



Preliminary Program

The schedule below shows preliminary information. Please visit the website (<http://csmspace.com/events/minevent2017>) for the most current schedule.

June 17

8:00 AM :: Short Courses A through C

June 18

8:00 AM :: Short Courses D through F

6:00 PM - 8:00 PM :: Welcome Reception

June 19

8:00 AM :: Welcome and Opening Keynote Session; Speaker: Eric Lutz

8:00 AM - 5:00 PM :: Exhibits

June 20

8:00 AM :: Plenary Panel: *Opportunities of Today, Challenges of Tomorrow*

Use of computer modeling and automation technology along with sound engineering to build systems that can ventilate the mines of tomorrow with safe, breathable air and cost effectiveness

Stephen Hardcastle

Pramod Thakur

Keith Wallace

Jon Volkwein

8:00 AM - 5:00 PM :: Exhibits

6:30 PM :: Reception and Banquet

June 21

8:00 AM - 3:00 PM :: Exhibits

June 22

All day :: Field Trips

Oral Presentations

June 19 :: 10:00 AM

01 Mine Ventilation Case Studies I

Green Center Metals Hall

Chair: Bharath Belle

Commissioning a Ventilation Expansion in a Saskatchewan Potash Mine

K Penner, *Canada*

Improvement Project Ventilation System of Mine Achilla UEA Cia. Buenaventura SAA Mining (Peru)
J Corimanya, *Peru*

The Economic Potential of Electric Mining Equipment
J Varaschin, *Canada*

Obuasi Mine Ventilation Redesign
K Osei-Boakye, *Ghana*

June 19 :: 10:00 AM

02 Ventilation Planning and Design I
Green Center Petroleum Hall
Chair: Stephen Hardcastle

Ventilation Requirements for Underground Mines - Are We Using the Correct Values?
A Halim, *Sweden*

Egress and Entrapment in Hardrock Mines (Revisited)
D Brake, *Australia*

The Mystery of the Ventilation Raises
E De Souza, *Canada*

Incorporating Ventilation into Production Scheduling
A Brickey, *United States*

June 19 :: 1:30 PM

03 Mine Ventilation Case Studies II
Green Center Metals Hall
Chair: Adrianus Halim

Mitigating Ventilation Air Methane Cost-Effectively from a Colliery in Australia
R Holmes, *Australia*

Totten Mine Ventilation Control System Update: Implementation and Savings Achieved with Level 1 "User Control" and Future Plans
E Acuña, *Canada*

Practical Implementation of Ventilation on Demand at the Henderson Mine
R Brokering, *United States*

Modeling the Underground Ventilation System at the Waste Isolation Pilot Plant to Ensure Proper Ventilation Alignment
K Wallace, *United States*

June 19 :: 1:30 PM

04 Climate, Heating and Cooling I
Green Center Petroleum Hall
Chair: George Gamble

Testing and Evaluation of a Modular Thermal Transfer Unit for Underground Mine Air Conditioning
G Li, *Canada*

Evaluation of the Atmospheric and Underground Environmental Conditions by Means of Continuous Climatic Monitoring Systems – Lesson Learned
P Roghanchi, *United States*

Headframe, Intake Shaft and Intake Portal Design Issues for Heater Design
D Brake, *Australia*

Implementation of a Heat Management Control System

R Anderson, *Canada*

June 19 :: 3:30 PM

05 Diesel Particulate Control

Green Center Metals Hall

Chair: Arash Habibi

An In-Mine Performance Assessment of a Sub-Micron Particulate Monitor Across Multiple Diesel Particulate Matter Environments

S Hardcastle, *Canada*

Comparison of Diffuser Assisted Ventilation and Push-Pull Systems for DPM Control in a Dead-End Entry

Y Zheng, *United States*

Long-Term Continuous Measurement of Diesel Particulate Matter Patterns in a Large Underground Metal Mine

J Volkwein, *United States*

Demonstration of Continuous Monitors for Tracking DPM Trends Over Prolonged Periods in an Underground Mine

C Barrett, *United States*

June 19 :: 3:30 PM

06 Longwall Ventilation I

Green Center Petroleum Hall

Chair: Robert Krog

Blowing Fan Stoppage Tests in a Bleederless Longwall System

T McCarty-Glenn, *United States*

Modern Methods of the Assessment of Gas Hazards in the Gob of Longwalls with Caving

D Waclaw, *Poland*

Development and Applications of a Scaled Aerodynamic Model for Simulations of Airflows in a Longwall Panel

V Gangrade, *United States*

Guidelines for Gob Isolation Using Pressure Balancing: Greenfield Projects and Active Operations

F Calizaya, *United States*

June 20 :: 10:00 AM

07 Respirable Dust Measurement and Control I

Green Center Metals Hall

Chair: Karoly Kocsis

Comparison of Coal vs. Mineral Mass Fractions in Respirable Dust in Appalachian Coal Mines

K Phillips, *United States*

Real-Time Sizing of Airborne Coarse Coal Dust

T Barone, *United States*

How Relevant Are Engineering Samples in the Management of Personal Dust Exposure?

B Belle, *Australia*

Evaluation of SDBS Surfactant on Coal Wetting Performance with Static Methods: Preliminary Laboratory Tests

Y Chen, *Australia*

June 20 :: 10:00 AM

08 Mine Fire and Explosion Prevention I

Green Center Petroleum Hall

Chair: Karl Zipf

Characterization of a Limestone Rock Dust for its Wicking, Dispersion, and Inerting Capabilities

I Perera, *United States*

Numerical Modeling of the Effect of Underground Mine Fires on Ambient Conditions of Refuge Alternatives

L Zhou, *United States*

Development of a Mine Dust Sampling Device for Use in Underground Coal Mines

B Goertz, *United States*

Coal Mine Explosions and the Development of Mitigating Controls

J du Plessis, *South Africa*

June 20 :: 1:30 PM

09 Ventilation Network Analysis

Green Center Metals Hall

Chair: Ian Iloomis

Diurnal Thermal Flywheel Influence on Ventilation Temperatures in Large Underground Mines

C Stewart, *Australia*

Evaluation of Duct Leakage Estimation Methods in an Auxiliary Mine Ventilation System: Empirical vs Computational Fluid Dynamics

S Akhtar, *Canada*

Computational Energy Dynamics Solver for Mine Ventilation Simulations

G Danko, *United States*

June 20 :: 1:30 PM

10 Mine Fire and Explosion Prevention II

Green Center Petroleum Hall

Chair: Kirk McDaniel

The Effect of Environmental Factors on the Propagation of Methane Flames in the Longwall Gob

M Fig, *United States*

Development of Spray Systems for Frictional Ignition Protection When Cutting Minerals in an Explosive Atmosphere and for Effective Dust Control

E Krummenauer, *Germany*

Development of a Fire Modeling Study for the Chuquicamata Underground Mine

B Prosser, *United States*

Utilizing Smart Active Explosion Suppression Systems to Support Dynamic Risk Environments in Underground Coal Mining

A Spaeth, *South Africa*

June 20 :: 3:30 PM

11 Climate, Heating and Cooling II

Green Center Metals Hall

Chair: Dave Loring

A Review of Cooling System Practices and Their Applicability to Deep and Hot Underground US Mines

A Greth, *United States*

Heat Transfer Analysis of Using Large Scale Seasonal Thermal Energy Storage Systems for Mine Ventilation Purposes

L Amiri, *Canada*

Numerical Investigation of Spray Freezing Thermal Energy Storage System for Mine Heating

S Akhtar, *Canada*

June 20 :: 3:30 PM

12 Auxiliary Ventilation, Coal

Green Center Petroleum Hall

Chair: Pedram Roghanchi

Case Study of an Exhaust Face Ventilation System Used with a Continuous Mining Machine Equipped with a Flooded-bed Dust Scrubber

G Howe, *United States*

Review of Auxiliary Ventilation in Mine Planning and Design

P Rostami, *United States*

Design Considerations for the Construction of a Face Ventilation Gallery Using Computational Fluid Dynamics Modeling

B Coleman, *United States*

June 21 :: 8:00 AM

13 Respirable Dust Measurement and Control II

Green Center Metals Hall

Chair: Keith Wallace

Helmet-CAM: An Innovative Tool for Exposure Assessment of Respirable Dust and Other Contaminants

A Cecala, *United States*

CFD Modeling of Dust Dispersion in a Room-and-Pillar Mining Area: A Case Study

V Kollipara, *United States*

Specification and Application of Dry Dust Collectors for Crusher Control Room Ventilation

E Meisburger, *Indonesia*

Characterizing Respirable Dust Size Distribution and Submicron Silica Content in Gold Mine Dust

L Chubb, *United States*

June 21 :: 8:00 AM

14 Longwall Ventilation II

Green Center Petroleum Hall

Chair: Duncan Chalmers

Longwall Emissions During Falling Atmospheric Pressures and the Sample Frequency Required to Detect Them

R Krog, *United States*

Evaluation of Cave Airflow Resistance Associated with Multiple Air Gap Geometries During Cave Evolution

D Eroglu, *United States*

Understanding Gob Outgassing Associated with Pressure Disturbances in Longwall Mine

S Lolon, *United States*

Prediction of Airflow Resistance of a Mature Panel Cave

A Baysal, *United States*

June 21 :: 10:00 AM

15 Respirable Dust Measurement and Control III

Green Center Metals Hall

Chair: Aleksandar Bugarski

Pressure Drop Measurement Across Flooded-Bed Scrubber Screen and Demister in a Laboratory Setup for Its Use in a Longwall Shearer

S Arya, *United States*

Pilot Study in Real Time Respirable Silica Measurement

D Chalmers, *Australia*

In Stope Dust Control at Beatrix Gold Mine

M van der Bank, *South Africa*

Mitigation of Pollutants in Deep Open-Pit Mines Under Arctic Air Inversion

K Raj, *United States*

June 21 :: 10:00 AM

16 Ventilation Planning and Design II

Green Center Petroleum Hall

Chair: David Brokering

Co-Simulation: 1D to 3D Coupling in an Underground Mine Ventilation Simulated Model

N Rueda, *Netherlands*

Planning the Upgrade of the Return Air Raise Silencer System at Totten Mine

A Dobson, *Canada*

Mine Ventilation Control in Large Scale Mining

S Sjoström, *Sweden*

Building a Global Paradigm for Ventilation Best-Practices

J Stinnette, *United States*

June 21 :: 1:30 PM

17 Ventilation Monitoring and Measurements

Green Center Metals Hall

Chair: Kray Luxbacher

Conception of Automated Ventilation Control System and Its Implementation in Belarussian Potash Mines

M Semin, *Russian Federation*

Accurate Determination of Air Quantity in a Vane Axial Main Mine Fan: A Comparison of Two Methods

D Bartsch, *United States*

Coal Dust Monitoring of the Future: Application of Passive Real-Time pDR1000 and Active PDM3700 Continuous Dust Monitors

B Belle, *Australia*

Installing a Live Ventilation Network Monitoring System to Improve Safety

T Willemsen, *South Africa*

June 21 :: 1:30 PM

18 Mine Fire and Explosion Prevention III

Green Center Petroleum Hall

Chair: Liming Yuan

A Fundamental Investigation of Simulated Gob Configurations on Methane Flame Propagation

C Strebinger, *United States*

Development of Gas and Spontaneous Combustion Control Strategies for 6.0 Km Long Longwall Panels

R Balusu, *Australia*

Improved Understanding of the Role of Pyrite in Coal Spontaneous Combustion

B Beamish, *Australia*

CFD Modeling of Longwall Tailgate Ventilation Conditions

A Juganda, *United States*

June 21 :: 3:30 PM

19 Auxiliary Ventilation, Hard Rock

Green Center Metals Hall

Chair: Chris Pritchard

Optimizing Auxiliary Ventilation Systems to Mitigate Heat and Gases in Underground Metal Mines

P Roghanchi, *United States*

Studying Operational Improvements in Blast Gas Clearing Using Ventilation Control

D Witow, *Canada*

Attenuation of Noise from Auxiliary Ventilation in Underground Mines

F Calizaya, *United States*

June 21 :: 3:30 PM

20 Respirable Dust Measurement and Control IV

Green Center Petroleum Hall

Chair: Dan Stinnette

Examination of Capture Efficacies of a Shearer Mounted Flooded Bed Dust Scrubber Using Experiments and Computational Fluid Dynamics (Cfd) Modeling on a Reduced Scaled Model

A Kumar, *United States*

Collection of Dust and DPM Samples for Transmission Electron Microscopy Analysis Using a Multi Stage Cascade Impactor

A Habibi, *United States*

Water Spray Knockdown Efficiencies of Airborne Float Coal Dust Measured Using the Cloud, Aerosol, and Precipitation Spectrometer

C Seaman, *United States*