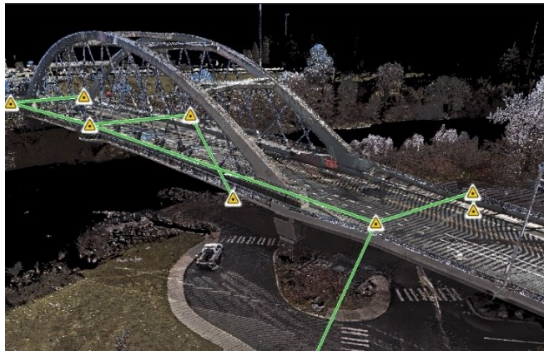
VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

One day Workshop on

LIDAR Technology for Civil Engineering Applications



28th March 2024 (Thursday)

Organized by

School of Civil Engineering (SCE),
VIT, Vellore – 632014

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Dr. G. Viswanathan,
Founder & Chancellor

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School of Civil Engineering

Coordinators & Resource Persons

Dr. L. Vignesh Rajkumar
Assistant Professor and Survey Lab in-charge
School of Civil Engineering

Dr. S. Vasantha Kumar
Professor and Transportation Lab in-charge
School of Civil Engineering

ABOUT VIT

Vellore Institute of Technology (VIT), founded in 1984 by Chancellor Dr. G. Viswanathan, has grown to over 33,000 students from over 50 countries and states. It was granted university status in 2001 by the MHRD Government of India for excellence in academics, research, and extracurricular initiatives. VIT is a top Indian institute known for its quality teaching, research, and innovation. It ranks 240th in the world and 9th in India in engineering and technology subjects, with eight subjects within the top 500. VIT is also the 8th best university, 11th best research institution in India, and 173rd best institution in Asia.

ABOUT SCE

The School of Civil Engineering (SCE) is a part of VIT since its inception. The School has grown tremendously over years and is now recognized as one of the major engineering schools in VIT. The School has faculty members from various reputed institutes. Besides high-quality teaching and instruction at both UG and PG levels, the faculty members of the school are actively involved in executing a number of R&D and consultancy projects from government agencies including DST, ISRO, BRNS and also from many reputed industries.

ABOUT THE PROGRAMME

3D laser 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 building's 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.

TOPICS TO BE COVERED

1) Introduction to LIDAR technology and its applications in Civil Engineering.
2) Demonstration of laser scanner for indoor and outdoor scanning.
3) Demonstration of importing of collected scan data to post-processing software for automatic/manual registration of scans and final 3D map preparation.

TARGET GROUP

- Students and Research scholars
- Faculty members from academic institutions
- Government/ Non-Government officials

REGISTRATION FEE

- **Rs.300/-** (Students UG and PG)
- **Rs.500/-** (Research Scholars PhD/MS)
- **Rs.1000/-** (Faculty members)
- **Rs.1500/-** (Govt./Non-Govt. officials)

Registration charges include entry to lectures, demonstrations, course material, snacks and lunch. The number of participants is **strictly limited to 50** based on first come first serve.

VENUE

CDMM 303, School of Civil Engineering, VIT

DATE & TIME

28th March 2024 (Thursday)/ 9.00 am - 5.30 pm

CONTACT

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REGISTRATION

Full Name : ----------
Designation : ----------
Department : ----------
Organization : ----------
Address : ----------
Mobile number : ----------
Email ID : ----------
Type of Registration : ----------
Signature of student : ----------
Signature of HOD/Principal: ----------

To register for the programme please send the above details along with online transaction number through email to the coordinator on or before 26th March 2024. Payment should be made through online only using the link below.

https://events.vit.ac.in/