सीएसआईआर - राष्ट्रीय भूभौतिकीय अनुसंधान संस्थान
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)
उप्पल मार्ग, हैदराबाद, तेलंगाणा, भारत – 500007

CSIR - National Geophysical Research Institute
(Council of Scientific & Industrial Research)
Uppal Road, Hyderabad, Telangana, India-500007

प्रशिक्षण कार्यक्रम
(सीएसआईआर की एक एकीकृत कौशल पहल)

Training Program
(CSIR-Integrated Skill Initiative)

CSIR Integrated Skill Initiative

Fossil Fuel and Climate History (F2CH)

(26 February-08 March, 2027)

About CSIR-NGRI

The CSIR-National Geophysical Research Institute (CSIR-NGRI), a constituent research laboratory of the Council of Scientific & Industrial Research (CSIR) was established in 1961 with the mission to carry out research in multidisciplinary areas of the highly complex structure and processes of the Earth system and its extensively interlinked subsystems. NGRI has the mandate to conduct research for public-good science to enable government agencies, public and private sector stakeholders to make informed decisions about use of geo-resources sustainably and improve preparedness and resilience to natural hazards.

As a close understanding of Earth processes and its intersections with the growth and development of the human society only can secure the future, it is our vision to develop the knowledge base of Earth system processes and apply it to produce strategies to minimize loss of life and property from natural disaster as well as manage water, energy, and mineral resources for enhancing the quality of life.

The research activities fall broadly under three themes: **Geodynamics**, which revolve round investigating and modeling fundamental aspects of the Earth system and processes, **Earthquake Hazards**, which encompass features on the surface and subsurface of crust which may potentially endanger lives and properties through catastrophes like earthquakes and landslides as well as deterioration in pollution levels of groundwater and soil, changes in climatic conditions and associated environmental issues. The theme **Natural Resources** comprise of implementation of techniques to identify primary geo-resources, which are the pillars of human civilization and fount of economic growth like groundwater, hydrocarbons as well as alternate energy sources and minerals.

The Institute is structured into seven major R&D Groups and twenty one Activities, which include expertise in a variety of geophysical, geochemical, geological techniques like Seismology, Magnetotellurics, GPS, Paleo-seismology, Structural geology, Controlled Source Seismics, Gravity and Magnetics, Geochemistry, Geochronology, Paleomagnetism, Planetary, Polar Geophysics, Geomagnetism, Airborne geophysics, Shallow subsurface geophysics and Rock Mechanics, Hydrochemistry, Paleo-environmental studies and Modeling and simulation of Earth processes.

1. About the Training Program

The training program offers participants hands-on experience with advanced geochemical and analytical techniques widely used in fossil fuel exploration and paleoclimate research. Practical sessions include Rock-Eval pyrolysis, GC-MS, bitumen extraction, GC-C, Kiel IV, EA-IRMS, Laser Particle Size Analysis (LPSA), and Scanning Electron Microscopy (SEM), providing exposure to source rock evaluation, biomarker analysis, stable isotope studies, sediment characterization, and microscopic investigations.

The program is organized around two core modules. The **Fossil Fuels module** covers petroleum source and reservoir characterization, biomarker interpretation, thermal maturity indicators, oil-source correlation, and kerogen kinetics for hydrocarbon generation modelling. The **Climate History module** focuses on reconstructing past climatic changes from lake sediments, marine fossils, ice cores, and speleothems, with particular emphasis on monsoon variability and climate oscillations such as ENSO and IOD.

Together, the lectures and practical sessions aim to build interdisciplinary expertise in applying geochemical tools to sustainable energy research, paleoenvironmental reconstruction, and climate history. The medium of instruction will be in English.

Faculty:

The training will be conducted by experts at NGRI and other universities with extensive experience.

Selection Procedure:

Selection will be on a first-come, first-served basis, subject to seat availability.

Sponsorship:

Established academic institutions/Government organizations/ industrial sectors are welcome to sponsor candidates of their interest.

Duration	: 11 Days
Mode of Training Course	: Offline
Number of Seats	: 20
Certification	: A certificate will be issued to the participants for the successful completion of the course

Venue: CSIR- National Geophysical Research Institute, Uppal Road, Hyderabad - 500007.

2. Eligibility

This training course is intended for those individuals who desire to gain an understanding or intend to work on crustal deformation studies using the GNSS technique. We emphasize practical work applications.

Educational Qualifications:

A Mater Degree in Geophysics / Applied Geophysics / Geology / / Physics / Pursuing a Doctorate or Higher Education/ Faculty or sponsored candidates from established academic institutions / government organizations / industrial sectors .

Nationality: Indian

3. Technical Requirements

Participants will practice various practical sessions using open-source software GAMIT/GLOBK for the processing of GPS data. There will be practical sessions on the data processing. Therefore, participants are requested to bring their own laptops with pre-installed GAMIT/GLOBK software and have good computational skills on Windows /Linux Operating System.

4. Required Documents

The interested candidates may apply through online link given below: (https://www.ngri.res.in/cms/skill-development.php) and has to upload the following documents in the application form:

1. Proof of age (SSC/Aadhar Card/Pan Card)
2. A copy of last examination passed
3. ID proof (College/ Institute/ Employer) & Address proof (Aadhar Card)
4. No Objection Certificate (NOC) from the Institution / Employer
5. Self Declaration form (for those candidates who are currently not pursuing any higher degree or unemployed/not getting any fellowship).

5. Important Dates

Duration: 26 February - 08 March, 2027

Last Date for Applying: 1 February 2027

6. Charges

Course Fee:

- Rs. 2500/- +18% GST= 2,950/- (for those who are pursuing the Bachelor's/Master's degree)
- Rs. 5,000/- + 18% GST = 5,900/- (for those candidates who completed their Master's or pursuing Ph.D or working as Project Assistant/Associate/Senior Project Associate)
- Rs. 10,000/- + 18% GST = 11,800/- (for those candidates who have completed their Doctorate degree or pursuing Post Doctorate or Faculty or Industry sponsored)
- Course fee includes Training Fee, Course Material, Working Lunch, Tea, Snacks and Yoga Classes. It should be paid online by the candidate at the time of submitting the application form.

Food:

Breakfast and dinner will be available at nominal rates in the CSIR-NGRI Campus and will be payable by the participants.

Accommodation Charges:

- **CSIR-NGRI Guest House (twin sharing basis):** ₹600/- per head per day for the first 6 days, ₹1200/- per head per day from the 7th day onwards.
- **Skills Development Quarters (twin sharing basis):** ₹100/- per head per day.
- **Staff Quarters/Research Scholars' Hostel (twin sharing basis):** ₹50/- per head per day.

7. Training Coordinator(s)

Dr. Monalisa Mallick, Scientist-D (Course Coordinator)
Email: mmallick.ngri@csir.res.in
Contact Details: 040-2701 2494 (O)/ +91 9969647564

Dr. Barnita Banerjee, Scientist-D (Course Co-Coordinator)
Email: barnita24.ngri@csir.res.in
Contact Details: 040 2701 2808 (O)/ +91 8297630115

8. Extra Curriculum Activities

- Yoga Classes with expert Trainer
- Quiz Competition/Running/Cultural Programs (Dance/Singing)

9. Program Management Committee

Nodal Officer: Dr. Abhey Ram Bansal, Scientist - G
Email: arb.ngri@csir.res.in

Mr. Satendra Singh, Sr. Technical Officer
Email: satendrasingh.ngri@csir.res.in

Ms. Swaroopa G., Senior Project Associate
Email: skills.ngri@csir.res.in

Office Contact: 040-2701 2325/2810

10. Chairman

Dr. Prakash Kumar
Director
CSIR- National Geophysical Research Institute
Email: director.ngri@csir.res.in
Office Contact: 040-2701 2302

11. Visit Us

https://www.ngri.res.in/cms/skill-development.php

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https://maps.app.goo.gl/Yj6pkVvgRCcpnHWP8