



INTERNATIONAL CONFERENCE

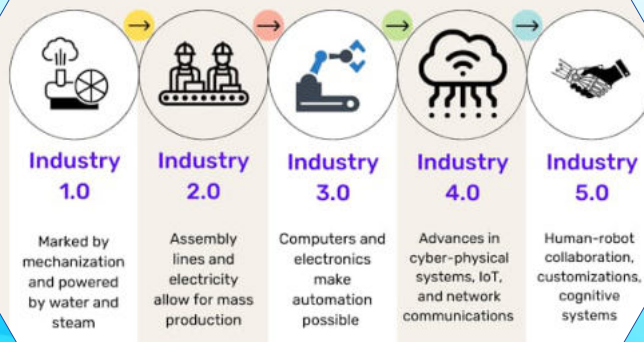
“Digital Intelligence for Green Mining and Industrial Networks” (DIGMIN-2025)



GJLT, IIT-ISM, Dhanbad



12-13 September, 2025



Organized by

Department of Mining Engineering

Indian Institute of Technology (ISM) Dhanbad – 826004
Jharkhand, India

CONFERENCE CONCEPT

Digital Intelligence for Green Mining and Industrial Networks (DIGMIN) – 2025 will serve as India's flagship conference at the intersection of digitalization, intelligent automation, and sustainable mining practices. DIGMIN-2025 is envisioned as a premier conference focused on accelerating the digital transformation of the mining sector. Anchored on the pillars of Digitalization, Intelligent Systems, Green Technologies, Mining 5.0, Industrial Integration, and Next-generation Infrastructure, the conference aims to bring together mining professionals, regulatory personnel, academic researchers, technologists, sustainability experts, policymakers, and industry leaders to deliberate on the accelerated adoption of next-generation digital technologies in mining and allied industrial ecosystems. DIGMIN-2025 will showcase AI/ML-driven risk prediction advancements, robotics, IoT-enabled automation, and eco-efficient mining practices. The event will foster collaboration between public institutions, private players, and startups through panel discussions, technology exhibitions, and policy roundtables. The goal is to unlock hidden opportunities in mining through smart digital systems, drive sustainable resource management, and build a roadmap for a resilient, technology-integrated, and environmentally responsible mining ecosystem in India. It will be a landmark conference organized as part of the Centenary Celebrations of IIT (ISM) Dhanbad, commemorating 100 years of excellence in mining education and research.

ABOUT IIT (ISM) DHANBAD



The Indian Institute of Technology (Indian School of Mines) Dhanbad is situated in India's prime coking coal belt, which is 260 km from Kolkata city. IIT (ISM) Dhanbad offers all the amenities of a world-class academic institution and is fully residential. The Indian School of Mines was officially inaugurated on December 9th, 1926, by Lord Irwin, the then Viceroy of India, to meet the demand for trained manpower associated with mining activities in the country, focusing on Mining and Applied Geology disciplines. The Indian School of Mines was granted the status of Indian Institute of Technology (IIT) on September 06, 2016, by the Government of India, and it was renamed the Indian Institute of Technology (Indian School of Mines) Dhanbad. Since its inception, the institute has significantly broadened its scope of activities, evolving into a comprehensive technology education institute. IIT (ISM) offers B.Tech. (4 Years), Integrated M. Tech. (5 Years), Master of Science/Arts and Technology, Master of Business Administration, and Ph.D. programs. IIT(ISM) Dhanbad has made significant contributions to the advancement of mining, minerals, petroleum, and groundwater exploration in India.

ABOUT THE DEPARTMENT



The institute/ deemed university, Indian School of Mines (ISM), Dhanbad, was established in 1926, with the Department of Mining Engineering founded by the then Viceroy of India, Lord Irwin. The school came under the purview of the Indian Institute of Technology in 2016 and was renamed the Indian Institute of Technology (Indian School of Mines), IIT(ISM). Over the past 99 years, it has developed and grown to become the country's

largest department of its kind, boasting excellent teaching and research facilities alongside widespread activities in the coal, metalliferous mining, and construction sectors. In the QS World University Rankings by Subject 2025, IIT (ISM) Dhanbad is ranked 20th globally for Mineral and Mining Engineering, making it the top-ranked Indian institution in this subject area.

THEMES OF THE CONFERENCE

Digital Foundations for Smart Mining

- Integration of IoT, cloud, and edge computing in mine operations

Robotics and Automation in Harsh Mining Environments

- Autonomous drilling, blasting, and hauling systems
- Swarm robotics for exploration and maintenance
- Human-robot collaboration in underground and confined spaces

Edge AI and Real-Time Analytics in Mining

- Low-latency AI applications for critical mine operations
- Edge devices for environmental and structural monitoring
- Federated learning in distributed mine networks

AI-Driven Mineral Intelligence : Innovations in Critical Mineral Reserves Estimation

- Critical Mineral Mapping and Targeting
- AI-guided exploration for rare earth elements and strategic minerals
- Predictive analytics for grade distribution and tonnage

Digital Resilience and Disaster Management in Mining

- Design of intelligent operation centers
- Integration of AR/VR for remote inspections and diagnostics, enabling remote decision-making with digital twins

Energy Efficiency and Process Optimization

- AI for optimizing crushing, grinding, and material handling
- Dynamic control of furnaces and kilns using digital feedback
- CPS-enabled real-time energy monitoring and reduction strategies

CALL FOR PAPERS

The technical papers on the Conference theme are invited for oral presentation. The received papers will be peer-reviewed. It is intended to publish the proceedings of the Conference. Contributors must submit their original technical documents in the desired format in MS Word through email attachment on or before 15 August 2025.

Official Email ID for all correspondences and sending papers:
sagarwal@iitism.ac.in / digmin2025@iitism.ac.in

Format for preparing abstracts: **Title:** Times New Roman 12 bold, **Author:** Times New Roman 10.5, **Affiliation:** Times New Roman 10 italic, **Headings:** Times New Roman 10 bold, **Sub-Headings:** Times New Roman 12 bold, **Paragraph texts:** Times New Roman 10. **Figures:** Figure 1, Figure 2, etc. **Tables:** Table 1, Table 2, etc. Figures and tables should be placed at their references within the text. References should be cited in Chicago style only in the main text and arranged alphabetically, with heading references.

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Registration fee (excluding GST@18%)	Indian delegates, INR	Foreign delegates, USD
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A/C No.: 0986101024892	IFSC: CNRB0000986;
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KEY DETAILS

Call for abstracts	01.06.2025
Receipt of abstracts	30.06.2025
Review of abstracts and decision notification	15.07.2025
Receipt of full papers	15.08.2025
Review of full papers and decision intimation	21.08.2025
Intimation of acceptance of papers	31.08.2025

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