

# HEPHAESTUS

CIVIL ENGINEERING ASSOCIATION



2020  
EDITION



CEA  
NITC

ASSOCIATION

ACTIVITIES

ACHIEVEMENTS

MEMBERS

CEA MAGAZINE 2019-2020



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# CIVIL ENGINEERING ASSOCIATION



The Department of Civil Engineering is one of the oldest Departments of our institute. It was established at the inception stage of the Calicut Regional Engineering College (CREC), the forerunner to the present National Institute of Technology, Calicut (NITC), in 1961. The Civil Engineering Association (CEA) of NITC was formed with the primary aim of exposing potential civil engineers to the various challenges of the profession.

With students and faculty as its members, the organization is one of India's most active Civil Engineering Associations. CEA organizes various activities like interactive sessions with distinguished practitioners from the civil engineering field, competitions and socially relevant projects for the students throughout the year. The CEA prides itself on the lively interaction between the students and faculty. We aim to carry forward its legacy by organizing new and more relevant events which would be helpful for both the students and faculty.



# CEA ACTIVITIES

## Workshop on AutoCAD

AutoCAD is considered to be an essential technical skill in the domain of Civil Engineering. The scope of this application ranges from the design of a simple residential house to the creation of complex transportation systems, irrigation structures, etc. Over the years, it has evolved as a critical prerequisite for a modern-day civil engineer. Aspiring civil engineers are advised to have this on their checklist to stay competent.

With the objective of providing exposure to Auto CAD and upskilling in the domain of computer-aided design, Civil Engineering Association (CEA) has organised a workshop on 28th December 2019, which was coordinated by final year students Abhiram V K, Afeefa Parveen C, Anna Mary Jose, Avanthika P, Sriram Goteti. The workshop was conducted for 60 students in the second year of civil engineering in the CED Lab at NIT Calicut. The workshop spanned two sessions and had 100% occupancy.

## Site Visits

Site visits are an essential part of our learning. Visiting a real-time construction project or design office allows you to develop a greater understanding of how civil engineering theory is put into practice. CEA came up with the site visit programme for the 60 enthusiastic students organized by B.Tech third years: Gautham Nambiar, D B Arunraj, Arjun Satish and Rahul M

The Outcomes of the visit to the construction site in Kozhikode dated 18/01/2020 are:

1. The students understood the functionality of the reinforced concrete slab and various members of the RCC.
2. Students figured out the reinforcement details in the slabs.
3. Students understood how the RCC building details were carried out following the IS code and the consequences of the measure on the site during the work.

# CEA ACTIVITIES

## Webinars & Talks

### 1. Scope of Civil Engineering in Present Day –Interactive Talk

An interactive 45 minutes Panel Discussion on “Scope of Civil Engineering in Present Day” was conducted on the 4th of February, 2022, by CEA third years, including Govind Sai Nithin, Raju and Tarun Achary, through the Zoom platform. Panellists from various fields of civil engineering were invited, like structural, transportation, environmental, geotechnical, water resources etc., and working in different sectors like a teacher, a consultant, field engineers etc.

During the panel discussion, students were able to understand the different work that is to be done by civil engineers, the scope of work in the civil engineering field and the various ways in which they can achieve their target goal. The program provided participants with a forum for discussion and idea exchange with a great panel of resource persons, including professors from prestigious institutions. The event concluded successfully with a Q&A.

### 2. Life after B.Tech and Studying abroad – Webinar

There are a lot of routes a student can take after finishing B.Tech. However, with many career options available, it is natural that a student may feel confused about which one to select. To help them decide what to do after B. Tech, the Civil Engineering Association, in collaboration with ICI, conducted a webinar for the Department of Civil Engineering students regarding " Life after B. Tech and Studying abroad " by Mr. Shripad Patil, a 2018 graduate from NIT Calicut, on May 15th, 2020. He was a former CEA Secretary and completed his master's at Columbia University in New York.

The main points discussed in the webinar are:

1. Studying abroad helps students to acquire global skills and access personal and professional opportunities.

2. How to perform well in Exams like GATE, UPSC– ESE, PSUs, etc.

The enthusiastic participation of students made the webinar successful in clarifying their doubts and helped them to build their carrier paths.

# NOTABLE ACHIEVEMENTS



## Awards

Dr. S Chandrakaran, a professor of NIT Calicut in the Dept. of Civil Eng., has been awarded the **Prof. K M Bahauddin Award** for the Best Engineering College Teacher of Kerala 2020 given by NITC Alumni. His field of Specialisation is Geotechnical engineering, and he also procured many other awards like George Oommen Memorial Award, Shamsar Prakash Award, Railway Board Prize, and the Best Paper award.

## Publication at SECON 2020

J. Ashish Manoj, A. Asiya, Dasari Navya, G. Ganesh Kumar, P. Robin Davis, students in their Final year in Civil Engineering Dept., were awarded a Certificate of Excellence by the Federal Institute of Science and Technology (FISAT), Kerala, for the publication of their paper titled “Machine Learning Approach to Failure Mode Prediction of Reinforced Concrete Infilled Frames”. The paper was presented at the First International Conference on Structural Engineering and Construction Management (SECON 2020) which was conducted on the 14th and 15th of May 2020.

This paper highlights the significance of reinforced concrete infilled frames in Earthquake responsive structural engineering. The authors proposed a data-driven machine-learning technique that predicted failure modes of RC infilled frames. A failure mode classification system is proposed, which consists of three predominant failure modes. The results suggest that machine learning modelling techniques, in which the dataset is allowed to speak for itself, can be applied effectively for complicated structural interaction issues involving several dependent parameters.

# MEMBERS OF CEA

In 2020, CEA was supported by the our faculties and the following student executives:

Head of Dept. – **Dr. Indira P V**

President of CEA – **Dr. Mohammed Ameen**

CEA Faculty In-charge – **Dr. A P Sashikala**

## Senior Executives

CEA Secretary – **Jerin Johnson** (B160675CE)

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- 15) Avanthika P - B170107CE
- 16) Abhiram V K - B170255CE
- 17) Sreehari C R - B170073CE
- 18) Rahul M - B170773CE
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- 22) Shekhar Raman - B170606CE
- 23) Sumit Singh - B170667CE
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