

CIVIL ENGINEERING NEWSLETTER

AADHARA

Edition Jan / Feb 2023



STUDENTS SECTION

FACULTY CONTRIBUTION



OTHER SIGNIFICANT EVENTS

VISION AND MISSION OF THE DEPARTMENT

VISION

To be a centre of excellence in Civil Engineering Education through full-fledged Learning experience along with research.

MISSION

To accomplish our vision, we are committed to excel in Civil Engineering Education by providing,

- Faculty experts from all specialization of Civil Engineering to facilitate teaching learning process.
- Excellent infrastructure facilities to apply Civil Engineering knowledge and perform societal based research.
- Exposure to latest technologies in Civil Engineering through industry-institute interaction and professional bodies.
- Environs to develop their innovative thoughts, ethics, communication, inter- and intra- personal skills.
- Enthusiasm towards self-learning, social responsibility and entrepreneurship

PROGRAMME EDUCATIONAL OBJECTIVES

- To apply knowledge of mathematics, science and engineering to solve existing problems in the area of Structural, Geotechnical, Water Resources, Environmental, Transportation, Urban Planning, Construction Materials and Management in Civil Engineering.
- To analyze, design, construct Civil Engineering traditional and modern structures.
- To perform investigation on any complicated Civil Engineering problems by conducting research using modern equipments and software tools.
- To communicate and develop strong inter- and intra-personal skills to prepare them for placement and higher studies.
- To be self-motivated towards lifelong learning and entrepreneurship.

STUDENTS' ACHIEVEMENT

BAI



THE NEWS

Civil Engineering students have secured 1st and 2nd prizes in the technical event organized by the Builders Association of India. The winners will be felicitated by Mr. V. Senthil Balaji, Honorable Minister of Tamilnadu on 22.01.2023 at Le-Meridien, Coimbatore.

Theme:

Construction industry -Turning waste to wealth

Team Members

1st prize -

Febish .M&Kalaidharan .R

II year

Mentor -

Ms. R. Hemavathi,
AP/Civil Engineering

2nd prize

Aravind Babu.G.S-

III year

Mentor-

Dr. S. Ramakrishnan
Asso.Prof / Civil Engineering

STUDENTS' ACHIEVEMENT

Internship



THE NEWS

Pre-final year student K. Saran has been undergone an internship training titled "Construction of water treatment system for achieving higher COC" at Neyveli Lignite Corporation Limited from 16th December to 29th December 2022.

STUDENTS' ACHIEVEMENT

Moments 2023



THE NEWS

Civil Engineering third-year students Kapil.E and Praneshwr. V. RA have secured 2nd place and won a cash prize of Rs. 4000 in the Build IT event and Quiz competition - Tech Vision in the “Moments 2023”, National Level Technical Symposium held at Department of Civil Engineering, NIT Trichy on 04th and 05th Feb 2023. Mentor Dr. R. Chandra Devi, ASP/CE

FACULTY CONTRIBUTION

R & D Publications



THE NEWS

Mr. S. C. Boobalan, Assistant Professor, Department of Civil Engineering, participated and presented a paper on the topic "Utilization of waste plastic sheets as soil stabilization materials" in the Second International Conference on "Sustainable Materials and Practices for Built Environment (SMPBE-2023)" held at Manipal University on 19th and 20th January 2022.

FACULTY CONTRIBUTION

R & D Publications

SIC-SISTEEM-2022 IOP Publishing
IOP Conf. Series: Earth and Environmental Science 1125 (2022) 012012 doi:10.1088/1755-1315/1125/1/012012

Economically Improving the quality of construction through Six Sigma and Cost Benefit Analysis

Aswin Bharath A^[1], Saravanan M^[2], Ramakrishnan S^[3], Adhithiya Varma B^[4], Mounish S^[5]
[1] Assistant Prof., Department of Civil Engineering, Kumaraguru College of Technology, Coimbatore, India. Email – bharathaswin1234@gmail.com
[2] Associate Prof., Marri Laxman Reddy Institute of Technology and Management, Hyderabad, India. Email – saravananm@mlritm.ac.in
[3] Associate Prof., Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India. Email - ramakrishnans@skcet.ac.in
[4] Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India. Email – adhithyavarma2210@gmail.com
[5] Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India. Email – mounish402@gmail.com

Abstract

Six Sigma is a quality management tool which is highly effective in manufacturing industries, but implementing the six sigma in construction sector is a challenging task since each and every construction project is involved with huge quantity of money. As we all know that the quality and the cost of the construction project are directly proportional to each other, so in the attempt of improving the quality of the project, we also end up in exceeding the budgeted cost of the project. To avoid this situation in the construction projects, the quality management tool six sigma is combined with a cost management tool Cost Benefit Analysis. This study shows the method of improving the quality of the construction process without affecting the cost of the construction. Combination of these two management tools provided an organization with a successful quality project with budgeted cost.

THE NEWS

Dr. S. Ramakrishnan, Associate Professor, Department of Civil Engineering, published a paper, “Economically Improving the quality of construction through Six Sigma and Cost Benefit Analysis” in the IOP Conference series: Earth and Environmental Science.

FACULTY CONTRIBUTION

R & D Publications



THE NEWS

Dr. P. Saravanakumar, Associate Professor, Department of Civil Engineering, presented their paper on "Carbon Black Based Self-Sensing Cement Composite for Structural Health Monitoring – A Review on Strength and Conductive Characteristics" in the second International Conference on Construction Materials and Structures (ICCMS-2022) held on 13th to 19th December 2022.

FACULTY CONTRIBUTION

R & D Publications



THE NEWS

Mr. S. Sadheesh, Assistant Professor, Department of Civil Engineering, published 2 papers, “Effects of air pollution due to vehicular emission in Coimbatore and reduction strategies” and “Monitoring and analyzing the effect of heavy metals in air based on ecological and health risks in Coimbatore” in IOP Conference series: Earth and Environmental Science.

FACULTY CONTRIBUTION

R & D Publications

SIC-SISTEEM-2022 IOP Publishing
IOP Conf. Series: Earth and Environmental Science 1125 (2022) 012018 doi:10.1088/1755-1315/1125/1/012018

INVESTIGATION ON DURABILITY OF STUDY FIBER REINFORCED CONCRETE

Ramakrishnan S¹, Dinesh A², Gnanaprabhakaran M¹, Aswin D¹, Gowthambalaji K¹

¹. Department of Civil Engineering, Sri Krishna College of Engineering and Technology
2. Department of Civil Engineering, Sri Ramakrishna Engineering College

Abstract. The significance of concrete durability cannot be undervalued. Durability of concrete is simply defined as its capability to resist enduring action and chemical attack, while maintaining the engineering properties for desired life time. The durability of concrete is dynamic with looks to a structure's life span. In this investigation, study on durability of fiber reinforced concrete made with steel and glass fiber has compared for M30 grade of the concrete. The fractions of fiber are 0.5%, 1%, 1.5% and 2% by the volume of concrete. Durability of concrete is relatively measured by conducting laboratory tests such as acid attack test and rapid chloride permeability test. In acid attack test concrete specimens were immersed in acid for 28 days and 56 days. The compressive strength, loss of mass are compared for acid immersed specimen with water curing specimens. Rapid chloride permeability test was conducted at 28 days and 56 days for eight mix proportion. It can be concluded that which type of fiber reinforced concrete is suitable for durability. Also concluded that the optimal usage of fiber in concrete in context of durability.

THE NEWS

Dr. S. Ramakrishnan, Associate Professor, Department of Civil Engineering, published a paper, "Investigation on Durability of Study Fibre Reinforced Concrete" in the OP Conference series: Earth and Environmental Science.

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

Dr. R. Chandra Devi, Associate Professor, Civil Engineering Department, participated in a National Seminar on "Emerging Trends and Practices of Soil Improvement Techniques in Geotechnics" organised by the Department of Civil Engineering, Vels Institute of Science, Technology & Advanced Studies (VISTAS) held on 5th December 2022.

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

Dr. P. Saravanakumar, Associate Professor, Civil Engineering Department, participated in an IP Awareness/Training program under National Intellectual Property Awareness Mission held on 5th January 2023.

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

Mr. S. Sadheesh, Assistant Professor, Civil Engineering department, has successfully completed an online MOOC certification on “Renewable Energy and Green Building Entrepreneurship” authorized by Duke University through the Coursera platform.

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

Dr. P. Saravanakumar, Associate Professor, Department of Civil Engineering, has been awarded the Best Researcher Award for his contribution to composite materials.

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

The following faculty members from Civil Engineering Department participated in an IP Awareness/Training program under National Intellectual Property Awareness Mission held on 12th January 2023.

S. No	Name of the faculty	Designation
1.	Dr. R. Chandra Devi	Associate Professor
2.	Dr. M. R. Ezhilkumar	Associate Professor
3.	Mr. S. C. Boobalan	Assistant Professor
4.	Mr. R. Hemavathi	Assistant Professor

FACULTY CONTRIBUTION

Faculty Progression



THE NEWS

Dr. P. Saravanakumar, Associate Professor, Civil Engineering Department, participated in a 2-day FDP on "Era of Change – Artificial Intelligence and IoT using Google Cloud Core Infrastructure" from 22nd to 23rd December 2022 at SKCET organised by the Department of AI&DS, SKCET.

FACULTY CONTRIBUTION

Faculty Participation



THE NEWS

Mr. A. Jesudass, Assistant Professor, Civil Engineering Department, along with Pre-final year Civil students G. Ugesh and M. Sanjay, have participated in the symposium on “Structural Engineering: the way forward” conducted by IIT Madras from 9th – 10th February 2023.

FACULTY CONTRIBUTION

Faculty Participation



THE NEWS

Dr. R. Chandra Devi, Associate Professor, Civil Engineering Department has participated in the AICTE recognised FDP on “Leadership and Management Development” conducted by Entrepreneurship Development and Industrial Coordination Department from 9th to 13th January 2023.

FACULTY CONTRIBUTION

Faculty Participation



THE NEWS

Dr. M. R. Ezhilkumar, Assistant Professor, Department of Civil Engineering, participated in an International Workshop on "Design of foundation systems for offshore wind turbines – Indian Perspective" on 4th February 2023, organised by the Department of Civil and Infrastructure Engineering, IIT Jodhpur

FACULTY CONTRIBUTION

Faculty Participation



THE NEWS

Dr. P. Saravanakumar, Associate Professor, Department of Civil Engineering, participated and completed a six-day FDP on "Recent Trends in Structural Engineering" from 23rd January to 31st January 2023, organised by the Department of Civil Engineering, SSIPMT, Raipur, in collaboration with faculties/experts from CSIR -SERC, Chennai & Government Institutes.

OTHER SIGNIFICANT EVENTS

Guest lecture



THE NEWS

Civil Engineering Department organised a Guest Lecture on **“Awareness Programme on Angiragging Politics and Laws”** on 24th January 2023. Ms.R.Thenmozhi, Senior Advocate, Coimbatore was the resource person for the event.

Session Takeaways:

Created awareness among the students to have cordial relationship between senior and junior students

Discussed about the legal issues,ethical values in academic life

Importance of filling antiragging affidavit form were discussed

Punishment for abetment of ragging

Discussed about the Administrative action in the event of ragging .

The event was organized by Ms. R. Hemavathi, Assistant Professor, Civil Engineering Department.

OTHER SIGNIFICANT EVENTS

Guest lecture



THE NEWS

ICI Storganisedapter, Department of Civil Engineering, organized an Industry Expert talk on **"Modern Technologies, Methods and Techniques in Civil Engineering Practice"** for the benefit of students of Department of Civil Engineering on 08.02.2023. The Resource person for the program is Er. Thilak Ranjith T, Proprietor & Consultant, TR Associates, Coimbatore, Managing Director, Escalade Design Pvt. Ltd.

Session takeaways:

1. Adoption of New technology in Construction Industry
2. Evaluation, NDT testing and strengthening of structures
3. Rehabilitation of structures
4. Design detailing of RCC and Steel structures
5. Geotechnical investigations
6. Ideas and opportunities to become a successful Entrepreneur.

Coordinator of the Program:

Dr. P. Saravanakumar,
Associate Professor, Dept. of Civil Engg

OTHER SIGNIFICANT EVENTS

Guest lecture



THE NEWS

Indian Geotechnical Society Students Chapter, Department of Civil Engineering, organised a Guest Lecture on "**Scope of Geotechnical Engineering in the Construction Industry**" for the students of Civil Engineering on 14.02.2023. The Resource person was Er. M.Yuvaraj, Geotechnical Engineer Yuva Geotechnical Engineering Infra, Salem.

Session takeaways:

- Geotechnical Challenges in the Field
- Foundation of Tanjore Temple and Leaning Tower of Pisa
- Underground Structures and Subway Design, Construction
- Role of Geotechnical Engineer in the Construction Industry
- Latest Research Area in Geotechnical Engineering.

Coordinator of the Program:

Dr. R. Chandra Devi,
Associate Professor, Dept. of Civil Engg

OTHER SIGNIFICANT EVENTS

Youth day



THE NEWS

The Department of Civil Engineering, in association with the Institution Innovation Council of SKCET, celebrated National Youth Day. Various events like Motivational Talk on Youth Empowerment, Art, Writing, Debate, and Photography were conducted. The best performers were facilitated with prizes.

1. Motivational Talk on Youth Empowerment

Dr. G. Balathandayutham gave a motivational talk on Youth empowerment to the students. The skillset and ethics they should inculcate to become an aspiring citizen of this country. The Industry Expectations of graduates were also discussed broadly, and challenges they are about to encounter and their counter actions were highlights of the session.

1. Write Minded

Students were asked to write poetry and a picture comprehension on the theme of Youth Empowerment, and the best works were appreciated with Prizes.

I Prize – Abinaya – III year Civil Engg.

II Prize – Somnath, I Year Mechanical Engg.

III Prize – Aishwarya Lakshmi – II year IT

1. The Unseen (Photography)

The students were asked to photographs on the theme Reality of Life in Slum, and the best submissions were appreciated with prizes.

I Prize – Sriram – III-year Mechanical Engg.

II Prize – Renuhasan – IV year – Civil Engg.

III Prize – Kamalesh – III year – MCT & Vishakrajan – III ECE

1. YouRart (Art Competition)

Students were given the Theme of “Is Reservation necessary in the current context “and debate was organized. Best three orators were facilitated with prizes

I st Prize – Sowmiya – I Year Civil Engg

2 nd Prize – Hiba Hadiya – II Year CSBS

3 rd Prize – Karthikeyan - III Year IT

OTHER SIGNIFICANT EVENTS

OCLE



THE NEWS

The 2nd year Civil Engineering students were taken to **Srivari Infrastructure Private Limited - Construction site** on 21st January 2023 as a part of Outside Classroom Learning Experience (OCLE) for the subject "Geotechnical Engineering". Massive basement construction for the area of 4.76 acres is observed.

Key learnings are

1. Excavated Basement
2. Subsurface Profile
3. Raft Foundation
4. Reinforcement for individual, combined and continuous footing
5. Groundwater table is observed at 15 m depth and dewatering process
6. Formwork for beam, slab, column, staircase and retaining wall

OTHER SIGNIFICANT EVENTS

OCLE



THE NEWS

The 3rd year Civil Engineering students were taken to **Construction site of SS Marbles Warehouse , Kovai Pazhamudhir Nilayam near Airport , Coimbatore** on Jan 21 st 2023 as a part of Outside Classroom Learning Experience for the subject , “Design of Steel Structures”

Key Learnings of the visit were

1. Structural Skelton system of Steel Structure
2. Hot Rolled Steel and Cold Formed steel - Difference & Application
3. Role of Web stiffeners in Parallel Flange sections of Compression Members and Beams
4. Importance of Connection Design and detailing
5. Secondary Compression member to support beam
6. Importance of Bracings in Roof and side bays.
7. Column bases and anchor bolts

OTHER SIGNIFICANT EVENTS

OCLE



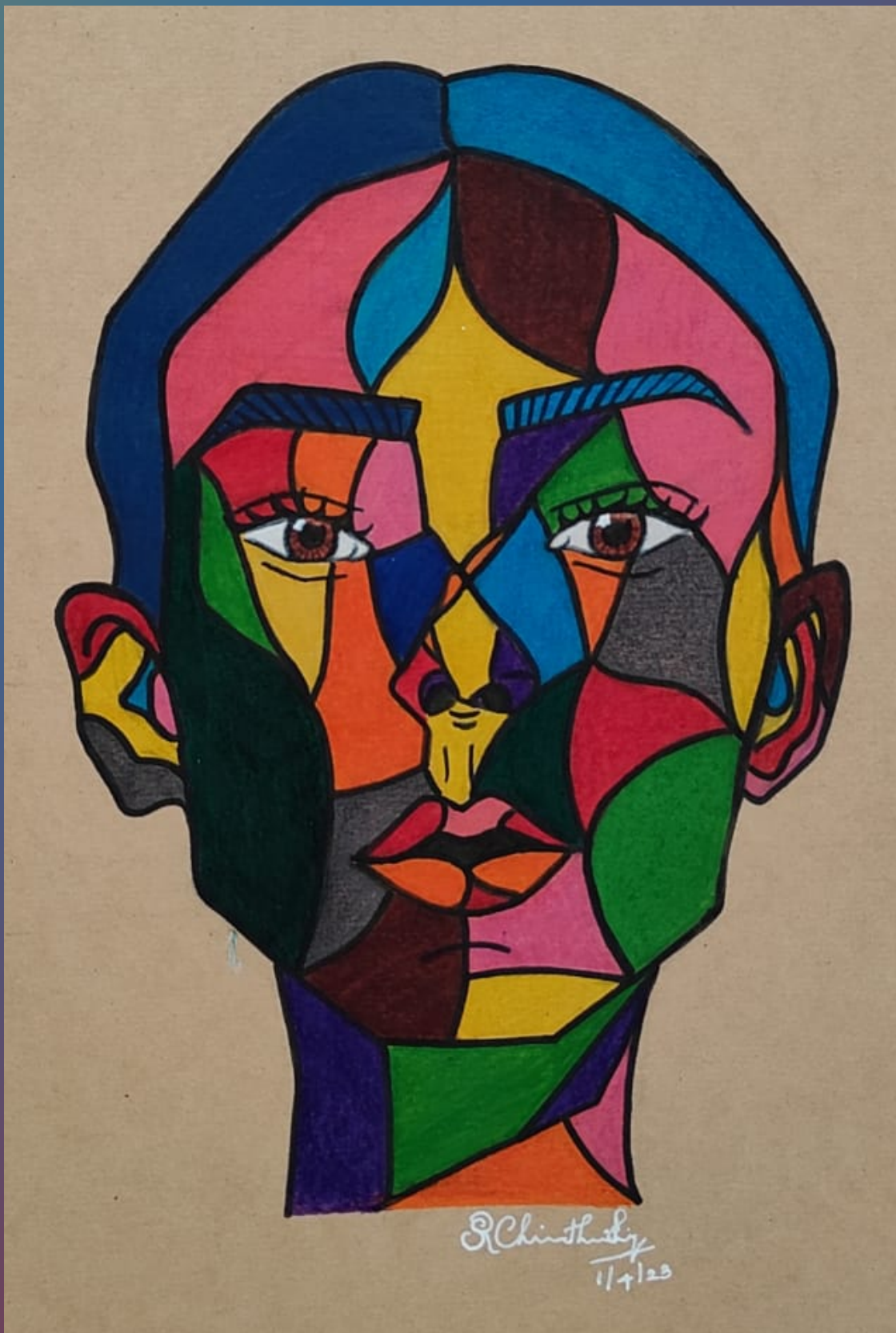
THE NEWS

The 1st year Civil Engineering students were taken to **Stadium Construction and Guest House Construction site in the SKCET campus** on 28/01/2023 as a part of the Outside Classroom Learning Experience (OCLE) for the subject "Introduction to Civil Engineering".

Key learnings are

- Students got to know the design requirements details of the stadium (Gallery Arrangement, Drainage requirements, Steel roof truss)
- Earthwork, Formwork for concreting, scaffolding, bar bending works
- Also they learnt construction safety practices adopted at site.
- They learnt to interpret the drawings in site and how it got translated into buildings.

CREATIVE CORNER



by

Chinthana Shri SR

|| year / Civil department



Civil Engineering Dept - NBA accredited for 3 years

From the Editorial Team of

FACULTY EDITORS

Dr. D. Maruthachalam,
HoD / Civil Engineering

Mr. R. Vignesh,
Assistant Professor,
Civil Engineering

STUDENT EDITORS

Ms. S. R. ChinthanaShri,
II year/ Civil Engineering

Mr. H. Sujan,
III year/ Civil Engineering

Mr. S. Lokesh Kumar,
IV year/ Civil Engineering