Faculty Development Program

Title : An Introduction to LIDAR and its applications in 3D Modelling

Date : 2025-04-24 - 2025-04-24
Time : 10:00 - 17:30
Venue : CDMM 303

Event Outcome

- At the end of the workshop

Resource Person 1 - Details
Name : Vasantha Kumar S
Designation : Professor Grade 1, School of Civil Engineering
University/ Company : VIT, Vellore
Address : India, 632014.

Resource Person 2 - Details
Name : Vignesh Rajkumar L
Designation : Assistant Professor Sr. Grade 2, School of Civil Engineering
University/ Company : VIT, Vellore
Address : India, 632014.

Resource Person's Profile :

1. Profile of Vasantha Kumar S

Has worked extensively using LIDAR Scanning technology. Has completed many consultancies and publications using the technology.

2. Profile of Vignesh Rajkumar L

Has already conducted similar workshops and worked using LIDAR Scanning

The 3D scanning technology or popularly known as LIDAR is a Light Detection and Ranging Technology that helps to create an accurate 3D representation of any given earth structure such as buildings, dams, roads, forest, etc. The technology consists of emitting millions of infrared light pulses every second from a laser scanner to the target. The coordinates results in point cloud consisting of millions of data points with X, Y, Z coordinates. This data can then be used to prepare the 3D maps after removing the unwanted noises. The entire laser scanning can be completed in just 3 minutes of time with modern ground based terrestrial laser scanning systems having an accuracy of 6 mm.

The ground-based LIDAR system can be used for various civil engineering applications like capturing existing buildings exterior, interior, preservation of heritage buildings, area volume calculations, highway asset management, identifying structural deformation, slope instability analysis, etc. Even thermal properties of objects can be studied using LIDAR systems.

The present workshop aims to give the participants a full-fledged knowledge of the latest ground-based LIDAR technology with more focus on practical demonstrations rather than theoretical lectures. At the end of the workshop, the participants will be well versed with the working principle of LIDAR and will know how the LIDAR technology can be used to capture the 3D
of any given structure.

We will be demonstrating and capturing point clouds with LIDAR scanner.

Coordinator's: **Prof. VIGNESH RAJKUMAR L 16373 - Assistant Professor Sr. Grade 2 - SCE**
Prof. VASANTHA KUMAR S 13676 - Professor Grade 1 - SCE