



IIT
ISM INDIAN INSTITUTE
OF TECHNOLOGY
INDIAN SCHOOL OF MINES
DHANBAD

Department of Mining Engineering



THE MINING EDGE

MONTHLY NEWSLETTER

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October 2025



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From HOD Desk



Dear Readers,



It gives me immense pleasure to present the October 2025 edition of The Mining Edge. This issue captures a period of remarkable academic and institutional achievements for the Department of Mining Engineering, IIT (ISM) Dhanbad. Over the past months, our department has continued to uphold its legacy of excellence through impactful research, vibrant student initiatives, and meaningful collaborations at both national and international levels. Each milestone featured in this issue reflects our collective dedication to advancing the frontiers of mining science and technology while nurturing a culture of innovation, sustainability, and integrity. As we look ahead, our focus remains steadfast on shaping competent professionals and visionary leaders who will drive the future of the global mining industry.

At a time when the global mining community is increasingly focused on sustainability, technology integration, and critical mineral security, our institute continues to play a pioneering role. The recent announcement by Hon'ble Prime Minister Shri Narendra Modi regarding the establishment of a satellite campus of the UK-India Critical Minerals Supply Chain Observatory at IIT(ISM) Dhanbad is a historic milestone. This initiative underscores our institute's leadership in mining research and resource engineering and reaffirms our century-long contribution to the nation's development in the energy and mineral sectors. It also positions IIT(ISM) Dhanbad at the forefront of international collaboration in the field of critical minerals, which are vital for clean energy, green technologies, and sustainable industrial growth.

The department's flagship annual event, KHANAN'25, once again showcased the innovative spirit and talent of our students. Through diverse competitions, workshops, and discussions on cutting-edge topics such as mining robotics, automation, and sustainable mining, the event strengthened academia-industry collaboration and inspired the next generation of mining professionals. The participation of experts from leading public sector enterprises and private industries enriched the experience for all, providing valuable insights into the emerging trends shaping the mining sector. We also take pride in our faculty and students for their outstanding achievements—ranging from national-level research awards and consultancy projects to top positions in competitive examinations and sporting excellence. These achievements highlight the department's holistic approach to education, where academic rigor is harmoniously balanced with innovation, creativity, and personal development. The continued success of our students and faculty reflects the collaborative and progressive environment that defines the Department of Mining Engineering.

Additionally, international academic engagements, such as the IIT(ISM) delegation's visit to TU Leoben, Austria, are fostering meaningful collaborations that will expand our global academic footprint. These partnerships open new avenues for joint research, student exchange, and technology transfer, thereby strengthening IIT(ISM)'s reputation as a globally connected institution of higher learning.

A hands-on training workshop titled "Advances in Tunnelling: Integrating Machine Learning Applications with Numerical Modelling (TUN-AID 2025)" will be organized by the Department of Mining Engineering, IIT (ISM) Dhanbad, from 3rd to 5th November 2025 as part of the institute's centenary celebrations. The workshop aims to provide researchers, academicians, and industry professionals with cutting-edge insights into the fusion of tunnelling technologies and data-driven modelling approaches—further strengthening IIT(ISM)'s commitment to innovation and excellence in mining education and research.

As we continue our journey towards academic excellence and innovation, the department remains committed to advancing research, promoting sustainable mining practices, and nurturing leaders who will shape the future of the mining industry. With the support of our esteemed faculty, motivated students, and dedicated staff, we look forward to contributing even more meaningfully to the nation's vision of self-reliance and sustainable growth. Together, we strive to uphold the proud legacy of IIT(ISM) Dhanbad as a beacon of excellence in mining and earth sciences.

Warm regards,
Prof. B.S. Choudhary

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Great Opportunity for IIT(ISM),Dhanbad

CRITICAL MINERALS FOR INDIA



“

During a meeting held on October 9, 2025, with British Prime Minister Keir Starmer, Prime Minister Narendra Modi announced that the Indian Institute of Technology (Indian School of Mines), Dhanbad, will host the satellite campus for the new UK-India Critical Minerals Supply Chain Observatory. This initiative marks a significant step toward strengthening bilateral collaboration in critical minerals research, technology exchange, and sustainable resource development.

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Critical minerals are those minerals which are essential for economic development and national security, the lack of availability of these minerals or even concentration of existence, extraction or processing of these minerals in few geographical locations may lead to supply chain vulnerability and disruption

”

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In a landmark announcement that underscores India's leadership in the global minerals and technology ecosystem, Hon'ble Prime Minister Shri Narendra Modi today announced the establishment of a satellite campus of the UK-India Critical Minerals Supply Chain Observatory at IIT (ISM) Dhanbad.



The announcement was made during the Joint Press Statement delivered by Prime Minister Modi and his British counterpart Rt. Hon. Keir Starmer in Mumbai, following their meeting on the sidelines of the inaugural UK-India Critical Minerals Roundtable and Industry Guild.

The Indian Critical Minerals Identification process tries to address five core objectives:



The initiative represents a major stride in strengthening bilateral cooperation between India and the United Kingdom in building resilient, sustainable, and secure supply chains for critical minerals – the essential materials driving clean energy, green technologies, and high-end manufacturing.

Prime Minister Modi, in his address, highlighted that the second phase of the UK-India Critical Minerals Supply Chain Observatory will be launched alongside the creation of an Industry Guild to promote research and innovation in this crucial sector. The Prime Minister specifically announced that the Observatory's satellite campus will be located at ISM Dhanbad, a recognition of the institute's century-old legacy and its modern research strength in mining, geoscience, and resource engineering.

The establishment of the satellite campus aligns with India's larger vision to enhance its capacity in critical mineral exploration, processing, and supply chain management, while fostering international collaboration with global partners. It will serve as a focal point for joint research, policy frameworks, and technological development in minerals vital to energy transition and sustainable development.

The initiative also complements ongoing bilateral efforts under the India-UK Technology and Innovation Partnership, which includes the creation of the Connectivity and Innovation Centre and the Joint Centre for Artificial Intelligence, as well as joint commitments toward climate technology and clean energy transitions.

The establishment of the Critical Minerals Observatory's satellite campus at IIT (ISM) Dhanbad will further consolidate the institute's position as a national hub for advanced research and innovation in exploration, sustainable mining, and mineral resource management, while contributing to India's self-reliance and leadership in the global critical minerals landscape.

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Khanan'25



The Department of Mining Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, in association with the Society of Mining Engineers (SME) IIT (ISM) Student Chapter, is set to host KHANAN'25 – the Annual Techno-Mining Fest on October 25 and 26, 2025.

Renowned as one of the premier student-led technical fests in the mining domain, KHANAN aims to bring together aspiring mining and earth science students from institutions across India to engage in a series of intellectually stimulating competitions, discussions, and workshops that blend academic rigor with real-world problem solving. Over two days, KHANAN'25 will feature a wide spectrum of events such as Mining Olympiad, Nirvana, Mine Designathon, Placement Fever, The Next Big Thing, Panel Discussion, War-o-Words, General Quizzine, Kalakriti, Gamicon, and Khanan Mafia, each designed to test analytical, creative, and technical capabilities of participants. These events will be complemented by insightful workshops on Mining Robotics and Automation, Mineral Market and Global Trade, Mine Planning and Design, and Mining Equipment and Technology.

Speaking ahead of the event, Prof. Devi Prasad Mishra, Faculty Advisor and Convener of KHANAN'25, said, "Mining Engineering is a dynamic and constantly evolving field that continues to shape the industrial and energy security of nations. The Department of Mining Engineering at IIT (ISM) Dhanbad, ranked 20th globally in QS World University Rankings for Mining and Mineral Engineering, remains at the forefront of research and innovation. KHANAN exemplifies the spirit of our students—offering a platform that fosters technical excellence, innovation, and leadership among future mining professionals."

The fest's hallmark lies in its interactive engagement with industry professionals, including senior officials from Coal India Limited (CIL), experts from metal mining sectors, and distinguished academicians who will participate in a panel discussion addressing key industry challenges and opportunities.

Additionally, KHANAN'25 will also incorporate CSR-driven events such as Kalakriti, a drawing competition encouraging awareness through art, and Gamicon, an informal gaming event promoting teamwork and stress relief. With its focus on innovation, collaboration, and knowledge sharing, KHANAN'25 promises to continue IIT (ISM) Dhanbad's legacy of nurturing talent and fostering excellence in the field of mining and allied sciences.

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The two-day national techno-mining fest KHANAN'25 kicked off at IIT (ISM) Dhanbad on Saturday, with experts from the government and industry highlighting the enduring importance of mining in India's development and global sustainability goals.

IIT (ISM) Director Prof. Sukumar Mishra welcomed the dignitaries and highlighted the need for young engineers to adapt to the fast-changing technological landscape in the mining sector.

Inaugurating the fest at Penman Auditorium, Ujjwal Tah, Director General of the Directorate General of Mines Safety (DGMS), described mining as "the backbone of civilization," tracing its evolution from the Stone Age to the digital era.

The event saw the participation of Sanjeev Kumar Singh, Chairman and Managing Director of Hindustan Copper Limited (HCL), and Manoj Kumar Agarwal, Chairman and Managing Director of Bharat Coking Coal Limited (BCCL), as Guests of Honour.

With experts from Coal India Limited, Hindustan Zinc, and other leading organizations expected to join discussions over the next two days, KHANAN'25 aims to strengthen industry-academia collaboration while celebrating IIT (ISM) Dhanbad's legacy as India's oldest and foremost mining institution.

Organized by the Department of Mining Engineering in association with the Society of Mining Engineers (SME) IIT (ISM) Student Chapter, KHANAN'25 features competitions, workshops, and discussions on emerging themes such as Mining Robotics and Automation, Sustainable Mining Practices, and Global Mineral Trade.



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Events Organised in KHANAN'25

Mining Olympiad



The Mining Olympiad, a dynamic quiz competition, covered subjects like science, business, and history. It featured two rounds: a pen-and-paper quiz and an exciting rapid-fire challenge, offering participants an engaging intellectual experience.

Khanan Mafia



Khanan Mafia was an exhilarating journey, filled with geo-puzzles that challenged participants and uncovered hidden talents. It pushed them to solve intricate puzzles, igniting their inner explorers as they raced to claim the ultimate treasure. Their determination was tested, and at the end, they rose among the champions.

Kalakriti

Children from the NGOs, FFI, and Kartavya took part in the drawing competition. Their artwork raised awareness and made a positive societal impact, sparking meaningful conversations for a better future. This memorable event highlights the transformative power of creativity and reminds us that change often starts with simple yet impactful expressions.



Edm Night

A spectacular EDM night was hosted by Tribevibe on 26 October 2025. The event featured an electrifying performance by the renowned DJ Richa, whose seamless mixes and dynamic beats kept the crowd energized and dancing all night.

The fusion of dazzling lights and high-energy music created an unforgettable atmosphere, making it one of the most memorable moments of the festival. With attendees from across the country coming together to celebrate, the night was filled with vibrant energy. This EDM party perfectly captured the spirit of KHANAN'24, leaving everyone with lasting memories.



Face Painting



Gamicon

OCTOBER 2025 Gamicon included two nights of engaging online games, providing the perfect opportunity for relaxation and social connection. Participants were able to hone essential skills such as teamwork and focus, while enjoying the experience and contributing to a friendly atmosphere.

Nirvana

Nirvana offered a platform to tackle key challenges in the mining industry, with both predefined and participant-created problem statements. The competition included two rounds: online submissions and presentations. Winners were chosen based on the innovation and impact of their solutions.

Dezyn-O-Mania

Dezyn-O-Mania, a collaboration between Coal India and IIT (ISM) Incubation Center, challenged students to design innovative solutions for the mining industry. Participants developed prototypes aimed at improving safety, efficiency, and machinery effectiveness, while gaining hands-on experience, networking with industry experts, and showcasing their creativity for opportunities.

Placement Fever

Placement Fever offered a realistic simulated campus placement experience involving three rounds: Aptitude Test, Group Discussion, and Interview. Participants enhanced their cognitive, collaboration, and communication skills while gaining valuable insights to improve their readiness for the placement process.

War-O-Words

War-O-Words is an intellectually stimulating debate contest that tested participants' persuasive abilities and critical thinking. This platform provided an opportunity to refine debating skills and engage in thought-provoking discourse with the best in the field.

General Quizzine

General Quizzine challenged the mining enthusiasts with geo-puzzles and complex problem-solving in a two-stage competition. Teamwork and sharp intellect were key to uncovering brilliance in the two consecutive rounds.



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*Glimpses of Khanan'25***SME****KHANAN'25**

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Longwall Training Gallery Visit

On the occasion of KHANAN '25, Mr. Sanjeev Kumar Singh, Chairman and Managing Director of Hindustan Copper Limited (HCL), visited the Longwall Gallery of the Department of Mining Engineering. During his visit, he interacted with faculty members and appreciated the department's efforts in providing hands-on learning opportunities to students.

As part of the KHANAN '25 activities, students from various colleges, also visited the Longwall Gallery. The visit offered them valuable insights into the operational aspects and technological advancements of longwall mining, thereby enriching their practical knowledge and exposure to real-world mining systems.



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Rashtriya Ekta Pledge on 31.10.2025



The Department of Mining Engineering observed National Unity Day on 31st October 2025, commemorating the 150th Birth Anniversary of Sardar Vallabhbhai Patel, the Iron Man of India. On this occasion, a Rashtriya Ekta Pledge was administered at 11:00 AM in the Conference Hall of the department.

Prof. B. S. Choudhary, Head of the Department of Mining Engineering, along with all faculty members and technical staff, participated enthusiastically in the pledge ceremony. The event served as a tribute to Sardar Patel's remarkable contribution towards the unity and integrity of the nation and reaffirmed the department's commitment to uphold these enduring values.

Vigilance Awareness Week



The Department of Mining Engineering observed Vigilance Awareness Week from 27th October to 2nd November 2025, in line with the nationwide initiative led by the Central Vigilance Commission. This week is celebrated every year during the period in which the birthday of Sardar Vallabhbhai Patel falls, to honor his vision of integrity and transparency in public life.

The theme for this year's observance was "Vigilance: Our Shared Responsibility." On this occasion, Prof. B. S. Choudhary, Head of the Department of Mining Engineering, along with all faculty members and technical staff, took the Integrity Pledge at the Conference Hall of the department. The event aimed to promote collective responsibility in upholding ethical values, transparency, and accountability within the institution and society at large.

"सतर्कता: हमारी साझा जिम्मेदारी"

"Vigilance: Our Shared Responsibility"

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Outreach Activities

Visit of IIT(ISM) Delegation to TU Leoben, Austria



A delegation from the Indian Institute of Technology (Indian School of Mines), Dhanbad, visited TU Leoben, Austria, from October 13 to 17, 2025, as part of an academic and research collaboration initiative. The delegation comprised Professor Somnath Chattopadhyaya (Department of Mechanical Engineering), Professor Susanta Mukhopadhyay (Department of Computer Science and Engineering), and Professor Radhakanta Koner (Department of Mining Engineering).

During the visit, the team explored various laboratories and research facilities at TU Leoben and interacted with faculty and researchers to discuss potential areas of collaboration in the fields of mining, materials, and sustainable technologies. A formal meeting was held with university officials and representatives from different research groups to strengthen academic and research linkages between the two institutions.

Additionally, a high-level interaction meeting was held with His Excellency Shri Shambhu S. Kumaran, Indian High Commissioner (Ambassador) to Vienna, Austria, and India's Permanent Representative to the UN in Vienna, on October 16, 2025, at the JW Marriott Hotel, Vienna. The meeting focused on exploring avenues for academic exchange, joint research projects, and future partnerships with Austrian universities.

This visit marks an important step toward enhancing international collaboration and fostering global academic engagement for IIT(ISM) Dhanbad.

Conference and Seminar



Prof. Anindya Sinha along Prof. Radhakanta Konar and Prof. Siddharth Agrawal, Department of Mining Engineering, attended the 11th Asian Mining Congress (AMC) held on October 30–31, 2025, at JW Marriott Hotel, Kolkata. The prestigious biennial event, organized by the Mining, Geological & Metallurgical Institute of India (MGMI), focused on the theme “Innovative & Responsible Mining for Inclusive Growth.”

Prof. Anindya Sinha participated in the conference along with the Chairman and Convener of the event and chaired one of the technical sessions, contributing to discussions on sustainable and technologically advanced mining practices

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Faculty Achievement



Prof. D. P. Mishra, Department of Mining Engineering, IIT (ISM) Dhanbad, has brought laurels to the institute by winning two national awards at the CMPDI Hackathons 2025 on R&D and Carbon Capture Technology.

🏆 1st Runner-Up: AI-enabled Photoacoustic Spectroscopy-based Multi-gas Detector for Underground Coal Mines (in collaboration with TCS Research, Kolkata)

🥈 2nd Runner-Up: Geological Storage of Captured CO₂ in Coal-Bearing Regions of India

These remarkable achievements highlight Prof. D. P. Mishra contributions to mine safety, sustainability, and carbon management, reinforcing IIT (ISM) Dhanbad's leadership in innovative mining research and technology.

Student Achievement



IIT (ISM) Dhanbad congratulates its distinguished alumnus Mohit Aggarwal (Mining Engineering, 2013–18) for securing All India Rank 1 in the Indian Economic Service (IES) Examination 2025, bringing immense pride and recognition to the institute. His exemplary achievement reflects the spirit of dedication, excellence, and perseverance nurtured at IIT (ISM). The institute applauds his outstanding success and wishes him continued accomplishments and contributions in the service of the nation.



Shrijal C. Dabhekar student of M.Tech (Mining Engineering) has secured 3rd position in the 10th All India Bushikan Cup Karate Championship, organized by the International Shotokan Karate Kyokai at the Nehru Complex, Koylanagar, Dhanbad, on 10th and 11th October 2025. The medals were presented by Mr. Aman Raj, Chief Vigilance Officer of BCCI, and Mr. Sunil Kumar, Director of Doon Public School. Participants from five states—Uttar Pradesh, Bihar, Odisha, West Bengal, and Jharkhand—took part in this prestigious tournament.

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Research Publications & Projects



Research Publications



- **Koner, R. (2025).** 'Optimum mine dump design in Wardha valley coalfields using finite difference based numerical methods', Journal of Analytical and Numerical Methods in Mining Engineering, doi: 10.22034/anm.2025.22754.1665
- **Thota Sivasankar*, Hari Shanker Srivastava and Dheeraj Kumar (2025).** Comparative evaluation of hybrid polarimetric decomposition techniques for land cover mapping, <https://www.ijssaprp.in>, https://www.researchgate.net/publication/396024644_Comparative_evaluation_of_hybrid_polarimetric_decomposition_techniques_for_land_cover_mapping
- **Chandrabhas, N.S., Yangale, S., Choudhary, B.S. et al.(2025).** Deterministic Rock Displacement Velocity Prediction in Jointed Rocks: A Field UAV-Enabled Machine Learning Approach. Mining, Metallurgy & Exploration (2025). <https://doi.org/10.1007/s42461-025-01370-6>



Projects



- **Prof. B. S. Choudhary** has been awarded consultancy project titled "Scientific study to conduct controlled deep hole blasting, under regulation 164 (1-B) of MMR-1961 for stone mines situated at Tantri, Tola Nutandih, Dist- Bokaro of M/S Jugnu Construction".
- **Prof. Md. Soyeab Alam** and **Prof. Dheeraj Kumar** has been awarded consultancy project titled "Quarterly Subsidence Monitoring Survey by using Total Station as main technique and partial use of integrated approaches for Khetri & Kolihan Copper Mine".
- **Prof. Ashok Kumar** has been awarded consultancy project titled "Scientific Study for Safe Development and Depillaring Operations using Paste Fill Technology and Subsidence Prediction at Singhali Underground Mine, Korba Area".
- **Prof. Ashok Kumar** has been awarded R & D project titled "Conducting scientific study for the loading/stability analysis of the developed pillars of seam I and Seam II below the OB dump at New Akashkinaree Colliery of BCCL".

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Legacy that Inspires the Future

भारतीय प्रौद्योगिकी संस्थान
भारतीय खनि विद्यापीठ
धनबाद

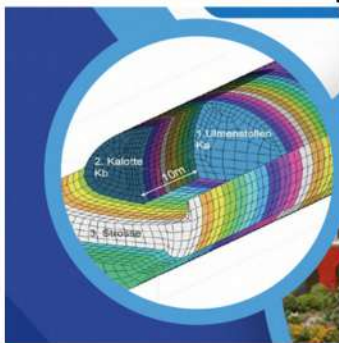


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NATIONAL WORKSHOP UNDER CENTENARY CELEBRATION

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.



TUN-AID 2025



3-Day National Workshop on Tunnelling Advancements in Difficult Grounds (TUN-AID 2025): Numerical Modelling and Machine Learning Approach (3rd to 5th of November, 2025)

Organized by the Department of Mining Engineering, IIT (ISM), Dhanbad, & Indian Geotechnical Society (IGS), Dhanbad Chapter



Course Overview

This three-day workshop explores the critical role of tunnelling and underground space technology in modern civil and mining engineering. As demand for sustainable infrastructure grows, this field is essential for shaping the future of urbanization and industry. The program offers a powerful mix of theory and application, featuring two days of intensive, hands-on training in advanced numerical modelling using Rocscience software. You'll also learn from international experts and industry leaders through guest lectures and technology showcases. A special session will be dedicated to the integration of Machine Learning in geotechnical engineering, revealing innovative solutions for complex tunnelling projects. Designed for students, researchers, and professionals, this workshop is an ideal opportunity to gain practical expertise, network with global leaders, and explore the future of this dynamic field.

Numerical Modeling using FEM/DEM

AI-ML approaches for Geotechnical Problems

I-System of Ground Classification

Insightful Case Studies

TUN-AID 2025

COMMITTEE MEMBERS



Chairman

PROF. B. S. CHOUDHARY

HEAD OF DEPARTMENT, DEPARTMENT OF MINING ENGINEERING, IIT (ISM) DHANBAD



Convenor

DR. SWAPNIL MISHRA

ASSISTANT PROFESSOR, DEPARTMENT OF MINING ENGINEERING, IIT (ISM) DHANBAD



Co-Convenor

DR. D. GOPI KRISHNA

ASSISTANT PROFESSOR, DEPARTMENT OF MINING ENGINEERING, IIT (ISM) DHANBAD

Student Coordinators



Jyoti Jagajitta Raj
M.Tech in Tunnelling & Underground Space Technology



Susmit Mantayya Swami
M.Tech in Tunnelling & Underground Space Technology



Ashwani Kumar
M.Tech in Tunnelling & Underground Space Technology





3-Day National Workshop on Tunnelling Advancements in Difficult Grounds (TUN-AID 2025): Numerical Modelling and Machine Learning Approach

(3rd to 5th of November, 2025)

Organized by the Department of Mining Engineering, IIT (ISM), Dhanbad, & Indian Geotechnical Society (IGS), Dhanbad Chapter



EXPERT SPEAKERS



Dr. Manoj Verman

Tunnelling & Rock Engineering Expert, Rocscience Representative and President, ISRM Commission on Hard Rock Excavation



Prof. V M S R Murthy

Director- IEST Shibpur
Former HoD- IIT (ISM) Dhanbad
Former Scientist- CMRI Nagpur



Dr. Bineshian Hoss

Chief Principal,
Director (Technical) at Amberg Engineering
Sr. Vice President - TAI



Prof. Byungmin Kim

Associate Professor- Department of Urban & Environmental Engineering, Ulsan National Institute of Science and Technology (UNIST)



Dr. Mainak Ghosh Roy

Group Senior Manager (Geology), NHPC Ltd.
Member (Hydro), Central Electricity Authority



Dr. Priyanka Bhartiya

Principal Engineer - COWI India, Tunnelling and Geotechnical Engineering



Dr. Anshul Sindhwani

Lead Engineering Geologist- L&T
Former Secretary (Coordination)- TALym



Mr. Rohan Pawade

Senior Lead Engineering Manager (Structural Engineer) at L&T Construction - Engg. R&D Center



Ms. Sharada Niphade

Assistant Engineering Manager (Design) at Larsen and Toubro



Mr. Vishal Bansal

Tunnel Design Engineer- NHAI
Secretary (Technical)- TALym



Mr. Chiranjib Sarkar

Principal Engineer- Geoconsult,
Former Vice Chairperson- TALym
Governing Council Member — TAI
Jt. Secretary -IGS Kolkata chapter

TUN-AID 2025

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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 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

12th - 13th September: DIGMIN - 2025

26-26th October: Khanan'25

30th October : Mine Rescue Day

1st November : Coal India Foundation Day

1st November : Indian Mining Day

3rd to 5th Nov: Tun-Aid Workshop 2025

5th December : World Soil Day

03rd to 8th December : centenary Week

9th December : Foundation Day

11th December : International Mountain Day

14th December : National Energy Conservation Day

