Technology Developments: Continued Expansion by Marc dos Santos, Dos Santos International, Email: marc@dossantosintl.com

A Python-Based Tablet Interface for Moon Mining Operations by Victor Octavio Tenorio, PhD, University of Arizona, Email: vtenorio@arizona.edu

Wireless Coexistence: Concepts and Implications in the Mining Industry by Carl Sunderman, PhD, NIOSH, Spokane Mining Division, Email: csunderman@cdc.gov

Field Testing of New Style of Impingement Screens and Next-Generation Dust Filtering by Steven Schafrik, PhD, University of Kentucky, Email: steven.schafrik@uky.edu

Tuesday, April 18, 2023 – Ground Control II

Using Machine Learning to Evaluate Coal Geochemical Data with Respect to Dynamic Failures in U.S. Coal Seams by Heather Lawson, NIOSH, Spokane Mining Research Division, Email: bug4@cdc.gov

Galvanic Corrosion Between Graphitic Rock and Ground Support by Casey Stazick, NIOSH, Spokane Mining Division, Email: qvf0@cdc.gov

Analysis of Steel Props (Quick Stik) under Different Loading Scenarios by Khaled Morsy Mohamed, PhD, NIOSH, Pittsburgh Mining Division, Email: kmy1@cdc.gov

Taking Surface Quarry Operations Underground by Peter Christensen, RESPEC, Email: peter.christensen@respec.com

Thursday, April 20, 2023 – Dust/Ventilation

Characterizing Radio Emissions from Electronic Systems Used in Underground Coal Mines by Chenming Zhou, PhD, NIOSH, Pittsburgh Mining Research Division, Email: czhou@cdc.gov

A Comparison of EM Emission Reduction Methods for Personal Dust Monitors by Yongjun Zhang, NIOSH, Pittsburgh Mining Division, Email: qwd2@cdc.gov

A Comparison of Different Water Sprays at High Pressures for Respirable Coal Dust Knockdown Ability in a Confined Chamber by Scott Klima, NIOSH, Pittsburgh Mining Division, Email: ymr3@cdc.gov

Lab Evaluation of an Air-Cleaning Fan on Respirable Dust Control by David Zheng, PhD, NIOSH, Pittsburgh Mining Research Division, Email: vea1@cdc.gov

Tuesday, April 25, 2023 – Battery Research

Considerations for Using Lithium-Ion Battery-Powered Equipment in the Mining Environment by Dave Yantek, NIOSH, Pittsburgh Mining Research Division, Email: dyantek@cdc.gov

Thermal Runaway Pressures as a Function of Free Space in Sealed Containers for Lithium Titanate Cells by Connor Brown, NIOSH, Pittsburgh Mining Division, Email: kqr4@cdc.gov

Comparison of Fire Suppression Techniques on Lithium-Ion Battery Pack Fires by Wei Tang, PhD, NIOSH, Pittsburgh Mining Division, Email: ope0@cdc.gov

Lithium-Ion Battery Thermal Runaway in a Methane-Air Environment by Naseem Rayyan, NIOSH, Pittsburgh Mining Research Division, Email: nbo1@cdc.gov

Thursday, April 27, 2023 – Ethics and Engineering Projects

The Practical Side of the Ethics Coin for Mining Professionals by Gary Hartsog, Alpha Engineering Services, Email: ghartsog@alphaengineer.com

Full Scale Demonstration of Somerset Sub325 Centrifuge System on Refuse Tailings by Michael Barish, Somerset International, Email: mbarish@somersetint.com

Extracting Stuck Mobile Equipment by Terence M. Taylor, MSHA, Technical Support Center, Email: taylor.terence@dol.gov

Creating a Framework for Assured Autonomy by Michael McNinch, NIOSH, Spokane Mining Research Division, Email: msv1@cdc.gov