



International Conference on  
**Mine Ventilation and  
Environment for Green Mining  
(MVEGM-2024)**

20-22 December 2024  
Venue: Puri, Odisha



Organized by



**Department of Mining Engineering**  
Indian Institute of Technology (Indian School of Mines), Dhanbad  
Jharkhand-826004, India

## About the Conference



The depletion of shallow-depth coal and mineral deposits and the increasing demand for energy and minerals have led the mining industry to target the deeper deposits. Consequently, with an increase in mining depth, the workplace environment is becoming complex and severe due to increased heat and humidity conditions and emissions of greenhouse and toxic gases, mine dust, and diesel particulate matter. This, in turn, results in loss of production and productivity and impairs the health and safety of the miners. Also, the increased emission and contamination levels of various pollutants in mines due to the high level of mechanization have been the pressing issues driving towards green and sustainable mining options. Mine ventilation and environment management play a pivotal role in green mining practices by providing an efficient workplace environment, thereby enhancing the production, productivity, and safety of the mines. The paradigm shift in mining operations vis-à-vis the race for a Net-Zero economy opens up new avenues for advances in mine ventilation and environmental practices and research.

India is bestowed with a vast reserve of coal and mineral resources. The dependency on coal as a source of energy in India and globally will continue for some time to come. With the growing concern of global warming and climate change due to the emission of greenhouse gases, there is an urgent need to reduce the environmental footprint of coal mining by increasing the efficiency, innovation, and control across the entire mining value chain from exploration through mining, beneficiation, and conversion into an energy form. At the United Nations Climate Change Conference in Glasgow in 2021, the honorable Prime Minister of India announced that the country would achieve the target of Net-Zero by 2070 by adopting alternate sources of renewable energy. Needless to say, it requires the active participation and effort of all the stakeholders to reduce carbon emissions through sustainable and innovative mining practices. Green mining is needed to fulfill the increasing energy demand of the country and, at the same time, reduce carbon emissions, which is of utmost priority in the current context. Keeping this in mind, it is the responsibility of the academia, government, and private sector to explore innovative technologies, best practices, and regulations to minimize the environmental impacts of mining while ensuring the health and safety of the miners.

To foster and flourish the advancement of mine ventilation and environment for green mining, meaningful deliberations on a common platform are obligatory among researchers, academicians, industry leaders, and policymakers to make a positive stride in the endeavor of green mining. Being an institute of eminence and one of the global stakeholders in the field of mining and minerals, the Indian Institute of Technology (Indian School of Mines) Dhanbad is all set to organize the international conference 'MVEGM-2024', offering a common floor to share and unfold the latest research and developments, exchange of ideas, application of new concepts and innovative technologies, and collective efforts to surmount the challenges in the field of mine ventilation and environment research. By fostering dialogue and collaboration among diverse stakeholders, the conference aims to catalyze positive change and accelerate the transition towards a more environmentally friendly and socially inclusive mining for future generations.

The 'MVEGM-2024' will provide a forum where the mine ventilation, environmentalists, safety professionals, academicians, government, mine operators, consultants, and equipment manufacturers from around the world can meet and deliberate on the advances in mine ventilation, mine environmental monitoring and control, mine fires, explosions, mine rescue and recovery, coalbed methane, underground coal gasification, radiation problems in uranium mines, geothermal energy, mine waste management, applications of geomechanics and AI/ML in mine ventilation and environment, CO<sub>2</sub> sequestration and reduction of carbon footprint, ventilation problems in deep mines, diesel issues in opencast and underground mines, ventilation and environmental aspects of tunnels and underground space, and many more allied areas for green mining. The Department of Mining Engineering is continuously focusing on these outlined themes of the conference, and we are confident that the mining fraternity will immensely benefit from the deliberations made during the conference. Overall, the outcomes of the conference will help in the improvement of the mine ventilation and environmental conditions for green mining.

## Themes of the Conference

- Mine ventilation and environment
- Ventilation surveys
- Ventilation planning and economics
- Ventilation network analysis
- Mine ventilation and environment modeling
- Natural and mechanical ventilation
- Heat and humidity
- Mine refrigeration/air-conditioning
- Mine gases
- Radiation problems in uranium mines
- Mine dust generation, dispersion and its control
- Spontaneous combustion and mine fires
- Mine explosions
- Diesel particulate matter (DPM)
- Safety, health, and ergonomics
- Mine rescue and recovery
- Coalbed methane (CBM) and methane drainage
- Coal mine methane capture and utilization
- Underground coal gasification (UCG)
- Ventilation air methane and greenhouse gas management
- Ventilation and environmental aspects for tunnels and underground space
- Ventilation on demand (VOD)
- Advanced mine environmental monitoring, automation and control systems
- Application of sensors for mine ventilation and environmental monitoring
- CO<sub>2</sub> sequestration and reduction of carbon footprint
- Geothermal energy
- Geomechanics applications in the mine environment
- AI/ML application in mine ventilation and environment
- Mine waste management
- Net-Zero mining

## 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 Kolkata city. The IIT (ISM) Dhanbad has all the facilities of a world-class academic Institute and is fully residential. Earlier known as the Indian School of Mines, Dhanbad, the Institute 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 was conferred the status of Indian Institute of Technology (IIT) on September 06, 2016, by the Government of India, and renamed as Indian Institute of Technology (Indian School of Mines) Dhanbad. Since its establishment, the Institute has undergone considerable expansion and emerged as a reputed centrally funded technical institution in the country. IIT (ISM) Dhanbad offers 4 Years B. Tech. courses, 5 Years Integrated M. Tech. 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 groundwater exploration in India. The year 2026 will commemorate the 100 years of existence of the Institute and its service to the nation.

## About the 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 engaging in widespread activities in both coal, metalliferous mining, and construction sectors. Its stellar reputation attracts students from all over India and abroad. The Department has been designated as a QIP Centre for advanced studies by faculty members from other Mining Engineering institutions of the country to pursue higher studies (M.Tech. and Ph.D.). Moreover, it has achieved the status of a Centre of Advanced Studies by the University Grants Commission in recognition of its high standards in teaching, research, and service to the mining industry.

The Department is offering a 4 yr. B. Tech. program in Mining Engineering, three 2 yr. M. Tech programs in Mining Engineering, Tunneling and Underground Space Technology, and Geomatics, and Ph.D. Program. The students passing out from this Department have traditionally occupied top positions in the government, academia, and research organizations as well as in the mining industry, both in India and internationally. Prominent positions such as Director-General of Mines Safety, Controller-General of the Indian Bureau of Mines, Chairman and Managing Director of major mining companies, and top executives in many other public and private sector companies are frequently occupied by alumni of the Department. Additionally, over 300 former students of IIT (ISM) hold esteemed positions in the USA and other countries. Acknowledging the standards of teaching and research imparted and the contributions made to the mining industry, the Department has been ranked at 25th and 41st position in QS ranking in the years 2023 and 2024, respectively, among the global universities offering Mining and Mineral education.

## Registration Fee

Conference Participation	Indian Delegates	Foreign Delegates
Delegates (Academics & Research Organizations)	₹ 10,000	USD 250
Students / Research Scholars	₹ 4,000	USD 100
Delegates (Industry / Govt. Agency)	₹ 12,000	USD 300

Registration fee (excluding GST@18%)

## Call for Paper

The technical papers on the Conference theme are invited for oral and poster presentations. The received papers will be peer-reviewed by the relevant experts of the Technical Committee, and the selected papers will be published in the Conference proceedings by one of the internationally reputed publishers, such as Springer, Elsevier, Taylor and Francis, etc. Contributors are requested to submit their original technical papers in the desired format in MS Word through email attachment. The timelines for submission of abstracts and full papers are given in the table of Key Dates.

**The official email ID for all correspondences and sending the abstracts and full papers: [mvegm@iitism.ac.in](mailto:mvegm@iitism.ac.in)**

Format for preparing the paper: Title of the paper: Times New Roman 12 bold, Author(s) Name: Times New Roman 10.5, Affiliation(s): Times New Roman 10 italic, Abstract: 150-300 words, Keywords: 4-6 keywords, Headings & Sub-Headings: Times New Roman 10 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 near the place of their references in the text. References in the format '(Mishra et al., 2024)' should be cited in the main text and arranged in alphabetical order under the heading 'References' at the end. The world limit of the paper is 6000 words.

## Key Dates

Events	Date	Events	Date
Call for abstracts	15 June 2024	Review of full papers and decision intimation	15 Oct. 2024
Receipt of abstracts	15 July 2024	Receipt of final papers	31 Oct. 2024
Review of abstracts and decision intimation	30 July 2024	Intimation of acceptance of papers	15 Nov. 2024
Receipt of full papers	30 Sept. 2024	Registration of delegates	30 Nov. 2024

## Sponsorship

Diamond Sponsor	Platinum Sponsor	Gold Sponsor	Silver Sponsor	Bronze Sponsor
₹ 15,00,000/- (including 12 delegates free)	₹ 10,00,000/- (including 8 delegates free)	₹ 7,00,000/- (including 6 delegates free)	₹ 5,00,000/- (including 4 delegates free)	₹ 3,00,000/- (including 2 delegates free)

## Advertisement in the Souvenir

A Souvenir will be brought out and circulated widely during Conference. Advertisements for the Souvenir are invited from organization as per following rates.

Back Cover (Colour)	Front Inside Cover (Colour)	Back Inside Cover (Colour)	Inside Full Page (Colour)
₹ 1,00,000/-	₹ 75,000/-	₹ 50,000/-	₹ 30,000/-

\*These advertisement tariffs are exclusive of GST@18%. The GST will be charged extra.

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## Venue Puri, Odisha

Puri is a coastal city in the state of Odisha in eastern India. It is situated on the Bay of Bengal, 60 km south of the state capital of Bhubaneswar. Puri holds a significant cultural and religious importance. One of the main attractions in Puri is the famous Jagannath Temple, dedicated to the Lord Jagannath, a form of the Hindu deity Vishnu. The temple is an architectural marvel and a major pilgrimage destination for Hindus.

Puri is also renowned for its annual Rath Yatra or Chariot Festival, which attracts millions of devotees from all over the world. During this festival, the idols of Lord Jagannath, along with his siblings Balabhadra and Subhadra, are taken out in grand processions on elaborately decorated chariots. Apart from its religious significance, Puri is known for its beautiful beaches, such as Puri Beach, where tourists can enjoy the serene coastline and indulge in various water sports and activities.

The city is also famous for its traditional handicrafts, especially the intricate appliqué work known as Chandua, which is crafted by skilled artisans in the region. Overall, Puri in Odisha is a blend of spirituality, culture, and natural beauty, making it a must-visit destination for travelers seeking a unique and enriching experience.

## How to reach Puri, Odisha

**By Train:** Puri is a terminus on the East Coast Railway having direct express and superfast train links with New Delhi, Mumbai, Kolkata, Okha, Ahmedabad, Tirupati, etc. Some important trains are Kolkata (Howrah) Puri Howrah Express, Jagannath Express, New Delhi Purushottam Express. Khurda Road Station, 44 km from Puri, is a convenient rail head for train to Chennai and Western India.

**By Air:** The nearest public airports to Puri are Biju Patnaik International Airport at Bhubaneswar (53 km), Visakhapatnam Airport in Andhra Pradesh (368 km), Veer Surendra Sai Airport at Jharsuguda (400 km), Netaji Subhas Chandra Bose International Airport at Kolkata (440 km), Birsas Munda Airport at Ranchi (523 km).

## Visitor attractions (Must-see places)



Lord Jagannath Temple, Puri



Puri Beach



Konark (Black Pagoda), The Sun Temple



Dhauli Giri Shanti Stupa (Peace Pagoda), Bhubaneswar



Nandankanan Zoological Park, Bhubaneswar



Lingaraj Temple, Bhubaneswar



Khandagiri & Udayagiri Caves, Bhubaneswar

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# International Conference on Mine Ventilation and Environment for Green Mining (MVEGM-2024)

20-22 December 2024 | Venue: Puri, Odisha

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