

Information Brochure



International Conference  
on  
**SAFE, SMART AND  
SUSTAINABLE MINING (3SM)**



**December 16-18, 2023**  
**Venue : Margao, Goa**



Organized by :  
**Department of Mining Engineering**  
**Indian Institute of Technology (Indian School of Mines)**  
Dhanbad-826 004, Jharkhand (INDIA)

## About the Conference

Mining is the foundation of global economic development. The mining industry in this modern era faces a series of challenges, such as depletion of mineral resources at shallow depth, harsh mining conditions, high safety risks, dearth of advanced technologies and skilled manpower. COVID-19 has hindered the pace for the modernization of mining industry, including digitalisation and automation. To protect the health and safety of the mine workers, the industry is evolving advanced technologies to reduce the involvement and exposure of miners by operating the mines remotely. Therefore, the establishment of intelligent, green, and sustainable mines has gradually become a consensus for the industry. The mining industry across the globe is going through a new technological revolution. Recent years have witnessed rapid progress in intelligent mining. Introduction of cutting-edge technologies such as internet of things (IoT), big data, artificial intelligence (AI), 5G, edge computing, and virtual reality have greatly promoted smart mining and comprehensively improved the sustainability of mining.

At the same time, the fluctuations in energy demand and prices associated with the reactivation of the economies have revealed the need for pragmatic solutions to ensure a sustainable transition that guarantees an uninterrupted vital energy supply. The waves of change that affect the energy sector and the digital workplace will inevitably impact the geoscience and engineering professionals to adjust, develop and foster new competencies and practices in this new era. The organization of this conference can play a vital role in outlining and promoting some of these new technologies and practices to make geoscientists, academicians, mining practitioners and environmentalists more competitive in accessing the opportunities in the near future. In view of the above, the title of the conference “Safe, Smart and Sustainable Mining (3SM)” best suits the need of the hour. Department of Mining Engineering in IIT(ISM) Dhanbad is continuously focusing on the outlined themes of the conference to address the recent and upcoming challenges of the mining industry. This conference will promote the deliberations on these topics and invite suggestions for the bright and sustainable future of the mining industry. IIT(ISM) Dhanbad is confident that this conference will provide a befitting platform and generate great interest to all stake holders. Looking forward to welcoming you in the Indian State of Goa during December 16-18, 2023.

## About IIT (ISM) Dhanbad



The **Indian Institute of Technology (Indian School of Mines) Dhanbad** is located in the prime coking coal belt of India which is 260 km away from the Kolkata city. The IIT (ISM) Dhanbad has all the facilities of a world-class academic research institute and is fully residential. The Indian School of Mines was formally opened on 9th December 1926, by Lord Irwin, the then Viceroy of India to address the need for trained manpower related to mining activities in the country with disciplines of Mining and Applied Geology. The Indian School of Mines has been conferred the status of Indian Institute of Technology (IIT) on September 06, 2016, by the Government of India and

has been renamed as Indian Institute of Technology (Indian School of Mines), Dhanbad. Since its establishment, the institute has undergone considerable expansion of its activities, and emerged as a reputed technical institution of the country. IIT (ISM) offers B. Tech. (4 Years) courses, Integrated M. Tech. (5 Years) courses, Master of Science/Arts and Technology, Master of Business Administration, and awards Ph.D. Degree. IIT(ISM) Dhanbad has been contributing significantly to the growth and development of mining, mineral, petroleum, and geosciences in India apart from other emerging streams.

## About Department

The **Department of Mining Engineering** was established in 1926 with the founding of the Institute in that year by the then Viceroy of India, Lord Irwin. Over the past 97 years, it has developed and grown to become the largest Department of its kind in the country with excellent facilities for teaching and research and widespread activities in both coal, metalliferous mining, and construction sectors. Its high reputation attracts students from all parts of India as well as from abroad. The Department 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 25th position in QS ranking-2023 among the global universities offering Mining and Mineral education.



## Themes of the conference

- Mining geology, exploration and ore body modelling
- Mine planning
- Mine closure, reclamation and rehabilitation
- Methods of working and equipment development
- Exploitation of deeper deposits
- Seabed mining and asteroid mining
- Drilling, blasting and mechanical cutting
- Material handling
- Mine ventilation
- Haul road design
- Mine waste to wealth
- Design, stabilization and monitoring of surface mine slope
- Excavation and stability of underground structures
- Tunneling and underground space technology
- Mine hazards, rescue and recovery
- Mine safety, health and ergonomics
- Coalbed methane (CBM) and methane drainage
- Mine surveying, remote sensing & GIS
- Environmental aspects related to surface and underground mining
- Mineral beneficiation and recent trends

- Mine automation, robotics, application of AI/ML, IoT, augmented reality and virtual reality
- Case studies and frontier areas of surface and underground mining technology

## Call for Papers

The technical papers on the Conference theme are invited for oral/ poster presentation. It is intended to publish the proceedings of the Conference. Contributors are requested to submit their camera-ready original technical papers through email attachment in MS Word on or before **30<sup>th</sup> September 2023**. The full paper will be reviewed by the Technical Committee before acceptance. Selected high quality papers will be published in Scopus indexed journal.

**Email id** for sending paper: [3smconf@gmail.com](mailto:3smconf@gmail.com)

**Format for preparing paper:** **Title:** Times New Roman 16 bold, **Author:** Times New Roman 14 bold, **Affiliation:** Times New Roman 12 *italic*, **Headings:** Times New Roman 12 bold, **Sub-Headings:** Times New Roman 12 bold, **Paragraph texts:** Times New Roman 12. **Figures:** Fig. 1, Fig. 2 etc. **Tables:** Table 1, Table 2, etc. Figures and tables should be placed at their references in between the text. References should be cited as (Choudhary et al., 2022) in the main text and arranged in alphabetical order heading references.

**December 16-18, 2023**

### About Venue: Margao, Goa

Goa is a state in western India with coastlines stretching along the Arabian Sea. Its long history as a Portuguese colony prior to 1961 is evident in its preserved 17th-century churches and the area's tropical spice plantations. Goa, popularly known as 'the pearl of the east', is famous for its churches, age-old ruins, palm-fringed beaches, coconut groves, ferry rides, and bubbly folk music.



## Sponsorship

DIAMOND SPONSOR	INR 10, 00,000/- (7 delegates free of cost)
GOLD SPONSOR	INR 7, 00,000/- (5 delegates free of cost)
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## Registration Fee

Registration fee including GST@18%	Indian, INR	Foreigner, USD
Delegates (Academics & Research Organization)	10,000	300
Students/Research Scholars	3,500	150
Delegates (Industry/ Govt. Agency)	12,500	350

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## Milestones

Last date for receipt of abstracts	15.08.2023
Last date for receipt of full papers	30.09.2023
Intimation of acceptance of paper	15.10.2023
Last date for registration of delegates	30.11.2023

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# Registration Form



## International Conference on SAFE, SMART AND SUSTAINABLE MINING (3SM)



December 16-18, 2023

Venue : Margao, Goa

1. Name (in block letters): .....

2. Affiliation: .....

3. Postal Address: .....

4. Tel: ..... Fax: .....

5. Email: .....

6. Participation details:

(i) Extended Abstract submitted: Y/N

(ii) Author's Name .....

(iii) Title of the Abstract .....

7. Details of Registration Fees

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