

# Faculty Profile

**Name:** Dr. Puja Hansdah

**Designation:** Assistant Professor

**Teaching Area:**

Mine Machinery

Rock Mechanics

Mine Ventilation

Mineral Processing

Geology

**Research Interest:**

Mineral Processing and Beneficiation

Environmental Sustainability

**Experience (In Years): 4 Years**

**Academic qualifications: B.Tech., Ph.D.**

**Major Research Publications / Presentation:**

1. Puja Hansdah, Shravan Kumar, N.R. Mandre, Dewatering performance of coal fines refuse slurry, and development of the water recovery index, 2017, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor and Francis Ltd. IF: 1.184.
2. Puja Hansdah, Shravan Kumar, N.R. Mandre, Performance optimization of dewatering of coal fine tailings using Box–Behnken design, 2017, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor and Francis Ltd. IF: 1.184.
3. Puja Hansdah, Shravan Kumar, N. R. Mandre, Optimization of settling characteristics of coal fine tailings with an anionic polyacrylamide using response surface methodology, 2018, International Journal of Coal Preparation and Utilization, Taylor and Francis Ltd. IF:2.034.
4. Puja Hansdah, Shravan Kumar, Analysis of settling performance of coal fines tailing polymer using central composite rotatable design Optimization, 2019, International Journal of Coal Preparation and Utilization, Taylor and Francis Ltd. IF: 2.034.



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5. Preeti Kumari and Puja Hansdah, Sources and toxicological effects of metal and metalloids on human health through fish consumption in mineral-rich city, Ranchi, India, 2023, Environmental Monitoring and Assessment, Springer. IF: 3.0.

6. Preeti Kumari and Puja Hansdah, Ecotoxicological and Potential Health Risk Assessment in Dimna Canal, Interlinking Lentic and Lotic Ecosystem in Jamshedpur, India, 2023, International Journal for Research in Applied Science & Engineering Technology (IJRASET). IF: 7.538.

7. Bhola Kumar Paswan, Smruti Naik, Puja Hansdah, Sidharth Gautam. Development of Mahua oil (Madhuca Indica) methyl ester-based drilling mud as a sustainable alternative to oil-based mud for unconventional reservoirs, 2025, Petroleum Science, Elsevier. IF: 9.4.

### NATIONAL/ INTERNATIONAL CONFERENCES

1. Presented an oral paper on “Flocculation and dewatering characteristics of coal fine tailings using polymer” at XVI International Seminar on Mineral Processing Technology, 3 - 5 February 2017, Mahabalipuram, Chennai, India.
2. Presented an oral paper on “Coal fine dewatering using polymer and the effect of coal characterization” at National Conference on Waste to Wealth in Mineral and Metallurgical held on 9 - 10, March 2018, Bhubaneswar, Odisha.
3. Co-authored a paper “Present scenario of coal fine dewatering and future perspective” at 5th International Conference and Exhibition, Coal preparation society of India, 6 - 7 Nov, 2017, at New Delhi, India.
4. Presented an oral paper on “Flotation of refuse tailing fine coal slurry and its characterization” at XVII International Seminar on Mineral Processing Technology (MPT) 2018 during October 10 - 12, 2018, IIT (ISM), Dhanbad.
5. Presented an oral paper on “Settling characteristics of coal washery tailings using synthetic polymer” at XVII International seminar on Mineral Processing Technology (MPT) 2018 during October 10 - 12, 2018, IIT (ISM), Dhanbad.
6. Presented an oral paper on “Dewatering of coal fine tailing by flocculation process” at Indian Institute of metals, 72<sup>nd</sup> Annual technical meeting 2018 during November 15 to 16, 2018, at J W Marriot, Kolkata.
7. Presented an oral paper on “Settling behaviour of coal fines tailing by varying process parameter” International Conference on Renewable & Alternate Energy (ICRAE-2018) during December 3 to 6, 2018, at Assam Science and Technology University.
8. Presented a poster paper on “Modelling and Optimization of Flocculation Performance of Coal Fine Tailing using Response Surface Methodology” at the International Seminar on Mineral Processing Technology (MPT) 2019, from December 16 to 18, 2019, at Hotel Marigold, Hyderabad.

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9. Presented an oral paper on “Effect of flocculant on coal fine tailing by the aid of flocculation process” at the International Conference on Advanced Materials for Environmental Protection, ICAME 2022, from October 19 to 21, 2022.
10. Presented an oral paper on “An Investigation into the Flocculation and Settling Behaviour of Coal Preparation Plant Tailings” at International Conference on Petroleum, Hydrogen and Decarbonisation (ICPHD - 2024) during 12<sup>th</sup> - 14<sup>th</sup> December 2024 at IIT (ISM), Dhanbad, India.