## Preliminary Program

The schedule below shows preliminary information. Please visit the website (http://csmspace.com/events/mineevent2017) for the most current schedule.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>June 17</td>
<td>8:00 AM :: Short Courses A through C</td>
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<tr>
<td></td>
<td>6:00 PM - 8:00 PM :: Welcome Reception</td>
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<tr>
<td>June 18</td>
<td>8:00 AM :: Short Courses D through F</td>
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<td></td>
<td>6:00 PM - 8:00 PM :: Welcome Reception</td>
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<tr>
<td>June 19</td>
<td>8:00 AM :: Welcome and Opening Keynote Session; Speaker: Eric Lutz</td>
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<td>8:00 AM - 5:00 PM :: Exhibits</td>
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<tr>
<td>June 20</td>
<td>8:00 AM :: Plenary Panel: <em>Opportunities of Today, Challenges of Tomorrow</em></td>
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<td>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</td>
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<tr>
<td></td>
<td>Stephen Hardcastle</td>
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<td>Pramod Thakur</td>
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<td>Keith Wallace</td>
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<td>Jon Volkwein</td>
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<td>8:00 AM - 5:00 PM :: Exhibits</td>
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<tr>
<td></td>
<td>6:30 PM :: Reception and Banquet</td>
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<tr>
<td>June 21</td>
<td>8:00 AM - 3:00 PM :: Exhibits</td>
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<tr>
<td>June 22</td>
<td>All day :: Field Trips</td>
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### 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 Ioomis

Diurnal Thermal Flywheel Influence on Ventilation Temperatures in Large Underground Mines  
C Stewart, Australia

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 Erogul, 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 Sjostrom, 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
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*  

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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*