

**Publications: Journal Publications**

1. Yadav A., **Behera B.**, Singh G.S.P and Sharma S.K. (2024) Numerical Modelling Study of the Post-Failure Behavior of Coal Specimens. Journal of Rock Mechanics and Geotechnical Engineering, 16, 2; 514-531. (SCI, Q1-Indexed, Impact Factor: 9.40)
2. Yadav A., Singh G.S.P and **Behera B.**, (2023) A machine learning model for evaluation of chain pillar stability in deep longwall workings in India. Mining, Metallurgy and Exploration, 40, 2119-2137. (SCI, Q3-Indexed (*Q2 indexed during the time of publication*), Impact Factor: 1.50)
3. **Behera B.**, Yadav A., Singh G.S.P and Sharma S.K. (2021) Assessment of excavation damage and spalling potential at a mechanized longwall face: a numerical modelling study. Geomechanics and Geophysics for Geo-energy and Geo-resources, 7, 104; 1-40. (SCIE, Q1-Indexed, Impact Factor: 3.90)
4. Naik A.S., **Behera B.**, Shukla U.K. et al. (2021) Mineralogical studies of mahanadi basin coals based on FTIR, XRD and Microscopy: a geological perspective. Journal of Geological Society of India, 97, 1019-1027. (SCI, Q3-Indexed, Impact Factor: 1.46)
5. **Behera B.**, Yadav A., Singh G.S.P and Sharma S.K. (2020) Numerical modelling study of the geo-mechanical response of strata in longwall operations with particular reference to Indian geo-mining conditions. Rock Mechanics and Rock Engineering, 53; 1827-56. (SCI, Q1-Indexed, Impact Factor: 5.50)
6. **Behera B.**, Yadav A., Singh G.S.P and Sharma S.K. (2020) A numerical modelling approach for evaluation of spalling associated face instability in longwall workings under massive sandstone roof. Engineering Failure Analysis, 117, 104927. (SCI, Q1-Indexed, Impact Factor: 4.4)
7. Yadav A., **Behera B.**, Singh G.S.P and Sharma S.K. (2020) An approach for numerical modelling of gob compaction process in longwall mining. Mining, Metallurgy and Exploration, 37, 631-649. (SCIE, Q3-Indexed (*Q2 indexed during the time of publication*) Impact Factor: 1.50)
8. **Behera B.**, Yadav A., Singh G.S.P and Sharma S.K. (2020) Design of an optimum longwall face for improved ground control: a Review. J. Inst. Engg. Ser D, 101, 151-164. (Scopus)
9. Yadav A., **Behera B.**, Singh G.S.P and Sharma S.K. (2020) Numerical analysis of the gob stress distribution using a modified elastic model as the gob constitutive model. J. Inst. Engg. Ser D, 101, 127-139. (Scopus)
10. Sahoo S.K., **Behera B.**, Yadav A., Singh G.S.P. and Sharma S.K. (2020) Plain-strain modeling of progressive goaf compaction in a depillaring working. J. Inst. Engg. Ser D, 101, 233-245. (Scopus)
11. **Behera B.** and Sahu H.B. (2018) Assessment of auto-oxidation potential of some Indian coals by differential thermal analysis (DTA) technique. Journal of Mines, Metals and Fuels, June-July-18, 347-62. (Scopus)

12. **Behera B.** and Sahu H.B. (2017) Experimental evaluation of susceptibility to spontaneous heating of some Indian coals. Minetech-2017.

#### **Conference Publications**

13. **Behera, B.**, Singh, G.S.P. & Sharma S.K. Understanding the Mechanism of Longwall Face Spalling: Field Observation and Numerical Modelling Study. In Proceedings: International Conference on Safe, Smart and Sustainable Mining, 16-18 December 2023, Goa.
14. Kumar, A., Kumar, R., Ray, S., Pandit, B., Mishra, S., **Behera, B.**, Kumar, D., Ram, S. Assessment of chimney crown failure during tunnelling in the Himalayan region. In Proceedings: International Conference on Safe, Smart and Sustainable Mining, 16-18 December 2023, Goa.
15. Yadav A., **Behera B.**, Sahoo S.K., Singh G.S.P. and Sharma S.K. (2020) Performance evaluation of potential constitutive models for simulation of longwall goaf compaction using modulus updating technique. Recent practices and advancement in mineral industry, VNIT, Nagpur, 21-22 February, 2020.
16. Prajapati S.K., Yadav A., **Behera B.**, Sahoo S.K., Singh G.S.P. and Sharma S.K. (2020) An innovative methodology for improved simulation of goaf compaction in longwall workings using FLAC3D. Fifth International Itasca Symposium, February 17-20, Vienna, Austria, 2020.
17. Naik A.S. and **Behera B.** (2019) Mineralogical studies of Mahanadi Basin coals based on FTIR, XRD and Microscopy: Implications for industrial utilization. Recent Trends in Earth Sciences Research, Banaras Hindu University , 2019.
18. **Behera B.**, Singh G.S.P. and Sharma S.K. (2017) Understanding longwall geo-mechanics for improved planning and designing of longwall working- a review. Sustainable Mining Practices-2017, NIT Rourkela, Rourkela, Odisha.
19. Sahoo S.K., Galav A., **Behera B.**, Singh G.S.P. and Sharma S.K. (2016) Strata control monitoring in a contiguous seam depillaring working. Recent Advances in Rock Engineering, 2016 (RARE-2016)
20. **Behera B.**, and Sahu H.B. (2014) Evaluation of spontaneous heating susceptibility of some Indian coals by experimental techniques- a comparative study. All India Seminar on Mining- Recent Advances, Challenges and Scenario Beyond, NIT Rourkela, 2014.

#### **Journal Article (Under Consideration/Preparation)**

21. Bisoyi S.K., Khatti J., Fissaha Y., **Behera B.**, Pal B.K., Sazid M (2025) Assessment of Blast-Induced Ground Vibrations using Hybrid Artificial Neural Network Models: An Investigation for Dongri-Buzurg Mine in Bhandara, Maharashtra, India. (Communicated to Natural Resources Research, Springer, Q1-Indexed, Impact Factor: 4.8, **Status: Under Revision**)
22. Behera B., Yadav A., Singh G.S.P and Sharma S.K. Three-Dimensional Investigation of the Strata Mechanics and Face Damage Characteristics of Longwall Workings in Indian Geo-Mining Conditions. (Article Under Preparation)