

**SCHOOL OF INFRASTRUCTURE**  
**DEPARTMENT OF CIVIL ENGINEERING**

Ref: 810-4/ Dean (Sol) / 0524

Date: 23.05.2024

**REPORT**  
**GUEST LECTURE ON APPLICATION OF REMOTE SENSING IN CIVIL ENGINEERING**  
**FIELD**

Date & Time	Speaker	Title	Venue
<b>30.04.2024 &amp; 11.00 AM- 12.40 PM</b>	<b>Mr. Rajesh Thangaraj, Senior Consultant, Land Coordinates Technology (LCT), Chennai</b>	<b>Application of Remote Sensing in Civil Engineering Field</b>	<b>PG Computer Lab, Dept. of Civil Engineering, BSACIST</b>

**I. INTRODUCTION**

The Student Chapter of the American Society of Civil Engineers (ASCE), Department of Civil Engineering, School of Infrastructure organized a guest lecture on “**Application of Remote Sensing in Civil Engineering Field**” on **30.04.2024** from **11.00 AM-12.40 PM** at PG Computer Lab, Department of Civil Engineering for the benefit of I Year and II Year B.Tech Civil Engineering students.



**ASCE** STUDENT CHAPTER  
 B.S. Abdur Rahman™  
**Crescent**  
 Institute of Science & Technology  
Deemed to be University u/s 3 of the UGC Act, 1956

**SCHOOL OF INFRASTRUCTURE**  
**DEPARTMENT OF CIVIL ENGINEERING**  
 PRESENTS  
**LECTURE SERIES**  
 24<sup>th</sup> - 30<sup>th</sup> APRIL, 2024

RESOURCE PERSONS



**Er. U. ELAKYA**  
 Design Engineer  
 M/S S&F Engineering services,  
 Chennai  
 Topic: Structural Analysis of Buildings: Issues and Challenges  
 APRIL 24, 2024 AT 10:00 A.M



**Er. KAKA MOHAMMED SUHAIB**  
 Managing Director  
 M/S Samco Construction Pvt. Ltd.  
 Chennai  
 Topic: Quantity Surveying and Building Estimation  
 APRIL 25, 2024 AT 11:00 A.M



**Er. SAQLANE MEHDI KALVE**  
 Junior Engineer  
 M/S Heiwit,  
 Toronto, Canada  
 Topic: Safety Management in construction  
 WEBINAR ON APRIL 26, 2024 AT 9:30 A.M



**Er. T. RAJESH**  
 Senior Consultant, Geospatial division  
 M/S Land Coordinates Technology,  
 Chennai  
 Topic: Application of Remote Sensing in Civil Engineering field  
 APRIL 30, 2024 AT 11:00 A.M

STUDENTS COORDINATORS

FACULTY COORDINATORS

CONVENOR

**Dr. M. S. HAJI SHEIK MOHAMMED**  
 DEAN, SCHOOL OF INFRASTRUCTURE  
 FACULTY ADVISOR, ASCE

**Programme Invitation**

## II. ABOUT THE SPEAKER

Mr. Rajesh Thangaraj, holds M.Tech. degree in Remote Sensing is currently serving as Senior Consultant at Land Coordinates Technology (LCT), Chennai. He has successfully executed many projects in the field of drone, remote sensing and GIS domain.



**Mr. Rajesh Thangaraj**  
**Senior Consultant**  
**Land Coordinates Technology (LCT), Chennai**

## III. ABOUT THE GUEST LECTURE

Remote sensing is typically done using sensors onboard satellites, aircraft, or drones. It enables us to observe, monitor, and analyze the Earth's environment, including its land, water, and atmosphere, from a distance. Remote sensing plays a crucial role in fields such as environmental monitoring, agriculture, urban planning, disaster management, and resource exploration. It provides valuable information that helps us understand and address a wide range of societal and environmental challenges.

Mr. Anbuselvan, the Student from II Year B.Tech, Civil Engineering, extended a warm welcome to the resource person, faculty members and the students. As a part of the welcome address, the student briefed about the guest lecture series organized by the department of Civil Engineering, School of Infrastructure. He highlighted its significance in aiding students studying Civil Engineering by introducing them to technological advancements and other relevant topics.

Ms. K. Kanmani, Assistant Professor (Sr.Gr), addressed the students and emphasized the importance of Remote Sensing in Civil Engineering and the need for a deep knowledge in this topic. Mr. Anbuselvan II Year B.Tech. Civil Engineering introduced the Guest Speaker, Mr. Rajesh Thangaraj to the participants and elaborated some of the significant projects executed by the resource person.



**Welcome address & Guest Introduction by  
Mr. Anbuselvan  
Student of II year B.Tech, Civil Engineering**

#### **IV SALIENT POINTS DISSEMINATED IN THE GUEST LECTURE**

Mr. Rajesh Thangaraj, Senior Consultant at Land Coordinates Technology (LCT) in Chennai, commenced his lecture with a concise overview of remote sensing within the field of Civil Engineering. The Speaker provided an insightful explanation of three key technologies: GPS, GNSS, and Remote Sensing. Global Positioning System (GPS) was elucidated as a satellite-based navigation system that enables precise location determination on Earth's surface. The speaker also discussed GNSS, or Global Navigation Satellite System, as an umbrella term encompassing multiple satellite navigation systems, including GPS, GLONASS, Galileo, and Bei Dou, which collectively provide global coverage for positioning, navigation, and timing services. Additionally, Remote Sensing is introduced as the method of acquiring information about Earth's surface without direct physical contact, utilizing sensors onboard satellites, aircraft, or drones. These technologies were presented as essential tools in various fields, facilitating applications such as environmental monitoring, agriculture, urban planning, disaster management, and resource exploration. Subsequently, the speaker transitioned to discussing satellites, emphasizing their types and the significance of Remote Sensing satellites. These satellites were portrayed as instrumental in capturing vital data about Earth's surface, facilitating various applications such as environmental monitoring, urban planning, and disaster management.

The lecture further explored the application of Remote Sensing and Geographic Information Systems (GIS), highlighting their combined utility in analysing spatial data for decision-making purposes. Drones are discussed as another essential tool, with an overview

provided on their types and capabilities. LiDAR, or Light Detection and Ranging, was introduced as a remote sensing technology utilizing laser pulses to measure distances to Earth's surface. The working principle, applications, and scanning methods of LiDAR were elaborated upon, emphasizing its role in terrain mapping, forestry, urban planning, and disaster management.

Overall, the lecture offered a comprehensive overview of various technologies and their applications in Remote Sensing, GIS, and drone technology, providing valuable insights into their roles in modern data acquisition and analysis. The students also inquired about job opportunities in areas related to Remote Sensing.

The following students and faculty members were present during the event.

#### **A. Faculty Coordinators**

1. Dr. P. Gajalakshmi, Professor
2. Dr. V. S. Priya, Associate Professor
3. Dr. Nisha Khanam, Assistant Professor (Sel.Gr)
4. Ms. K. Kanmani, Assistant Professor (Sr.Gr)

#### **B. I Year B.Tech Civil Engineering Students**

S.NO	RRN	NAME
1	230011601001	ABDUL AADHIL M
2	230011601002	ABDUL RAHIM
3	230011601003	AKRAM JAWEETH A
4	230011601004	ARAVINTHAN THEIVARAJ
5	230011601005	ARSHATH IBRAHIM S
6	230011601007	IMRAN FARID A
7	230011601008	JAMEEL AHAMED M
8	230011601009	MAHALAKSHMI K
9	230011601010	MOHAMED ASLAM S
10	230011601011	MOHAMED SHADIQM
11	230011601012	MOHAMED YASIN S
12	230011601013	MOHAMMED AJMAL
13	230011601014	MOHAMMED FAAIZ K
14	230011601015	MOHAMMED MEHRAN P
15	230011601016	MOHAMMED RAZEEN T
16	230011601017	MOHAMMED SIDDIQ S
17	230011601018	RAMEEZA YASMIN P K
18	230011601019	ROSHAN ASFAQ
19	230011601020	SAAD SAYEED SHAIRKHAN

20	230011601021	SURYA MOORTHY M
21	230011601022	SYED AHAMED K M
22	230011601023	SYED MASOOTH
23	230011601024	THOKCHOM WANGLLEN MOILANGCHA
24	230011601025	THYCUS MARIO VALANTINE D
25	230011601026	YUKESH G

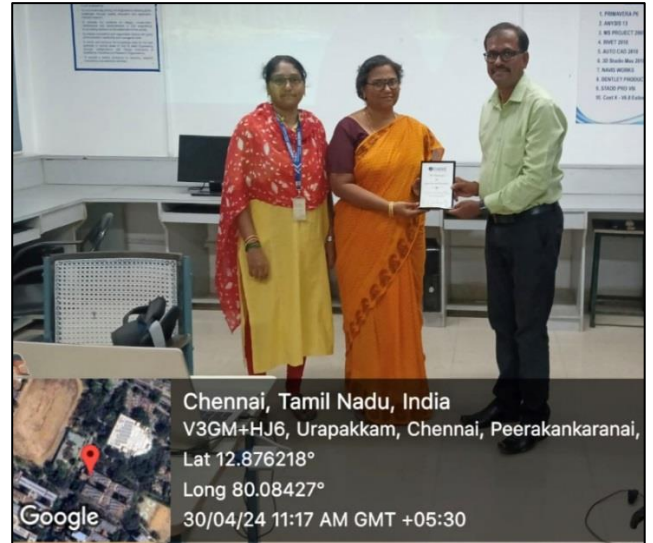
### C. II Year B.Tech Civil Engineering Students

S.NO	RRN	NAME
1	220011601001	AADAM GANI J
2	220011601002	ABISHEK P
3	220011601003	AFSAL AHAMED
4	220011601004	AHAMED NAEEM A
5	220011601005	AMEER SHAKEER S
6	220011601006	AMJATH T T
7	220011601007	ANANDHA KUMAR R
8	220011601008	ANBUSELVAN R
9	220011601009	AREEB ROHAN K
10	220011601010	ASHWITHA M
11	220011601011	DHEEPAK KUMAAR S
12	220011601012	FAISAL AHAMEED F S
13	220011601013	HALITH ISHA C
14	220011601015	MOHAMED JAFRON S
15	220011601016	MOHAMED MUBEEN
16	220011601017	MOHAMED RIYAZUDHEEN R
17	220011601018	MOHAMMED RAIHAAN R
18	220011601019	PRADEEP D
19	220011601020	PRADHEESH M
20	220011601021	RASETH IMAM NOOR
21	220011602010	MOHAMED KALIFA K
22	220011602011	MOHAMED SAMEER KM
23	220011602012	MOHAMED UVAIS M

The vote of thanks was delivered by Mr. Anbuselvan, Student from II Year B.Tech, Civil Engineering. He expressed gratitude to the Dean, School of Infrastructure for providing the opportunity to organize the guest lecture, and also extended appreciation to the guest speaker for delivering an informative session. Additionally, Dr. P. Gajalakshmi, a Professor, and Ms. K. Kanmani, an Assistant Professor (Senior Grade), presented a memento to the guest speaker.



**Presentation of Mr. Rajesh Thangaraj**



**Awarding memento to the speaker**

#### **IV. COURSE RELEVANCE**

The students of II year and I year B.Tech., Civil Engineering (under Regulation 2022) are offered a course on **CEDX 72 Remote Sensing** and **CED1202 Surveying** in their IV semester and II semester respectively. The main objective of course CEDX72 Remote Sensing is to impart the knowledge on the principles of remote sensing data acquisition and analysis of satellite data. The guest lecture titled "Application of Remote Sensing in Civil Engineering Field" adds significant value to the course by equipping students with an overview of diverse technologies and their applications in Remote Sensing. It offers valuable insights into their contributions to modern data acquisition and analysis processes. The topic of LIDAR applications is incorporated into Module 5 of their course CED1202 Surveying. This guest lecture provides considerable value, particularly in the realms of Drone and LIDAR surveying.

**Faculty In-charge**  
**(Ms. K. Kanmani, AP (Sr. Gr.))**

**Dean, Sol**  
**(Dr. M. S. Haji Sheik Mohammed)**