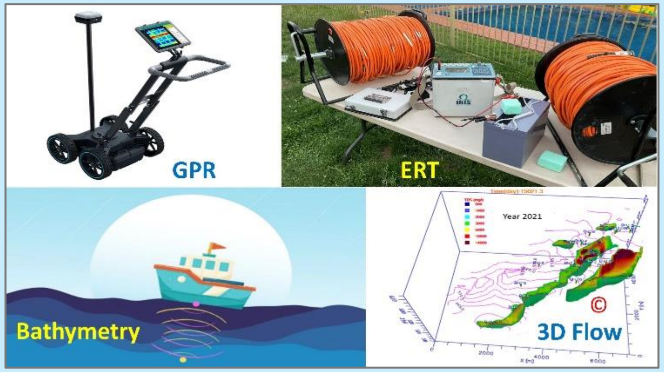
TRAINING COURSE

on

Applications of Hydro-geophysics and Numerical Solute Transport Modeling for Groundwater Management

(October 13 to 17, 2025)



Organized by

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NATIONAL INSTITUTE OF HYDROLOGY
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UTTARAKHAND, INDIA

INTRODUCTION

Effective groundwater management is crucial for ensuring sustainable water resources, especially in the face of increasing demand and climate variability. In the view of this, the upcoming training course brings together leading experts from the National Institute of Hydrology (NIH), Roorkee, and other esteemed institutions to provide an in-depth understanding of advanced hydrogeophysical and modeling techniques.

This specialized program focuses on key tools such as Electrical Resistivity Tomography (ERT), Ground Penetrating Radar (GPR), lake bathymetry survey, and groundwater flow and contaminant transport modeling. These techniques are vital for accurate aquifer conceptualization, assessing subsurface conditions, and developing effective groundwater management strategies.

Participants will benefit from the balanced mix of theoretical sessions and hands-on practical training, including field demonstrations and real-time case study analyses. The integration of lake bathymetry data into water budget calculations and groundwater models will further enhance participants' ability to assess and manage complex hydrogeological systems.

By the end of the course, attendees will gain the necessary skills to apply modern geophysical techniques and modeling software to real-world groundwater challenges.

COURSE CONTENT

The training course will feature lectures from experts at the National Institute of Hydrology (NIH), Roorkee, and other reputed institutions, focusing on ERT, GPR, Lake Bathymetry Survey and Groundwater Flow and Contaminant Transport Modeling. ***Participants will engage with both theoretical and practical aspects of aquifer conceptualisation of the subsurface/aquifers using geophysical techniques, lake bathymetry survey to be incorporated in the water budget and its integration in groundwater flow and contaminant transport modeling. The course is planned to provide field knowledge and practical sessions on software modeling that helps participant to apply for real-time case studies. All participants should bring their own laptops.***

WHO CAN PARTICIPATE?

The course is designed for professionals, including engineers, scientists, and research scholars, from government agencies, private organizations, and institutions involved in groundwater management and water resources planning. It is particularly relevant for those engaged in groundwater budgeting and resource management. Additionally, master’s students and research scholars are encouraged to participate, as the course offers valuable insights and practical experience in advanced groundwater modeling techniques.

REGISTRATION

Registration Fee: Free of charge.

REGISTER: Click Here to Register

Application Process: Interested individuals should complete the registration form by clicking the link above no later than **1st October, 2025**.
Submitting this form will be treated as an application for participation. Please note that filling the form does not guarantee confirmation of registration.
Shortlisted participants will be notified regarding confirmation of their registration.

Selection Criteria: Participants will be shortlisted based on their qualifications and relevance of their field of work to the course.
Seat Allocation: A total of 30 seats are available, distributed as follows:

- Industry: 20%
- Students and Research Scholars : 30%
- Government Sector: 50%

Travel and Accommodation: No TA/DA will be provided. However, accommodation at the Institute Guest House will be arranged on nominal charges, subject to availability, based on the information furnished in the registration form.

VENUE

The training course is proposed to be held at the National Institute of Hydrology, Roorkee.

All correspondence related to the course should be made with the course coordinator

ABOUT NIH

National Institute of Hydrology (NIH) is a premier Research and Development organization under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. It was established as an autonomous society in 1978 with its headquarters at Roorkee, Uttarakhand. The main objectives of NIH are to undertake, aid, promote and coordinate systematic and scientific work in all aspects of hydrology and water resources management. The Institute was declared a Science and Technology (S&T) organization in 1987.

The Institute is an ISO 9001:2015 certified organization. Over the years, the Institute has grown as a centre of excellence for pursuing research activities in hydrology and water resources with emphasis on technology transfer and demand driven, user-defined, strategic research. The research in the Institute is carried out under six Scientific Divisions at the headquarters at Roorkee, seven Regional Centres located at Belagavi, Bhopal, Jammu, Kakinada, Guwahati, Patna and Jodhpur.

The institute has well equipped laboratories like Soil and Water Laboratory, Nuclear Hydrology Laboratory, Hydrological Instrumentation Laboratory, Remote Sensing Laboratory and Water Quality Laboratory with state-of-the-art equipment. The institute pursues capacity development by way of organizing specialized training courses.
For more information about NIH, please visit www.nihroorkee.gov.in.

PATRON

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