INDIAN GEOPHYSICAL UNION

63rd Annual Convention

on

Advances in Geophysics from Geodynamics to Metallogeny, and Green Energy Transition

2-4 November 2026

Jointly Organized by

Indian Geophysical Union (IGU)

Department of Earth Sciences
Indian Institute of Technology Bombay (IITB), Mumbai

Indian Institute of Geomagnetism (IIG), Mumbai

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Conveners: **Prof. M. Radhakrishna (IITB)** and **Prof. A. P. Dimri (IIG)**

Co-Conveners: **Dr. G. Srinivasa Rao (IITB)** and **Dr. S. P. Anand (IIG)**

Corresponding email: igu123@gmail.com; iguiitb2026@gmail.com

OBJECTIVES

The three-day convention on “Advances in Geophysics from Geodynamics to Metallogeny, and Green Energy Transition” aims to bring together leading geoscientists, researchers, academicians, industry professionals, policymakers, and students to discuss recent developments and emerging challenges in geophysics and allied Earth science disciplines with special emphasis to energy security.

The convention will focus on understanding the Earth's dynamic processes, ranging from deep mantle and crustal evolution to surface processes that influence natural resources, environmental sustainability, and energy security. Special emphasis will be placed on advances in geodynamics, tectonics, seismology, geodesy, geomagnetism, and geophysical imaging techniques that provide new insights into the structure and evolution of the Earth.

A major component of the convention will address metallogeny and mineral resource exploration, highlighting the role of geophysical methods in locating and characterizing critical mineral deposits essential for modern technologies and industrial development. Discussions will explore the links between geological processes and mineralization, contributing to sustainable resource management.

Recognizing the global shift toward low-carbon development, the convention will also examine the contribution of geophysics to the green energy transition. Sessions will cover geothermal energy, carbon capture and storage, hydrogen resources, critical minerals for renewable energy technologies, subsurface energy systems, and environmental monitoring. These discussions are expected to foster interdisciplinary collaborations to address climate change and promote sustainable development.

The programme will include keynote and invited lectures by eminent scientists, technical sessions, panel discussions, poster presentations, and interactions among researchers and students. Young scientists and scholars will have opportunities to present their research findings, receive expert feedback, and establish professional networks.

By integrating fundamental Earth science research with applications in mineral exploration, environmental management, and sustainable energy, the convention seeks to provide a comprehensive platform for knowledge exchange and innovation. The deliberations are expected to advance geophysical sciences and support national priorities related to resource security, energy transition, and environmental sustainability.

The convention will serve as an important forum for strengthening collaboration among academic institutions, research organizations, government agencies, and industry stakeholders, thereby promoting the effective use of geophysical knowledge for the benefit of society and sustainable development.

About Mumbai

Mumbai, the vibrant capital of Maharashtra, is a city where tradition meets innovation and dreams transform into reality. Nestled along the picturesque Arabian Sea coast, Mumbai stands as India's financial powerhouse and cultural melting pot. Renowned for its dynamic business environment, world-class infrastructure, and thriving entertainment industry, the city attracts visitors, professionals, and entrepreneurs from around the globe. From the iconic Gateway of India and the historic Chhatrapati Shivaji Maharaj Terminus to the scenic Marine Drive and bustling cityscape, Mumbai offers a unique blend of heritage and modernity. As the home of Bollywood, India's largest film industry, the city radiates creativity, diversity, and energy. With its rich cultural legacy, resilient spirit, and endless opportunities, Mumbai continues to inspire millions and remains one of the world's most fascinating metropolitan destinations.

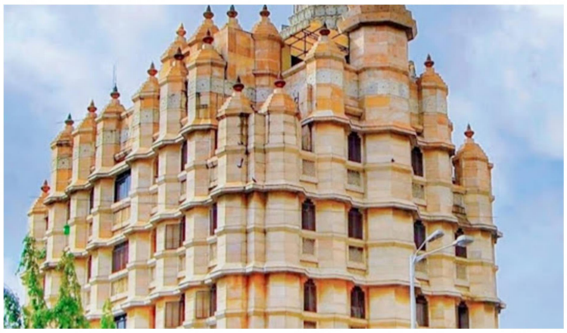
Marine Drive

Skyline of Worli

CSMT

Gateway of India

Elephanta Caves



Sidhivinayak Temple

About the Department of Earth Sciences, IIT Bombay

IIT Bombay was established in 1958. It attracts top-tier students. Its renowned faculty drives research and academic excellence, forging collaborations with peers across the nation and the world. Alumni excel in various fields, contributing to industry, academia, research, and more. The institute offers innovative short-term courses, continuing education, and distance learning. Faculty members have received prestigious awards, including the Shanti Swaroop Bhatnagar Prize, Padma Awards, and many others. It provides a fully residential experience with hostels, dining, sports, and recreational facilities. IIT Bombay is an autonomous institute and deemed university governed by a board of governors, chaired by the president of India. It operates under the guidance of the IIT Council, established by India's Ministry of Education (MoE) (earlier called the Human Resource Development).

The Department of Earth Sciences at IIT Bombay was established as an independent department in 1982. Prior to that, it was operated as a part of the Geology Section of the Department of Civil Engineering. The department currently offers M.Sc. Programs in Applied Geology and Applied Geophysics, M.Tech programs in Geoexploration and Petroleum Geoscience. From 2025 onwards, the B.S. Program in Applied Geophysics is started. Currently, the department boasts a strong reputation, supported by its 26 faculty members, who specialise in diverse research areas across a range of Geosciences, catering to academic and societal interests. The faculty members are actively involved in both teaching and research, significantly advancing various disciplines within Geoscience. In addition to their teaching responsibilities, the faculty participate in several sponsored research projects, consulting assignments, and short-term courses through IIT Bombay's Continuing Education Programme (CEP). All core and elective courses in the programs are tailored to meet industry standards and research needs. The

department's strong connections with industry and research organizations which greatly enhanced the quality of its students.

About Indian Institute of Geomagnetism

Indian Institute of Geomagnetism is a premier autonomous research institution of the Government of India dedicated to the study of geomagnetism and allied fields of Earth, atmospheric, space, and planetary sciences. Established in 1971 as the successor to the historic Colaba–Alibag Magnetic Observatory, whose geomagnetic observations dated back to 1841, IIG has emerged as a globally recognised centre of excellence in geomagnetic, space and geophysical research. Headquartered at New Panvel, Navi Mumbai, the institute functions under the Department of Science and Technology (DST), Government of India. IIG operates a nationwide network of magnetic observatories and regional research laboratories located at Prayagraj, Tirunelveli, and Shillong, providing high-quality geomagnetic data for scientific and societal applications.

The institute's research encompasses a broad spectrum of disciplines, including Geomagnetism and paleomagnetism, Solid Earth geophysics and tectonics, Seismology and earthquake precursor studies, Electromagnetic imaging of the Earth's interior, Space physics and space weather, Atmospheric and ionospheric sciences, Planetary magnetospheres, Groundwater and environmental studies, and Antarctic and Arctic geoscience research.

IIG hosts the World Data Centre for Geomagnetism, Mumbai, the only international geomagnetic data center in South Asia, and actively collaborates with leading research institutions worldwide. The institute also develops advanced magnetometers and provides geomagnetic survey, calibration, and consultancy services to government agencies, industry, aviation, and defense sectors. Through its cutting-edge research, observatory network, scientific training programs, and international collaborations, IIG continues to make significant contributions to understanding Earth's magnetic field, natural hazards, space weather, and the

dynamic processes linking Earth's interior, atmosphere, and near-space environment.

CALL FOR ABSTRACTS:

Format of Abstract: 1st Line: Title; 2nd Line: Author/Authors Affiliation; 3rd Line: Presenting Author e-mail ID and Abstract of about 300 words should be submitted online(www.iguonline.in) by 15th September, 2026. The author(s) should indicate his/her/their preference for oral or poster presentation. However, the technical committee shall decide the Final Scientific Program, as abstracts will be accepted based on merit and contents. Acceptance will be communicated to the potential speakers by 30th September 2026.

The main theme of the 63rd IGU Convention is: "Advances in Geophysics from Geodynamics to Metallogeny, and Green Energy Transition"

SUB THEMES

- Geodynamics–metallogeny linkages
- From Metallogeny to Energy Security: The Role of Geophysics
- Hydrogen, Geothermal and Emerging Clean Energy Resources
- Sustainable Resource Development for the Green Energy Transition
- Critical Minerals and India's Green Energy Future
- Ore-forming processes and metallogenic provinces
- Deep learning and AI in geodynamic studies
- Geodynamic setting of mineral deposits
- Magmatic and hydrothermal systems
- Metallogenic provinces and crustal evolution

SOLID EARTH GEOSCIENCES

- Groundwater exploration and hydrogeophysics
- Petroleum systems and basin analysis
- Unconventional hydrocarbon resources
- Coal and coal-bed methane exploration
- Geothermal energy resources
- Hydrogen exploration and subsurface storage
- Reservoir monitoring and geomechanics
- Exploration targeting using geophysical methods
- Magmatism, hydrothermal systems and mineralization
- Critical mineral resources and rare earth elements
- Geophysical imaging of crustal structures
- Borehole geophysics and reservoir characterization
- AI, machine learning and big-data analytics in geophysics
- Integrated geophysical and geological modeling
- Earthquake source processes and seismotectonics
- Seismic hazard assessment and risk mitigation
- Induced seismicity and reservoir-triggered earthquakes
- Early warning systems and disaster resilience
- Geophysical monitoring of active faults and volcanoes

MARINE GEOSCIENCES

- Coastal and marine geophysics
- Offshore Energy Resources and the Green Energy Transition
- Oceanic Lithosphere and Plate Dynamics
- Indian Ocean Geodynamics
- Marine Tectonics and Active Deformation
- Mantle Dynamics and Oceanic Volcanism
- Marine Geophysics and Crustal Imaging

ATMOSPHERIC, PLANETARY & SPACE SCIENCES

- Climate-resilient energy systems
- Role of geosciences in climate adaptation
- Sustainable development and energy transition pathways
- Earth observation and climate monitoring
- Space weather and geomagnetism
- Planetary geophysics and comparative planetology
- Climate change and Earth system monitoring
- Planetary Magnetism and Space Environments
- Remote Sensing and Earth Observation

SPECIAL SESSION: From solid Earth to Geospace: Processes, Mechanisms, Impacts, and Implications in Lithosphere, Atmosphere, Ionosphere, Magnetosphere Coupling

In addition to the above, a half-day session will be devoted to "**Young Researcher Program**" by those who are pursuing quality research for Ph.D. in Earth Sciences, certified by their supervisor. The "Best Oral Presenter Award" will be announced by a jury.

ABSTRACT VOLUME

The 63rd Annual Convention of IGU will bring out a volume containing abstracts, messages from luminaries, geoscientific work of eminent scientists/researchers, and advertisements from Sponsors (Institutes, Industries, and Instrument Manufacturers, etc.). The tariffs for publication of Advertisements are listed below:

Back Cover (Colour): ₹ 75,000/-

Front Cover (Colour): ₹ 70,000/- Inside

Back Cover (Colour): ₹ 60,000/- Inside

Inside Full Page (Colour): ₹ 50,000/-

Inside Full Page (BW): ₹ 30,000/-

Those interested in publishing their products/details of their organizations need to send the necessary information to igu123@gmail.com by 1st October 2026. The tariff has to be paid in favour of Treasurer, Indian Geophysical Union, payable at Hyderabad.

REGISTRATION FEE:

IGU Non-Member Delegate: INR 7000/-

IGU Member Delegate: INR 6000/-

IGU Non-Member Delegate (Senior Citizen): INR 4000/-

IGU Member Delegate (Senior Citizen): INR 3000/-

Research Scholars: INR 3000/-

IGU members (Research Scholars): 2000/-

Students: INR 1500/-

IGU student Members: INR 1000/-

Spouse / Accompanying Person: INR 2000/-

All delegates must register in advance to participate in the 63rd Annual Convention of IGU. The enclosed/attached Registration Form (also available at **www.iguonline.in**) may be filled in and sent by email to igu123@gmail.com, to Dr **Abhey Ram Bansal, Hon. Secretary, IGU, CSIR-NGRI Campus, Uppal Road, Hyderabad-500007, PH:040-2702810**. A soft copy of the abstract volume will be provided by the IGU. However, the registration form is mandatory to attend the conference. One form for one delegate.

BANK DETAILS:

Account Name: Indian Geophysical Union
Bank name: State Bank of India
Branch: SBI, Habsiguda, Hyderabad
Account No: 52191021424
Account Type: Saving Account
IFSC Code: SBIN0020087

REGISTRATION FORM

The 63rd Annual Convention of IGU will be held at the Department of Earth Sciences, IIT Bombay (IITB), Mumbai on "Advances in Geophysics from Geodynamics to Metallogeny, and Green Energy Transition" during 2-4 November 2026. Please submit filled-in (Capital Letters) registration form in the following format

1. Name: (Prof/ Dr/ Mr/Mrs/Ms)

2. Age:

3. Designation (Post):

4. PA/SRF/JRF/RA

5. Affiliation:

6. Address for Correspondence:

7. Mobile No:

8. Email ID:

9. Title of Abstract (if submitted):

10. Preference of Presentation (please tick) [.....] Oral [.....] Poster

11. Please tick suitable topic only

[.....] Advances in Geophysics: From Geodynamics to Metallogeny and Green Energy Transition
[.....] Solid Earth Geosciences
[.....] Marine Geosciences
[.....] Atmosphere, Space & Planetary Sciences
[.....] Young Researchers Program

11. Are you a Member of IGU? Yes [ ] No [ ]

Place: Date: Signature

ACCOMMODATION

The participants will be accommodated primarily in Government guest houses or city hotels on a paid basis. Delegates are requested to send their accommodation requirements well in advance to the Local Organising Convener (IGUIITB2026@gmail.com) with a copy to igu123@gmail.com by 30th September 2026.

IGU AWARDS

IGU-Hari Narain Lifetime Achievement Award to an eminent Senior Scientist for exceptional contribution to the causes of Indian Earth Sciences. Nominator should be past recipients, fellows and EC members of IGU, and any distinguished Earth Scientist/Professor (must be a member of IGU).

IGU-Krishnan Medal to Young Scientist (below 40 years as on 01-01- 2026) for significant contribution to Indian Earth Sciences.

IGU-Decennial Award to Senior Scientist meritorious Scientist (below 60 years as on 01-01-2026) for outstanding contribution to Earth Sciences covering land and/or offshore of India. Nominator should be a distinguished Earth Scientist/Professor.

IGU-JG Negi Young Scientist Award to a Geophysicist/Geologist whose age does not exceed 35 years (as on 01-01-2026) for his/her outstanding contribution to Geosciences.

Nomination for IGU-Anni Talwani Memorial Prize is restricted to 2 pages of candidate's CV along with no more than 2 pages each of 3 supporting letters. Nominator may kindly note that exceeding the limits is not permitted