Training on
Glacier studies and Remote sensing

06-16, June 2023

Organised by

DST-centre for excellence in climate change
Divecha Centre for Climate Change,
Indian Institute of Science, Bengaluru

DIVECHA CENTRE FOR CLIMATE CHANGE

INDIAN INSTITUTE OF SCIENCE

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF SCIENCE & TECHNOLOGY
सत्यमेव जयते

Introduction:

The Himalayan region has a large concentration of glaciers and seasonal snow. Recent advances in remote sensing technologies have made it possible to study previously unexplored Himalayan cryosphere. These studies are useful to assess the water security of people living in the mountains and in the Indo-Gangetic plains. In India due to a lack of trained manpower, it is difficult to generate reliable information on glaciers. Therefore, to fill this gap and to attract talented young people, training is planned.

DST-centre for excellence in climate change and Divecha Centre for climate change organizes training for young students who wish to work in glaciology. Lectures will be taken by faculty members of the Centre and by well-known faculties of other departments. A Series of tutorials and practical sessions will also be organised to provide hands-on experience

Date: 06-16 June 2023

Time: 09.30 am-05.00 pm

Venue: Divecha Centre for Climate Change

Last date for application submission: March 31, 2023

Intimation to selected students: April 15, 2023

No registration Fees

Syllabus:

1. Distribution of Glaciers and snow cover

Overview of Cryosphere, Importance of glaciers, precipitation and formation of snow, distribution of glaciers/snow

2. Application of remote sensing in glaciology

Fundamentals of Remote Sensing, Glacier inventory, Estimation of glacier mass balance, glacier depth, moraine-dammed lakes, snow cover and snow albedo

3. Climate and climate change

Climate change and climate variability, General circulation of atmosphere and oceans, impacts of aerosols

4. Monitoring of glaciers

Physical and morphological properties of snow and glaciers, Development of algorithms and glacier modelling, Glacier Lake Outburst Flood

5. Glacier Mass Balance

Concept of glacier mass balance, methods of glacier mass balance estimation-Glaciological, Geodetic and AAR methods, the concept of ELA, IAAR method

6. Ice and Snow ablation

Physics of snowmelt, heat budget and radiation. Snowmelt runoff model.

Practical: Topographic corrections of reflectance, Supra glacier debris cover, Depth estimate using different techniques, Climate Change and mass balance, Runoff Estimates in Himalayan river

Eligibility:

Post Graduate M.Sc., M.Tech., M.E. and PhD students from recognized Institutes/Universities.

Accommodation:

Accommodation will be provided to deserving candidates by Divecha Centre for Climate Change.

Faculty:

- **Prof. S. K. Satheesh**
  Professor & Chairman, Divecha Centre for Climate Change
- **Prof. J. Srinivasan**
  Distinguished Scientist, Divecha Centre for Climate Change
- **Dr. Anil Kulkarni**
  Distinguished Scientist, Divecha Centre for Climate Change

Guest lectures by eminent scientists.

How to apply:

Aspirants can enrol their names through the following link.

https://forms.gle/ecgcDuAS3WtiFWXH6

Contact: details

Dr. Anil V. Kulkarni
Distinguished Scientist,
Divecha Centre for Climate Change,
Indian Institute of Science,
Bengaluru- 560 012, India

E-mail id: glacier.dccc@iisc.ac.in

How to reach:

The IISc campus is conveniently located for those arriving by air as well as those choosing to travel by train. The new Bengaluru International Airport is 35 km from the campus. The campus is equidistant from the City Railway Station (Majestic) and the Cantonment Railway Station which are both about 7 km away. The Yeshwanthpura Railway Station is no more than 2 km.

https://goo.gl/maps/V1nuJ3Ga95p