



## **Gandhinagar University**

A Report on

“Applications of RS & GIS in Civil Engineering”

(3<sup>rd</sup> September 2022, Saturday)

### **Event Overview:**

The Workshop on “Applications of RS & GIS in Civil Engineering” was organized on 3<sup>rd</sup> September 2022 at Gandhinagar University by Civil Engineering Department, Gandhinagar Institute of Technology. The Workshop was coordinated by Prof. Pooja Patanwal & Prof. Paresh Umredkar. The session was organized for the students & Faculties of Civil Engineering Department with the permission of Dr H N Shah, Director. The workshop was organized to learn the QGIS software, Application in Civil Engineering filed & to develop a basic understanding about Geo-Spatial techniques.

### **Objective:**

The main objective of this workshop was to learn the GIS and remote sensing techniques which play a crucial role & serve as a complete platform in every aspect of civil engineering. Geographic information system (GIS) technology provides the tools for creating, managing, analyzing, and visualizing the data associated with developing and managing infrastructure. We organized this workshop to enable the students to apply the tools to solve various problems related to Civil Engineering.

### **Program Overview:**

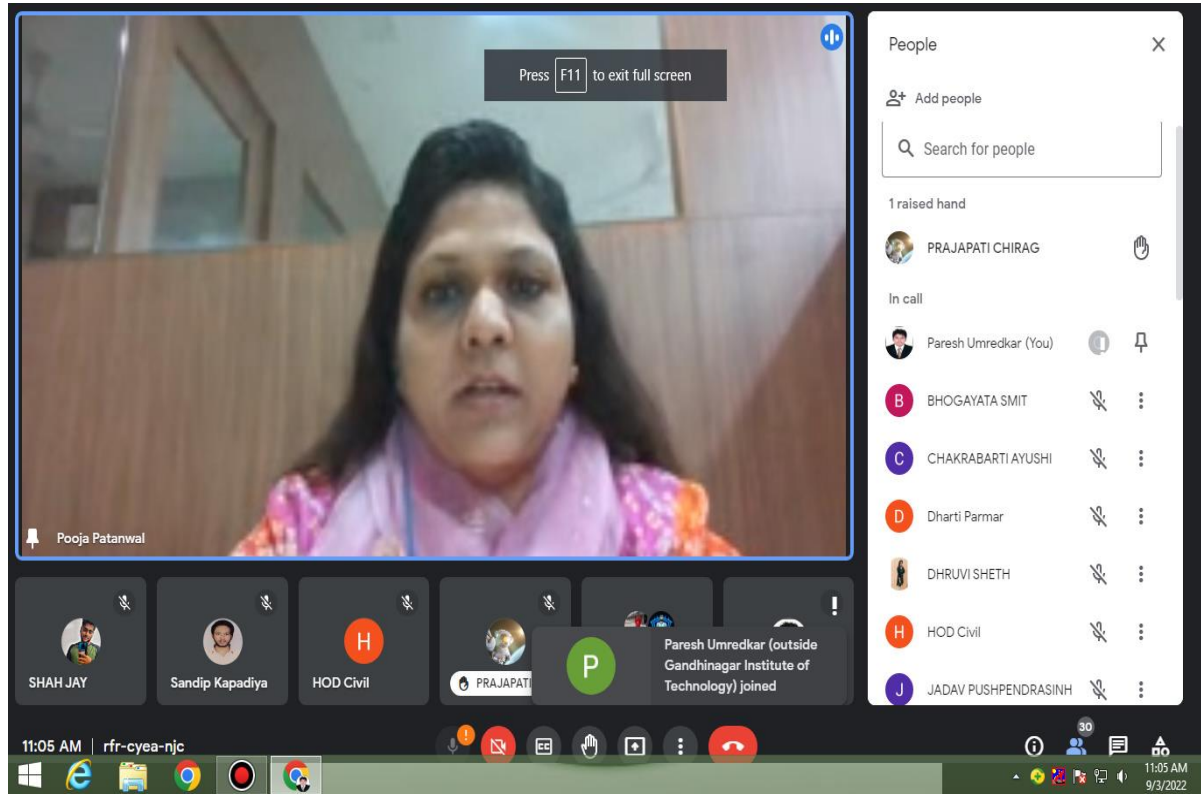
Total 58 students and faculty members participated in the session. The session started at 11:00 am through Online platform. Prof. Pooja Patanwal has initiated the Introduction on remote sensing and GIS. She Introduced the expert speaker, Dr. Mahendrasinh Gadhavi, Assistant Professor, L. D. College of Engineering.

Dr. Mahendrasinh Gadhavi have 15 years’ Experience in this field. He is currently working as an Assistant Professor in LDCE and Teaching various subjects of general geology, engineering geology, mineralogy, advanced surveying, flood management, geospatial techniques, and use of GIS in disaster assessment at graduate and post graduate levels and research in different fields of geology, Remote Sensing & GIS, geo-hydrology, and surveying. He is also responsible for Geology and geo-informatics lab management.

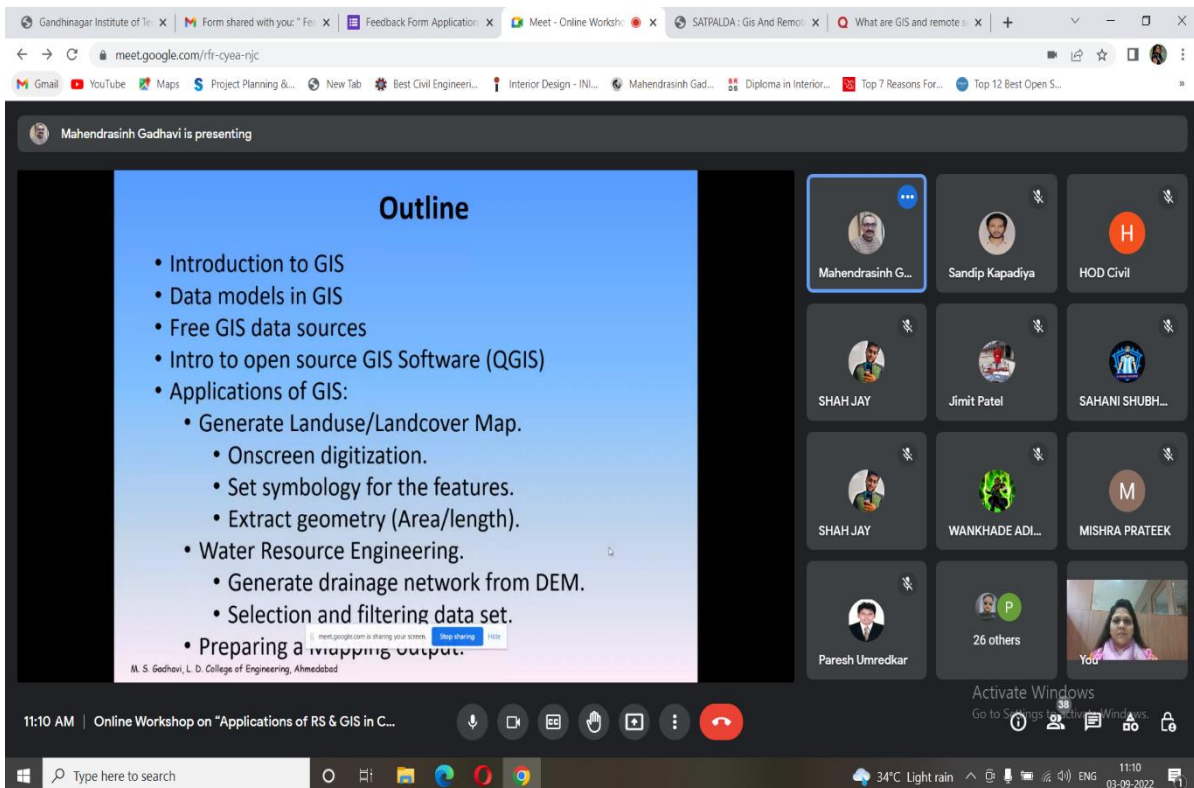
In the Session, he gave Introduction to GIS, Data Models in GIS, Importance of GIS and remote sensing techniques, Free GIS Data sources & Introduction to open sources GIS Software (QGIS). He also explained the applications of GIS by generating landcover map of GIT Campus, onscreen digitization, and working with attributes, importing spreadsheet files & Basic vector styling. He found out the Gandhinagar University area and road length in the QGIS software. At last, he explained how to prepare a mapping output in QGIS Software.

The queries from students & faculties have been answered by the expert during Questions & Answers session. In the end, Prof. Pooja Patanwal concluded with vote of thanks to all students, faculties & assisting staff members who directly or indirectly a part of this event to make it successful. She especially thanks the Trustees of GIT and Director Dr. H N Shah for continuous support and motivation for such type of events. The Workshop was effectively accomplished under the persistent guidance of Dr. H N Shah, Director of the Institute, and consistent efforts of Civil Engineering Department.

## Moments/Photo Gallery:



## Welcome Session by Prof. Pooja Patanwal



## Outline presented by expert, Dr. Mahendrasinh Gadhave

meet.google.com/rfr-cyea-njc

Mahendrasinh Gadhavi is presenting

Indian Geo-Platform of ISRO

National Remote Sensing Centre

Select Category:  Satellite/Sensor  These Products  Program/Projects

Select Theme:

Select Product:

Technical Documents:

- 1 CartoDEM Brochure
- 2 CartoDEM-1 Data Users Handbook
- 3 CartoDEM Brochure
- 4 CartoDEM-1 Quality Document
- 5 CartoDEM VRS1 Technical Document
- 6 CartoDEM VRS1 Technical Document
- 7 CartoDEM VRS1-Handbook-Platform

Select Area

Bounding Box:

Please enter the Bounding Box coordinates below  
Note: Range for selection: 56E 89A 102E 40V

Min Longitude:  Min Latitude:

Max Longitude:  Max Latitude:

11:27 AM | Online Workshop on "Applications of RS & GIS in C..."

34°C Light rain

## Free GIS Data Sources

meet.google.com/rfr-cyea-njc

Mahendrasinh Gadhavi is presenting

QGIS

Project: Edit View Layer Settings Engine Vector Raster Database Blob Mesh HOMGIS Processing Layer

Processing Toolbox

- Recently used
- Geography
- Database
- File tools
- GPS
- Interpolation
- Layer tools
- Mask
- Network analysis
- Plot
- Raster analysis
- Raster creation
- Raster terrain analysis
- Raster tools
- Vector analysis
- Vector creation
- Vector general
- Vector geometry
- Vector overlay
- Vector selection
- Vector style
- Vector tools
- Combinator plugins
- GDAL
- GRASS
- SAGA

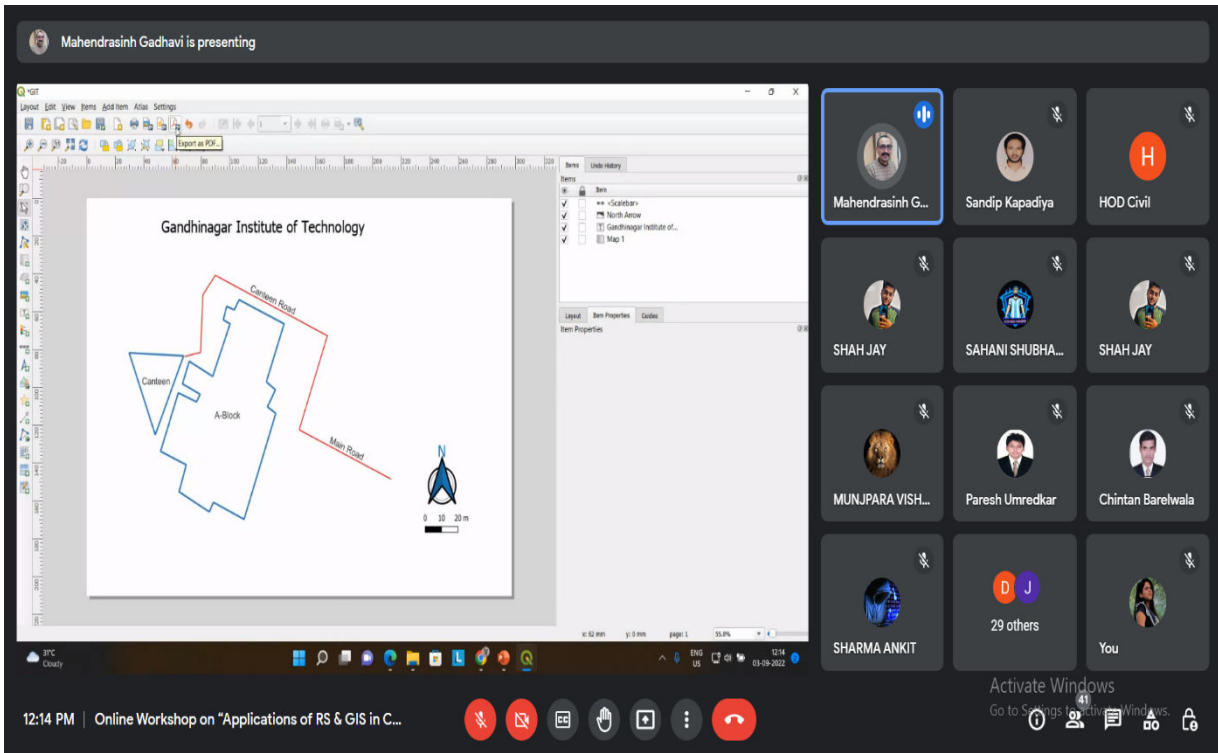
Layers

- ✓ Roads
- ✓ Buildings
- ✓ Ring Virtual Earth
- Google Satellite Hybrid

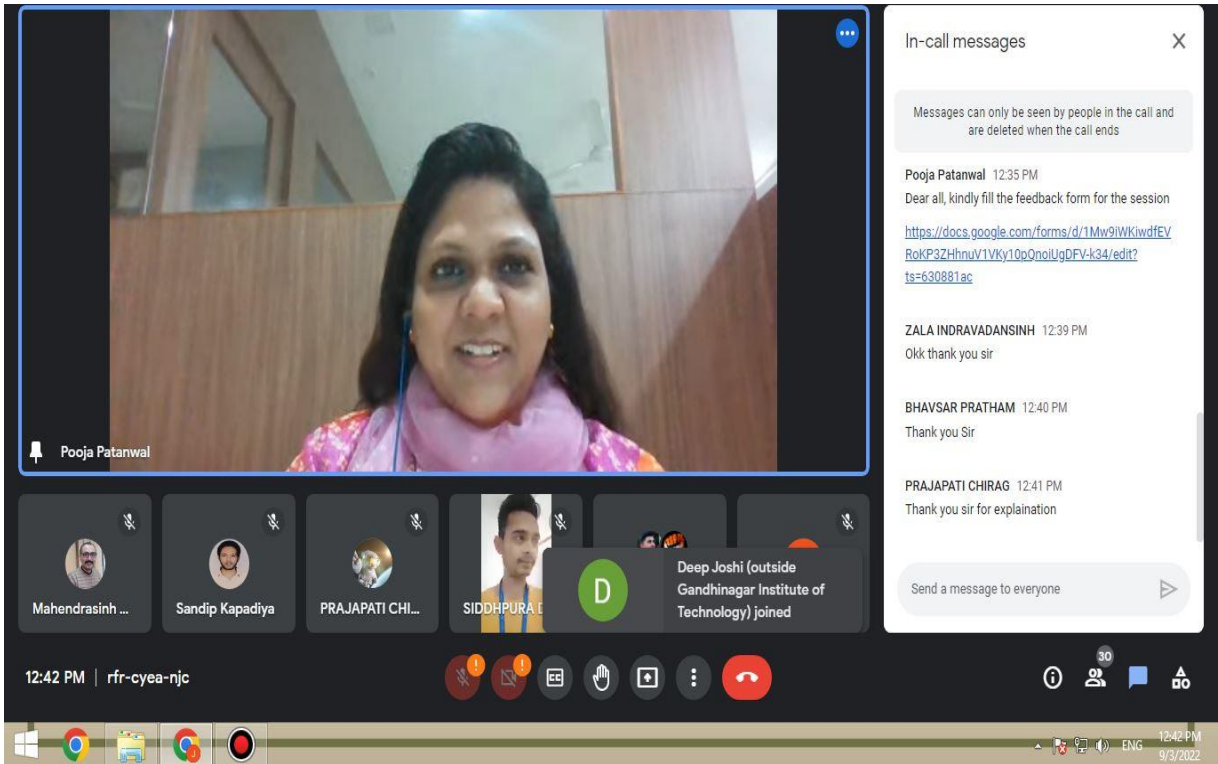
12:06 PM | Online Workshop on "Applications of RS & GIS in ..."

34°C Light rain

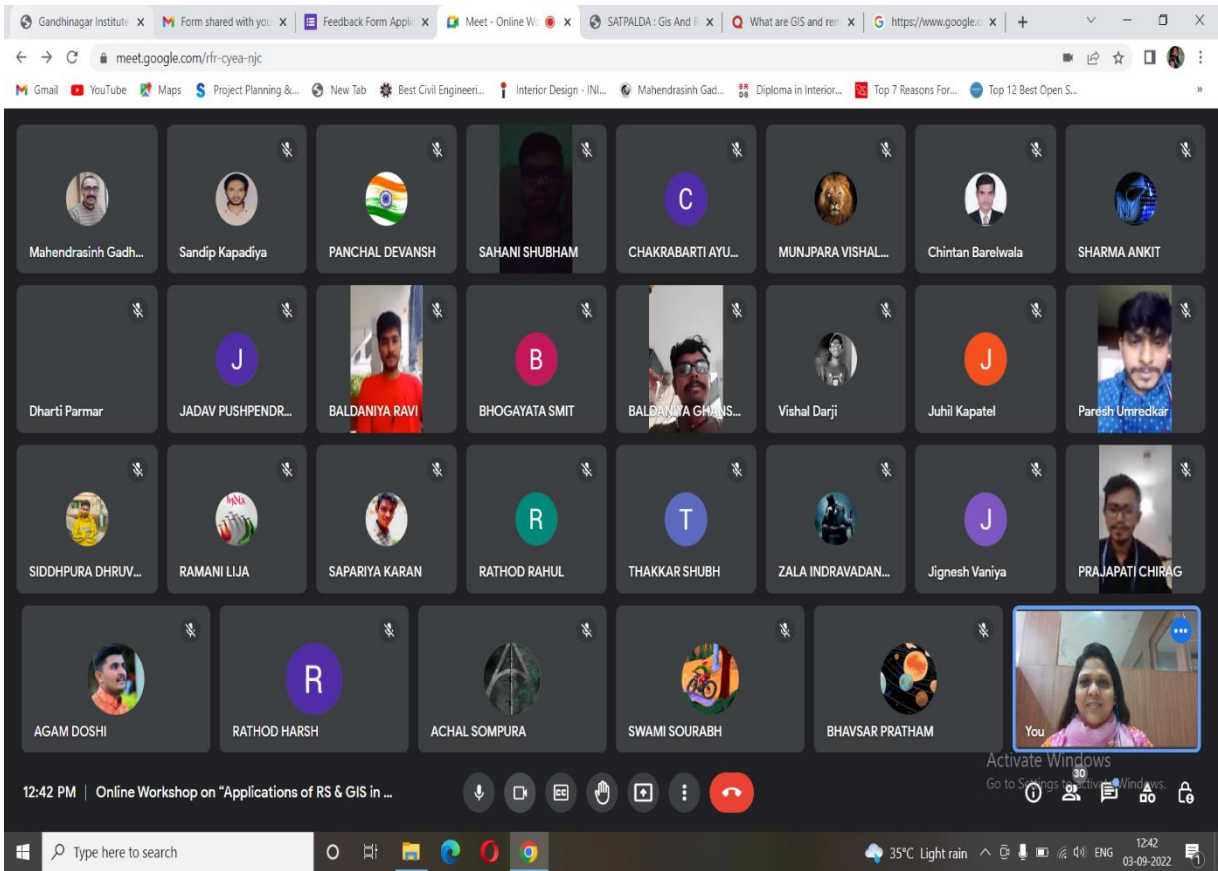
## QGIS Digitization of GIT Campus



## Mapping Output



## Vote of Thanks by Prof. Pooja Patanwal



**Group Photo**