

Anup Kumar Tripathi

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RESEARCH INTERESTS

- Mine Electrical and Power Systems Engineering
- Renewable Energy and Environmental Pollution Control
- Mining Systems Optimization
- Surface Mining and Reclamation

EDUCATION

DOCTORAL DEGREE

Doctor of Philosophy (Ph.D.) in Mining Engineering (2003 – 2007)

Specialization: Mine Electrical and Power Systems Engineering

University: University of Kentucky, Lexington, USA

MASTER DEGREE

Master of Technology (M.Tech.) in Mining Engineering (2000 – 2002)

Specialization: Mining Engineering

University: Indian Institute of Technology (IIT), Kharagpur, India
(M.Tech. Project from Germany)

BACHELOR DEGREE

Bachelor of Technology (B.Tech.) in Mining Engineering (1996 – 2000)

Specialization: Mining Engineering

University: Indian Institute of Technology (IIT (ISM)), Dhanbad,
India

RESEARCH EXPERIENCE

POST-DOCTORAL RESEARCH (INDIA)

Research Associate in Mining Engineering (July 2009 – June 2011)

University: Indian Institute of Technology (IIT), Kharagpur, India

POST-DOCTORAL RESEARCH (INDIA)

Senior Researcher in Mining Engineering (December 2008 – June 2009)

University: Indian Institute of Technology (IIT), Kharagpur, India

POST-DOCTORAL RESEARCH (USA)

Post-Doctoral Researcher of Mining Engineering (January 2008 – August 2008)

University: Southern Illinois University, Carbondale, IL, USA

TEACHING EXPERIENCE

PRESENT TEACHING EMPLOYMENT

Post: Associate Professor of Mining Engineering
(November 2023 – Present)

University: National Institute of Technology Karnataka (NITK), Surathkal, India

PREVIOUS TEACHING EMPLOYMENTS

Post: Assistant Professor of Mining Engineering
(November 2012 – October 2023)

University: National Institute of Technology Karnataka (NITK), Surathkal, India

Post: Lecturer (Non-Permanent) of Mining Engineering
(July 2011 – October 2012)

University: National Institute of Technology Karnataka (NITK), Surathkal, India

SELECTED JOURNAL PUBLICATIONS

1. Avchar, A., Pal, S.K., Tripathi, A.K., Kumar, G., 2023, "Subsidence Analysis for Old Abandoned Board and Pillar Coal Mines Using ANSYS and Monte Carlo Simulation", *Journal of Mining Science*, Vol. 59, No. 6, December, pp. 938 - 948.
2. Dileep, G., Tripathi, A.K., Murthy, C.S.N., Pal, S.K., 2023, "A Review Study of Thermal Conductivity and Influencing Physico-mechanical Properties of Rocks", *International Journal of Mining and Mineral Engineering*, Vol. 14, No. 3, August, pp. 247 - 273.
3. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2021, "Experimental Investigation on Potential Use of Drilling Parameters to Quantify Rock Strength", *International Journal of Geo-Engineering*, Vol. 12, No. 1, December, pp. 1 – 15.
4. Pal, S. K., Tripathi, A. K., Panda, S., Palaniappan, S. K., 2021, "Sonar Mapping of Abandoned Water-logged Underground Coal Mine and Backfilling Operation using Underwater Camera", *International Journal of Mining and Mineral Engineering*, Vol. 12, No. 3, December, pp. 181 – 194.
5. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2020, "Prediction of Mechanical Properties of Sedimentary Type Rocks Using Rotary Drilling Parameters", *Geotechnical and Geological Engineering*, Vol. 38, No. 5, July – December, pp. 4863 – 4876.
6. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2020, "Rock Strength Characterization Using Measurement while Drilling Technique", *Indian Geotechnical Journal*, Vol. 50, No. 6, December, pp. 994 – 1005.
7. Pal, S. K., Pandey N., Tripathi, A. K., 2020, "Characteristics of Vibration at Failure and Its Relation to Rock Properties during Tensile Failure", *Journal of Mines, Metals and Fuels*, Vol. 68, No. 4, April, pp. 115 – 119.
8. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2019, "Estimation of Rock Strength Properties Using Selected Mechanical Parameters Obtained During the Rotary Drilling", *Journal of The Institution of Engineers India, Series D*, Vol. 100, No. 2, July – December, pp. 177 – 186.

9. Tripathi, A. K., 2019, “Symmetrical Component Analysis of an Unbalanced Mine Power Distribution System in B²-Spice”, Journal of Mines, Metals and Fuels, Vol. 67, No. 6, June, pp. 316 – 319.
10. Pal, S. K., Tripathi, A. K., Panda, S., Palaniappan, S. K., 2018, “Pressure Signature Analysis in Gravity Blind Backfilling Method”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 114, April 2017 – March 2018, pp. 40 – 50.
11. Pal, S. K., Mukhopadhyay, S. K., Panda, S., Tripathi, A. K., 2016, “Model Studies on the Efficiency of Gravity Blind Backfilling Method and Evaluation of a Pre-Jamming Indication Parameter”, International Journal of Earth Sciences and Engineering, Vol. 9, No. 4, August 2016, pp. 1474 – 1479.
12. Pal, S. K., Kumar, P., Tripathi, A. K., 2016, “Improving the Productivity of Bord and Pillar Panel by Side Discharge Loader in Indian Coal Mines”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 112, April 2015 – March 2016, pp. 1 – 13.
13. Sottile, J., Novak, T., Tripathi, A., 2015, “Best Practices for Implementing High-Resistance Grounding in Mine Power Systems”, IEEE Transactions on Industry Applications, Vol. 51, No. 6, November – December, pp. 5254 – 5260.
14. Pal, S. K., Kedia, R., Tripathi, A. K., 2014, “A Study on Loose Material Filled PVC Props as an Alternative to Conventional Wooden Supports”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 110, April 2013 – March 2014, pp. 13 – 22.
15. Vanapalli, N. R., Ghosh, S. K., Pal, S. K., Tripathi, A. K., 2013, “Studies of Vibrations in the Machine during Drilling”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 109, April 2012 – March 2013, pp. 25 – 32.
16. Tripathi, A. K., Bhattacharya, J., Pal, S. K., 2012, “Postmining Soil Development on Spreader Reclaimed Land for Agricultural Purpose”, Journal of Mines, Metals and Fuels, Vol. 60, No. 5, May, pp. 103 – 108.

17. Tripathi, A. K., Bhattacharya, J., Pal, S. K., 2012, "Reclamation and Management of Disturbed Surface Mining Areas for Agricultural Purpose with Emphasis on Concurrent Reclamation", *Journal of Mines, Metals and Fuels*, Vol. 60, No. 3 – 4, March – April, pp. 54 – 59.
18. Vanapalli, N. R., Ghosh, S. K., Pal, S. K., Tripathi, A. K., 2012, "Vibration and Acoustic Emission Studies of Rock Samples under Uniaxial Compression and Tension", *Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions*, Vol. 108, April 2011 – March 2012, pp. 61 – 70.
19. Pal, S. K., Desai, K., Niyogi, S. C., Tripathi, A. K., 2012, "An Investigation on Operational Characteristics of Surface Miners", *Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions*, Vol. 108, April 2011 – March 2012, pp. 70 – 76.
20. Tripathi, A. K., Bhattacharya, J., Pal, S. K., 2011, "Forestry Reclamation of Disturbed Surface Mine Lands", *Journal of Mines, Metals and Fuels*, Vol. 59, No. 10, October, pp. 345 – 348.
21. Pal, S. K., Mukhopadhyay, S. K., Tripathi, A. K., 2011, "Laboratory Studies on Stabilization of Old, Abandoned and Waterlogged Underground Workings", *Journal of Mines, Metals and Fuels*, Vol. 59, No. 5 – 6, May – June, pp. 150 – 154.
22. Pal, S. K., Paul, T. K., Tripathi, A. K., 2011, "A Study on Selection of Pertinent Cross-Sectional Areas for Underground Supports", *Journal of Mines, Metals and Fuels*, Vol. 59, No. 3 – 4, March – April, pp. 116 – 122.
23. Tripathi, A. K., Bhattacharya, J., Pal, S. K., 2011, "Reclamation of Disturbed Surface Mine Lands", *Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions*, Vol. 107, April 2010 – March 2011, pp. 85 – 94.
24. Pal, S. K., Keshri, A. K., Tripathi, A. K., 2011, "A Study on Correlation between P-Wave Velocity, Number of Joints and Schmidt Hammer Rebound Number", *Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions*, Vol. 107, April 2010 – March 2011, pp. 27 – 33.

25. Pal, S. K., Ghosh, D., Tripathi, A. K., 2011, “An Experimental Study on Variation of Power Consumption and Cutting Resistance of Coal Using Shearer Drum Model”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 107, April 2010 – March 2011, pp. 34 – 44.
26. Pal, S. K., Prusty, B. K., Tripathi, A. K., 2011, “Air Permeability Studies of Surface Soils over In Situ Coal-Seam Fire Areas in Jharia Coalfield”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 107, April 2010 – March 2011, pp. 17 – 26.
27. Pal, S. K., Singh, B., Tripathi, A. K., 2010, “Studies on Gas Permeability of Sandstone”, Journal of Mines, Metals and Fuels, Vol. 58, No. 6, June, pp. 168 – 176.
28. Pal, S. K., Bijurkar, K. A., Tripathi, A. K., 2010, “Effects of Granulometric Variations on Permeability of Sand”, Mining, Geological and Metallurgical Institute of India (M.G.M.I.) Transactions, Vol. 106, April 2009 – March 2010, pp. 67 – 74.

SELECTED CONFERENCE PUBLICATIONS

1. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2019, “MWD Technique to Estimate the Compressive Strength of Rocks”, Proceedings of the International Conference on Emerging Research in Civil, Aeronautical and Mechanical Engineering (ERCAM-2019), A.I.P., Springer Publishers, July 2019, Vol. 2204, Article Number 040011, pp. 1 – 10.
2. Lakshminarayana, C.R., Tripathi, A.K., Pal, S.K., 2019, “Quantification of Rock Strength Using the Mechanical Drilling Parameters”, Proceedings of the First International Conference on Emerging Trends in Engineering (ICETE), March 2019, pp. 352 – 361.
3. Pal, S. K., Panda, S., Tripathi, A. K., 2015, “Studies on Gravity Backfilling Method for Blind Backfilling of Abandoned Coal Mines”, Proceedings of 24th International Mining Congress and Exhibition of Turkey (IMCET 2015), April 2015, pp. 1453 – 1465.