

Dr. Ankush Galav

Assistant Professor,
Department of Mining Engineering,
Indian Institute of Technology (Indian School of Mines) Dhanbad
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Education

- PhD** Indian Institute of Technology (BHU) Varanasi, Mining Engineering
GPA: 8.88/10 2023
Thesis: Design of Protective Barrier Pillar Against Large Water Head in Underground Coal Mines.
Advisor: Dr. G.S.P. Singh & Prof. S.K. Sharma
- MTech** Indian Institute of Technology (BHU) Varanasi, Mining Engineering
GPA: 9.92/10 2017
Thesis: Study of Strat Behaviour in a Contiguous Seam Depillaring Working
Advisor: Dr. G.S.P. Singh & Prof. S.K. Sharma
- BTech** Indian Institute of Technology (BHU) Varanasi, Mining Engineering
GPA: 8.08/10 2015
Thesis: Evaluation of Blasting Design on Coal Formation in Surface Mines
Advisor: Prof. P. Rai

Work Experience

- **Assistant Professor| IIT(ISM) Dhanbad** Aug 2024 to Present
Subjects Teaching: Planning and Design for Tunnels and Caverns; Mining Equipment Reliability, Maintainability, and Availability; Mine simulation and Data Analytics Practical
- Course Coordinator of Internship in Odd Semester of session 2024-25.
- **Postdoctoral Fellow| IIT(BHU) Varanasi** April 2024 to Aug 2024
Title: Assessment of safe parting thickness and optimal goaf edge support requirement for extraction of pillars under soft cover
- **Research Associate| IIT(BHU) Varanasi** Dec 2023 to April 2024
Title: Assessment of safe parting thickness and optimal goaf edge support requirement for extraction of pillars under soft cover
- **Senior Research Fellow| IIT(BHU) Varanasi** Nov 2023 to Dec 2023
Title: Assessment of safe parting thickness and optimal goaf edge support requirement for extraction of pillars under soft cover
- **Senior Project Fellow| IIT(BHU) Varanasi** July 2022 to Oct 2023
Title: Design of Protective Water Barrier Pillar Against Large Water Head in Underground Coal Mines

Publications

- I. **Galav A.**, Singh G.S.P., Sharma S.K. (2023). Hydro-Mechanically Coupled Numerical Modelling of Protective Water Barrier Pillars in Underground Coal Mines in India. Mine Water and the Environment. 10.1007/s10230-023-00946-2.
- II. **Galav A.**, Singh G.S.P., Sharma S.K. (2022). A Numerical Modeling Approach for Assessment of Seepage Characteristics and Performance of Protective Water Barrier Pillars in Underground Coal Mines. Mining, Metallurgy & Exploration. 39. 1-17. 10.1007/s42461-022-00672-3.
- III. **Galav A.**, Singh G.S.P., Sharma S.K. (2021). Design and Performance of Protective Water Barrier Pillars for Underground Coal Mines in India—A Review. Journal of The Institution of Engineers (India): Series D. 102. 10.1007/s40033-021-00286-x.
- IV. **Galav A.**, Kumar R., Singh G.S.P., Sharma S.K. (2019). Numerical Simulation of Water Flow through a Protective Barrier Pillar in Underground Coal Mines. Proceedings of 5th ISRM Young Scholars' Symposium on Rock Mechanics and International Symposium on Rock Engineering for Innovative Future, Okinawa. December 1–4, 2019. Paper Number: ISRM-YSRM-2019-023
- V. **Galav A.**, Sahoo S.K., Singh G.S.P., Sharma S.K. (2017). Study of Strata Behaviour in a Contiguous Seam Depillaring Working. Proceedings of Deep Excavation, Energy Resources and Production (DEEP16), IIT Kharagpur. Paper Number 136
- VI. Sahoo S.K., **Galav A.**, Behera B., Sharma S.K., Singh G.S.P. (2016). Strata Control Monitoring in a Contiguous Seam Depillaring Working. Proceedings of the conference on Recent Advances in Rock Engineering (RARE 2016). 10.2991/rare-16.2016.55
- VII. **Galav A.**, Singh G.S.P., Sharma S.K. (2023). Design of Protective Water Barrier Pillars for Enhanced safety and Productivity in Underground Coal Mines. Proceedings of the Seminar UMANG 2023. Dec 2023.

Patent

- **A. Galav**, G.S.P. Singh, S.K. Sharma (2023). A system and method for assessing hydro-mechanical performance of water barrier pillars for coal mines (Published)

Ph.D. Guidance

- Ritesh Kumar Pandey (Admission No.: 24DP0271)
- Abhishek Kumar (Admission No.: 24DP0267)

Consultancy Projects

- Three-Dimensional Subsidence Study of Patal East (Eastern Part) Coal Block
(Clint M/s RCR Steel Works Pvt. Ltd.) (role: Co-CI)
- Scientific study for development under NH-19 national highway at Dishergarh (R-IV) seam at Ningah Colliery
(Clint M/s Eastern Coalfields Limited) (role: Co-CI)
- Technical Audit of the Block-E OCP (15MTY) of BCCL
(Clint M/s BCCL) (role: Co-CI)
- Customised Training Program with Mine Visits and Classroom Session for Caterpillar (Executive Development Program)
(Clint M/s caterpillar India Engineering Solutions Private Limited, Chennai) (role: Co-CI)

Administrative duties/assignments

- Editor, Monthly Newsletter of Department of Mining Engineering
- I-STEM Departmental Coordinator
- I-STEM Faculty Incharge
- Organising Committee member of International Conference MVEGM-2024, Department of Mining Engineering, IIT(ISM) Dhanbad
- Member of Stage Management committee of III and Basant 2025
- Coal Mine Excursion duty for 2nd year B.Tech. students

Membership in Professional Associations

- International Society of Rock Mechanics (ISRM)
- Associate Member of The Institution of Engineers (India)
- The Mining, Geological and Metallurgical Institute of India (MGMI): Life Member

Achievements/ Extra Curricular Activities

- **AIR 5898 in IIT JEE 2011**
- Selected for Ph.D. on a **supernumerary** seat
- PhD thesis nominated for **ROCHA Medal** by ISRM (India)
- **Navkriti Medal** for best research work in the M.Tech. category at the institute level
- **IIT (BHU) Varanasi Medal** for standing First in Mining Engineering at MTech Examination 2017
- The **Institution Prizes** for the paper published in the Journal of Institution of Engineers (India): series D on December 16, 2022
- **IIT (BHU), Varanasi Special mention** for outstanding and significant contribution to the institute

being part of organizational activities

- **Acting Vice President**, Students Parliament, IIT (BHU), Varanasi
- **Convener, PG Affairs Committee**, Students Parliament, IIT (BHU) Varanasi
- **Convener, International Relations Office**, IIT (BHU) Varanasi
- **Represented IIT (BHU)**, Varanasi in **Student Leadership Conclave** at IIT Gandhinagar
- **Represented IIT (BHU)**, Varanasi in **IIT SPAN meet** at IIT Bombay
- Member, Senate Post Graduate Committee (SPGC) at IIT (BHU) Varanasi
- Member, Library Committee at IIT (BHU) Varanasi
- Hostel Secretary at IIT (BHU) Varanasi from July 2017 to June 2018
- Member, Hostel Allotment Committee, IIT (BHU) Varanasi
- Member, The Quantum of Punishment against different in-disciplinary activities done by students of hostel residents 2018-19 session
- Member, core team hostel election 2018-19
- Hospitality Head, METTLE 2014, the Annual Techno-Management festival of Department of Mining Engineering–IIT-(BHU), Varanasi
- Sports Organizer of the Mining Society of the Department of Mining Engineering, IIT (BHU) during session 2012-13.
- **Arvind Akruwala Memorial Award** for best academic attendance during 2013-14 & 2014-15 in Department of Mining Engineering–IIT-(BHU), Varanasi
- Worked as a teaching assistant and took classes of undergraduate students during my Graduation
- International Mathematics Olympiad (IMO), 2008- Rank 6 (State); 170 (International)
- SVS Global Mathematics test, 2008-09, rank 15. Gold Medalist.

Internship/Professional Training/Short-term Courses

- Practical Training Experience at Eastern Coalfields Limited, Coal India Limited (2013: 1 month 20 days)
- Practical Training Experience at Western Coalfields Limited, Coal India Limited (2014: 1 month 12 days)
- Green Belt Program on Lean Six Sigma Methodology (2015: 4 days)
- Basics of Computational Fluid Dynamics: Theory and Programming (2017: 3 days)
- Modelling Energy System using CFD: Theory and Practice (2017: 7 days)
- Faculty Development Program on Curriculum Building for Data Science & Business Analytics (2018: 1 day)
- Multi-physics Modeling Techniques using CFD (2018: 5 days)
- Introduction to HTML5 (2020: 1 month)
- Machine Learning for All (2020: 2 month)
- Matlab Software Training (2023: 5 Days)