

National Conference on  
**Emerging Trends in Earth Sciences:  
Geohazards and Resource Management**



**ETES-2024**

Sept. 27-29, 2024



Organized by :  
Department of Applied Geophysics  
Indian Institute of Technology  
(Indian School of Mines), Dhanbad  
Pin-826 004, Jharkhand (INDIA)

## The Objective of the Conference:

The earth system is increasingly being perceived holistically, linking the atmosphere, oceans, and solid Earth. This holistic perspective explains how the growing societal impact of the Earth science research, empowered by state-of-art techniques. At its core, modern science is founded on principles of sustainable resource management and overall sustainable development, encompassing social, economic, energy and environmental aspects. Sustainability is paramount for humanity's scientific advancement, particularly in energy and environmental domains. Today's global demands for sustainable resource management and production are propelled by scientific discovery and engineering innovations. Heightened hazards and climatic changes, occurring with greater frequent and intensity, underscore the urgent need for collaboration among our society, governments, academic institutions, national labs, and investors. The substantial shifts in energy prices and demand resulting from economic reactivation underscore the necessity for practical approach to ensure a sustainable transition guaranteeing a continuous supply of essential energy. Geoscience and engineering professionals must adapt, develop, and cultivate new skills and practices in this new evolving era, as the energy industry and the digital workplace undergo transformative changes.

The conference aims to provide a platform for advancing knowledge, fostering collaboration, and addressing critical issues related to geohazards, sustainable resource management, energy security, and the ocean's multifaceted role in climate regulation, biodiversity support, and resource provision in the field of Earth Sciences. We extend our warmest welcome to all participants, including esteemed scientists, researchers, educators, industry professionals, and policymakers at IIT (ISM), Dhanbad, and together, we will embark on an intellectual voyage that promises to enrich our knowledge and pave the way for a sustainable and prosperous future.

## Conference Themes

- Geology and geodynamics of the eastern Himalayas and foreland basins
- Physics of Earth's interior and planetary system
- Advances in near-surface exploration
- Mine safety and geoscientific challenges of the mining industry
- Emerging trends in ground water resource management
- Climate change and atmospheric sciences
- Continental margins and ocean basins
- Geological hazards: risk assessment and mitigation
- Energy security & storage and carbon sequestration
- AI/ML applications in geosciences
- Geoscientific techniques in delineating archeological heritages
- Advances in geospatial technologies

## About IIT (ISM) Dhanbad

The Indian Institute of Technology (Indian School of Mines), Dhanbad spans a sprawling campus area of 393 acres and is located in the heart of India's prime coking coal belt, approximately 260 km away from Kolkata city. IIT (ISM) Dhanbad boasts all the facilities of a world-class academic institution and operates as a fully residential campus. Established on December 9, 1926, by Lord Irwin, the then Viceroy of India, the Indian School of Mines was founded to address the pressing need for trained manpower in mining-related fields, with a focus on disciplines such as Mining and Applied Geology. In 1967, it was accorded the status of a deemed university under Section 3 of the UGC Act, 1956. Over the last 98 years, ISM has expanded significantly, incorporating essential core engineering disciplines and garnering a reputation as a full-fledged





institute of global repute, offering higher education in engineering, science, and management. The Indian School of Mines has been conferred the status of Indian Institute of Technology (IIT) on September 06, 2016, the Government of India elevated the institution to the status of an Indian Institute of Technology (IIT) and renamed it the Indian Institute of Technology (Indian School of Mines), Dhanbad. Since its inception, the institute has experienced substantial growth in its activities, and it now stands as a comprehensive technology education institute. IIT (ISM) offers a wide array of programs, including B. Tech. (4 Years) courses in 12 major engineering disciplines; Integrated M. Tech. (5 Years) programs in Applied Geology, Applied Geophysics, and Mathematics & Computing; Master of Technology; Master of Science; Master of Science and Technology; Master of Business Administration; and Ph.D. programs. IIT(ISM) Dhanbad has made significant contributions to the growth and development of fields of Mining, Mineral, Petroleum, and groundwater exploration in India.

### About Department

The Department of Applied Geophysics at IIT (ISM) was established in 1957 and has since achieved 66 years of excellence. It has emerged as one of the premier geophysics departments in the country, dedicated to providing high quality teaching and conducting impactful research. Over the years, the Department has experienced significant growth and currently offers range of programs, including three years M.Sc. Tech. and five years integrated M. Tech. in Applied Geophysics, two years M. Tech in Earthquake Science and Engineering, and a doctoral program in Applied Geophysics. Students in the department are actively engaged with various professional organizations, including SEG, EAGE, SPG, AEG, AAPG, and IGU. The department is involved in more than 15 ongoing research and development projects along with several national and international consultancy projects supported by various agencies and industries. Additionally, it participates in several national programs such as DRS, UGC-SAP, COSIST, CAS, and FIST all funded by the government of India. The Department boasts state-of-the-art geophysical instruments across various geophysical disciplines and maintains multiple well-equipped laboratories, including those dedicated to Seismic, Gravity & Magnetic, Electrical & Electromagnetic, Geophysical Inversion, Global Optimization & Deep Learning, Rock & Petrophysics, and Remote Sensing, Geophysical Instrumentation and Seismological Observatory. Furthermore, the department is at the forefront of cutting-edge research and planning to establish SERB-Centre of Excellence in AI/ML modeling for early warning of extreme Geohazards in collaboration with DST, New Delhi.

### Call for Paper

It is our great pleasure to warmly welcome you to the National Conference on "Emerging trends in Earth Sciences: Geohazards and Resource management" scheduled to take place at IIT(ISM) Dhanbad from Sept. 27 to Sept. 29, 2024. The conference aims to bring together a diverse community of educators, scientists, researchers, engineers, industrial delegates, and policymakers who are dedicated to forging a world where scientific discoveries translate into practical solutions. Through global collaborations and partnerships, we strive for a sustainable future. This conference provides a unique opportunity to engage with the latest developments in geophysics, encompassing everything from fundamental advancements in methodologies to capturing case studies. We look forward to your participation and the exciting exchange of ideas and knowledge during this event.



## Sponsorship and Exhibition Stall

We extend a warm welcome to companies and institutions interested in sponsoring this conference. Sponsorship will primarily contribute to supporting students, scientists/researchers, and invited participants' attendance at the event. For all sponsors, the general benefits include:

- A dedicated space for displaying advertisements and equipment during the conference.
- Inclusion of sponsor names in the conference program and abstract book (souvenir).

Diamond Sponsorship	Gold Sponsorship	Silver Sponsorship	Exhibition, Stall
₹ 3,00,000/- (including 6 delegates free)	₹ 2,00,000/- (including 4 delegates free)	₹ 1,00,000/- (including 2 delegates free)	₹ 1,00,000/- (including 2 delegates free)

## Advertisement

The souvenir (abstract book) comprises highlights of the technical program, a list of delegates, and abstracts. It will be distributed to all participants. Advertising in this book offers a golden opportunity for industries and other entities to promote their products and services, fostering future business and growth.

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## Sequel

This conference provides a unique opportunity to engage with the latest developments in geophysics, encompassing everything from fundamental advancements in methodologies to capturing case studies. The abstract of the proceedings of the conference shall be published as an abstract volume by IIT (ISM). Additionally, selected research papers will be published in Indian journals (IGU, AEG, JESS, etc.) and Foreign Journals. The conference covers to encourage young researchers including the best young woman researchers for oral and poster sessions.

## Important Date

Last date of abstract submission	12 August 2024
Last date for early bird registration	26 August 2024
Acceptance of abstract	26 August 2024
Last date of late registration	16 September 2024
Conference	27-29 September 2024

At least one author of each accepted paper must register for the paper to be included in the conference proceeding. Student's registration is only applicable if the one of the paper is a registered at an institution. Registration Fees (including GST @18%):

## Registration Fees

Delegate	Early Bird Rates (01 delegate) (Till 26th August, 2024)	Standard Rates (01 delegate) (After 26th August, 2024)
Participants from Industry	₹ 10000/-	₹ 12000/-
Researcher / Scientist Faculty	₹ 6000/-	₹ 7000/-
Research Scholar / PDF/Project Fellow	₹ 3500/-	₹ 4000/-
Student	₹ 1500/-	₹ 2000/-
Accompanying person	₹ 2000/-	₹ 2000/-



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