



**IIT
ISM** INDIAN INSTITUTE
OF TECHNOLOGY
INDIAN SCHOOL OF MINES
DHANBAD

Department of Mining Engineering



THE MINING EDGE

MONTHLY NEWSLETTER

VOLUME 12

August 2025

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From HOD's Desk



It is a matter of great privilege to present the August 2025 edition of The Mining Edge, the official newsletter of the Department of Mining Engineering, IIT (ISM) Dhanbad. This issue highlights the department's recent milestones, research advancements, and academic engagements, underscoring our continued commitment to excellence in education, innovation, and industry collaboration.

The year 2025 holds particular significance as IIT (ISM) celebrates its centenary, commemorating a century of outstanding contributions to education, research, and the mining and allied sectors. Among the year's defining events was the 45th Convocation Ceremony, graced by the Hon'ble President of India, Smt. Droupadi Murmu. On this occasion, the department's students brought distinction to the institute by securing multiple gold and silver medals across academic programs.

The department has further consolidated its position as a center of research-driven innovation and industry-oriented training through the successful organization of several Executive Development Programmes (EDPs), including:

- Specialized training for Graduate Executive Trainees (GETs) of NLC India Ltd.
- A targeted programme on Application of Modern Surveying Techniques for DGMS surveyors.
- Comprehensive training on Safety and Health Management System Audit for executives of Western and Northern Coalfields Limited.

Beyond training initiatives, faculty and students have actively engaged in prestigious academic and professional forums such as the 6th ICC Mining Summit, while also preparing to contribute to the forthcoming International Conference on Digital Intelligence for Green Mining and Industrial Networks (DIGMIN-2025), which will spotlight advancements in digital mining, automation, and sustainable practices.

Looking ahead, the department remains steadfast in its mission to promote innovation, sustainability, and capacity-building in the mining sector. We extend an open invitation to all stakeholders – students, researchers, industry professionals, and alumni – to collaborate with us in shaping the future of safe, efficient, and sustainable mining practices.

Warm regards,
Prof. B.S. Chaudhary

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President of India Addresses 45th Convocation of IIT (ISM) Dhanbad in Its Centenary Year, August 1, 2025

The Hon'ble President of India, Smt. Droupadi Murmu, presided over the 45th Convocation Ceremony of the Indian Institute of Technology (Indian School of Mines), Dhanbad, held during the centenary year of the institute. The event marked the conferment of degrees upon undergraduates, postgraduates, and doctorate recipients in the presence of distinguished guests, faculty, students, and their families.

In her address, the Hon'ble President expressed her appreciation for the institute's significant contribution to national scientific and technological progress. She highlighted IIT (ISM) Dhanbad's rich legacy of nearly a century, noting its evolution from a specialized institution in mining and geology to a premier centre of multidisciplinary education and advanced research in engineering, science, and management.

Students of the Department of Mining Engineering brought distinction to the institute by securing top honours:

- 🥇 Gold Medal: Om Sandilya (B.Tech Mining)
- 🥇 Gold Medal: Chandan Mishra (M.Tech Mining)
- 🥈 Silver Medal: Kumar Kislay (B.Tech Mining)

These medals, conferred by the Hon'ble President of India, stand as recognition of their exceptional academic merit, diligence, and commitment to excellence. Their achievements bring great pride to the department and the institute. We wish them continued success in their professional endeavours!



The 45th Convocation of IIT (ISM) Dhanbad emerged as a significant milestone, commemorating the accomplishments of its students and faculty while reiterating the institute's dedication to academic excellence, research-driven innovation, and contributions to national development in its centenary year.

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Delegate Visit

On 1st August 2025, the Department of Mining Engineering, IIT(ISM) Dhanbad, hosted a distinguished delegation of dignitaries including:

- Shri Dharmendra Pradhan, Hon'ble Minister of Education, Government of India
- Shri P.M. Prasad, Chairman, Coal India Limited



The visiting dignitaries acknowledged the Department's sustained efforts in fostering innovation, practical training, and high-quality research. Their interactions with faculty and observations of advanced mining equipment and simulation technologies reaffirmed IIT(ISM)'s strategic role in advancing the nation's mining sector. The visit underscored the Department's progress in contemporary pedagogy and research while serving as a catalyst for continued efforts toward sustainable and technology-oriented mining practices.



Mining Induction Ceremony – 2025

The Department of Mining Engineering, IIT(ISM) Dhanbad, in collaboration with the Mining Engineering Society, organized a vibrant Mining Induction Ceremony to welcome the incoming batch of undergraduate as well as postgraduate students. The program was held on Tuesday, August 12, 2025, at 6:00 PM in GJLT, marking the commencement of an enriching academic journey.

The ceremony was honored by the presence of Prof. B. S. Chaudhary, Head of the Department, and Prof. Ankush Galav, Faculty In-charge and Treasurer of the Mining Engineering Society. The event, meticulously coordinated by student organizers Mr. Deep Kumar Dey and Mr. Manish Kumar, provided the freshers with an overview of departmental activities, academic resources, and the dynamic student community at IIT(ISM) Dhanbad.

The evening concluded with an interactive session among faculty members, senior students, and the new entrants, creating an atmosphere of warmth and collegiality. The induction ceremony thus laid the foundation for a strong sense of identity and belonging, symbolizing the beginning of a promising academic and professional journey for the newest members of the Mining Engineering fraternity.



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Executive Development Program

1. "Specialized Mining Training Program" for GETs of NLC India Ltd.



The Department of Mining Engineering, IIT (ISM) Dhanbad, was pleased to organize a specialized training program for Graduate Executive Trainees (GETs) of NLC India Ltd. on **4th August 2025 (Monday)**. The event was convened at the advanced Sandvik Automation Centre, situated on the 3rd Floor of the i2h Building.

The ceremony was graced by the esteemed presence of Prof. Sukumar Mishra, Director, IIT (ISM) Dhanbad, who presided over the occasion as the Chief Guest. Faculty coordinators, Prof. D. P. Mishra and Prof. Ankush Galav, together with Prof. B. S. Choudhary, Head of the Department, extended a cordial welcome to the dignitaries and participants.

The training program has been meticulously structured in two phases, aiming to provide participants with an in-depth understanding of contemporary mining technologies, practical applications, and industry-aligned best practices.



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Executive Development Program

Phase I of the program (04th – 15th August, 2025) was dedicated to classroom-oriented sessions combined with hands-on training at the Sandvik Automation Centre. The curriculum encompassed contemporary mining technologies, automation practices, advanced surveying techniques, and safety management systems. Participants engaged in interactive lectures, laboratory demonstrations, and technical workshops, which facilitated both conceptual learning and the acquisition of practical competencies. The state-of-the-art infrastructure of the Sandvik Automation Centre provided an enabling environment for fostering innovation, skill enhancement, and technical proficiency. This phase represented a critical initiative in advancing industry-academia collaboration by preparing Graduate Executive Trainees (GETs) with the requisite knowledge and expertise to address the dynamic challenges of the mining sector. The Department of Mining Engineering reaffirms its commitment to cultivating future leaders in mining and to strengthening partnerships that contribute to the sector's sustainable advancement.



Phase II of the program (18th – 29th August, 2025) was oriented toward field exposure and advanced technical training. As part of this phase, participants undertook an on-site visit to the Nimcha Colliery of Eastern Coalfields Limited (ECL), which provided them with first-hand experience of mining operations, safety protocols, and production systems in practice. This experiential component served to bridge the gap between classroom-based instruction and industry requirements by integrating practical field exposure with advanced technological training.



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Executive Development Program

Longwall Gallery Visit by GETs of NLC India Ltd.

The visit was designed to provide the Graduate Executive Trainees (GETs) of NLC India Ltd. with practical exposure to contemporary underground mining practices. During the field engagement, participants acquired insights into longwall technology, equipment operation, and safety management procedures. The team was guided by faculty members and technical experts who elaborated on various dimensions of the mining process. This experiential learning enabled the executives to connect theoretical knowledge with operational realities, thereby deepening their understanding of productivity and efficiency in underground coal mining.



The initiative effectively bridged the gap between classroom instruction and field practice, while also fostering stronger industry-academia collaboration and professional skill development. The Department of Mining Engineering, IIT (ISM) Dhanbad, coordinated and facilitated the visit in its entirety. Overall, the experience proved to be both enriching and intellectually rewarding for all participants.



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Executive Development Program

2. “Application of Modern Surveying Techniques – Total Station, GNSS, Remote Sensing & GIS” for DGMS Surveyors



The Department of Mining Engineering, IIT (ISM) Dhanbad, in collaboration with the TEXMiN Foundation, has initiated a one-week training programme on “Application of Modern Surveying Techniques (Total Station, GNSS, Remote Sensing & GIS)” for surveyors from the Directorate General of Mines Safety (DGMS). The programme, held at the Executive Development Centre from **August 18 to 22, 2025** is attended by 19 DGMS surveyors.



The inaugural session was presided over by Mr. Saifullah Ansari, Director Mines Safety (S&T), DGMS, as Chief Guest, alongside Prof. Dheeraj Kumar (Deputy Director, IIT-ISM), Prof. Keka Ojha (Dean, CEP), and Prof. Bhanwar Singh Choudhary (Head, Mining Engineering). The programme is coordinated by Prof. M.S. Alam and Prof. V.G.K. Villuri, with the objective of augmenting professional competence in contemporary surveying technologies to reinforce mine safety and monitoring systems.

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Executive Development Program

Highlights of Executive Development Programme on “Application of Modern Surveying Techniques – Total Station, GNSS, Remote Sensing, and GIS for DGMS Surveyors”



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Executive Development Program

3. “Safety and Health Management System Audit” for the executives of Western Coalfields Limited

The Department of Mining Engineering, IIT (ISM) Dhanbad, successfully conducted a six-day Executive Development Program (EDP) on “Safety and Health Management System Audit” for executives of Western Coalfields Limited (WCL), held from **August 18 - 23, 2025** at the Executive Development Centre, IIT (ISM) Dhanbad.



The program was strategically designed to enhance the professional competencies of coal industry executives by providing advanced knowledge and practical perspectives on occupational safety, health management, and systematic auditing procedures. Participants were introduced to international best practices, regulatory frameworks, risk assessment methodologies, and case-based applications, thereby equipping them to strengthen organizational safety protocols and ensure alignment with contemporary industrial standards.

The training employed a blended pedagogical approach, combining expert lectures with interactive discussions, simulations, and case study analyses to facilitate peer learning, problem-solving, and deeper insight into safety and health system implementation in mining operations. Emphasis was placed on cultivating a proactive safety culture, developing accident-prevention strategies, and integrating sustainable practices, thereby preparing participants for leadership in workplace safety and health management. The program also reaffirmed the Department's commitment to academia-industry collaboration and its role in advancing safe, healthy, and sustainable mining practices in India's coal sector.

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Executive Development Program

4. "Safety and Health Management System Audit" for the executives of Northern Coalfields Limited

The Department of Mining Engineering, IIT (ISM) Dhanbad, organized a six-day Executive Development Programme (EDP) on "Safety and Health Management System Audit" for executives of Northern Coalfields Limited. The programme is structured in two phases: the first conducted from **26–28 August, 2025** and the second from **2–4 September, 2025** at the Executive Development Centre of the institute. The primary objective of the programme is to enhance participants' proficiency in conducting safety audits and in performing root-cause analyses of mine-related incidents, thereby strengthening their professional competencies in occupational safety and health management.



The programme incorporated expert lectures, case-based analyses, and field visits, designed in consonance with prevailing regulatory frameworks and international best practices. It was coordinated by Prof. R. M. Bhattacharjee, with Prof. P. S. Paul serving as co-coordinator. The inaugural session was honored by the presence of Prof. Dheeraj Kumar (Deputy Director) and Prof. Keka Ojha (Dean, CEP), along with other senior faculty members. The Department gratefully acknowledges the enthusiastic participation of the NCL executives and extends its appreciation to all resource persons and stakeholders for their significant contributions to the success of the programme.



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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)" 12-13 September 2025 | GJLT Auditorium, IIT (ISM) Dhanbad

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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” 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 Roscience 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 IBM.
- 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 Jagajit Raj
M.Tech in Tunnelling &
Underground Space
Technology
Dept. of Mining
Engineering

Srushti 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. Bhanwar 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 led R&D and consultancy projects worth over ₹12 crores. A certified 2nd Class Manager (DGMS) and active member of ISE 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 impact testing facilities, supervised multiple Ph.D., M.Tech., and B.Tech students, and published extensively. She is a member of different societies contributing to geotechnical frontiers like IGS, ISRM, ISSMOE, and ISET. 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 joint doctoral degree from IIT Kharagpur and the University of Wollongong, Australia, and specializes in rock excavation, mechanical cutting, rock-tool interaction, rock mechanics, and numerical modeling. With over ₹4 crores 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 20-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)

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
	12:00-12:45 Lunch
Day 2	12:45-14:00 Hands-On Training-1
	14:00-17:30 High Tea
	17:00-17:30 Guest Lecture 3
	17:30-18:00 High Tea
Day 3	18:00-18:45 Product Showcase
	18:45-19:15 Guest Lecture 4
	19:15-19:45 Lunch
	19:45-20:00 Hands-On Training-2
Day 4	20:00-20:30 High Tea
	20:30-21:00 Guest Lecture 5
	21:00-21:30 Guest Lecture 6
	21:30-22:00 Lunch
Day 5	22:00-22:30 Guest Lecture 7
	22:30-23:00 Hands-On Training
	23:00-23:30 High Tea
	23:30-24:00 Valedictory Ceremony

Course fee

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

Contact us:

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6th ICC Mining Summit 2025



Prof. Anindya Sinha, accompanied by M.Tech students from the Department of Mining Engineering, IIT (ISM) Dhanbad, participated in the 6th ICC Mining Summit organized on 23rd August 2025 at Hotel BNR Chanakya, Ranchi. The summit, themed “Redefining Mining for a Sustainable Future,” served as a platform for distinguished representatives from government, industry, academia, and civil society to engage in deliberations on sustainable mining practices, adoption of clean technologies, evolving policy frameworks, and emerging investment opportunities in the mining sector.

Student Achievement



The flagship annual event, Mineral Development Awareness Programme (MDAP) 2025, organized by the Society of Geoscientists and Allied Technologists (SGAT) from 22–24 August 2025 at Joda, Keonjhar, Odisha, concluded successfully. We are pleased to report that **Mr. Sumit Kumar Bhagat and Mr. Ravindra Chandela, students of the Department of Mining Engineering, IIT (ISM) Dhanbad, achieved the Overall Third Position among all participating teams.**

Technical Staff Achievement



The Department of Mining Engineering, IIT (ISM) Dhanbad, extends its heartfelt congratulations to **Mr. Dayamoy Karmakar, Technical Officer of the department, on being awarded the Second Class Mine Manager's Certificate of Competency from the Directorate General of Mines Safety. This notable achievement is a testament to his commitment, perseverance, and professional competence in the domain of mining engineering. The department conveys its best wishes for his continued success and future professional accomplishments.**

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Research Publications & Projects



Research Publications



- **K. Chand, M. F. Bhat, R. Koner, Y. Fissaha, N. R. Cheepurupalli, T. Saidani, and H. Ikeda**, "Open-Pit Mine Reclamation Monitoring and Management for a Sustainable Future Using Drone Technology: A Review," *Drones*, vol. 9, no. 9, p. 601, 2025, doi: 10.3390/drones9090601.
- **K. Chand, R. Koner, and R. Mitra**, "Open-pit Coal Mine Waste Dump 4D Topography Monitoring using UAV Technology," in *Proc. 59th U.S. Rock Mechanics/Geomechanics Symp.*, Santa Fe, NM, USA, 2025, doi: 10.56952/ARMA-2025-0275.
- **P. Salunkhe, S. Mishra, and S. Verma**, "Factors influencing underwater tunnel construction: A detailed review," in *Proc. Indian Geotech. Conf. (IGC 2024)*, vol. 8, AI/ML/DL Application in Geotechnical Engineering and Rock Mechanics, Tunnelling and Underground Structures. Singapore: Springer, 2024. ISBN: 978-981-96-7782-5.
- **J. J. Raj, M. Vishwakarma, G. P. Singh, A. Kumar, and S. Mishra**, "Comparative analysis of deformation in tunnels of varied shapes under different seismic loads," (*Accepted for oral presentation in 14th International Symposium on Plasticity and Impact Mechanics, October 12 - 16, 2025*).
- **A. Kumar, M. Vishwakarma, G. P. Singh, J. J. Raj, and S. Mishra**, "Geotechnical behaviour and environmental risk of mine tailings: A FEM-LEM based slope stability assessment," (*Accepted for oral presentation in 14th International Symposium on Plasticity and Impact Mechanics, October 12 - 16, 2025*).
- **R. Paul and S. Mishra**, "Assessing plastic response in rock tunnels under seismic loading using finite element analysis," (*Accepted for oral presentation in 14th International Symposium on Plasticity and Impact Mechanics, October 12 - 16, 2025*).
- **R. Paul, S. Mishra, and J. Khatti**, "AI-based simulation of seismic resilience in underground space technologies," in *Resilient Cities and Infrastructure in Earthquake Zones: Sustainable Solutions*, Elsevier (*Accepted as book chapter*)



Consultancy & R&D Projects



- **Prof. D.P. Mishra** has received a sponsored research project titled "Assessment of Critical Minerals in Mine and Mineral Wastes for Sustainable Utilization" from the Ministry of Mines (MoM).
- **Prof. Dheeraj Kumar** has been awarded a sponsored research project on "Development of Innovative and Cutting-Edge Indigenous Technologies for Critical Minerals Exploration and Smart/Sustainable Mining" from the Anusandhan National Research Foundation (ANRF).
- **Prof. Dheeraj Kumar** has also undertaken a consultancy project on "Scientific Study for OGL and Differential Survey Works" sponsored by M/s DGM (Mining), NTPC Badam CMP.
- **Prof. Dheeraj Kumar** has further been awarded a consultancy project on "Scientific Study for Earthwork Estimation at Tasra OCP" (including OGL, survey, part-final surveys, and quarterly excavation measurement), sponsored by M/s SAIL Tasra.
- **Prof. R.K. Sinha** has formalized a Memorandum of Understanding (MoU) with TechXEarthSpace Private Limited, Bengaluru.

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Ph.D. Awarded



- **Mr. Sikandar Kumar**, Research Scholar in the Department of Mining Engineering, has successfully been conferred the degree of Doctor of Philosophy (Ph.D.) under the esteemed supervision of **Prof. R. K. Sinha**. His doctoral dissertation, entitled “Investigation into the Influence of Pillars in Bord and Pillar Depillaring Working at Deeper Horizon”, presents a comprehensive study on the role and behavior of coal pillars during the depillaring process in deep underground coal mines.
- **Mr. Sujit Kumar**, Research Scholar in the Department of Mining Engineering, has been awarded the degree of Doctor of Philosophy (Ph.D.) under the supervision of **Prof. A. K. Mishra & Prof. B. S. Choudhary**. His doctoral research, entitled “Influence of Explosive Properties on Blast Performance in Opencast Coal Mines”, focuses on the systematic evaluation of how the physico-chemical and detonation characteristics of explosives affect blasting efficiency in large-scale surface coal mining operations.

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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
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

12th - 13th September: DIGMIN - 2025

30th October : Mine Rescue Day

1st November : Coal India Foundation Day

1st November : Indian Mining Day

5th December : World Soil Day

11th December : International Mountain Day

14th December : National Energy Conservation Day

