



International Institute of Geospatial Science & Technology

A Constituent unit of SAIARD & authorised collaborative institution & CCPTR
Centre of MAKAUT, an UGC & AICTE recognised State Govt. University in
West Bengal

20 Hrs Hands-on Online Training Course On LiDAR Point Cloud Processing

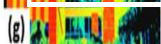
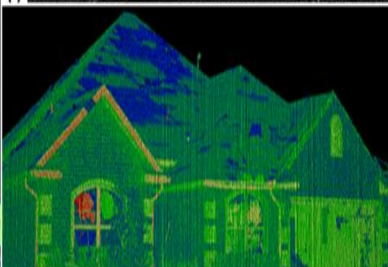
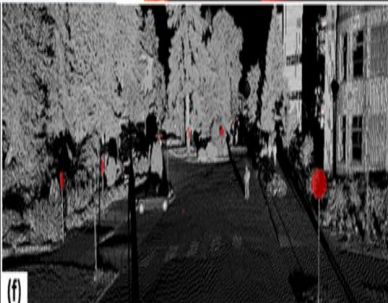
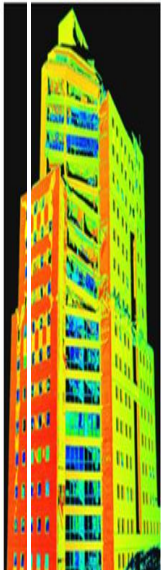
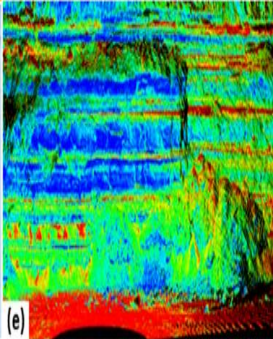
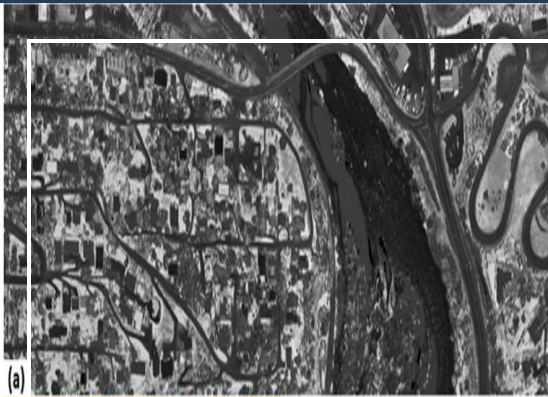
Starting from
30 October 2021
@ 7.00 – 9.00 pm
(Each Saturday & Sunday)

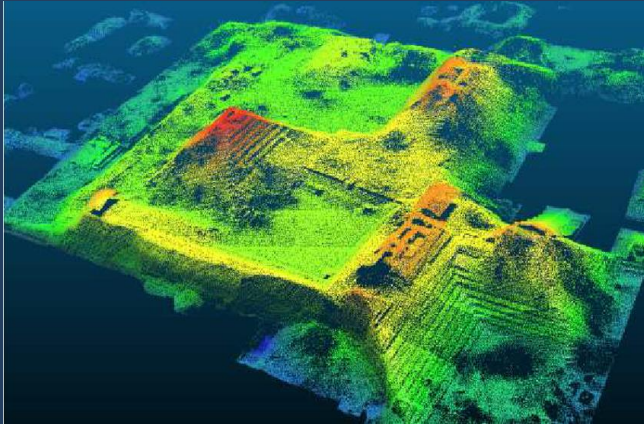
For Details

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LiDAR Technology

According to the American Geoscience Institute, LiDAR uses a pulsed laser to calculate an object's variable distances from the earth surface. These light pulses — put together with the information collected by the airborne system — generate accurate 3D information about the earth surface and the target object.

Components

There are three primary components of a LiDAR instrument — the scanner, laser and GPS receiver. Other elements that play a vital role in the data collection and analysis are the photodetector and optics. Most government and private organizations use helicopters, drones and airplanes for acquiring LiDAR data. LiDAR systems are divided into two types based on its functionality — Airborne LiDAR & Terrestrial LiDAR.

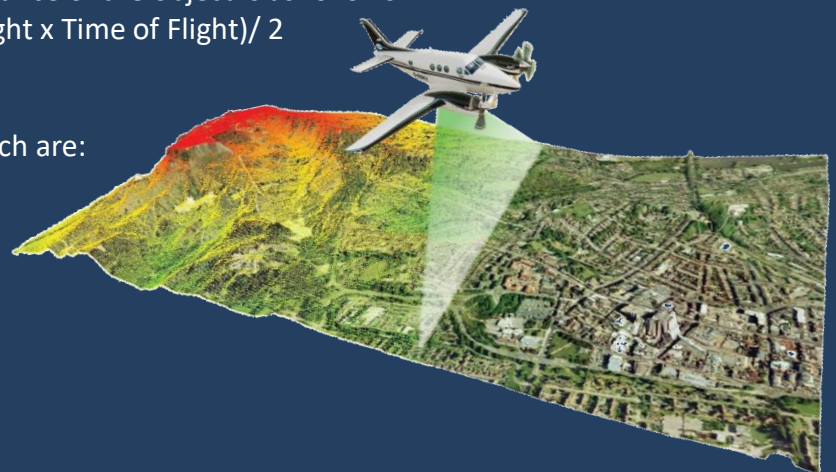
How Does LiDAR Work?

LiDAR follows a simple principle — throw laser light at an object on the earth surface and calculate the time it takes to return to the LiDAR source. Given the speed at which the light travels (approximately 186,000 miles per second), the process of measuring the exact distance through LiDAR appears to be incredibly fast. However, it's very technical. The formula that analysts use to arrive at the precise distance of the object is as follows:

The distance of the object = $(\text{Speed of Light} \times \text{Time of Flight}) / 2$

LiDAR can be used to accomplish many developmental **objectives**, some of which are:

- Oceanography
- Digital Elevation or Terrain Model
- Agriculture & Archaeology



Training support

- Training license for 30 days.
- Training materials for practice.
- Real life hands-on training data.
- Hands-on assistance during the training.
- Learning guide documents.
- Live Discussions
- Project Handling
- 24x7 Hrs Support

Resource Persons

From IIGST, Govt. Bodies & Industry Professionals

Seat Limitations - NIL

Course Fees - 1200/-

Mode of Training - Online

Last Date of Application - 27.10.21

Bank Details

Bank- **SBI**

Beneficiary Name- **IIGST - SAIARD**

Acc. No- **38377901244**

IFSC Code: **SBIN0016629**

Admission Link

<https://forms.gle/Lbos5SnyDA7ojb4c9>

Major Training Contents

- Basics of LiDAR Data acquisition,
- LiDAR works & Applications in mapping
- Create a LiDAR project and import points
- Classification Routines of LiDAR
- Classification of project using Macro
- Water modeling with bare ground DTM
- Generate GIS product as DEM, DTM, Lattice Model, Contours
- 3D Point cloud Advanced Classification,
- Tree detection & Canopy Classification & area delineation,
- Individual tree Count & base detection,
- 3D wire power line & tower modeling,
- Earth model preparation & editing,
- 3D Building roof & wall modeling,

About IIGST

International Institute of Geospatial Science and Technology (IIGST)- is a constituent unit of South Asian Institute for Advanced Research and Development (SAIARD), has been formed with a motto to spread the arena of geospatial technology & its applications through education, research, training and capacity building, research, advocacy and innovative ideas through publication, various outreach programmes, collaborations and partnerships for sustainable and cognitive development of this region as well as to provide skill-based education to the students and make them employable and strengthening the hands of both public and private sectors by providing all-round supports in Southeast Asia. As a key player in geospatial field, the academic platforms of IIGST are designed in such a way as that it can meet the requirements of working professionals, academicians, researchers, planners and decision makers.

To widen its outreach, IIGST has taken various initiatives like starting skill based courses on various aspect of Geoinformatics, etc. training and capacity building programmes, conferences etc. both in physical and e-learning mode in collaboration with different academic and non-academic institutions both at national and international level. Along with that as the basic motto of this institution is to support the all round development of our future generations to make them skilled and employable along with that to strengthen the hands of both public and private sectors, so, since its inception, IIGST has taken a community & policy-based approach through the intervention of this geospatial technology for the betterment of society and humanity.