

Monday, November 15, 2021 (EST)

<p>8:00am - 8:10am</p>	<p>Opening General Session</p> <ul style="list-style-type: none"> Welcome/Chapter Introductions <i>Dr. Liang Yuan and Conference Chair Shimin Liu</i> <p>Join through zoom link: https://psu.zoom.us/j/96780665773?pwd=VElWSi94M2VYRGV0Y3VCWWxxOUVMUT09</p>	
<p>8:10am - 10:30am</p>	<p>Keynote Session <i>Chaired by Dr. Shimin Liu, Penn State</i></p> <p>Join through zoom link: https://psu.zoom.us/j/96780665773?pwd=VElWSi94M2VYRGV0Y3VCWWxxOUVMUT09</p>	
<p>8:10am - 8:40am</p>	<p>Occupational Health Challenges in China's Mining industry and Countermeasures</p> <p><i>Liang Yuan, Professor, Academician of Chinese Academy of Engineering, President of Anhui University of Science and Technology</i></p>	
<p>8:40am - 9:20am</p>	<p>Mine Dust Research Gaps Based on NASEM Report and Lessons Learned for Dust Characterization</p> <p><i>Emily Sarver, Associate Professor, Virginia Tech</i></p>	
<p>9:20am - 10:00 am</p>	<p>Characterization of Particulates in Australian Mines</p> <p><i>Nicky LaBranche, Researcher, University of Queensland</i></p>	
<p>10:00am - 10:30 am</p>	<p>Prevalence of Pneumoconiosis and Counter Measures in China Coal Mines</p> <p><i>Jun Ma, Professor, Secretary General of China Occupational Safety & Health Association (COSHA)</i></p>	
<p>10:30am - 10:50am</p>	<p>Break/ Breakroom Networking</p>	
<p>10:50am - 12:10pm</p>	<p>Technical Session 1 Dust and Aerosol Characterization I <i>Chaired by Dr. Long Fan, Penn State</i></p> <p>Join through zoom link: https://psu.zoom.us/j/94322018216?pwd=UU1zVm5OdWpNRVdMZlCYjgxYlo2dz09</p>	

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10:50am - 11:10am	<p>Segregation Of Respirable Dust for Chemical and Toxicological Analyses <i>Teresa L. Barone, Chemical Engineer at Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Pittsburgh</i></p>	
11:10am - 11:30am	<p>Toxicity of Respirable Coal Mine Dust: Study of Metals Dissolution of RCMD in Lung Fluids <i>Pedram Roghanchi, Assistant Professor, New Mexico Tech University</i></p>	
11:30am - 11:50am	<p>Air Quality Monitor and Control in Underground Coal Mines- A Case Study <i>Sheng Xue, Professor, Anhui University of Science and Technology</i></p>	
11:50am - 12:10 pm	<p>Study on Acceleration Characteristics of Compound Flame of Gas / Coal Dust Explosion <i>Pei Bei, Professor, Henan Polytechnic University</i></p>	
10:50am - 12:10pm	<p>Technical Session 2 Best Practices for Dust Control I <i>Chaired by Dr. Ang Liu, Penn State</i> Join through zoom link: https://psu.zoom.us/j/92644110916?pwd=T2I2eVJlVk9vU3VlMwxsRDFmc0dBdz09</p>	
10:50am - 11:10am	<p>Status investigation of the occupational hazards of industrial dust and the institutions of dust control in China <i>Longzhe Jin, Professor, University of Science and Technology Beijing</i></p>	
11:10am - 11:30am	<p>Prevention and Control Technology of Typical Dust Sources in Metal Mines <i>Gang Li, Professor and Chief Engineer, SINOSTEEL</i></p>	
11:30am - 11:50am	<p>Experimental Investigation on Highly Efficient Collection and Cleaning for Fine Coal Dust Particles by Dry-Wet Mixed Chemical Method <i>Gang Zhou, Professor, Shandong University of Science and Technology</i></p>	

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11:50am - 12:10pm	<p>Water Injection into Coal Seam and Its Implication on Dust Control <i>Yanbin Yu, Associate Professor, Shandong University of Science and Technology</i></p>	
12:10pm - 1:00pm	Lunch Break	
1:00pm - 2:40pm	<p>Technical Session 3 Dust and Aerosol Health Effects and Regulatory Policy <i>Chaired by Dr. Jiang Hua, NIOSH</i> Join through zoom link: https://psu.zoom.us/j/96559932383?pwd=aW5xN3k5eHpDcFNqZ0pNaW5DclpRZz09</p>	
1:00pm - 1:20pm	<p>Lung-Based Exosomal Inhibition Mediates Systemic Impacts Following Mine-Site Derived Particulate Matter Exposure <i>Katherine Zychowski, Assistant Professor, The University of New Mexico</i></p>	
1:20pm - 1:40pm	<p>Improving Self-Efficacy in Care of Miners by Multidisciplinary Groups Via Virtual Community Partnerships <i>Kevin Vlahovich, MD, The University of New Mexico</i></p>	
1:40pm - 2:00pm	<p>Particulate Matter: Fine and Ultrafine - How Emerging Data on Engineered Nanomaterials May Change How We Regulate Worker Exposures to Dust <i>Jeremy M. Gernand, Associate Professor, Penn State University</i></p>	
2:00pm - 2:20pm	<p>Toxicity of the Respirable Dust - An Overview <i>Eskanolou Amir, Graduate Student, Penn State University</i></p>	
2:20pm - 2:40pm	<p>An Investigation of RCMD and RCS in the U.S. Underground and Surface Coal Mines <i>Elham Rahimi, Graduate Student, Penn State University</i></p>	
2:40pm - 3:00pm	Break/ Breakroom Networking	

<p>3:00pm - 5:00pm</p>	<p>Technical Session 4 Dust Generation and Transport <i>Chaired by Guang Xu, Missouri S&T</i> Join through zoom link: https://psu.zoom.us/j/93691365278?pwd=MmV5emFPbWNkMk8xb1VXY2lwRlpKQT09</p>	
<p>3:00pm - 3:20pm</p>	<p>Dust in Mining Environment, Control Standards, and Research on Drilling Dust <i>Yi Luo, Professor, West Virginia University</i></p>	
<p>3:20pm - 3:40pm</p>	<p>Development of a Roof Bolter Drilling Control Process to Reduce the Generation of Respirable Dust <i>Hua Jiang, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Pittsburgh</i></p>	
<p>3:40pm - 4:00pm</p>	<p>Airborne Dust Generation and Dispersion Due to Remote LHD Mucking in An Open Stope of A Mechanized Underground Metalliferous Mine <i>Paluchamy B., Indian Institute of Technology (Indian School of Mines) Dhanbad</i></p>	
<p>4:00pm - 4:20pm</p>	<p>The Fate of Inhaled Uranium-Containing Dust Upon Clearance to Human GI Tract <i>Milton Chandra Das, Graduate Student, New Mexico Institute of Mining and Technology</i></p>	
<p>4:20pm - 4:40pm</p>	<p>Simulation Study on Multi-phase Coupling Law of Airflow-Droplet-Dust in Fully Mechanized Mining Face <i>Haiming Yu, Lecture, Shandong University of Science and Technology</i></p>	
<p>4:40pm - 5:00pm</p>	<p>A Systematic Review of Occupational Exposure to Respirable Coal Mine Dust (RCMD) in the Mining Industry <i>Younes Shekarian, Graduate Student, Penn State University</i></p>	

Tuesday, November 16, 2021 (EST)

<p>8:00am - 10:20am</p>	<p>Keynote Session <i>Chaired by Dr. Shimin Liu, Penn State</i> Join through zoom link: https://psu.zoom.us/j/96740681607?pwd=bU9LMUdPQmd4amdYRC9qY1JjQWFNdz09</p>	
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8:00am - 8:30am	<p>Dust Control Theory and Technical Equipment System of Difficult Wetting Coal Seam in Mining Face <i>Weimin Cheng, Professor, Shandong University of Science and Technology</i></p>	
8:30am - 9:10am	<p>Overview of Respirable Crystalline Silica (RCS) Air Sampling and Laboratory Analysis <i>Keith Rickabaugh, CIH, Technical Director at RJ Lee Group</i></p>	
9:10am - 9:50am	<p>NIOSH Mining Research for Respirable Coal and Silica Dust <i>Randy Reed, Office of Mine Safety and Health Research, NIOSH</i></p>	
9:50am - 10:20am	<p>Health hazards and precise prevention of industrial silica dust <i>Weihong Chen, Professor, Huazhong University of Science and Technology</i></p>	
10:20am - 10:40am	Break/ Breakroom Networking	
10:40am - 12:00pm	<p>Technical Session 5 Dust and Aerosol Characterization II <i>Chaired by Dr. Long Fan, Penn State</i> Join through zoom link: https://psu.zoom.us/j/92683561004?pwd=MXNaT1YzNVhwTjl2MW0rRWYwLzZkUT09</p>	
10:40am - 11:00am	<p>Study on the Dust Control Technology of Surfactant-Magnetized Water in the Underground Coal Mine <i>Botao Qin, Professor, China University of Mining and Technology</i></p>	
11:00am - 11:20am	<p>Characterization of Mine Dust Using Automate SEM Techniques <i>Gary Casuccio, Senior Scientist & Vice President, RJ Lee Group</i></p>	
11:20am - 11:40am	<p>Characterization of Nano-to-Micron Sized Respirable Coal Dust: Particle Surface Alteration and the Health Impact <i>Shimin Liu, Associate Professor, Penn State University</i></p>	

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11:40am - 12:00pm	<p>Introduction of the IJCS&T and Special Issue on Mine Dust Control <i>Wanjie Wang, Managing Editor of IJCS&T</i></p>	
10:40am - 12:00pm	<p>Technical Session 6 Best Practices for Dust Control II <i>Chaired by Dr. Sekhar Bhattacharyya, Penn State</i> Join through zoom link: https://psu.zoom.us/j/93975680429?pwd=cGdLQTNzOE1XeEtbWV5ZlRmVHBqQT09</p>	
10:40am - 11:00am	<p>Shot-Crete Technology and Dust Control: Research and Application <i>Lianjun Chen, Professor, Shandong University of Science and Technology</i></p>	
11:00am - 11:20am	<p>Study on the Law of Dust Pollution and High Efficient Control Technology in Fully mechanized Excavation Face of Coal Mine <i>Wen Nie, Professor, Shandong University of Science and Technology</i></p>	
11:20am - 11:40am	<p>Dust Generation Mechanism During Coal Cutting by Roadheader <i>Hetang Wang, Professor, China University of Mining and Technology</i></p>	
11:40am - 12:00pm	<p>Effects of Solid Inertants on the Dispersion and Deflagration of Combustible Dust Clouds <i>Chunmiao Yuan, Associate Professor, Northeastern University, China</i></p>	
12:00pm - 1:00pm	<p>Lunch Break</p>	
1:00pm - 3:00pm	<p>Technical Session 7 Best Practices for Dust Control III <i>Chaired by Dr. Mohammad Rezaee, Penn State</i> Join through zoom link: https://psu.zoom.us/j/94401935955?pwd=TVl6a0lRelZ2T3U5SG1RWU9wNytCZz09</p>	

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1:00pm - 1:20pm	<p>Effectiveness of Filtering Facepiece Respirators and Elastomeric Half-mask Respirators against Nanoparticles <i>Xinjian He, Professor, China University of Mining and Technology, China</i></p>	
1:20pm - 1:40pm	<p>Air Curtain Technology and Equipment for Workplace Dust Control of Unable Enclosed Spaces <i>Xiaochuan Li, Associate Professor, China University and Mining Technology</i></p>	
1:40pm - 2:00pm	<p>Wireless Measurement of Respirable Dust Using Inexpensive Sensors in Surface Mines <i>William A. Groves, Associate Prosser, Penn State University</i></p>	
2:00pm - 2:20pm	<p>Calibration Of Low-Cost PM Sensors for Coal Dust Monitoring <i>Guang Xu, Associate Professor, Missouri University of Science and Technology</i></p>	
2:20pm - 2:40pm	<p>Mine Dust Exposure Monitoring and Control of the Future <i>Belle Bharath, Technical Manager of Anglo American Group's Coal Business; Adjunct Professor of Mining Engineering at the University of New South Wales, University of Queensland and the University of Pretoria</i></p>	
2:40pm - 3:00pm	<p>Resonator-based Wearable Respirable Dust Monitor (WEARDM) for Coal and Silica Dust Monitoring in Underground Mines <i>Igor Paprotny and Dr. Mandana Hajizadehmotlagh, Associate Professor, University of Illinois at Chicago.</i></p>	
3:00pm - 3:30pm	<p>Break/ Breakroom Networking</p>	
3:30pm - 5:30pm	<p>Roundtable Discussion Chaired by Dr. Barbara Arnold, Penn State Join through zoom link: https://psu.zoom.us/j/98369600894?pwd=Q1pMaWNQNQVlraSt6YlVpOVlmdDnsUT09</p>	
	<p>Location (in-person): Room C213, Energy Institute</p> <p>Participants:</p> <ul style="list-style-type: none"> • <i>Joseph Sbaffoni, JAS Mine Consulting LLC</i> • <i>Barb Arnold, Professor in Practice, Penn State</i> • <i>Shimin Liu, Associate Professor, Penn State</i> • <i>William Groves, Associate Professor, Penn State</i> 	

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- **Randy Reed**, NIOSH
- **Jake Wells**, Rosebud Mining
- **Teresa L. Barone**, NIOSH
- **William Hudak**, Pennsylvania Department of Environmental Protection
- **Tom Richard**, Director of IEE, Penn State
- **Cheryl Spellman**, Pennsy Supply Inc
- **Belle Bharath**, Technical Manager of Anglo American Group's Coal Business
- **Tim Burgess**, JH Fletcher
- **Garron Ross**, JH Fletcher
- **Greg Hinshaw**, JH Fletcher
- **Guang Xu**, Missouri University of Science and Technology
- **Gary Casuccio**, RJ Lee Group
- **Keith Rickabaugh**, RJ Lee Group