International Conference on

Sustainable & Innovative Mining Practices

16th–18th November

Organized by

Department of Mining Engineering
National Institute of Technology Rourkela

Preamble

Mining Industry is often perceived as one of the major contribution of carbon emission on this Blue Planet. Despite growing demand and production of fossil fuels and minerals, mining Industry has taken equal efforts in reducing their carbon footprint on several levels across the mining value chain. Not only India, most of the countries are putting great efforts in carbon emission reduction gradually by sustainable and innovative mining practices. Prime Minister of India announced at United Nation Climate Change Conference, Glasgow for reduction in carbon emission by 2030 adopting alternate source of renewable energy and reduce of fossil energy mix. Further, Net-Zero target set forth to be achieved by 2070. Considering growing industrial demands and availability of mineral resources, fossil energy is likely to remains as a main source of energy for India by at least 2040 and it may be dominant at least next 5 decades' subjected to development of alternate sources of energy. Green and clean mining is need of hour to fulfil the increasing energy demand of the country and at the same time reduction in rate of carbon emission at utmost priority. Under this transitioning efforts, there are a lot of challenges before the mining practitioners, researchers, academicians and industry bodies to maintain the requirement of energy demand of the country and address of the environmental issues through sustainable and innovative mining practices. Mining industry looking on researchers and academicians for novel technologies in the fields of both geo-mechanics and environmental issues for sustainable and innovative mining. Department of Mining Engineering of National Institute of Technology Rourkela, India is going to organise an International Conference on Sustainable and Innovative Mining Practices (ICSIMP-2023) for discussions and interactions among global stakeholders with a resolution on the technological development in sustainable mining, mining methods, strata mechanics, ground control including mine mechanization/automation, mitigation of environmental issues along with suitable management of post mining activities.

About the Host Institute

NIT Rourkela is an institution of national importance funded by Ministry of Human Resource Development, Government of India. The Institute was established as Regional Engineering College (REC) on August 15, 1961. It is one of the premier national level institutions for technical education in the country. The main objective of the institute is to produce quality engineers and researchers in various branches of Engineering and Sciences. NIT Rourkela was ranked 601-800 in the world by the Times Higher Education World University Rankings (Engineering) of 2023 and 59th in Southern Asia University Ranking. In India, it is ranked 15th in Engineering Category by the National Institutional Ranking Framework (NIRF) in 2022. The campus of the Institute spread across 262 ha, in the heart of Rourkela Steel City, hosts 20 Departments awarding graduate and post graduate degrees including Ph.D. in Engineering, Science, Planning and Architecture, Management, and Humanities.

About the Department

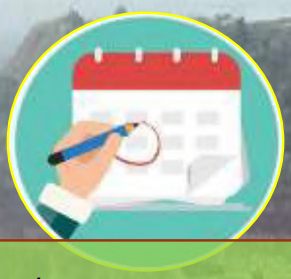
The Department of Mining Engineering at NIT Rourkela was established in 1979 in the midst of coal and mineral belt with a vision to become a leader of higher learning in the field of eco-friendly exploitation and utilization of mineral resources and be a preferred destination for undergraduate and graduate studies. It boasts modern and sophisticated equipment for research and teaching purposes. The Department specializes in Geomechanics and Strata Control, Mine Environment and Safety Engineering, Clean Coal Technology, GIS and Remote Sensing for Mining, Computer Application in Mining, Mine Planning, Mine Surveying etc. The Department regularly offer technical solutions to various problem faced by them and imparts various continuing education programmes for the benefit of the mining stakeholders. The current research focus of the Department includes coal mining technology, fly ash management, slope stability, spontaneous heating of coal and mine fires, modelling of coal bed methane, environmental impact assessment, and mine systems reliability.

WHO SHOULD ATTEND?

The Conference is of interest to all mining stakeholders involving academicians, Researchers, Practicing Engineers, Geologists, Scientists, and representatives from Regulatory and Government bodies, Consultancy firms and other interested stakeholders.

CALL FOR PAPERS

The technical papers/case studies on the subject mentioned under Conference theme are invited for oral/poster presentation. Interested authors may send full text of paper/case studies) as per the guidelines/ instructions given below so as to reach the Conference Secretariat by 31st March 2023. Only original contributions that have not been published or presented at any journals, conference/ symposium/seminar are welcomed. The full journal paper will be reviewed by the Technical Committee before acceptance. **Selected high quality papers will be published in Scopus indexed journal/book**.



Important Dates

Submission of Abstract:	**1st February 2023 to 31st March, 2023**
Intimation of acceptance of Abstract:	**15th April, 2023**
Submission of Full Paper (Last date):	**15th July, 2023**
Intimation of acceptance of Paper:	**31st July, 2023**

Programme Themes

T1. Mine Environmental Engineering & Management

- Air, Water & Noise Pollution
- Acid mine Drainage & Geo-Chemistry
- Mine Closure, Reclamation & Rehabilitation
- Environmental Impact Assessments

T2. Mine Safety & Health

- Mine Ventilation & Fire
- Mine Disaster
- Machine Health & Relaibilty
- Ergonomics
- Saftey & Risk Assessment

T3. Mine Operation & Planning

- Exploration & Resource Modeling
- Mine Planning & Design
- Drilling & Blasting Practices
- Legislation and Policy Issues in Mines

T4. Remote Sensing & GIS

- Remote Sensing for Environmental Monitoring
- Mineral Exploration
- Landslide & Natural Hazard Assessment
- Web-GIS for Mine Information Management

T5. Automation & Digitalization

- Industrial IoTs (IIoTs), Industry 4.0 & Beyond
- Drone Application in Mines
- Augmented Reality & Virtual Reality Application
- Machine Learning & Artificial Intelligence

T6. New Developments in Geomechanics

- Slope Stability & Highwall Mining
- Mining Methods & Strata Mechanics
- Rock Excavation & Breakage
- Numerical Modeling & Analysis

T7. Waste Management in Mining & Allied Industries

- Operation & Management of Ash Pond & Tailing Dams
- Waste to Wealth
- Fly Ash/Bottom Ash Management
- Tailing Re-mining

T8. Carbon Capture, Storage & Sequestration

- Coal Bed Methane/Enhanced Oil/Gas Recovery
- Underground Storage for Liquid and Gaseous Media
- Methane drainage
- De-carbonization & Emission Reduction

Registration Fees

Registration Fees Details	INR (Indian)	USD (Foreigner)
Delegates (Academics & Research Organization)	8,000	200
Students/Research Scholars	3,000	100
Delegates (Industry/ Govt. Agency)	10,000	300

* GST @18% shall be applicable as per Govt. of India Rules.

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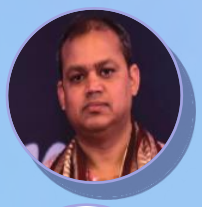

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