In order to celebrate the 25th anniversary of the conference series, retrospective papers on various topics are invited for presentation and publication in the proceedings. Those papers are printed in bold-italic face in this brochure.

Final acceptance of all the papers listed below is contingent upon review of final papers by the Steering Committee. Approximately 41 papers will be selected for presentation at the conference and all others will be presented in the poster sessions. Both presentation and poster papers will be included in the Proceedings.

**Coal Pillar**


**Coal Pillar Extraction**

5. Successful Application of Rock Bolt Support and Mechanised Depillaring in Difficult Roof Conditions at Tandsi Mine, Western Coalfields, India, D. Oldroyd and D. Bigby, Rock Mechanics Technology Ltd, United Kingdom and J. Leeming, Joy Mining Machinery Ltd, United Kingdom.
7. Investigation of the Stability of a Pillar Retreat Section at the Fletcher Mine, D. Tesarik, J. Seymour, L. Martin, F. Jones, T. Yanske, NIOSH - Spokane Research Lab, Spokane, WA.
In-situ Horizontal Stress


Ground Control in Australia

9. *25 Years of Ground Control Developments, Practices and Issues in Australia (or “25 Years of Keeping it Up, Down Under”),* B. Hebblewhite, University of New South Wales, Australia.
11. Main Gate Roof Support Design and Management During Longwall Retreat in the Australian Coal Industry, R. Thomas and C. Wagner, Strata Engineering (Australia) Pty Ltd, Australia.
12. Why Uniaxial Compressive Strength and Young’s Modulus May Be Largely Irrelevant to Roadway Roof Stability – Except in the Tailgate, R. Frith, University of New South Wales, Australia and M. Colwell, Colwell Geotechnical Services, Australia.
13. We Thought it was 200m, Now an Insight Into Why and How to Use This Information for Future Analytical Design, M. Colwell, Colwell Geotechnical Services, Australia and R. Frith, University of New South Wales, Australia.

Ground Control in Europe


Ground Control in South Africa


Roof Bolting
19. *Twenty-Four Conferences; More Than One-Hundred and Seventy Papers; Understanding Roof Bolt Selection and Design Still Remains Priceless, S. Tadolini, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA and R. Mazzoni, MSHA Technical Support, Pittsburgh, PA.*


21. Evaluation of Bore Hole Rifling Bolts at the San Juan Coal Mine, L. Giraldo, S. Cotten, and J. Farrand, Raytheon UTD, Springfield, VA.


**Roof Bolting – Resin**


25. Characterization of Internal Insertion Pressure During Installation of Fully Grouted Bolts, L. Giraldo, S. Cotten, J. Farrand, Raytheon UTD, Springfield, VA.

26. Load Capacity and Bond Interaction of Fully Resin-Grouted Rock Bolts, N. Slatalla and M. Alber, Ruhr University, Germany.


**Computer Modeling**

28. *25 Years of Progressive in Numerical Modeling for Ground Control – What Have We Accomplished and Where Do We Go Next? K. Heasley, West Virginia University, Morgantown, WV.*


30. Verification of Mine Designs and Modeling Technologies for Controlling Mining Induced Seismicity, H. Maleki, Maleki Technologies, Inc., Spokane, WA.

31. Detailed Stress Analysis of Longwall Panels, K. Morsy and S. Peng, West Virginia University, Morgantown, WV.


**Standing Support/Shield**

33. *A Retrospective Assessment of Longwall Roof Support with a Focus on...*
Challenging Accepted Roof Support Concepts and Design Premises, T. Barczak, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA.

34. Towards a Real Time Response to Changing Strata Conditions on a Longwall, R. Trueman and G. Lyman, University of Queensland, Australia and M. Callan and B. Robertson, Anglo Coal Australia Pty Ltd, Australia.


Inundation


38. Evaluation of Inrush Potential at Broadmeadow Mine, B. Coutts, BHP Mitsubishi Alliance, Australia.

Impoundment


Geophysics

40. Reflections on the Application of Geophysics to Ground Control, P. Hatherly, University of Sydney, Australia.


42. Electrical Measurements of Coal Measure Rocks for Electromagnetic Applications in Mining Industry, N. Boykov, West Virginia University, Morgantown, WV, H. Tehrani and L. Stolarczyk, Stolar Horizon, Inc., Raton, NM, and Y. Luo and S. Peng, West Virginia University, Morgantown, WV.


Geology

Rusnak, Peabody Energy, St. Louis, MO.


46. Identifying Moisture-sensitive Roof Rocks in Coal Mines, G. Molinda and D. Oyler, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA and H. Gurgenli, West Virginia University, Morgantown, WV.

47. Geo-mechanical & Weathering Properties of Weak Shales, H. Gurgenli and S. Peng, West Virginia University, Morgantown, WV.


Cutting Fragmentation


50. Application of Electrohydrodynamic Method and High-pressure Water Jets as Non-blasting Alternative of Rock Breaking and Splitting in Open Pits, K. Kotwica and J. Res, University of Mining and Metallurgy, Poland.

Longwall

51. Advancements in the Use of High-Modulus Polymer Mining Grids to Speed Longwall Recovery, T. Bailey, Huesker, Inc., Charlotte, NC.

52. Monitoring of Strata Behaviour in Shallow Longwall Panel – A Case Study, S. Sharma, Banaras Hindu University, India and U. Sankar and M. Venkataramaiah, No. 5 Incline Group of Mines, India.


Longwall Pre-driven Recovery Room


Top Coal Caving
56. Study of Sub-level Caving Technology in Extremely Thick Coal Seam, H. Nan, Henan Polytechnic University, China and Y. Zhou, Henan Polytechnic University and China University of Mining and Technology, China.

**Multi-seam**

57. The Analysis on Strata Stress of Multi-coal Seam Strip Mining, J. He and K. Deng, China University of Mining Technology, China.


59. Multiple Seam Mining Interactions – Case Study, K. Morsy and S. Peng, West Virginia University, Morgantown, WV.

60. Multiple Seam Mining Feasibility Using the LaModel Stress Analysis Program, R. Hardy and K. Heasley, West Virginia University, Morgantown, WV.

**Mine Design**


63. Empirical Mine Design for Western Underground Metal Mines, T. Brady, NIOSH – Spokane Research Lab, Spokane, WA, R. Pakalnis, University of British Columbia, Canada, and L Martin, NIOSH – Spokane Research Lab, Spokane, WA.

**Subsidence**

64. Quality Assurance During the Processing of Mining-induced Subsidence Damages and Research Work Concerning Mining Subsidence Engineering in the German Hard Coal Mining, P. Fischer and M. Hegemann, Deutsche Steinkohle AG, Germany, A. Preusse, RWTH Aachen University, Germany, A. Sroka, Freiberg University of Mining & Technology, Germany, and H. Kateloe, RWTH Aachen University, Germany.

65. Numerical Modelling of Mining Induced Subsidence in Areas of High Topographic Relief, W. Keilich, University of Wollongong, Australia.

66. Study on the Subsidence Character of the Strata in the Weak Rock Mine Under Special Mining Condition, W. Zhang and H. Zhang, Shandong University of Science and Technology, China, Z. Wang, Dalian University of Technology, China, and C. An, Shandong University of Science and Technology, China.

67. Physical Simulating on Movement Law and Stability of Water Confining Strata of Subsurface Overburden in Shallow Seam Mining, Q. Huang, Xi’an University of Science and Technology, China.

68. Fractal Characteristics of Ground Subsidence and its Application, D. Zhang, G. Yin, and H. Wang, Chongqing University, China.
Ground Control

69. The Pressure Arch Theory – History, Past Use, and Current Application as a Conceptual Model, A. Iannacchione and E. Esterhuizen, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA.
71. Load Capacity and Stiffness Characteristics of Screen Materials Used for Surface Control in Underground Coal Mines, D. Dolinar, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA.
72. Assessment of Underground Coal Bed Production Trends and Roof Fall Risks, K. Zipf, Jr. and D. Pappas, NIOSH – Pittsburgh Research Lab, Pittsburgh, PA.
73. Experimental Study on Strength and Deformation Characteristics of Coal Under Cyclic Loading, Y. Yang, S. Chen, and J. Chu, Shandong University of Science and Technology, China.
74. An Easy Method of Computation of Rock Mass Rating – The Need of the Hour, T. Das, University of Science & Technology, Poland and N. Dey, Bengal Engineering and Science University, India.
75. Correlation of Acoustic Emission (A.E.) with Physical and Mechanical Properties of Different Types of Rock and Coal Specimens, B. Mishra and A. Khair, West Virginia University, Morgantown, WV.