

Background

Natural resources are under tremendous pressure in the recent decades due to interaction between human and nature. The human footprints have been extending over the pristine natural environmental landscape and the equilibrium of the natural system is getting disturbed. It accentuates the occurrence and intensity of natural extreme events, causes enormous damage in our geo-environment as well as losses of human lives and properties around the world. The warming and climate change trend are particularly significant in the current century because of its unequivocally the effects of anthropogenic activities, mainly since mid-20th century and continuing at an unprecedented rate. Human-induced climate change is directly connected to the intensity of fossil fuel burning, released aerosol, deforestation and land used land cover alteration. Furthermore, climate change accelerates the recurrent disasters in the last few decades, which threatening the survival of humans on the earth. The climatic change has doubled the burden of inequality; like, the higher economic strata emit more proportionally Greenhouse Gases (GHGs) and the lower economic group are more vulnerable to its associated impacts.

The Remote Sensing based measurement with integration of geospatial pathways bridged the earth surface data and science to unfold the complex geo-environmental processes and their causalities. The efficiency of data processing, analyzing and visualizing platforms are getting more optimized and sophisticated to handle a large volume (big data) of data over planetary and long temporal scale. The fusion of advance statistical modelling, machine learning (ML) and deep learning (DL) tools with remote sensing and geospatial pathways bestowed another height to advance the geospatial researches. The outcomes from academic and industrial research might benefit the policymakers to bring an appropriate strategy in policymaking and implementation.

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Summer Training Program (virtual)

on

Spatial Data Programming with R, GEE and Python for Natural Resource Applications



<http://cujisg2022.unaux.com/training/>

Organised Virtually
during 2-8th June, 2022

Organized Jointly by:

Indian Society of Geomatics (ISG)-Ranchi
Chapter

&

Department of Geoinformatics, Central
University of Jharkhand, Ranchi

Themes

- Spatial data processing for Natural Resource Applications using advanced platforms such as GEE and R-CRAN
- Earth Observation and Big Data Analytics for Natural Resource Applications using Python
- Processing Climate data for Natural Resource Applications
- Processing LIDAR and UAV data for Natural Resources Applications

Objectives

- a) To provide state of art tools for processing large spatial dataset (e.g. satellite data) for Natural Resource Applications.
- b) To process climate data to analyse variability in climate change and its impact on society and environment.
- c) To impart knowledge in GEE, R-CRAN and Python for solving geospatial applications.
- d) To impart knowledge in LIDAR and UAV for solving geospatial applications.

Working modality for the Training Program

The one week summer training program is an opportunity to enhance participant skills on recent development of big data analytics for Natural Resource Applications using GEE, R-CRAN, and Python. The motive of the training session is for processing spatial data (e.g. satellite data, climate data) for Natural Resources Mapping and managing for the benefit of society. Furthermore, to apply advance remote sensing techniques such as LIDAR and UAV for mapping and monitoring environment and climate.

Participants & Eligibility

The Training Program expects to bring around 100 participants from various regional, national, and international public and private organizations, academic and research institutions including:

- Students and Researchers involved in the use of Earth observation and Data Processing.
- Faculty and scientist from academic and research institutions, decision-makers from government agencies (Remote Sensing Centres, Space Application Centers, Ministry of Environment-Forest and Climate Change, Water resources, Disaster management etc.)
- Representatives of the private sector involved with Space and Earth observation, disaster management, environmental monitoring, etc.)



Eligibility Criteria

- Candidates must hold a Bachelor's Degree or equivalent qualification with basic working knowledge in Remote Sensing and GIS.
- Selection of applicants is subject to fulfillment of the minimum eligibility criteria and domain of work in relevant areas. The training is organized for a max. of 100 participants only.

Languages: The working language of the training program is English.

Dates and Venue of the Training Program

The Training Program will be organized at the Indian Society of Geomatics (ISG), Ranchi Chapter and Department of Geoinformatics, Central University of Jharkhand (CUJ) through online mode during **02-08 June 2022**.

Important Dates

Submission of online Application Ends- **20 May 2022**

Acceptance communication- **25 May 2022**

Queries: geoinfo.conference@gmail.com

Registration: Students/Scholars	₹ 2000
IGS Members	₹ 750
Academicians	₹ 3000
Foreign applicants	₹ 5000

Pay registration fee via NEFT/RTGS. E-certificate will be provided for registered participants.

Bank A/C Number: **7277000100006806**

A/C Name: INDIAN SOCIETY OF GEOMATICS-RANCHI CHAPTER; IFSC code: PUNB0727700

Address: Punjab National Bank at Brambe, Ranchi

How To Apply: Fill this Google form:

<https://forms.gle/NXRoy8dKZkSMa9q69>

Resource Persons

- Dr. Surajit Ghosh, IWMI, Sri Lanka
- Dr. Prasenjit Acharya, Vidyasagar University, WB
- Dr. Sumanta Das, University of Queensland, Australia
- Dr. Bikash R. Parida, Central University of Jharkhand
- Mr. B. Sadasiva Rao, NRSC, Hyderabad
- Mr. Nilay Nishant, NESAC, Shillong

