



IIT INDIAN INSTITUTE
OF TECHNOLOGY
ISM INDIAN SCHOOL OF MINES
DHANBAD

Department of Mining Engineering



THE MINING EDGE

MONTHLY NEWSLETTER

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Content

Message from HOD Desk	...01
ISRO's "Space on Wheels" Mobile Exhibition	...02
Academic Visit of International Delegation	...03
PDP on Controlled Blasting Management and Safety for Road Construction	...04
Publications & Projects	...05
Campus Placements	...06
Students Achievement	...07
Faculty Profile of the Department	...08-09
Miner's Calendar 2025	...10

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From HOD Desk



It gives me immense pleasure to present the February 2026 issue of The Mining Edge, the Monthly Newsletter of the Department of Mining Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad. This issue reflects the sustained academic vigor, research excellence, and professional engagement that define our department's commitment to advancing the frontiers of mining engineering education and practice.

Over the past month, the Department has witnessed a series of intellectually enriching activities and professional milestones. The distinguished visit of Prof. Sekhar Bhattacharyya from Pennsylvania State University fostered meaningful academic dialogue and opened avenues for collaborative research and global engagement. Such interactions reinforce our vision of nurturing a vibrant scholarly ecosystem rooted in innovation, critical inquiry, and international cooperation.

The successful organization of the two-week Professional Development Programme on Controlled Blasting Management and Safety for Road Construction for officers of the Border Roads Organisation underscores our dedication to capacity building and nation-building initiatives. By integrating scientific rigor with field-oriented applications, the programme exemplified our resolve to bridge academia and industry through impactful knowledge dissemination.

We were also privileged to host an international delegation from the Republic of Liberia, whose visit to our advanced laboratories facilitated constructive academic exchange and showcased our state-of-the-art research and training infrastructure. Such engagements strengthen our global outreach and affirm our position as a leading center of excellence in mining and allied disciplines.

I take particular pride in acknowledging the commendable achievements of our students in placements, research, and extracurricular pursuits. Their accomplishments in reputed organizations and competitive platforms stand as a testament to the quality of education, mentorship, and professional grooming imparted by the Department.

As we continue our journey, let us reaffirm our collective commitment to academic distinction, ethical responsibility, sustainable mining practices, and technological innovation. I extend my sincere appreciation to the editorial team, faculty members, staff, research scholars, and students whose contributions have made this issue possible.

I wish all readers an engaging and inspiring read.

Warm regards,
Prof. B.S. Choudhary

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ISRO's "Space on Wheels" Mobile Exhibition Visits IIT (ISM) Dhanbad

In early February 2026, ISRO's "Space on Wheels" mobile exhibition visited IIT (ISM) Dhanbad, coinciding with the Industry-Institute Interaction (III – 2026) event. The exhibition, inaugurated on 5 – 6 February 2026 by Director Prof. Sukumar Mishra, aimed to inspire students and young minds by bringing India's space achievements closer to them.



The exhibition featured interactive models of rockets, satellites, and the Chandrayaan mission, along with launch simulations and displays of upcoming projects such as Gaganyaan. It provided a hands-on learning experience, highlighting real-world applications of space technology in areas like remote sensing, communication, and navigation, thereby fostering scientific curiosity and promoting STEM careers.

The initiative witnessed overwhelming engagement, attracting over 10,000 students and parents, alongside 8,000 school children from across Jharkhand, who had the opportunity to interact with ISRO experts and gain insights into India's rapidly advancing space program.

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Academic Visit of International Delegation to Departmental Laboratories

A delegation comprising thirty representatives from the Republic of Liberia visited our laboratories on 10th february 2026 as part of an academic and technical exposure program. The visit was organized to provide the delegates with a comprehensive overview of our department's state-of-the-art facilities, ongoing research initiatives, and applied training infrastructure. The schedule, though tentative, was carefully structured to ensure meaningful interaction with faculty members, researchers, and technical staff across multiple specialized laboratories.



The laboratory visit commenced at 12:15 PM with an engaging tour of the Rock Excavation Laboratory, where delegates were acquainted with advanced drilling, blasting, and excavation methodologies. The delegation was guided throughout the visit by Dr. Sunil Kumar, Mr. R. K. Das, and Mr. Sudhanshu Pandey, who were present to showcase all the laboratories and explain their facilities, ongoing research activities, and practical applications in detail.

This was followed by a demonstration at the Virtual Reality (VR) Laboratory, highlighting immersive simulation tools for mine planning and safety training. The delegation subsequently explored the Survey Laboratory, observing modern surveying instruments and geospatial data applications, and the Ventilation Laboratory, where experimental studies on airflow dynamics and environmental control were presented.

The itinerary continued with visits to the Rock Mechanics Laboratory for insights into rock behavior and ground control research, and the Bord & Pillar Training Gallery, which showcased sustainable mine working practices. The tour further included the Longwall Laboratory, featuring mechanized underground coal mining systems and simulations, and concluded at TEXMiN (Technology Innovation in Exploration and Mining Foundation), where discussions centered on research innovation, industry collaboration, and technology incubation initiatives.

Overall, the visit fostered academic exchange and strengthened international engagement, providing the delegates with valuable exposure to contemporary advancements in mining engineering research, education, and technological innovation.

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Professional Development Programme on Controlled Blasting Management and Safety for Road Construction

A Two-Week Professional Development Programme on “Controlled Blasting Management and Safety for Road Construction” was successfully organized from 16 February 2026 to 28 February 2026 for the young officers of the Border Roads Organisation (BRO). The programme was designed to enhance technical proficiency and strengthen safety awareness in controlled blasting operations, particularly in the context of road construction projects undertaken in challenging and geologically complex terrains.



The course curriculum encompassed comprehensive theoretical lectures, case studies, and practical demonstrations covering blast design principles, explosive selection, vibration control, environmental considerations, statutory regulations, and risk mitigation strategies. Emphasis was placed on adopting scientific blasting practices to ensure operational efficiency, structural stability, and adherence to safety standards. Interactive sessions facilitated knowledge exchange between participants and faculty members, fostering a deeper understanding of contemporary advancements and field-level challenges.



The programme was coordinated by Dr. B. S. Choudhary, Coordinator and Head of the Department of Mining Engineering (MNE), with Prof. D. G. Krishna serving as Co-Coordinator. Their leadership and academic guidance ensured the effective delivery of the programme, aligning it with both industry requirements and national infrastructure development objectives.

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Publications & Projects

Journal Publication

- **Das, M., Gautam, G. K., Jain, S., Bhat, M. F., Mankar, A. K., & Koner, R. (2026).** A comparative analysis of AHP, FR, AHP-FR and LR models for landslide susceptibility mapping in Sikkim Himalaya, India. *Earth Surface Processes and Landforms*, 51(2). <https://doi.org/10.1002/esp.70257>

Research & Consultancy Projects

- **Prof. Siddhartha Agarwal, Department of Mining Engineering**, has been awarded a research project titled "AI-enabled Mine Inspection for Health and Safety and Data Analyses for Development of Risk Indices (AIMSURE)" under the Wadhwani Innovation Network – Center of Excellence (WIN-CoE).
- **Prof. Siddhartha Agarwal, Department of Mining Engineering**, has been awarded a consultancy project by Eastern Coalfields Limited for the Sonepur Bazari Opencast Mine, Bardhaman, with **Prof. Anindya Sinha** serving as Co-Principal Investigator.
- **Prof. Siddhartha Agarwal, Department of Mining Engineering**, has been awarded a consultancy project by Western Coalfields Limited, Nagpur, titled "Scientific Study Initiated under Regulation 106(2) of CMR 2017 in view of DGMS (Tech) Circular No. 3 of 2020 at MKD-III OCM, Makardhokda Sub Area, Umrer Area."
- **Prof. D. P. Mishra, Department of Mining Engineering**, has been awarded a consultancy project by Sainik Mining and Allied Services Limited, Dhanbad, titled "Scientific Studies for Determination of In-Situ Density Seam-wise, Overall Composite Density, and Bulk Density of Coal at Dulanga Coal Mining Project (DCMP)."
- **Prof. D. P. Mishra, Department of Mining Engineering**, has been awarded a consultancy project by Bharat Coking Coal Limited, Koyla Nagar, Dhanbad, titled "Gas Emission Study at Kenduadih, PB Area, BCCL." **Prof. Patitapaban Sahu and Prof. Ankush Galau, Department of Mining Engineering**, are associated with the project as Co-Principal Investigators.
- **Prof. D. G. Krishna, Department of Mining Engineering**, has been awarded a consultancy project by M/s Shri Stones, Bili Markundi, Chopan–Sonebhadra, Uttar Pradesh, titled "Scientific Study Regarding the Method of Mining." **Prof. B. S. Choudhary, Department of Mining Engineering**, is associated with the project as Co-Principal Investigator.
- **Prof. Ashok Kumar, Department of Mining Engineering**, has been awarded a consultancy project by UltraTech Cement Ltd., Mumbai, titled "Additional Mining, Environment and Hydrology Studies as Mentioned in TOR of Arjuni East Coal Mine, Umari." **Prof. S. Pasupuleti, Department of Civil Engineering**, is associated with the project as Co-Principal Investigator.

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Campus Placements

- The Department proudly announces the successful placement of **Mr. Naramdas Shiva**, B.Tech (Mining Engineering), in **Terex India Private Limited**. His selection reflects both his academic competence and practical preparedness in core mining engineering disciplines. Terex India, a leading organization in material processing and mining equipment solutions, offers significant exposure to advanced technologies and industry practices. This achievement underscores the Department's continued commitment to fostering technical excellence, industry readiness, and professional development among its students.
- The Department is also pleased to report the commendable achievement of **Ms. Vanshika Pandey and Ms. Kalawati Tamta**, both B.Tech (Mining Engineering), who have been selected for the post of **Management Trainee at IREL (India) Limited**. Their accomplishment highlights the strong foundation in mining engineering principles, analytical skills, and professional aptitude cultivated during their academic training. Securing positions in a reputed public sector enterprise such as IREL (India) Limited reflects the growing recognition of the Department's academic rigor and its consistent contribution to producing competent and industry-ready graduates.



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Students Achievement



Mr. Shrijal Chandrashekhar Dabhekar, M.Tech in Mining Engineering, has distinguished himself by winning the Silver Medal at the Open Jharkhand State and Senior State Karate Championship. The event was conducted by the Sports Karate Association of Jharkhand on 31 January and 1 February 2026 at the Tana Bhagat Indoor Stadium, Khel Gaon, Ranchi. This remarkable achievement highlights his exceptional dedication, discipline, and skill in karate, balancing athletic excellence with academic commitments. The Department applauds his success, which not only brings personal recognition but also adds to the institute's prestige in state-level sports competitions.



The Department is pleased to announce that **Mr. Anand Kumar, M.Tech in Tunneling & Underground Space Technology**, has been offered employment as a Mining Engineer with Safe MineTech Solutions Private Limited. Following a successful application process and interview, Mr. Kumar is expected to join the organization after the completion of his degree requirements. The final date of joining is presently under mutual discussion with the organization. He will be initially posted at Jaipur, with the understanding that he may be transferred to any office, project, or establishment of Safe MineTech Solutions or its Group Companies in India, at the discretion of the management.

Both achievements make the Department immensely proud and serve as an inspiration to fellow students. I wish them continued success and a bright future in their professional endeavors.

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DEPARTMENT OF MINING ENGINEERING

Faculty Profile of the Department



Prof. V M S R Murthy
Professor (HAG) On
Deputation As Director IIST
Shibpur

Research Interest:
Rock Excavation Engineering



Prof. Arvind Kumar Mishra
Professor (HAG) On Deputation
As Director CIMFR

Research Interest:
Explosive Engineering, Rock
Blasting Technology, Rock
Excavation Engineering,
Opencast Mining



Prof. Dheeraj Kumar
Professor (HAG)

Research Interest:
Digital Mining Technologies,
Mine Surveying & Geospatial
Technologies



Prof. R M Bhattacharjee
Professor

Research Interest:
Underground Coal Mining
Technology, Risk Assessment
And Safety Management,
Emergency Response &
Disaster Management,
Accident Investigation, Mine
Fire And Explosion



Prof. Devi Prasad Mishra
Professor

Research Interest:
Mine Ventilation and
Environmental Engineering, Mine
Fire And Explosion, Application
of CFD In Mine Ventilation and
Environmental Engineering,
Methane Drainage/CBM/UCG,
Stowing/backfilling With Fly
Ash/pond Ash, Characterization
of Fly Ash/pond Ash



**Prof. Bhanwar Singh
Choudhary**

Professor

Research Interest:
Drilling & Blasting Technology,
Underground Metal Mines,
Computer Aided Mine Planning,
Tunnel Engineering



Prof. Partha Sarathi Paul
Professor

Research Interest:
Core Mining Discipline: Mine
Safety Engineering; Occupational
Health, Safety And Ergonomics;
Applied Multivariate Modeling
And ML Techniques; Rock
Mechanics; Mine Ventilation.
Interdisciplinary: Automation For
Workplace Safety; Socio-
economic Impact Of Mining



Prof. Anindya Sinha
Professor of Practice

Research Interest:
Mine Planning & Design,
Mine Environment
Planning & Management,
Mine Mechanization &
Digitization



Prof. Rabindra Kumar Sinha
Associate Professor

Research Interest:
Design of Structures in Rock,
In situ Rock Mechanics
Investigations, Numerical
Modelling



**Prof. Vasanta Govind
Kumar Villuri**
Associate Professor

Research Interest:
Photogrammetry,
Cartography, Remote Sensing,
GIS And GPS



Prof. Radhakanta Koner
Associate Professor

Research Interest:
Mine Automation, Data Analytics,
Georesources Utilization Using
Remote Sensing Technology,
Slope Stability Analysis,
Landslide Analysis, Wireless
Sensing Technology, Real-time
Monitoring System In Mining



Prof. Patitapaban Sahu
Associate Professor

Research Interest:
Mine Ventilation, Sub-Surface
Environmental
Engineering, Mine
Radiation, CBM and Data
Analytics In Mining



DEPARTMENT OF MINING ENGINEERING

Faculty Profile of the Department



Prof. Gnananandh Budi

Assistant Professor

Research Interest:
Rock Mechanics And Ground Control



Prof. Kashinath Pal

Assistant Professor

Research Interest:
Rock Mechanics, Groundwater, Slope Stability



Prof. Mohammad Soyeab Alam

Assistant Professor

Research Interest:
Geospatial Technology In Mining, Underground Metal Mining, Mine Subsidence Studies, Mine Slope Stability Analysis, Mine Surveying



Prof. Siddhartha Agarwal
Assistant Professor

Research Interest:
Digitalization of Mining Operations, Industry 4.0 Applications In Mining, Machine Learning And Artificial Intelligence Applications In Energy Consumption In Mines, Earth Sciences: Geostatistics, Open Pit Mine Planning & Scheduling, Real Time Monitoring Of Air Pollution In Open Cast Mines, Geotechnical And Environmental Closure And Repurposing Planning



Prof. Swapnil Mishra
Assistant Professor

Research Interest:
Blast Resistant Design of Underground Structures, In-situ Stresses Surrounding Underground Structures, Impact Testing on Weak and Weathered Rock Conditions, Ground Subsidence, Rock Dynamics and Material Testing, Physical Modelling



Prof. Ashok Kumar
Assistant Professor

Research Interest:
Underground Mining Methods, Strata/Rock Mechanics, Numerical Modeling, Underground Instrumentation And Monitoring Of Strata, Support Design, Rockmass Characterisation, Excavation Methods For Tunnels & Caverns, Drilling & Blasting, Operations Research, Mine Environment, Surface Mining



Prof. Dondapati Gopi Krishna

Assistant Professor
Research Interest: Rock Mechanics, Numerical Modeling in Geotechnical Engineering, Coal Mining, Mine Instrumentation and Monitoring



Prof. Bhaskara Behera

Assistant Professor
Research Interest:
Rock Mechanics And Ground Control, Mining Methods, Numerical Methods In Geomechanics, Mine Planning And Design



Prof. Ajeet Yadav
Assistant Professor

Research Interest:
Rock Mechanics and Ground Control, Mining Methods, Mine Ventilation, Numerical Modelling



Prof. Ankush Galav
Assistant Professor

Research Interest:
Rock Mechanics and Ground Control, Mining Methods, Rock Excavation Engineering, Numerical Modelling, Mine Planning and Design, Mine Instrumentation and Monitoring



Prof. Santosh Kumar Behera
Assistant Professor

Research Interest:
Paste backfilling, underground metal mining, underground metal mine backfilling, underground coal mine stowing and associated mining methods, fly ash filling in open cast mines, and slope stability.



Prof. Maitreya Mohan Sahoo
Assistant Professor

Research Interest:
Remote Sensing, Geographical Information System, Geoinformatics, Digital Image Processing, Geological Spectroscopy, Hyperspectral Mixing and Unmixing, Super-Resolution, Digital Twin Technology, Artificial Intelligence



2026 CALENDAR

JANUARY

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH

M	T	W	T	F	S	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

APRIL

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

M	T	W	T	F	S	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

SEPTEMBER

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER

M	T	W	T	F	S	S
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

DECEMBER

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

2026 Calendar of Important Mining Days

4th April : International Day for Mine Awareness and Assistance in Mine Action

22nd April : World Earth Day

1st May : International Labour Day

4th May : Coal Miners Day

23rd June : International Women in Engineering Day

30th October : Mine Rescue Day

1st November : Coal India Foundation Day

1st November : Indian Mining Day

5th December : World Soil Day

9th December : Foundation Day

11th December : International Mountain Day

14th December : National Energy Conservation Day

