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**CONFERENCE PROGRAM**

**Resource Operators Conference**

**8-9 February 2024**

McKinnon Building 67

 Co-host

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| **Thursday 8th February 2024** |
| **7.30 - 8.00 am Registration and Coffee** |
| **8. - 8.30 am Welcome and Plenary- Chair: *Naj Aziz***  |
| * **Welcome to the University and opening remarks**: **Senior** **Professor Gursel Alici, Faculty of Engineering and Information sciences, University of Wollongong,**
* **Conference Co-host by Professor Shangjiu Meng, Vice-Chancellor Heilongjiang University of Science and Technology, China**
 |
|  ***8.30 - 10.30 am Technical Session I - Special session. Chairs: Naj Aziz / Kevin Marston*** |
| **1. Keynote Speaker: Professor Ismet Canbulat:** Mining Engineering Education – The Past, Current And Future Trends**2. Ray Tolhurst:** Trends In Mining Education, Recruitment And Employee Development**3. Professor Brian Smart:**  What Future For The Mining Engineer, Society And Humankind?* ***Special Discussion on mining education***
 |
| **10.30 - 11.00 am Morning Tea** |
| **11.00 - 12.40 pm Technical Session II - Chairs:  *Ross Seedsman/ John Hoelle*** |
| **4. Tianctheng Zhang, Zhongwei Chen, Quanle Zou:** Adsorption And Modification Behaviour Of Silica Nanofluid On Coal And Its Injection Enhancement Mechanism**5.** **James Anderson, Ismet Canbulat, Serkan Saydam:** Variations In The Mechanical Properties Of Coal Related To Structural Deformation And Burst Events**6**. **Xiaohan Yang, Mehdi Serati, Paul Buddery:** Coal Strength Measurement By Stereo Digital Image Correlation **7. Warren Roach:** PCD Bit Developments To Improve Bolt Load Transfer And Decrease Drilling Times |
| **12.40 - 1.30 pm Lunch**  |
| **1.30 - 3.40 pm Technical Session III - Chair:  *Samantha Grimsey / Brian Smart*** |
| **8**. **Terry Medhurst, Adrian Moodie, Brian Vorster.**Characterisation Of Roof Behaviour And Primary Support Response At Ulan West Mine**9. Richard Campbell, Kyle Mclennan, Andrew Seccombe, Kerri Smit:** A Case Study Of Coal Seam UIS Hydraulic Fracturing Practices And Resultant Mining Conditions**10. Ken Mills:** Influence Of Seam-Level Bedding Plane Shears On Overburden Behaviour Around Underground Coal Mines**11. Barry Smart:** Maximising The Value Of Mining Data Using Artificial Intelligence (AI) |
| **3.40 ­- 4.00 pm Afternoon Tea**  |
| **4.00 - 6.00 pm Technical Session IV – *Adam Raine / Pabasara Kumari*** |
| **12. Kent McTyer:** Performance Of New And Improved Pumpable Crib Bags (Pcbs) For Longwall Gate Road reinforcement **13. Mohsen Dehghanipoodeh, Hossein Masoumi, Javad Hashemi:** Component-Level Material Characterization of Timber Chocks**14. Tim Gibbons:** Issues affecting uranium mining in the 21st century**15. Osvaldo Vallati**, **Bradley Darlington, Peter Young:** Xcell Cyclops: The Experience of Measuring Convergence in Hard Rock Mines |

**Conference Dinner 7.00 for 7.30 pm; Lucia by the sea, 16 Cliff Rd, Wollongong**

**Tserenbaljir Serchmaa, Ulziibayar Oyunkhuu, Natsagdorj Zulaa, Udanbor Batsanaa, Damba Badamgarav**:Open-pit Mining Auto Transport Data Processing**ollongong NSW 2500**

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**Supporters**



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| **Friday 9th February 2024** |
| **8.00 - 10.30 am Technical Session V - Chair: Basil Beamish / Adrian Rippon** |
| **16.** **Jiangwan He, Mehdi Serati, Martin Veidt, Alessandro Carcione:** Active Ultrasonic Monitoring of Damage Progression in Coal Under Uniaxial Compression**17.**  **William Sloan, Michael Desira, Tim Huston:**Optimising Adjacent Goaf Drainage Operations by Utilising Automated Control Logic at Kestrel South Mine**18. Adel Mottahedi, Naj Aziz , Ali Mirzaghorbanali, Sina Anzanpour, Alex Remennikov:** Aspects of Testing Tendon Supports for Strength, Effective Installation, and Performance in Different Ground Formation**19.** **Borya Orkhontuul, Bayaraa Byambadagva, Baldan Purevtogtokh, Udanbor Uyansanaa, Damba Badamgarav:** Determinationof Fuel Consumption of Dump Trucks Depending On Mining And Technical Conditions**20. Pabasara Wanniarachchige:** Investigating The Potential Of Mine-Based Geothermal Energy Systems |
| **10.30 - 11.00 am Morning Tea** |
| **11.00 - 12.30 pm Technical Session VI- Chairs: Richard Campbell /Ali Mirzaghorbanali**  |
| ***21.* Jan Theiler and Basil Beamish:** Spontaneous Combustion Hazard Likelihood Assessment of Low Reactivity Coals**22. Jessica Juric and Russell Thomas:** Application of a Protodyakonov Test from Gas Drainage Core Samples and Correlation of Results to Empirically Observed Outburst Risk**23. Ben Blacka, Adrian Rippon, Nick Le Baut:** Measurements of the Height of Fracturing and Height of Depressurisation Above a Longwall Panel |
| **12.30-1.30 pm Lunch**  |
| **1.30 – 3.00 pm Technical Session VI- Chairs: Xue-qiu He / Jan Nemcik** |
| **24. Alireza Entezam,Hadi Nourizadeh, Ali Mirzaghorbanali, Polly Burey, Tristan Shelley, Naj Aziz:** Application Of Waste Glass Powder In Cementitious Grouts**25.** **Petr Waclawik, Radovan Kukutsch, Martin Vavro**: The Influence Of Drilling Technology On The Qualitative Assessment Of The Rock mass**26. David Walker, Ernest Baafi, Senevi Kiridena:** A Simulation Model to Access the Impact of Underground Coal Mine Logistics Strain on an Operation |
| **3.30 pm Conference Closure** |
| ***Additional accepted papers in the conference will be published online******27. Lei Zhang, Xiaochuan Yuan, Naj Aziz, Yongcheng Liu: Experimental Study On Stress-Seepage*** *Characteristics Of Fractured Shale From The Longmaxi Formation In China****28. Luke Chase-Dunlop, Ernest Baafi:*** *Effects Of Pumping Infrastructure On Mine Production During Wet Season – A Case Study****29. Rastegarmanesh, Ashkan Rastegarmanesh, Ali Mirzaghorbanali, Kevin Mcdougall, Naj Aziz, Sina Anzanpour, Hadi Nourizade:*** *Finite Element Modelling Of Fully Encapsulated Cable Bolts In Laboratory Large Scale Pull Out Test****30.******Muhannad Al Kalbani, Mehdi Serati, Harald Hofmann, Thierry Bore:*** *A Niche Application Of Permanent CO2 Disposal From Coal-Fired Power Stations Via Mineralisation In Proximal Mafic And Ultramafic Deposits****31****.* ***Shima Entezam, Behshad Jodeiri Shokri, Hadi Nourizadeh, Peter Gregor, Alireza Entezam, Ali Mirzaghorbanali, Kevin Mcdougall, Waru Karunasena,*** *Naj Aziz:**Investigating The Axial And Shear Performance Of Fiberglass Rock Bolts****32. Behshad Jodeiri Shokri, Ali Mirzaghorbanali, Waru Karunasena, Kevin Mcdougall, Naj Aziz, Shima Entezam, Hadi Nourizadeh, Amin Motallebiyan, Alireza Entezam:*** *Finite Element Simulation Of Fully Grouted Rock Bolts Behaviour Across Varied Bore Hole Diameters****33.******Adel Mottahedi, Naj Aziz, Alex Remennikov, Mohammad Ataei:*** *Coal Burst Phenomenon In Underground Coal Mining; Triggering Mechanisms And Causative Factors****34.******Gantulga S, Tsend-Ayush Ts, Sarnai A, Altantuya B****: Preliminary Determination Of Copper Recovery In The Leaching Process Of Erdenetiin-Ovoo Oxidized Ore Deposit* ***35. Borya Orkhontuul, Tsend-Ayush Battsetseg, Tserenbaljir Serchmaa, Ulziibayar Oyunkhuu, Natsagdorj Zulaa, Udanbor Batsanaa****:**Open-Pit Mining Auto Transport Data Processing****36. Shima Entezam, Behshad Jodeiri Shokri, Hadi Nourizadeh, Alireza Entezam, Ali Mirzaghorbanali, Kevin Mcdougall, Naj*** ***Aziz:*** *Comparative Analysis Of Axial Performance In Rock Bolting: Assessing GFRP And Steel Bolts****37. Yujie Peng, Dazhao Song, Xueqiu He, Liming Qiu, Anhu Wang, Gang Yang, Litao Wang, Limin Qie:****Coal And Gas Outburst* *Risk Zones Division Method Based On Quantitative Coupling Of Gas And Stress: A Case Study In The Juji Coal Mine, China****38. Belle Bharath, Hsin Wei Wu, Yonggang Jin, P Wild, M Webber, Gama Gamato:*** *What Is The Value Of Inhalable Coal Dust Exposure Monitoring?* ***39. Itmam Abedin, Ting Ren:*** *Influence Of Water Saturation Duration On The Mechanical Properties And Toughness Index Of Australian Coal****40. Zhupeng Jin, Feiyang Liu, Xianshun Fan:*** *Research On The Role Of Residual Coal Pillars In Coal Seam Mining And The Control Of Surrounding Rock In Top Excavation Tunnels****41. Xiao Fukun，Gao Yiren：****Damage Evolution Of Dry And Saturated Porous Rock Samples Under Cyclic Loading And Unloading****42. Zhijun Liu， Dong Yang， Jixi Shao， Yaoqing Hu:*** *Evolution Of Pore Connectivity In Fushun Oil Shale Analyzed By Low-Field Nuclear Magnetic Resonance Spectroscopy* ***43. Wei Li, Huaguang Liu, Shaojun Dai, Zhupeng Jin, Qiyuan Shan:*** *Research On The Preparation And Management System Of Coal Mine Operating Procedures****44. Gang Liu, Dongwei Wang, Zhitao Yang:*** *Mechanical**Properties And Acoustic Emission Characteristics Of Triclinic Sandstone Under Bias Conditions****45. Tian Tian Du, Hong Peng Yu, Yue Qu, Yan Xia Wang:*** *Study Of Organic Geochemical Characteristics Of Mudstones Of The Ershi'erzhan Formation In The Mohe Basin****46. Kaijun Liu, Fei Huang, Shang Gao, Zhibin Zhang, Baigao An, Yongli Li:*** *Characteristics And* *Research Significance Of* *Polymorphic*  *Pyrites* *In The Logatchev Area, Mid-Atlantic Ridge****47.*** ***Chuanhai Liu, Hongda Lu, Baoyong Zhang, Qiang Wu, Huiming Han:*** *Experiment on gradient depressurization gas hydrate breakdown in sediments with varied saturation levels****48. Gang Yang, Dazhao Song, Man Wang, Minggong Guo, Linming Qiu, Xueqiu He, Yingjie Zhao, Feng Shen:*** *The Mechanism of coal and gas outburst induced by* *support body overall instability in normal fault tectonic coal zone****49. Qiang Liua, Liming Qiua, Dazhao Songa, Zhenlei Lia, Yi Zhua, Jintao Danga:*** *Analysis of apparent resistivity change during waterproof coal pillar seepage based on finite element method* |