



IIT
ISM INDIAN INSTITUTE
OF TECHNOLOGY
INDIAN SCHOOL OF MINES
DHANBAD

Department of Mining Engineering



THE MINING EDGE

MONTHLY NEWSLETTER

VOLUME 13

September 2025

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From HOD's Desk



It gives me immense pleasure to present the September 2025 edition of The Mining Edge, the monthly newsletter of the Department of Mining Engineering, IIT (ISM) Dhanbad. The newsletter continues to serve as a vital medium to showcase the academic, research, and co-curricular activities of the department while also reflecting the collective spirit of our faculty, students, staff, and alumni.

The past month has been marked by a series of noteworthy events and achievements. The department celebrated its vibrant traditions through Vishwakarma Pooja, where faculty, students, and retired colleagues came together to uphold the cultural and professional ethos of our fraternity. Equally inspiring was the observance of Swachhata Hi Sewa 5.0 campaign, where our faculty and staff actively participated in the cleanliness drive and pledge, reaffirming our commitment to sustainability and social responsibility.

We also had the honour of hosting distinguished alumni and eminent personalities. The visit of Prof. Raja V. Ramani, a 1962 batch alumnus and Professor Emeritus at Penn State University, USA, was particularly memorable. His interaction with faculty members highlighted the importance of international collaborations, cutting-edge research, and the role of alumni in guiding future generations of mining engineers.

Our department has also taken pride in its continued recognition at the national level. IIT (ISM) Dhanbad's ranking at the 15th position in the NIRF 2025 Engineering Category is a testament to the relentless efforts of our students, faculty, and staff. Such achievements not only motivate us to strive for excellence but also remind us of our responsibility to innovate and lead in the field of mining education and research.

In the academic sphere, training and research activities continue to progress with vigor. Initiatives such as specialized training programs for industry professionals, research contributions in the domains of mine safety, automation, and geo-environmental studies, and student participation in seminars and workshops demonstrate our dedication to bridging the gap between industry and academia.

As we look ahead, I am confident that the department will continue to uphold its legacy of excellence while embracing innovation and sustainability in mining practices. I extend my heartfelt gratitude to all faculty members, staff, students, and alumni whose contributions make our department a hub of knowledge, innovation, and growth.

Let us continue to work together with the shared vision of shaping the future of mining engineering and contributing meaningfully to the nation and society at large.

Warm regards,
Prof. B.S. Choudhary

Ranked 20th globally, 1st in India, and within the top 100 in QS World University Rankings (Southern Asia)



IIT (ISM) Dhanbad Secures 15th Position in NIRF 2025 Rankings – Engineering Category



It is a matter of immense pride and distinction that the Indian Institute of Technology (Indian School of Mines), Dhanbad, has secured **the 15th position in the prestigious National Institutional Ranking Framework (NIRF) 2025 under the Engineering Category**. This noteworthy accomplishment underscores the institute's steadfast commitment to academic excellence, pioneering research, technological innovation, and holistic student development.

The ranking stands as a reflection of the dedication and scholarly contributions of the faculty, the diligence and ingenuity of the students, and the unwavering support of the alumni and institutional stakeholders. It reinforces IIT (ISM) Dhanbad's reputation as a leading center for engineering education and research, both at the national and international levels.

This recognition further strengthens the institute's enduring legacy of excellence and motivates the entire IIT (ISM) community to pursue higher standards of innovation, research, and societal contribution, thereby advancing the institute's mission toward nation-building and sustainable development.

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Teachers Day Celebration

The Department of Mining Engineering, IIT (ISM) Dhanbad, observed Teachers' Day on 5th September 2025 with profound enthusiasm to acknowledge and celebrate the invaluable contributions of faculty members, technical staff, and mentors. The event served as an occasion to express collective gratitude and admiration for their dedicated guidance and unwavering support.



The programme included a vibrant array of cultural performances organized by the students, featuring classical and contemporary dance, melodious musical renditions, and eloquent recitations of sher-o-shayari. These artistic expressions not only showcased the diverse talents of the students but also conveyed their deep respect and appreciation for their teachers.



As a token of gratitude, students extended greetings and presented thoughtful mementos to faculty and staff members. The exchange of kind words and warm gestures during the celebration symbolized the enduring bond of respect and affection between teachers and students, rendering the occasion both memorable and meaningful.

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Special acknowledgement was accorded to the Ph.D. and M.Tech. student community for their commendable efforts in organizing and coordinating the event. Their active participation and meticulous planning were instrumental in ensuring the success of the celebration and in creating a memorable experience for all attendees.



Teachers' Day 2025 at IIT (ISM) transcended the essence of a mere celebration, serving instead as a reflective occasion to recognize the invaluable guidance, mentorship, and inspiration imparted by teachers on a daily basis. The institute community came together in a spirit of respect and gratitude to honor these torchbearers of knowledge, thereby rendering the occasion both meaningful and impactful.





INTERNATIONAL CONFERENCE "Digital Intelligence for Green Mining and Industrial Networks" (DIGMIN-2025)

The Department of Mining Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad is proud to host the prestigious International Conference on Digital Intelligence for Green Mining and Industrial Networks (DIGMIN-2025) during 12-13 September 2025, organized as part of the centenary celebrations of IIT (ISM) Dhanbad. This two-day event will serve as a flagship forum for deliberations and collaboration in sustainable and intelligent mining technologies.

DIGMIN-2025 will bring together the distinguished academicians, researchers, industry professionals, policymakers, and sustainability leaders to explore the convergence of digitalization, automation, artificial intelligence, and green mining practices. The conference will showcase the cutting-edge developments in AI/ML for risk prediction, IoT-enabled mine automation, autonomous systems, and cyber-physical solutions for resource efficiency and environmental stewardship.



Key themes of the Conference include:

- Smart Mining Infrastructure and Digital Foundations
- Robotics & Automation in Harsh Mining Environments
- Real-time Analytics and Edge AI for Mining Operations
- AI-Driven Intelligence for Critical Mineral Estimation
- Energy Optimization and Resilient Mining Systems

DIGMIN-2025 promises an enriching experience with high-impact keynote addresses, technical paper sessions, industry exhibits, and policy roundtables, aiming to create actionable roadmaps for a digitally empowered and environmentally responsible mining future.

INTERNATIONAL CONFERENCE ON "Digital Intelligence for Green Mining and Industrial Networks (DIGMIN-2025)" September 12-13, 2025 GJLT Auditorium, IIT (ISM) Dhanbad

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Glimpses of Digmin 2025



Glimpses of Digmin 2025



Swachhata Pledge Ceremony

As part of the Swachhata Hi Sewa (SHS) campaign, the Department of Mining Engineering at IIT (ISM) Dhanbad organized a Swachhata Pledge ceremony on 17th September 2025 (Wednesday) at 10:00 AM in the Conference Hall. The event witnessed enthusiastic participation from faculty members, officers, and staff, all of whom reaffirmed their dedication to upholding cleanliness, hygiene, and sustainable practices in their personal and professional lives.

The pledge ceremony served as a meaningful reminder of the collective responsibility shared by all stakeholders in fostering a cleaner, healthier, and more sustainable environment. Aligned with the objectives of the national Swachh Bharat Abhiyan, the event underscored the institute's ongoing commitment to promoting the values of cleanliness, civic responsibility, and environmental consciousness within its academic and societal framework.



"Gandhi Ji believed cleanliness next only to Godliness, let's pledge today to convert cleanliness into a national passion."

"Swachh Bharat is everyone's responsibility."



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Vishwakarma Pooja Celebration

The Department of Mining Engineering at IIT (ISM) Dhanbad observed Vishwakarma Pooja with profound reverence and enthusiasm at the Rock Mechanics Laboratory. The event witnessed active participation from faculty members, research scholars, students, and departmental staff. A particularly notable aspect of the celebration was the gracious presence of several retired colleagues, whose participation added a sense of nostalgia and deepened the significance of the occasion.



Following the ceremonial rituals and prayers, a Mahabhog was organized at the Mine Survey Laboratory, bringing together all attendees in a shared spirit of community and camaraderie. The celebration served not only as an expression of devotion to Lord Vishwakarma, revered as the divine architect and craftsman, but also as an opportunity to reinforce the enduring connections among current and former members of the Mining Engineering community.



Delegate Visit



The Department of Mining Engineering had the honor of welcoming **Prof. Raja V. Ramani**, a distinguished alumnus of the 1962 Batch and Professor Emeritus of Mining and Geo-Environmental Engineering, Penn State University, USA, on 20th September 2025 at 12:00 noon.

All faculty members of the department participated in the interactive session held in the Conference Room. Prof. Ramani's visit was marked by enriching discussions on prospective research collaborations and formal academic partnerships, aimed at fostering deeper academic and research linkages between IIT (ISM) Dhanbad and Penn State University.

The interaction served as a valuable platform for sharing knowledge, experiences, and ideas, further strengthening the long-standing association between the two premier institutions.

Workshop on Indigenous Technologies for Critical Minerals Exploration and Smart Mining



The Indian Institute of Technology (Indian School of Mines), Dhanbad, organized a one-day National Workshop under the ANRF–PAIR Category B Project on “Development of Innovative and Cutting-edge Indigenous Technologies for Critical Minerals Exploration and Smart/Sustainable Mining.”

The project is spearheaded by Prof. Dheeraj Kumar, Deputy Director, IIT(ISM) Dhanbad (Project Director), with Prof. Ejaz Ahmad as Coordinator. It is being implemented in collaboration with spoke institutions — NIT Durgapur, NIT Jamshedpur, Patna University, MMMUT Gorakhpur, and Vinoba Bhave University, Hazaribagh — with the collective objective of developing indigenous technological solutions for India’s mining and mineral sectors.

The workshop witnessed the participation of more than 150 faculty members from the hub and spoke institutions. Prof. Raja V. Ramani, Emeritus Professor, Pennsylvania State University, USA, graced the occasion as the Chief Guest. In his address, he underscored the urgent need to advance homegrown technologies in the domains of critical minerals exploration and smart mining, highlighting their significance for clean energy transitions, electric mobility, electronics manufacturing, and defense applications. He further emphasized that India’s leadership in these sectors is vital for ensuring resource security and realizing the vision of Atmanirbhar Bharat.

Delivering the Presidential Address in online mode, Prof. Sukumar Mishra, Director, IIT(ISM) Dhanbad, emphasized the necessity of collaborative research to generate comprehensive, end-to-end technological solutions addressing both national and global challenges. In his Welcome Address, Prof. Dheeraj Kumar reaffirmed IIT(ISM)’s commitment to advancing innovation in mining technologies, while Prof. Parthasarathi Das, Dean (R&D), highlighted the critical role of institutional partnerships in achieving meaningful and impactful research outcomes.

A special roundtable discussion among Co-Principal Investigators (Co-PIs) from the spoke institutions focused on collaborative research strategies, infrastructure sharing, faculty and student mobility, and industry partnerships. The deliberations culminated in defining a roadmap for future collaborative actions under the project.

The ANRF–PAIR Programme represents a flagship initiative aimed at strengthening research capacity across India through a hub-and-spoke model. By emphasizing critical minerals and sustainable mining, the IIT(ISM)-led project addresses a domain of strategic national importance. These minerals form the backbone of emerging technologies — spanning renewable energy systems to advanced manufacturing — and the project aspires to develop comprehensive indigenous technology packages that will bolster India’s global competitiveness and ensure long-term resource self-reliance.

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Swachhata Hi Sewa 2025 – Felicitation of Safai Mitras and Volunteers at IIT (ISM) Dhanbad



In line with the directives of the Ministry of Education, Government of India, IIT (ISM) Dhanbad proudly observed the Swachhata Hi Sewa (SHS) Campaign 5.0 from 15th September to 2nd October 2025. The campaign focused on collective cleanliness efforts, spreading awareness, and encouraging active participation in making the campus clean, green, and sustainable.

As part of this initiative, a felicitation program was held on 25th September 2025 at 11:00 AM in Penman Auditorium, where Safai Mitras, Swachhata Coordinators, volunteers, and members of Deepti Ladies Club, Sampurna Ladies Club, Scolomin Club, Staff Recreation Club, and the Shop Inspection Team were honored for their dedicated contributions.

During the program, Mr. Ravi from the Department of Mining Engineering was felicitated for his commendable role and enthusiastic participation in the Swachhata Hi Sewa campaign. His efforts, along with those of other volunteers and coordinators, were recognized as an integral part of the Institute's mission towards maintaining cleanliness and hygiene in and around the campus.

The event also drew inspiration from national-level initiatives like the “Swachhotsav – Safai Mitra Samman Samaroh,” observed across the country under Swachhata Hi Sewa – 2025. The recognition of Safai Mitras as the true foot soldiers of cleanliness resonated strongly with the spirit of the program at IIT (ISM).

The Department of Mining Engineering congratulates Mr. Ravi for his well-deserved recognition and remains committed to supporting the Institute's collective journey towards Swachh Bharat.

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Faculty Achievements



We are pleased to announce that Prof. V. M. S. R. Murthy, Professor (HAG), Department of Mining Engineering, IIT (ISM) Dhanbad, and Director, IEST Shibpur, has been elected as a Fellow of the Indian National Academy of Engineering (INAE). This distinguished recognition, effective from November 1, 2025, honors his exceptional contributions to the field of Mining Engineering and his commitment to engineering excellence. The formal induction will be held during the INAE Annual Convention 2025 in Bengaluru. We extend our sincere congratulations to Prof. Murthy on this remarkable accomplishment.



We are pleased to share that Dr. Patitapaban Sahu, Associate Professor in the Department of Mining Engineering, has been selected to receive the prestigious MGMI Award for Non-Coal Mining (2024–25), conferred by the Mining, Geological & Metallurgical Institute of India (MGMI). This distinguished recognition acknowledges Dr. Sahu's significant contributions in the areas of mine ventilation, mine fire safety, coalbed methane research, and environmental engineering in mining. The award will be formally presented during the 119th Annual General Meeting of MGMI, scheduled on September 27, 2025, at Hyatt Regency, Kolkata. We extend our heartfelt congratulations to Dr. Sahu for this outstanding achievement, which brings great pride to the IIT (ISM) Dhanbad community.



We are pleased to share that Dr. Swapnil Mishra, Assistant Professor in the Department of Mining Engineering, has been selected as a member of the Editorial Board of Scientific Reports, a highly regarded open-access journal from the Nature Portfolio. This achievement reflects Dr. Mishra's significant scholarly contributions to the domain of Civil Engineering and her unwavering dedication to promoting research that tackles pressing global scientific issues. In her new capacity, she will play an active role in upholding and enhancing the journal's standing as a trusted and influential platform for the publication of high-quality, original, and impactful scientific work.

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Research Publications & Projects



Research Publications



- **K. Chand, R. Koner, (2025).** "Mine Internal Dump Optimum Geometric Design Parameters Identification for Mine Ground Floor Inclination Conditions Using Numerical Modelling and Machine Learning," Society for Mining, Metallurgy & Exploration Inc. 2025, <https://doi.org/10.1007/s42461-025-01344-8>.
- **Sahoo, M.M., Herrmann, I. and P.V., Arun. (2025).** "Explainable Ante-hoc Approaches for EO Data Analysis: Opportunities and Challenges". edited by Arun P.V., Jocelyn Chanussot, B Krishna Mohan, D Nagesh Kumar, Alok Porwal, 148-166. Florida, CRC Press, Taylor and Francis Group, LLC, 2026. <https://doi.org/10.1201/9781003597025>.
- **Ram, S., Kumar, A., Skrzypkowski, K., Stasica, J., Rak, Z., & Madziarz, M. (2025).** Assessment of Dyke-Induced Strength Variations in Coal and Its Surroundings Using a Non-Destructive In Situ Testing Approach. *Mining*, 5(4), 63. <https://doi.org/10.3390/mining5040063>.
- **Thappitla, R.S., Villuri, V.G.K. & Kumar, S.** An autoencoder driven deep learning geospatial approach to flood vulnerability analysis in the upper and middle basin of river Damodar. *Sci Rep* 15, 33741 (2025). <https://doi.org/10.1038/s41598-025-96781-2>.



Consultancy & R&D Projects



- **Prof. Santosh Kumar Behera and Prof. D. P. Mishra** have been awarded an R&D project titled "Scientific Study for Safe Development and Depillaring Operations Using Paste Backfill Technology and Subsidence Prediction at Singhali Underground Mine, Korba Area."
- **Prof. Ashok Kumar and Prof. Santosh Kumar Behera** have secured a consultancy project on "Preparation of a Detailed Study Report of Opencast Mining Method Plan for a Period of Five Years (2026–27 to 2030–31) for Drang Rock Salt Mine of Hindustan Salt Limited, Mandi, Himachal Pradesh."
- **Prof. Ashok Kumar and Prof. Dheeraj Kumar** have been awarded a consultancy project titled "Subject Matter Expert for Adani 3S CoE Project at TEXMiN Building, IIT (ISM) Dhanbad."
- **Prof. B. S. Choudhary and Prof. D. G. Krishna** have undertaken a consultancy project on "Vibration Monitoring Studies (Pre-Blasting) at the Proposed 640 MW Indira Sagar Pump Storage Scheme, M/s NHDC Ltd."
- **Prof. B. S. Choudhary and Prof. D. G. Krishna** have been entrusted with another consultancy project titled "Scientific Study to Conduct Controlled Deep Hole Blasting under Regulation 164 (1-B) of MMR-1961 for Baitarani Iron Ore Mines of M/s Sunandan Pradhan."
- **Prof. D. G. Krishna and Prof. B. S. Choudhary** have also been a consultancy project on "Scientific Study for Slope Stability at Baitarani Iron Ore Mines, M/s Sunandan Pradhan, Bhubaneswar."

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Ph.D. Submitted



- **Dr. Vislavath Suresh (21DR0217)**, a part-time Research Scholar from the Department of Mining Engineering, has been Submitted the Doctor of Philosophy (Ph.D.) degree under the supervision of Prof. Siddharth Agrawal. His doctoral research, titled "Cyber-Physical Systems for Air Pollution Monitoring in Surface Coal Mines Using Low-Cost Sensors: A Sustainable Development Approach," focuses on developing an integrated framework for sustainable air quality monitoring in mining environments.
- **Dr. Anant Kumar Shukla (18DP000433)**, a part-time Research Scholar from the Department of Mining Engineering, has been Submitted the Doctor of Philosophy (Ph.D.) degree under the joint supervision of Prof. A. K. Mishra. His doctoral research, titled "Stability Analysis Using Numerical and Experimental Methods of Underground Cavern in Rock with High Overburden: Insights from the Tala Hydro-Electric Project," provides valuable contributions toward understanding the stability behavior of deep underground structures through combined analytical and experimental investigations.

Longwall Training Gallery Visit

A distinguished delegate visit was held at the Longwall Training Gallery, IIT(ISM) Dhanbad, under the Department of Mining Engineering. The visit highlighted the department's commitment to practical learning and cutting-edge research in underground mining. The delegates appreciated the state-of-the-art facilities and the interactive demonstration of longwall mining techniques.



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Khanan 2025



About the Department

The Department of Mining Engineering has been recognized as a QIP Centre for the faculty members of other Mining Engineering Departments of the country to pursue higher studies (M.Tech. and Ph.D.). The students passing out from this Department have traditionally occupied top positions in the government departments, academia, and research organizations as well as in the mining industry, both in India and abroad. Acknowledging the standards of teaching and research imparted and the contributions made to the mining industry, the Department has been ranked at 20th position in QS ranking-2025 among the global universities offering Mining and Mineral education.

About Khanan

The annual Techno-Mining fest of IIT (ISM) Dhanbad, 'KHANAN'25' is organized by the Department of Mining Engineering, IIT (ISM) Dhanbad in collaboration with SME IIT (ISM) Student chapter. It has the key aim: uniting students from various mining and allied disciplines across the country. This event serves as a platform for them to display their talents and capabilities. Three days of the event, a variety of activities will be taking place. These include interactive discussions, enlightening talks by distinguished personalities from the industries, presentation of research papers, analysis of practical cases, many more. This fest creates an immersive learning atmosphere, allowing aspiring mining and science students to real-life scenarios and challenges being faced in the industry.

Past Sponsors



KHANAN'25
The Annual Techno-Mining Fest

Organised by
DEPARTMENT OF MINING ENGINEERING
IIT(ISM) Dhanbad

25-26 OCTOBER 2025

ORGANISING TEAM

Faculty Advisor and Convenor: Prof. D.P. Mishra
(+91 6299882610)

SME President : Manish Kumar (+91 8935878941)
SME Vice-president: Deep Kumar Dey (+91 6204612079)
Secretary , ERAA: Affan Ahmed (+91 9798959100)
Secretary: Suraj Pradhan (+91 7436052015)
Ad. Secretary: Arpita Kumari (+91 9142004936)

Sponsorship and Finance Team

Advisor: Prof. Ashok Kumar & Prof. Ankush Galav
Student coordinator: Himanshu Singh
Members: Sidhant Saurav & Sumit Bhagat

Event Management Team

Advisor: Prof. D Gopi Krishna & Prof. Bhaskara Behera
Student coordinator: Nakshatra Singh Jhala & Affan Ahmed
Members: Rajnee Kant & Prabal Chandra

Logistics & Hospitality Team

Advisor: Prof. P Sahu & Prof. Ajeet Yadav
Student coordinator: Koushik Mandal
Members: Saksham Kumar & Amit Jana

Media & Designing Team

Advisor: Prof. D Gopi Krishna & Prof. Ankush Galav
Student coordinator: Kundan Kumar & Himanshu Raj
Members: Bhanothu Sai Prasad & Naisha Gorli

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Khanan 2025

KHANAN EVENTS

DEZYN-O-MANIA

PLACEMENT FEVER

THE NEXT BIG THING

PANEL DISCUSSION

WAR-O-WORDS

KALAKRITI

GAMICON

KHANAN MAFIA

MINING OLYMPIAD

GENERAL QUIZZINE

NIRVANA

MINE DESIGNOTHON

KHANAN WORKSHOPS

GENERAL
QUIZZINE

NIRVANA

MINE
DESIGN
OTHONMINING
OLYMPIAD

OUR HISTORY

IIT (ISM) Dhanbad is a premier engineering institute in India, renowned for its expertise in mining, mineral, and applied geology. Established in 1926, it has a rich history of professional as well as cultural heritage among the institute, with several fest and clubs contributing in producing an atmosphere optimal for one's growth, along with a strong reputation for producing highly skilled professionals and industry leaders.

MOTIVE

Primary focus of 'KHANAN' is enhancing decision-making, problem solving abilities and empowering students to tackle complex issues. Through the 'KHANAN', participants not only showcase their abilities but also acquire invaluable knowledge and expertise, contributing to their personal growth and professional growth.



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STUDENT WORKSHOP UNDER CENTENARY CELEBRATION



A hands-on training workshop on “Advances in Tunnelling: Integrating Machine Learning Applications with Numerical Modelling” (TUN - AID 2025) is scheduled to be held from **3rd to 5th November 2025**, organized by the Department of Mining Engineering, IIT (ISM) Dhanbad, as part of the institute's centenary celebrations.

**Hands-on Training Workshop on Advances in Tunnelling:
Integrating Machine Learning Applications with Numerical Modelling**
(3rd - 5th November, 2025)
Organized by the Department of Mining Engineering
Indian Institute of Technology (Indian School of Mines), Dhanbad, India

Course Overview

Tunnelling and underground space technology are vital branches of civil and mining engineering, enabling the efficient use of subsurface spaces for infrastructure, transportation, and resource development. With the rising demand for sustainable and resilient infrastructure, this field plays a key role in shaping the future of urbanization and industrial growth.

This three-day program offers a dynamic blend of theory and practice, featuring two days of hands-on training on Rocscience software for advanced numerical modelling in tunnelling. Participants will also benefit from guest lectures, industry showcases, and international expert sessions that share cutting-edge advancements and real-world insights.

A highlight of the workshop is a dedicated lecture on integrating Machine Learning applications into geotechnical engineering, unlocking innovative and impactful solutions for tunnelling projects. Designed for students, researchers, and professionals, this event provides an exceptional platform to gain expertise, connect with global experts, and explore future opportunities in this evolving domain.

About the Department

Founded in 1926, the Department of Mining Engineering at IIT (ISM) Dhanbad has been a pioneer in shaping the future of mining and mineral education for nearly a century. As the largest and most renowned department of its kind in India, it has set benchmarks in teaching, research, and innovation across coal, metalliferous mining, and construction sectors.

Celebrating its legacy of excellence, the department proudly holds a prestigious position in the QS World University Rankings 2025: Ranked #20 globally and #1 in India in Engineering – Mineral & Mining, and placed among the Top 100 in Southern Asia.

Who should attend?

- B.Tech, M.Tech, or Ph.D. student, or a faculty member from the fields of Mining Engineering, Geotechnical Engineering, or Civil Engineering.
- Working professional from a PSUs or a private company involved in mining, tunnelling, consultancies, instrumentation, or infrastructure development.
- Official from a regulatory body such as the CPCB, SPCB, DGMS, or IIRM.
- Researcher or practitioner engaged in tunnelling, planning and design of underground space, instrumentation, or geological and geotechnical field.

Committee Members

Chairman
PROF. B. S. CHAUDHARY
Head of The Department
Department of Mining Engineering,
IIT (ISM) Dhanbad, India

Course Coordinator
DR. SWAPNIL MISHRA
Assistant Professor
Department of Mining Engineering,
IIT (ISM) Dhanbad, India

Course Co-coordinator
DR. DONDAPATI GOPI KRISHNA
Assistant Professor
Department of Mining Engineering,
IIT (ISM) Dhanbad, India

Student Coordinators

Jyoti Jagajita Raj
M.Tech in Tunnelling &
Underground Space
Technology
Dept. of Mining
Engineering

Susmit Mantayya Swami
M.Tech in Tunnelling &
Underground Space
Technology
Dept. of Mining
Engineering

Ashwini Kumar
M.Tech in Tunnelling &
Underground Space
Technology
Dept. of Mining
Engineering

About the Faculty

Dr. Bharwar Singh Choudhary, Professor and Head of Mining Engineering at IIT (ISM) Dhanbad, specializes in mine planning, underground metal mining, drilling and blasting, and tunnelling. With 17+ years of academic and industry experience, he has supervised 14 Ph.D. and 42 M.Tech scholars, published 90 journal papers, and 40 IAS and consultancy projects worth over ₹12 crore. A ranked 2nd Class Manager (CGMS) and active member of ISM and TAI, he is a leading authority in blasting technology and mining engineering education.

Dr. Swapnil Mishra, Assistant Professor at IIT (ISM) Dhanbad, specializes in tunnelling, underground space development, high-strain rate loading, blast and seismic loads, and finite element analysis. With a Ph.D. from IIT Delhi and international collaboration with UNIST, South Korea, she has designed advanced mixed lining, facilities, supervised multiple Ph.D., M.Tech., and B.Tech students, and published extensively. She is a member of various societies contributing to geotechnical forums like IGS, ISRM, ISSMOE, and ISIT. Recognized among the top 75 Women Leaders in Geotechnical Engineering by IGS, she received the Women Achiever Award 2023 for her significant contributions to underground structure design and impact load studies.

Dr. Dondapati Gopi Krishna is an Assistant Professor in Mining Engineering at IIT (ISM) Dhanbad since August 2023. He holds a post doctoral degree from IIT Kharagpur and the University of Wollongong, Australia, and specializes in rock excavation, mechanical cutting, rock-rock interaction, rock mechanics, and numerical modeling. With over 14 cores in sponsored research funding and strong industry collaborations, he has published widely in reputed international journals and conferences. A Professional Engineer with Engineers Australia, he is also a member of ISRM and the Tunnelling Association of India.

Sponsorship Details

Categories	Benefits
Platinum Sponsor	"Your Brand, Your Stage, Your Moment" - An exclusive 45-minute platform to present your organization, showcase your innovations, and inspire a distinguished audience. Free Entry Up to 7 Employees
Gold Sponsor	"Golden Spotlight: Inspire & Connect" - A premium 30-minute opportunity to highlight your achievements, connect with industry leaders, and leave a lasting impression. Free Entry Up to 5 Employees
Silver Sponsor	"Silver Showcase: Elevate Your Brand" - A focused 25-minute session to feature your expertise and spark meaningful connections with industry leaders. Free Entry Up to 3 Employees

(Prime logo placement across event materials and Exclusive networking opportunities for all the sponsors)

Course fee:

- Students: INR 1,500/-
- Academicians: INR 7,000/-
- Professionals from Government Organization and Industries: INR 10,000/-

Schedule

Inaugural Ceremony- 09:00-10:00	
Day 1	10:00-10:30 High Tea
	10:30-11:45 Guest Lecture 1
	11:45-12:00 Guest Lecture 2
	12:00-12:30 Lunch
Day 2	12:30-1:00 Hands-On Training-1
	1:00-1:30 High Tea
	1:30-1:45 Guest Lecture 3
	1:45-2:00 Product Showcase
Day 3	2:00-2:15 Guest Lecture 4
	2:15-2:30 Lunch
	2:30-2:45 Hands-On Training-2
	2:45-3:00 High Tea
Day 4	3:00-3:15 Networking Session
	3:15-3:30 Guest Lecture 5
	3:30-3:45 High Tea
	3:45-4:00 Guest Lecture 6
Day 5	4:00-4:15 Lunch
	4:15-4:30 Guest Lecture 7
	4:30-4:45 Hands-On Training
	4:45-5:00 High Tea
5:00-5:30 Valedictory Ceremony	

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Ranked 20th globally, 1st in India, and within the top 100 in QS World University Rankings (Southern Asia)



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
Chaudhary**

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 Soyeb 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, Geo-technical 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 opencast 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



2025 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
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

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
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

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
				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

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
					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

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					

2025 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

25th - 26th October: Khanan 2025

30th October : Mine Rescue Day

1st November : Coal India Foundation Day

1st November : Indian Mining Day

3rd - 5th November : Student Workshop Under Centenary Celebration (TUN-AID 2025)

5th December : World Soil Day

11th December : International Mountain Day

14th December : National Energy Conservation Day

