

About Us

Regional Center for Geodesy (RCG) and the Geospatial Information Science and Engineering (GISE) in collaboration with AllTerra Solutions LLP, are organizing a residential workshop on Global Navigation Satellite System (GNSS) for Surveying and Mapping.

RCG is established with a focus on capacity building in India, particularly in the western region. We specialize in advanced surveying and applied geodesy. Our expertise spans the use of SAR for snow depth estimation and land deformation, GNSS Reflectometry for estimating geophysical variables, and UAV-based topographic mapping techniques.

GISE Hub at IIT Bombay is a multidisciplinary effort to achieve multipronged objectives of capacity building, research and development of geospatial solutions, educational outreach and entrepreneurship and innovation in the core development sectors. We are committed to government-industry-academia collaborations that ensures larger and contemporary learning opportunities.

AllTerra is Trimble's globally trademarked brand for distribution partners focusing on delivering Trimble's world-leading technology to surveyors and geospatial professionals.

Workshop Schedule

Date	Time
10 May 2024	10.00 AM to 6.00 PM
11 May 2024	10.00 AM to 6.00 PM
12 May 2024	10.00 AM to 6.00 PM



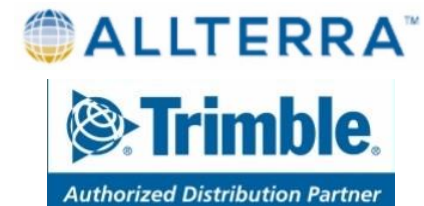
Workshop on Global Navigation Satellite System (GNSS) for Surveying and Mapping

on
10, 11 & 12 May, 2024

Organized by
**Regional Center for Geodesy
(RCG)**
And
GISE Hub
**Indian Institute of Technology
Bombay**

In collaboration with
AllTerra Solutions LLP
(Authorized Distributor for Trimble
Geospatial Instruments)

Global Navigation Satellite System (GNSS) for Surveying and Mapping



Workshop fees – INR 8000

Introduction

Modern surveying instruments are used to create accurate maps, manage land, and facilitate efficient planning and management. With rapid advancements in the technology and availability of advanced innovative surveying instruments, these instruments have become easy to use and are more precise. Various advance instruments used in surveying include GPS, Global Navigation Satellite System (GNSS) Receivers. Modern surveying methods such as GNSS help obtain position information with greater accuracy. This course will provide an overview of the latest advances in modern surveying methods including the practical demonstration of GNSS and data processing techniques. This course intends to familiarize the participants with modern surveying methods and techniques in order to apply them in real world mapping, surveying and geospatial projects. The course, therefore, will be of special interest to the geospatial professionals, land surveyors, academicians and students interested in or associated with different aspects of surveying and positioning.

Outline

The course will contain classroom lecture modules covering theory and methods on following topics:

- Overview of modern surveying instruments
- Overview of map projections
- Coordinate systems and different height systems
- Applications of GNSS
- Application of latest windows based total station
- Source and error budget in GNSS
- Overview of differential GPS
- Datum and its types
- Continuous Operating Reference Station (CORS)
- Satellite based Augmentation System, (SBAS)
- Real Time Kinematic (RTK)
- Post Processing Kinematic (PPK) mode
- Do's and Don'ts in GNSS survey

Demonstration/Hands on

Facility

Participants will be given demonstrations and hands-on experience in using different surveying equipment such as GNSS antenna/receiver. There will be practical demonstrations of data processing and analysis using easy to use free/open-source software.

Benefits

This course will be useful for academicians, surveyors and geo-spatial professionals in the field of construction, surveying, positioning, mapping and Central/ State Govt./Private Organizations/NGO/self-employed practitioners engaged in village/town/state/national-level surveys for mapping and infrastructure development projects.

As participants are expected from all over India, this course would provide an excellent opportunity for the participants to interact with one another and discuss problems and solutions of mutual interest.

Speakers



Prof. RAAJ Ramsankaran

<https://www.civil.iitb.ac.in/~ramsankaran/>



Prof. Eswar Rajasekaran

<https://www.civil.iitb.ac.in/faculty/details/prof-eswar-rajasekaran>

For Registrations

Fill the Google form link attached

<https://forms.gle/DrrcWMb8fCZZGpBw9>

Email: gishub@iitb.ac.in