



**Department of Civil Engineering**

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# **CONNECTIONS**

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**NEWSLETTER**

**Feb '23, Volume 6 Issue 2**



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# Editorial Board

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**CO-EDITOR & AP/ CIVIL**

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**III YEAR CIVIL ENGINEERING**

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**II YEAR CIVIL ENGINEERING**

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# Department Vision and Mission

## Vision

To become a department of excellence in Civil Engineering education and research producing globally competent civil engineers to serve the industry and society.

## Mission

- Providing state-of-the art resources that contribute to an excellent learning environment.
- Imparting necessary skills, cultivating moral and ethical values.
- Establishing regular interaction and collaboration with industries.
- Motivating the students to take up competitive exams and pursue higher education.
- Promoting research and development activities in emerging areas of civil engineering and offering services to society and industry through education, research and consultancy activities.

# SERB Sponsored National Conference

National Conference was organized on "**Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023**" sponsored by SERB on 16th and 17th February 2023.

Six keynote lectures were delivered during the conference by the following experts.

## Day 1 -Keynote Speakers

- ★ **Dr. S. Maheswaran** Senior Principal Scientist Advanced Materials Laboratory SERC-CSIR, Chennai.
- ★ **Dr.Mahendrakumar Madhavan** Professor Department of Civil Engineering IIT Hyderabad.
- ★ **Dr.S.Praveenkumar** Assistant Professor (Sr,Grade) Department of Civil Engineering PSG College of Technology Coimbatore.

## Day 2 -Keynote Speakers

- ★ **Dr. T. Palanisamy** Assistant Professor Department of Civil Engineering NITK, Surathkal
- ★ **Mr.Nagesh Puttaswamy** Former DGM Technical Ultratech Cements Ltd. Independent Civil Engineering Professional Trainer, Mentor & Skill Enhancer.
- ★ **Dr.J.S.Sudarsan** Program Director School of Energy & Environment NICMAR University, Pune.

# SERB Sponsored National Conference



# Industry Interaction

**Advanced Software Laboratory** is established in support with **TechApps Consulting**, Chennai was inaugurated on 2nd February 2023. Guest: Mr. R. Arunkumar, Global Manager – Education Program, Bentley Systems International Ltd., Chennai.



# Research Activities

- **Ruby Freya, Richin John Charly , A Shanmugam, G. Ashish Kumar, T Bharath Vazhvarasan, R. Senthil** published a paper titled "Investigation of Rheological Properties in Shear Thickening Fluid for Seismic Dampers" in **Materials Today Proceedings**, 6th February 2023, <https://doi.org/10.1016/j.matpr.2023.01.286>.

# Interaction with Outside World

- **Dr.R.Kumutha** acted as an examiner to adjudicate the Ph.D. thesis entitled "Experimental Study on Mechanical Properties and Flexural Behaviour of High Strength Geopolymer Concrete" for the award of Ph.D. Degree in the subject Civil Engineering by the Osmania University.
- **Dr.R.Kumutha** acted as a reviewer for the research article titled "Seawater-sea sand geopolymer concrete: effects of the fly ash/GGBS ratio and alkali modulus" for the Elsevier Journal, Construction and Building Materials on 02.02.2023.

# Consultancy

- **Dr.R.Kumutha** carried out an inspection of a residential building at Kilpauk, Chennai on 22.02.2023 for verification of its Structural soundness and issued the Certificate of Soundness. (**Revenue generated: Rs.5900/-**)



# Students Research Activities

- **Vivedhitha Varshini A G, Gogula Chezhiyan N, Kavinselva P, and Mr. R. Mathiyazhagan**, presented a paper titled "Analysis of Ground Water - Tambaram Municipality" in the National conference "Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023" sponsored by SERB on 16th and 17th February 2023.
- **Siddharth J U, Gokul K, Saravanapandi G, and Dr.R.Sathia**, presented a paper titled "Seismic Analysis of Earthquake Resistant Building Using ETABS" in the National conference "Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023" sponsored by SERB on 16th and 17th February 2023.
- **Hemalatha R and Jenani M** presented a paper titled "Modeling of Spatially Distributed Surface Runoff Generation Using ArcGIS - A Case Study in Cuddalore District" in the National conference "Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023" sponsored by SERB on 16th and 17th February 2023.

# Students Research Activities

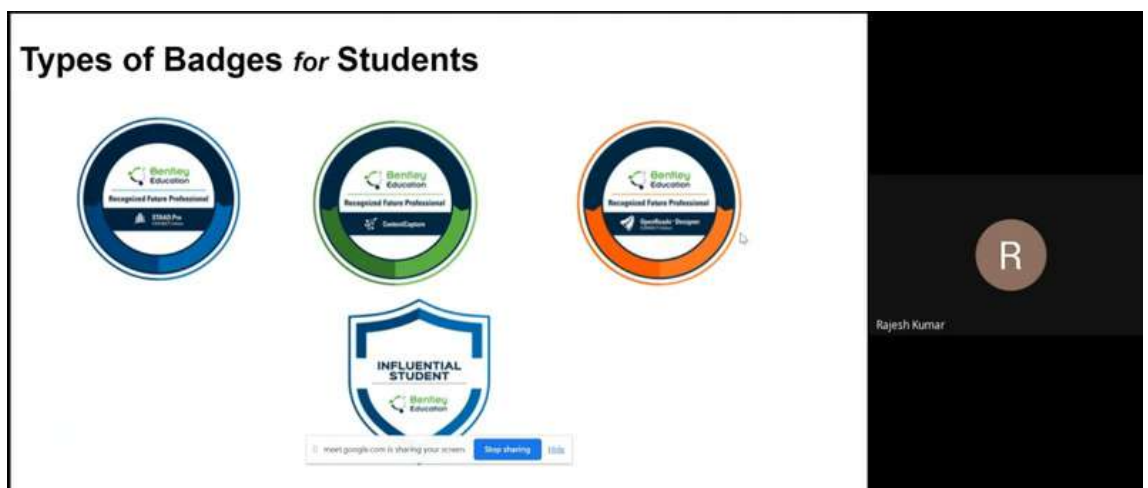
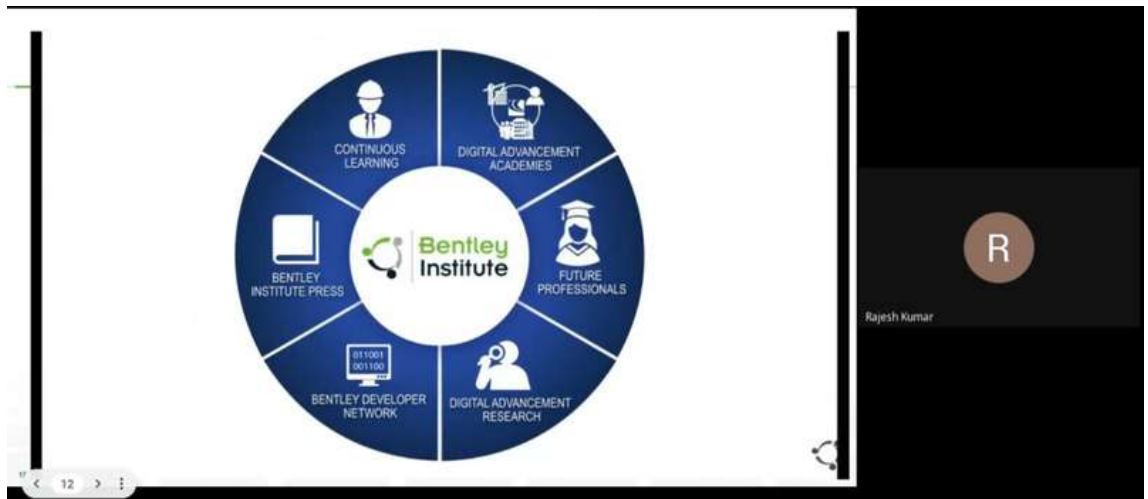
- **Gopinath A V Vignesh A Yokesh J P and Mr. A. Vijay Vignesh**, presented a paper titled "Experimental Investigation on Crumb Rubber Based Cement Bricks along with Polypropylene Fiber" in the National conference "Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023" sponsored by SERB on 16th and 17th February 2023.
- **Jaya Surya J Santhosh Kumar. N.M and Mr. S. Hariswaran**, presented a paper titled "Filtered Sand - An Alternate for River Sand and M-Sand" in the National conference "Smart and Energy Efficient Construction Materials and Technologies for Sustainable Infrastructure - SEMSI 2023" sponsored by SERB on 16th and 17th February 2023.

## Accreditation

NBA Visit for Tier I was held from 10th to 12th February 2023.

# Programs Organised

The Induction Program on "**Bentley Academic Software for Students**" is conducted on 24.02.2023 (Friday) at 10 - 11 A.M.



## Programs Attended

- **Dr.P.Venkateswara Rao** has participated in one week online FDP on “Applications of Artificial Intelligence and Machine Learning in Civil Engineering” organized by Dept. of Civil Engineering, Seshadri Rao Gudlavalleru Engineering College from 20th to 25th February 2023.

## Students Activities

- **Mr. RB Yugeshwaran and Mr. R J Ramanhujam**, first year students have successfully completed the Micro Learning Course on Orthographic Projections for Mechanical Components offered by the L&T Edu Tech Micro Learning Initiative on 6th and 12th February 2023 respectively.
- **Mr. K. Guruprakash and Mr. T. Lalith Kumar**, final year students have completed implant training in Pearl Constructions Chennai Pvt. Ltd. during 2nd January to 18th February 2023.

# PROGRAM OUTCOMES (POs)

Students in the Civil Engineering program should, at the time of their graduation, be able to

- Apply the knowledge of mathematics, science, engineering fundamentals and concepts of Civil Engineering to the solution of complex engineering problems. **(Engineering knowledge)**
- Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. **(Problem analysis)**
- Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. **(Design/Development of Solutions)**
- Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions for complex problems. **(Conduct Investigations of Complex Problems)**
- Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. **(Modern Tool Usage)**
- Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice. **(The Engineer and Society)**
- Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and Sustainability)**
- Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. **(Ethics)**
- Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and Team Work)**
- Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. **(Communication)**
- Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. **(Project Management and Finance)**
- Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change. **(Life-long Learning)**

## **PROGRAM SPECIFIC OUTCOMES (PSOs)**

Students in the Civil Engineering program should, at the time of their graduation, be able to

- Provide solutions for real life problems related to core areas of civil engineering by applying knowledge of mathematics, Basic and Engineering Sciences and by using appropriate engineering tools.
- Plan, analyse, design, execute and manage infrastructure projects considering safety, societal and environmental factors.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOs)**

Civil Engineering graduates during the first few years of graduation will:

- Practice civil engineering in construction industry, government or public sector undertakings by applying ethical principles and following norms of civil engineering practice.
- Pursue higher education and research to hone-up latest civil engineering technologies and to adapt to the changing global scenario.
- Exhibit leadership and team working skills as an entrepreneur with demonstrable attributes to contribute to the societal needs.