

(List of publications)

SCI/Scopus Journals:

1. Prashant., Ghosh, C.N., Mandal, P.K., Dhirendra, K., **Behera, S.K.**, 2016. Design of embankment for high concentration ash slurry filling in opencast mines – a case study. *Journal of Mines, Metals & Fuels, Special Issue on CSIR-CIMFR*, 450-454.
2. **Behera, S.K.**, Mishra, D.P., Ghosh, C.N., Prashant., Mandal. P.K., Singh, K.M.P., Buragohain, J., Singh, P.K., 2019a. Characterization of lead–zinc mill tailings, fly ash and their mixtures for paste backfilling in underground metalliferous mines. *Environmental Earth Sciences*, 78, 394. <https://doi.org/10.1007/s12665-019-8395-9>.
3. **Behera, S.K.**, Prashant, Mishra, D.P., Ghosh, C.N., Verma, A., Mohanty, S., Mishra, K., Singh, P.K., 2019b. Slump test: laboratory and numerical simulation based approach for consistency of mill tailings paste. *Current Science*, 117(2), 235-241.
4. Singh, P., Ghosh, C.N., **Behera, S.K.**, Mishra, K., Kumar, D., Buragohain, J., Mandal, P.K., 2019. Optimisation of binder alternative for cemented paste fill in underground metal mines. *Arabian Journal of Geosciences*, 12, 462. <https://doi.org/10.1007/s12517-019-4623-6>.
5. **Behera, S.K.**, Ghosh, C.N., Mishra, D.P., Singh, P., Mishra, K., Buragohain, J., Mandal, P.K., 2020a. Strength development and microstructural investigation of lead-zinc mill tailings based paste backfill with fly ash as alternative binder. *Cement and Concrete Composites*, 109, 103553. <https://doi.org/10.1016/j.cemconcomp.2020.103553>.
6. **Behera, S.K.**, Ghosh, C.N., Mishra, K., Mishra, D.P., Singh, P., Mandal, P.K., Buragohain, J., Sethi, M.K., 2020b. Utilisation of lead–zinc mill tailings and slag as paste backfill materials. *Environmental Earth Sciences*, 79, 389. <https://doi.org/10.1007/s12665-020-09132-x>.
7. **Behera, S.K.**, Mishra, D.P., Singh, P., Mishra, K., Mandal, S.K., Ghosh, C.N., Kumar, R., Mandal, Phanil K., 2021. Utilization of mill tailings, fly ash and slag as mine paste backfill material: Review and future perspective, *Construction and Building Materials*, Volume 309, 125120, ISSN 0950-0618, <https://doi.org/10.1016/j.conbuildmat.2021.125120>.
8. Mishra, K., Paul, P.S., Ghosh, C.N., Singh, P., **Behera, S.K.**, Mandal, P.K., 2022. Predicting and Optimising the Strength of Cemented Paste Fills Through Bayesian Network Model. *Mining, Metallurgy & Exploration* 39, 2095–2120. <https://doi.org/10.1007/s42461-022-00650-9>
9. **Behera, S.K.**, Mishra, D.P., Singh, P. et al. Tensile strength of cemented paste backfill for lead–zinc mill tailings: lab and in situ scenarios. *Arab J Geosci* 16, 451 (2023). <https://doi.org/10.1007/s12517-023-11536-5>
10. **Behera, S.K.**, Sngh, P., Mishra, .P., Mishra, K., Kumar, A., Mandal., S.K., Mandal, P.K., Mishra, A.K., (2023): Required strength design of cemented backfill for underground metalliferous mine, *International Journal of Mining, Reclamation and Environment*. DOI: 10.1080/17480930.2023.2242159
11. Mishra, K., **Behera, S.K.**, Patel, S.K., Singh, P., Buragohain, J., Hazra, B., Mandal, S. K.,

Kumar, R. Experimental Investigation on the Mechanical and Microstructural Properties of Cemented Coal Ash Based Paste Backfill Reinforced with Polypropylene Fibre. Indian Geotech J (2024). <https://doi.org/10.1007/s40098-024-01086-2>

Other Journals:

1. **Behera, S. K.**, Pandit, K., Ghosh, C. N (2014): “Fibre Wrapping a Way for Externally Strengthening Rib Pillars”. The **IM & E Journal**, vol. 53 No. 08, pp. 25-30.
2. Ghosh, C. N, **Behera, S. K.**, Prashant., (2015): “Optimal Extraction of Coal Around Air Shaft Pillar - A Case Study”, The **MINETECH Journal**, vol. 35 No. 2, pp. 37-43.

National / International Conferences:

1. Mahapatra, S., **Behera, S.K.**, Ghosh, C.N., 2013. An approach for blind backfilling in underground coal mines. 25th National Convention of Mining Engineers & POSTALE 2013, November 30-December 01, Dhanbad, 134-137.
2. **Behera, S.K.**, Ghosh, C.N., 2015. Consolidation analysis of sand stowing in the depillared area around air shaft using PLAXIS 3D and stability analysis of air shaft. Challenges in Mining and Mineral Industry (CMMI), September 26, Keonjhar, 85-93.
3. **Behera, S.K.**, Prashant., Ghosh, C.N., Mandal, P.K., 2016. Design of embankment for safe back filling in opencast mines: A case study. Recent Advance in Rock Engineering (RARE-2016), 16-18 November, Atlantis Press, Bengaluru, India, 199-205.
4. Prashant., Ghosh, C.N., Mandal, P.K., **Behera, S.K.**, 2017. Granulated slag: An alternative material for stowing in underground coal mines. NexGen Technologies for Mining and Fuel Industries (NxGnMiFu-2017), February 15-17, Allied Publishers Pvt. Ltd., New Delhi, India, 2, 975-982.
5. Srivastwa, S., **Behera, S.K.**, Dharendra, K., Prashant., Ghosh, C.N., 2017. Development of data management software to evaluate locked up coal. NexGen Technologies for Mining and Fuel Industries (NxGnMiFu-2017), February 15-17, Allied Publishers Pvt. Ltd., New Delhi, India, 2, 29-32.
6. Ghosh, C.N., **Behera, S.K.**, Mandal, Prabhat K., Prashant., Mandal, Phanil K., Das, A. J., Singh, P. K., 2017. Development of technology for extraction of locked up coal using artificial pillars. NexGen Technologies for Mining and Fuel Industries (NxGnMiFu-2017), February 15-17, Allied Publishers Pvt. Ltd., New Delhi, India, 2, 417-424.
7. **Behera, S.K.**, Mishra, K., Prashant., Ghosh, C.N., Mandal, Phanil K., Samantray, A., Kumar, D., 2018. Cemented Hydraulic Filling – A Case Study. Technological Advancements and Emerging Mining Methods, August 24-25, Dhanbad, India, 196-206.
8. **Behera, S.K.**, Ghosh, C.N., Prashant., Mishra, D.P., Mishra K., Mandal, Phanil K., Singh, K.M.P., Buragohain, J., Singh, P.K., 2018. Strength development in paste fill using mill tailings and slag. Current Practices in Mining & Allied Industries (CPMAI), Keonjhar, October 6-7, 2018, 89-100.
9. Prashant., Mishra, K., Mandal, P.K., Ghosh, C.N., **Behera, S.K.**, Kumar, D., 2019. Optimization of bench design in opencast mines with coal ash and overburden as a backfill

material. International Conference and Exhibition on energy & Environment: Challenges & Opportunities (ENCO), New Delhi, February 20-22, 1, 498-505.

10. **Behera, S.K.**, Ghosh, C.N., Prashant., Mishra, D.P., Mishra, K., Behera, D., Mandal, P.K., Singh, K.M.P., Borgahin, J., Singh, P.K., 2019. Slag as a scope for alternative binder in paste backfilling. International Conference and Exhibition on energy & Environment: Challenges & Opportunities (ENCO), New Delhi, February 20-22, 2, 744-751.
11. Mishra, K., Ghosh, C.N., Paul, P.S., Prashant., **Behera, S.K.**, Mandal, P.K., 2019. Analysis of paste fill strength in the stope: A Bayesian Network Modeling Approach. International Conference and Exhibition on energy & Environment: Challenges & Opportunities (ENCO), New Delhi, February 20-22, 2, 738-743.
12. Ghosh, C.N., **Behera, S.K.**, Prashant., Mishra, D.P., Mishra, K., Mandal, P.K., 2019. Design of lead-zinc mill tailings paste with fly ash for filling the stopes in underground metal mines. 8th Asian Mining Congress, 6-9 November, Kolkata, India, 361-366.
13. Mishra, K., Prashant., **Behera, S.K.**, Ghosh, C.N., Paul, P.S Mandal, P.K., 2020. Naïve bayes classifier approach for strength evaluation of paste fills for underground metal mines. National Conference on Advances in Mining (AIM), 14-15 February, CSIR-CIMFR, Barwa Road, Dhanbad, India, 210-216.
14. Panwar, N., Sharma, R., Malik, S., Dhiman, A., Revil, A., **Behera, S.K.**, Khanna., S., 2022. Integration of SIP and MIP methods for pore-size distribution in carbonate rocks. Second International Meeting for Applied Geoscience & Energy, Society of Exploration Geophysicists and the American Association of Petroleum Geologists, 2198-2202. DOI:10.1190/image2022-3751698.1
15. **S. K. Behera**, Prashant Singh, S. K. Mandal, K. Mishra, P. K. Mandal, C. N. Ghosh, Paste backfilling in underground mines: Present scenario in India and future perspective, 9th Asian Mining Congress, 4-7 April, 2022, Kolkata, India, pp. 301-310.
16. **Behera, S.K.**, Singh, P., Mandal, S.K., Singh, V. et al. (2024). Pilot scale paste backfilling in underground coal mine: A case study, International Conference on Mine Ventilation and Environment for Green Mining (MVEGM-2024), Puri, Odisha, 20–22 December 2024.

Book Chapters:

1. **Behera, S.K.**, Singh, P., Mishra, K., Mandal, P.K., Mandal, S.K., Kumar, R. (2023). Underground Mine Backfilling Transition in Sukinda, Odisha: Present and Future. In: Sinha, A., Sarkar, B.C., Mandal, P.K. (eds) Proceedings of the 10th Asian Mining Congress 2023. AMC 2023. Springer Proceedings in Earth and Environmental Sciences. Springer, Cham. DOI: 10.1007/978-3-031-46966-4_22
2. **Behera, S.K.**, Singh, P., Mishra, K., Mandal, S.K., Kumar, R. (2025). Strength of In-Situ Backfill in Underground Hard Rock Mines. In: Gorai, A.K., Ram, S., Bishwal, R.M., Bhowmik, S. (eds) Sustainable and Innovative Mining Practices. ICSIMP 2023. Springer Proceedings in Earth and Environmental Sciences. Springer, Cham. https://doi.org/10.1007/978-3-031-76614-5_33