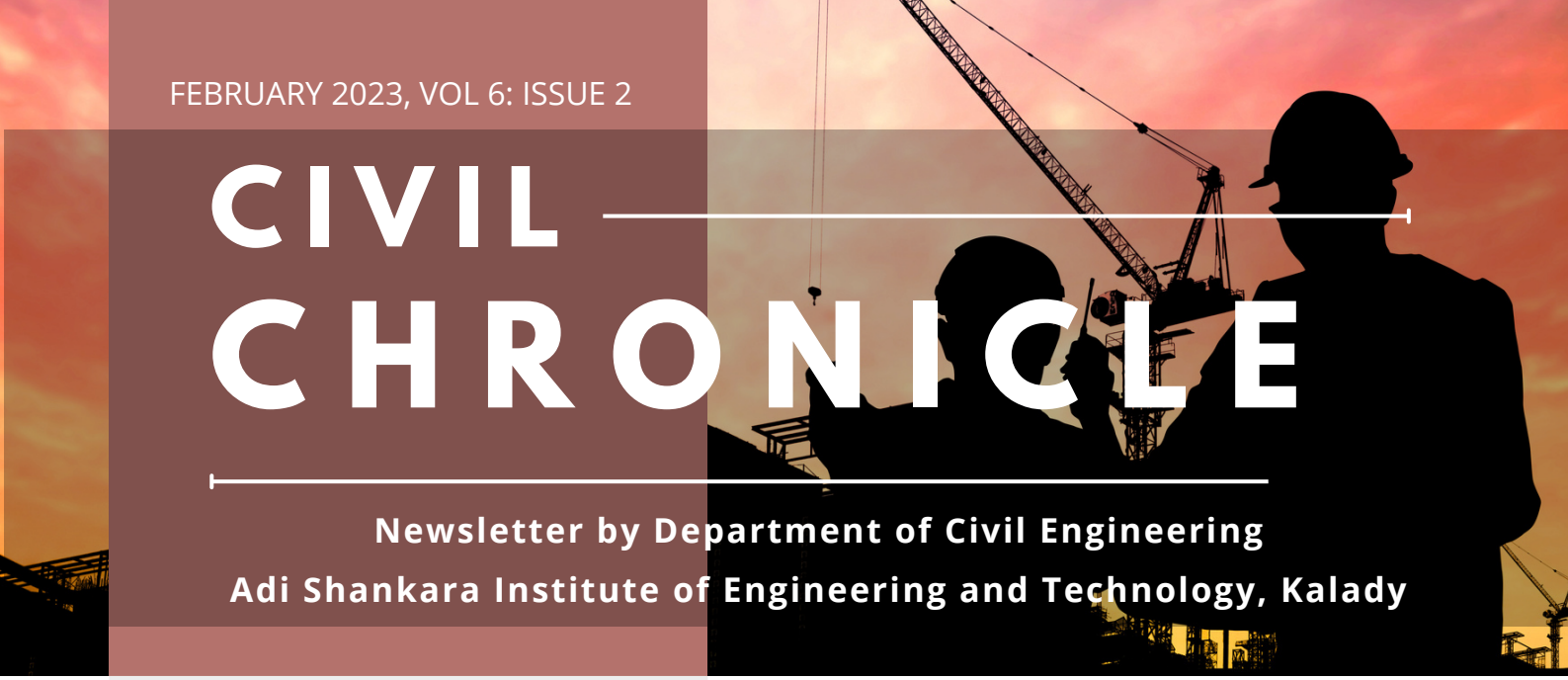
FEBRUARY 2023, VOL 6: ISSUE 2

CIVIL CHRONICLE



Newsletter by Department of Civil Engineering
Adi Shankara Institute of Engineering and Technology, Kalady

IN THIS ISSUE

DEPARTMENT VISION

TO EMERGE AS A CENTRE OF EXCELLENCE IN CIVIL ENGINEERING WITH GLOBAL PERSPECTIVES.

DEPARTMENT MISSION

- TO IMPART QUALITY PROFESSIONAL EDUCATION SO THAT THE STUDENTS EMERGE AS A COMPETENT PROFESSIONAL IN THE AREA OF CIVIL ENGINEERING.
- TO PROMOTE INNOVATIVE THINKING AND LIFELONG LEARNING IN BUDDING ENGINEERS.
- TO PRODUCE CIVIL ENGINEERS WHO HAVE IMBIBED ETHICAL VALUES TO SERVE THE SOCIETY AND NATION.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

- GRADUATES WILL HAVE A POTENTIAL TO PURSUE HIGHER STUDIES AND RESEARCH IN THE FIELD OF CIVIL ENGINEERING AND INTERDISCIPLINARY AREAS.
- GRADUATES WILL BE ABLE TO PRODUCE SUSTAINABLE SOLUTIONS WITH PROFESSIONAL ETHICS FOR REAL TIME CIVIL ENGINEERING PROBLEMS.
- GRADUATES WILL HAVE MANAGERIAL SKILLS AND LEADERSHIP QUALITIES IN EXECUTION OF CIVIL ENGINEERING PROJECTS.
- GRADUATES WILL BE ABLE TO WORK WITH INTEGRITY AND ETHICAL VALUES.

PROGRAM SPECIFIC OUTCOMES (PSOS)

AFTER SUCCESSFUL COMPLETION OF B.TECH IN CIVIL ENGINEERING, THE STUDENTS WILL BE ABLE TO:

- CHECK THE FEASIBILITY AND SUSTAINABILITY OF CIVIL ENGINEERING PROJECTS BY CONDUCTING GEOTECHNICAL INVESTIGATION, CIVIL ENGINEERING SURVEY AND ENVIRONMENTAL IMPACT ASSESSMENT.
- ANALYSE AND DESIGN BUILDINGS, HYDRAULIC STRUCTURES AND WATER DISTRIBUTION, WASTE MANAGEMENT AND TRANSPORTATION SYSTEMS.
- EXECUTE CIVIL ENGINEERING PROJECTS WITH THEIR KNOWLEDGE IN ESTIMATION, PROJECT MANAGEMENT, CONSTRUCTION MATERIALS AND TECHNOLOGIES

TOTAL STATION WORKSHOP

The add on course on "**Advanced Training on Total station survey and GPS**" was held from 13th February 2023 to 16th February 2023 for fourth semester students and from 20th February 2023 to 23rd February 2023 for the sixth semester students of the department. The survey camp conducted in association with Cill Associates Private Limited, Ernakulam focused on ensuring skill enhancement through hands-on training. The survey included preparing basic layout of the institute through GPS and total station. The training was coordinated by the faculty Ms. Shabnum Suhura.

DEPARTMENT ACTIVITIES

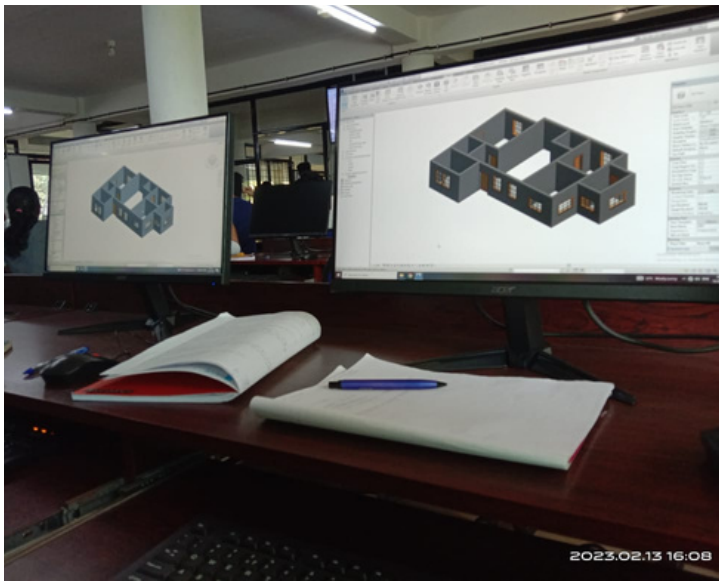
TOTAL STATION WORKSHOP

The survey provided the students with hands on experience in using advanced surveying equipment and techniques as well as in understanding the importance of accurate data collection and analysis.

DEPARTMENT ACTIVITIES

ADD ON COURSE ON "REVIT ARCHITECTURE"

The Add on course on "Advanced Training on Revit Architecture" was conducted for the Eighth semester students of the department for a period of 6 days from 13th February 2023. The students were familiarized with modelling in Revit Architecture. Revit Architecture is used to model structures and systems in 3D with precision and ease. The training conducted in association with industrial experts INTERCAD Systems helps multi-disciplinary teams to coordinate on a single project and documentation can be implemented effectively by instant revisions. The program was coordinated by department faculty Ms. Shabnum Suhura.



DEPARTMENT ACTIVITIES

CPRIZE SCHOLARSHIP

An awareness session was held for the Eighth semester students of the department on the "CPrize scholarship" offered by Armstech Engineers Private Limited and National Council for Technology and Training (NACTET) on 22nd February 2023. The merit scholarship examination CPrize is to be conducted by National Council for Technology and Training in engineering colleges and polytechnics across Kerala. The students were given information regarding the scholarship and encouraged to participate in the same. The students of the department had received free diploma certified software courses in the last two years through this scholarship.

DEPARTMENT ACTIVITIES

TRAINING PROGRAM ON KNIMBUS

A training program focussed on giving a better insight on the usage of Knimbus Platform was conducted for the faculties on 20th February 2023. The session was handled by Mr. Arjun Nair of Knimbus. The session was very informative and gave an idea about the access to the Platform, use of free space for institutional repository, access to Science Direct and other open eBooks, journals.

INSTITUTE EVENTS

BEST NSS VOLUNTEER

Ms. Anjanamol Jose of S8CE selected as best NSS volunteer university level for the academic year 2022-23.

STUDENT ACHIEVEMENTS

STUDENT ACHIEVEMENTS

CERD STUDENT PROJECT SCHEME

Congratulations to the following groups for getting their projects selected for presentation for CERD SPS Funding.

1. **Cost effective building model for rehabilitation of slum area**

Students:

NayanaC S

Pooja V Shaji

AmithLal

Dhananjayan C V

Principal investigator: Ms. Clydin P A

Co-investigator: Ms. Harshananda T N

2. **Estimation of congestion cost evaluation and solution**

Students:

Martin Baby

Ramkumar S

Vishnu Raju

Krishna das P M

Principal investigator: Ms. Dona Joy

Co-investigator: Dr. A N Swaminathan

STUDENT ACHIEVEMENTS

CERD STUDENT PROJECT SCHEME

Congratulations to the following groups for getting their projects selected for presentation for CERD SPS Funding.

3. **Development of user-friendly app for Kochi Metro commuters**

Students:

Sandra Shyin

AmruthaS Chandran

Namitha Dilip

Principal investigator: Ms. Jeeva P Winto

Co-investigator: Dr. K Dhanasekar

4. **Study of Artificial Groundwater Recharge using wastewater**

Students:

Arathi Prakash

Ashika P George

Merlin Babu

Minnu Sajan

Principal investigator: Dr. K. Dhanasekar

Co-investigator: Ms. Harshananda T. N

STUDENT ACHIEVEMENTS

CERD STUDENT PROJECT SCHEME

Congratulations to the following groups for getting their projects selected for presentation for CERD SPS Funding.

5. **Development of landslide prediction system**

Students:

Niya Thomas

Niranjan Krishnan

K A Afsal

Fathima Noura

Principal investigator: Ms. Harshananda T N

Co-investigator: Ms. Clydin P A

STUDENT ACHIEVEMENTS

CONGRATULATIONS TO THE TOPPERS OF SIXTH SEMESTER KTU EXAMINATION, 2022

STUDENT ACHIEVEMENTS

CONGRATULATIONS TO THE TOPPERS OF FOURTH SEMESTER KTU EXAMINATION, 2022

NEHA
9.73

RUMAISA
9.27

ANAKHA
8.41

ANNMOLE
8.23

CHAITHANYA
8.23

DENNA
8.23

RAOOF
8.18

ASHITHA
8.05

STUDENT ACHIEVEMENTS

CONGRATULATIONS TO THE TOPPERS OF SECOND SEMESTER KTU EXAMINATION, 2022

STUDENT ACHIEVEMENTS

STAFF OUTREACH

Dr. Dhanasekar K, Professor and Dr. A. N. Swaminathen, Associate Professor of the department published a book entitled "Advanced Concrete Technology" by AGPK Books.

DR. K DHANASEKAR

DR. A N SWAMINATHEN

MS. JYOTHILEKSHMI R

Dr. A. N. Swaminathen, Associate Professor and Ms. Jyothi Lekshmi R, Assistant Professor of the department published a patent on "Analysis of Mechanical Properties of Concrete Produced with Red Ceramic Construction and Demolition Waste".

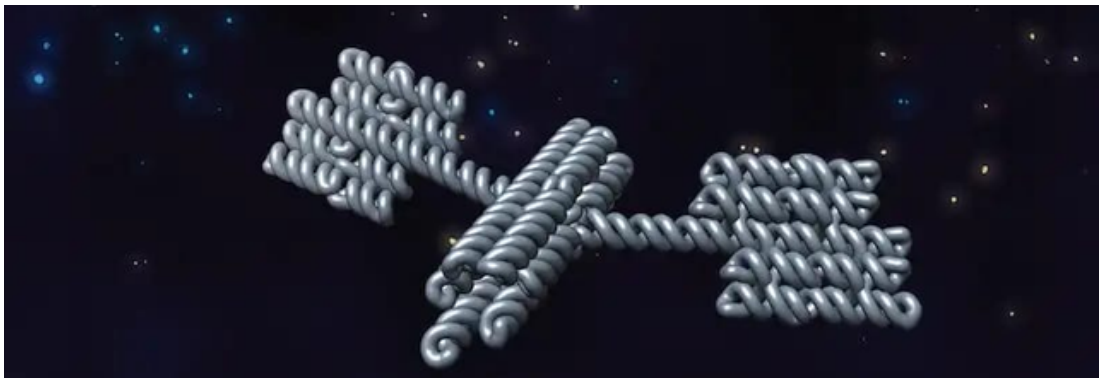
STAFF OUTREACH

NANOSATELLITE SHOWS THE WAY TO RNA MEDICINE OF THE FUTURE

Recent developments in the field of RNA medicine have shown great potential for treating a wide range of diseases, from cancer to genetic disorders. However, the delivery of RNA-based therapeutics to target cells remains a significant challenge. A team of researchers at the University of Helsinki has developed a nanosatellite-based approach to deliver RNA-based therapies to cells, opening up new possibilities for the future of RNA medicine.

RNA-based therapeutics work by targeting specific genes or gene products that are involved in disease processes. However, these molecules are large and fragile and can be quickly degraded by enzymes in the bloodstream, making delivery to target cells a significant hurdle. Existing delivery methods, such as lipid nanoparticles, are limited in their effectiveness and can have toxic side effects.

The research team at the University of Helsinki has developed a novel approach to RNA delivery using nanosatellites, tiny synthetic structures that can encapsulate RNA molecules and deliver them to target cells. The nanosatellites consist of a DNA backbone, which can be programmed to carry specific RNA sequences, and a protein shell, which protects the RNA from degradation.



FOOD FOR THOUGHT

NANOSATELLITE SHOWS THE WAY TO RNA MEDICINE OF THE FUTURE

The researchers tested the nanosatellite approach in mice, delivering RNA molecules that targeted cancer cells. They found that the nanosatellites were effective in delivering the RNA molecules to the target cells, resulting in a significant reduction in tumor growth.

One of the key advantages of the nanosatellite approach is its versatility. The DNA backbone can be easily modified to carry different RNA sequences, allowing for the development of targeted therapies for a wide range of diseases. The nanosatellites can also be designed to carry multiple RNA molecules, allowing for the simultaneous targeting of multiple disease-causing genes.

In addition, the nanosatellites have the potential to be manufactured at a large scale, making them more accessible and affordable than existing RNA delivery methods. The researchers envision a future where nanosatellites are used to deliver RNA-based therapies directly to target cells, revolutionizing the field of RNA medicine.

In conclusion, the development of a nanosatellite-based approach to RNA delivery represents a significant step forward in the field of RNA medicine. The versatility . and scalability of the approach, coupled with its effectiveness in delivering RNA molecules to target cells, make it a promising avenue for the development of new therapies for a wide range of diseases. The future of RNA medicine looks bright, and the nanosatellite approach may be the key to unlocking its full potential

Contributed by
Denna Babu S6 CE

FOOD FOR THOUGHT

CHIEF EDITOR

Ms. SHABNUM SUHURA

STAFF EDITORS

Ms. REEMA PIUS

Ms. CLYDIN P A

STUDENT EDITORS

Ashila Anil
S8 CE

Anjanamol Jose
S8 CE

Denna Babu
S6 CE

Muhammed Faiz KI
S4 CE

Swathylakshmi Lal
S4 CE

Abhishek Anilkumar
S2 CE

HOD'S MESSAGE

IN THE HIGHLY COMPETITIVE WORLD OUTSIDE, I BELIEVE IN THE VALUE OF HARD WORK, COMMITMENT AND HUMANITY. THESE VALUE ADDITIONS ARE VERY MUCH ESSENTIAL FOR THE YOUNG TECHNOCRATS, ENGINEERS AND SCIENTISTS. AS A DEPARTMENT HEAD I ENVISION MY COLLEAGUES AND STUDENTS WALKING HAND IN HAND AND BUILDING THEIR IDEAS FOR A DEVELOPED NATION.

MR. ANEESH P C