

**Conf. Mascot Lucidna**

**CONFERENCE PROGRAM**

**Resource Operators Conference**

**9-10 February 2023**

McKinnon Building 67





|  |
| --- |
| **Thursday 9th February 2023** |
| **7.30 - 8.150 am Registration and Coffee** |
| **8.15 - 8.30 am Welcome and Plenary- Chair: *Naj Aziz*** |
| **1. Special Industry Guest Speaker – Peter Baker, Vice President Operations, South32:**  An overview of South32 operations in Illawarra |
| **9.0 - 10.30 am Technical Session I - Chairs: Yvette Heritage / Eleonora Widzyk-Capehart** |
| **2. David Walker, Ernest Baafi, Senevi Kiridena:** An approach to solve underground coal mine logistics strain  **3. Richard Campbell, Ravindu Goonawardene, Ismet Canbulat:** The optimisation of ground consolidation practices in longwall coal mining applications  **4. Ken Mills, Stephen Wilson:** Observations of multi-seam subsidence at Ashton underground mine |
| **10.30 - 11.00 am Morning Tea** |
| **11.00 - 12.30 pm Technical Session II - Chairs:  *Jan Nemcik / John Hoelle*** |
| **5. Ian Gray, Tim Gibbons**: A structural engineering approach to longwall rock mechanics in massive structure  **6.** **Gaetano Ventichenque:** 3D rock failure modelling of pillar behaviour during longwall retreat into normal and angled design gas drainage stubs  **7. Xiaohan Yang, Mehdi Serati, Paul Buddery:** Brittle-ductile transition in coal pillar failures |
| **12.30 - 1.30 pm Lunch**  **8. Special Industry Guest Speaker - Gerald Linde, General Manager, Whitehaven Coal:** Overview Narrabri coal operations – challenges and future plans. ***Introduction by Naj Aziz***  *[Introduction by Naj Aziz]* |
|  |
|  |
| **2.00-3.30 pm Technical Session III - Chair: Richard Campbell** |
| **9**.  **Alex Remennikov, Edward Chern Jinn Gan:** Defining explosion risk exclusion zones around coal mine openings in emergency situation  **10. Dennis Black:** Outburst control in the Wongawilli seam  **8. 11. Frank Hungerford:** Reduction of fugitive methane emissions from open cut coal mines |
| **3.30 ­- 4.00 pm Afternoon Tea** |
| **4.00 - 6.00 pm Technical Session IV -  *Ali Mirzaghorbanali* / Adam Raine** |
| **12. Mark Kleinhans, Glenn Aitchison,:** Fighting mine fires with a small turbine engine  ***13.*  Sebastian D’Hyon, Shevaune Zeng:** Alternative spontaneous combustion testing methods  **14. Jon Roberts, Rongfu Liao, Ming Qiao, David Hastie, Peter Wypych:** Research into the selection and efficiency of nozzles for airborne dust suppression  **15. Ting Ren, Ming Qiao, Jon Roberts, Jennifer Hines:** Monitoring and computational modelling of ventilation and dust flow in development panel |

**Conference Dinner 7.00 for 7.30 pm; Lucia by the sea, 16 Cliff Rd, Wollongong NSW 2500**

**Sponsors**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **C:\Users\User\Pictures\thumbnail_Jennmar Logo 2021.jpg** | | DSI Underground Chile SpA (DSI Underground) - BNamericas | |  | | |
|  | C:\Users\User\Pictures\Sigra logo2013.png | |  | |  |  | |

|  |
| --- |
| **Friday 10th February 2023** |
| **16. 8.00 am A Keynote Speaker: Charlie Li:** Energy sources of rock burst and the influence of the surrounding rock mass - **Introduction by Naj Aziz** |
| **8.30 - 10.30 am Technical Session V - Chair: Ian Gray/  *Dennis Black*** |
| **17. Peter Craig, Matthew Holden:** Pumpable two-part resin cable bolt bonding material tests  **18. Kent McTyer:** Practical tests of the impact of mixing time and cure time on resin-anchored rock bolts  **19. Sina Anzanpour, Naj Aziz, Jan Nemcik, Ali Mirzaghorbanali, Alex Remennikov:** An update on load transfer characteristics of tendon under static and dynamic test conditions  **20. Hadi Nourizadeh, Ali Mirzaghorbanali, Naj Aziz, Kevin McDougall, Behshad Shokri Jodeiri, Ali Akbar Sahebi, Amin Mottalebiyan, Shima Entezam:** Finite element numerical modelling of rock bolt axial behaviour subject to different geotechnical conditions |
| **10.30 - 11.00 am Morning Tea** |
| **11.00 - 1.00 pm Technical Session VI - Chair:  *Peter Craig / Kevin Marston*** |
| **21. Vihanga Peiris, Kai Zhao, Binghao Li, Henry Gong, Aruna Seneviratne:** Preliminary studies of an energy efficient BLE wireless network for underground positioning systems  **22. Yangguang Han, Kumari W.G.P, Lloyd White, Dominique Tanner, Titus Murray:** Investigating a potential geothermal play in the southern Sydney Basin  **23.**  **David Walker, Chris Harvey, Ernest Baafi, S Kiridena, Ian Porter:** Movement of personnel and materials in Australian underground coal mine  **24.**  **Petr Waclawik, Radovan Kukutsch, Kristyna Schuchova, Jan Nemcik,Andrzej Walentek, Alexander Wrana, Sahendra Ram:** Deformation analysis in the surroundings of the roadway ahead of longwall mining, Staszic-Wujek Mine, Poland |
| **End of Technical Presentation and Conference Closure** |
| **BBQ at Lawn** |
| **ADDITIONAL PAPERS**  ***Additional papers in the conference proceedings are also published online***  **25. Zhenjun Shan, Ting Ren, Douglas Pateman, Guanzheng Wu, Jan Nemcik, Hongchao Zhao, Xiaohan Yang:** Experimental study on the uniaxial compressive behaviour of a FRP standing support  **26. Sadjad Mohammad, Mohammad Atae, Reza Kakai, Ali Mirzaghorbanali, Naj Aziz, Ashkan Rastegarmanesh:** Numerical simulation of stress distribution in longwall panels during the first caving interval  **27 Behshad** **Jodeiri Shokri Shima** **Entezam, Hadi Nourizadeh, Amin Motallebiyan, Ali Mirzaghorbanali, Kevin McDougall, NajAziz, Karu Karunasena:** The effect of changing confinement diameter on axial load transfer mechanisms of fully grouted rock bolts  **28. Bharath Belle, Rao Balusu:**Longwall maingate and tailgate proactive spon.com and gas management strategy - a safety share on risk management  **29. Shima Entezam, Behshad Jodeiri Shokri, Hadi Nourizadeh, Amin Motallebiyan, Ali Mirzaghorbanali, Kevin McDougall, Naj Aziz, Karu Karunasena:** Investigation of the effect of using fly ash in the grout mixture on performing the fully grouted rock bolt system  **30. Behshad Jodeiri Shokri, Shima Entezam, Alireza Entezam, Ali Mirzaghorbanali:** Investigating the effect of coal macerals on the recovery rate of the flotation process- A case study  **31. Amin Motallebiyan, Hadi Nourizadeh, Behshad Jodeiri Shokri, Shima Entezam, Ali Mirzaghorbanali, Naj Aziz, Kevin McDougall:** Effects of rib distances on axial load transfer mechanisms of fully grouted rock bolts  **32. Al Muhalab Al-Dughaishi, Shivakumar Karekal, Fok Tivive:** Slope stability prediction using the Artificial Neural Network (ANN)  **34. Yohanne Faivre, Ali Mirzaghorbanali, Hadi Nourizadeh, Behshad Jodeiri Shokri, Kevin McDougall, Naj Aziz:** SPT-CPT correlation in Southeast Queensland, Australia  **35. Raza Akhtar, Graham Skellern, Ali Mirzaghorbanali:** Substitution of recycled plastic aggregates (RPA) in concrete and its influence on pullout capacity of mechanical and chemical anchors  **36. Kieren Russell, Ting Ren:** Respirable dust generation and mitigation in Australian underground coal mine development heading – applications of computational fluid dynamics for respirable dust modelling  **37. Elizabeth Downing, Ali Mirzaghorbanali, and Naj Aziz:** Shear strength properties of clean and clay infilled rock joints: an analysis of the impact of moisture content under CNL conditions |

**Supporters**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | C:\Users\User\Pictures\thumbnail_image001.png | BBUGS | C:\Users\naj\Desktop\Nugs.jpg |  |