KINGS COLLEGE OF ENGINEERING
An Autonomous Institution

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 – 2024
CIRCULAR

DATE: 24.02.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mrs.A.SUGANYA

Date : 28.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM

D. Nandakumar
DRC MEMBER 24/02/2024

24/02/2024.
HOD/CIVIL

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DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024/EVEN SEMESTER

INTERNAL STAFF SEMINAR – REPORT

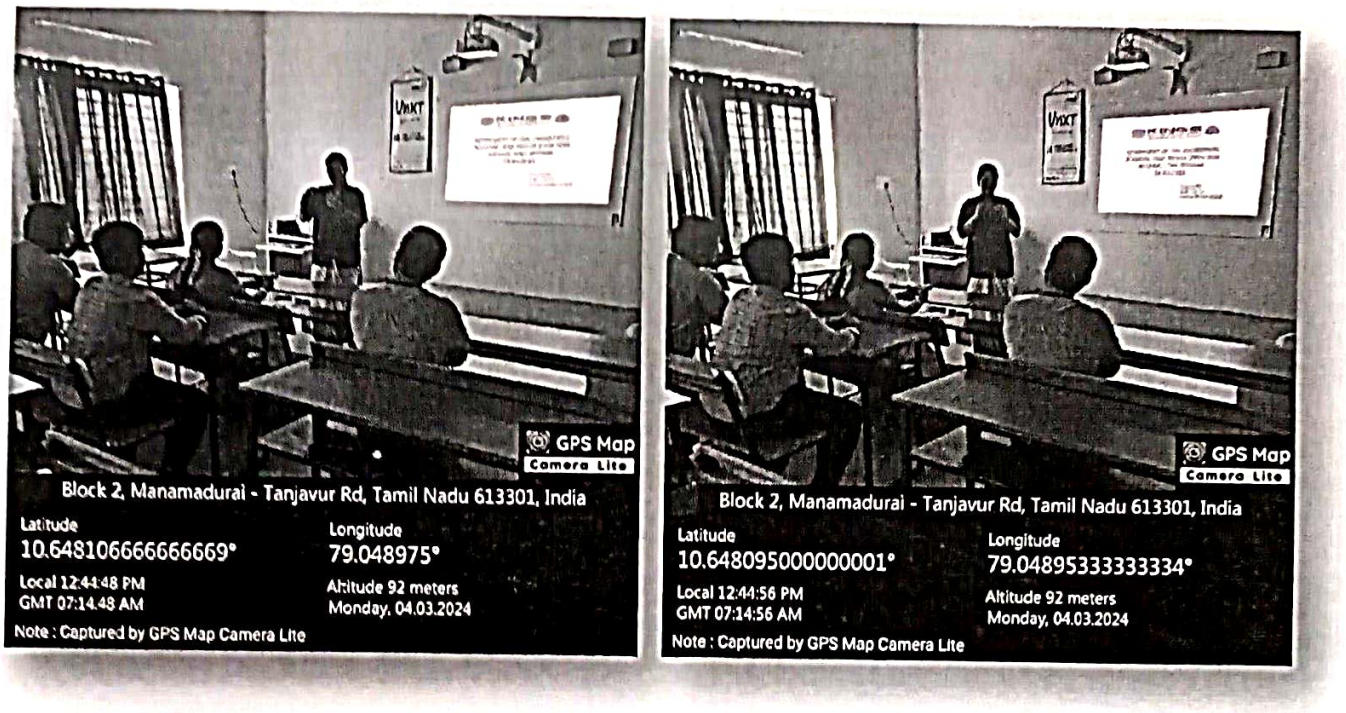
04/03/2023

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals.The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 04th March, 2024 at 12:30 PM. **Mrs.A.Suganya/AP** delivered his seminar talk on **"Guided approach for utilizing concrete robotic 3D printing for the architecture, engineering and construction industry.** The paper was referred from SPRINGER Journal, Asian Journal of Civil Engineering (2023).



Internal Seminar Session by Mrs.A.Suganya /AP CIVIL

Theme:

In this study the emerging field of robotic 3D printing offers practical alternatives to conventional building methods that are currentlyused in the Architecture, Engineering, and Construction (AEC) industry. Robotic 3D printing has many advantages over theconventional construction as it reduces human error, is relatively inexpensive, and opens the door to the creative complex designs while reducing the amount of expertise required to complete the construction process. At present, there is a shortage of resources offering guidance on how to utilize the available technology. In thispaper, which paves the way for accessing the most recent information regarding the robotic 3D printing technology of interest.We also use the resultingclassification methods to present a decision-making workflow to streamline the process of selecting the most appropriateapproach. We also examined and performed a detailed analysis on three case studies of prominent buildings that have beenconstructed using 3D printing technology. The categorical parameters were selected carefully to form a clear, informativedistinction between the buildings. Printing method and motion type were the most important parameters when it comes torobotic 3D printing. A new database was created and demonstrated to elucidate the types of the additive manufacturing thatcan be used. By analyzing the data, we hope to facilitate the development of newstructures as they relate to 3D printing inthe AEC industry.

Scope for future work:

- Here, theauthor has proposed 3D printing in architecture Construction is very well suited to 3D printing because most of the information that is required to create an item will exist as a result of the design process.
- Also, the industry is a lot experienced and keen in using computer aided manufacturing

Outcome:

The taxonomical categorization is dependent on severalparameters that particularly distinguish categories of 3Dprinted buildings based on the potential impact that theymay have on the AEC industry. It is important to note thatin line with the inclusion criteria that requires the building process be consistent with robotic3D printing methodsbeing used in the AEC industry, the taxonomy consideredonly buildings that utilized materials that can withstandhigh stresses. In addition, four parameters were selected to achieve a clear classification for the3D printed construction. The criteria for selectingeach parameter to classify the constructions that used the3D printing technology were determined to demonstrate themethodology of each structure.

09/03/2024.
HOD/CIVIL

09/3/2024
PRINCIPAL

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DEPARTMENT OF CIVIL ENGINEERING 04/03/2024

INTERNAL STAFF SEMINAR – ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Excellent Presentation.	04/03/24.
2	Mr.D.Nandhakumar	Informative session	04/03/2024.
3	Mr.A.Sagaya Albert	Excellent presentation. for advancement in Structural Engineering	04/03/24
4	Mrs.Kanimozhi	Excellent and innovative Presentation	4/3/24
5.	Mr.A.Sriram Gopal	Informative Session	04/3/24