Civil Info

Civil Engineering
News Letter Volume-V Issue-III October-November (2018-2019)

"HARDWORK BEATS TALENT WHEN TALENT DOESN'T WORK HARD"

The second semester classes for all the years (I,II,III & IV) are started from 19th of November 2019. All the best to the students for the upcoming semester.

Blood Donation Camp

On 05-10-18 DIET- National Service Scheme (NSS) in association with Red Cross – Vja have Participated in blood donation camp organized at STELLA INDOOR STADIUM Vijayawada

This camp was initiated by district collector Mr. B.Lakshmi Kantham along with Red Cross Vijayawada as a part of this our college have attended the camp on same day This event was headed by Dr Mahan Mohan from Red Cross Blood bank who involved in Process of testing donors before donation, District collector have appreciated the Management, Principal and NSS coordinators for helping them in making this a grand success.

YUVAGALAM

Dhanekula NSS unit in association with YUVAGALAM have organized an Interactive session with Representatives of YUVAGALAM Mr. Naga Sravan Kilaru and Mr. Tarun Kakani Chair of young India have interacted with students The Main motto of the Interactive Session is to identify the Aspects where the new state Andhra Pradesh is lagging

Almost 300 above Students have shared their opinion that AP is lagging in the areas of Employability, Special Status, Corruption, Farmers Suicides etc;

Mr. Naga Sravan Kilaru and Mr. Tarun Kakani

- Total 33 students of III-I have attended for the certification course on Rviet architecture conducted by APSSDC
- Total 20 students of IV-I have attended for the certification course on Robot structural Analysis conducted by APSSDC
- Total 122 students of III-I have successfully completed Qcad course conducted under ITC
- Total 112 students of IV-I have successfully completed Blender course conducted under ITC

TECHNICAL TOPICS

500-year-old Leaning Tower of Pisa mystery unveiled by engineers

Why has the Leaning Tower of Pisa survived the strong earthquakes that have hit the region since the middle ages? This is a long-standing question a research group of 16 engineers has investigated, including a leading expert in earthquake engineering and soil-structure interaction from the University of Bristol.

Professor George Mylonakis, from Bristol's Department of Civil Engineering, was invited to join a 16-member research team, led by Professor Camillo Nuti at Roma Tre University, to explore this Leaning Tower of Pisa mystery that has puzzled engineers for many years.

Despite leaning precariously at a five-degree angle, leading to an offset at the top of over five metres, the 58-metre tall Tower has managed to survive, undamaged, at least four strong earthquakes that have hit the region since 1280.

Given the vulnerability of the structure, which barely manages to stand vertically, it was expected to sustain serious damage or even collapse because of moderate seismic activity. Surprisingly this hasn't happened and until now this has mystified engineers for a long time. After studying available seismological, geotechnical and structural information, the research team concluded that the survival of the Tower can be attributed to a phenomenon known as dynamic soil-structure interaction (DSSI).

The considerable height and stiffness of the Tower combined with the softness of the foundation soil, causes the vibrational characteristics of the structure to be modified substantially, in such a way that the Tower does not resonate with earthquake ground motion. This has been the key to its survival. The unique combination of these characteristics gives the Tower of Pisa the world record in DSSI effects.

Professor Mylonakis, Chair in Geotechnics and Soil-Structure Interaction, and Head of Earthquake and Geotechnical Engineering Research Group in the Department of Civil Engineering at the University of Bristol, said: "Ironically, the very same soil that caused the leaning instability and brought the Tower to the verge of collapse, can be credited for helping it survive these seismic events."

By
S Ashok(158T1A0107)

Technique offers advance in testing micro-scale compressive strength of cement

Researchers have, for the first time, used a 'micropillar compression' technique to characterize the micro-scale strength of cement, allowing for the development of cement with desirable strength properties for civil engineering applications.

Cement is used to make concrete, one of the most widely used construction materials in the world. The compressive strength of cement is a primary factor in determining how much load concrete can bear -- a critical consideration for civil engineering projects. Engineers have long known that cement derives its strength from an ingredient called calcium silicate hydrate (C-S-H) -- the primary product formed when cement powder is mixed with water. Researchers, however, have not been able to measure the compressive strength of the C-S-H in a cement sample -- the sample sizes needed for isolating and testing the C-S-H components are too small to fabricate by conventional sample preparation methods.

To address this challenge, the researchers turned to a technique used in materials science called micropillar compression. Normally used on crystalline materials, micropillar compression uses very small samples to determine the compressive strength of a material.

Because cement is a heterogeneous material, made up of multiple components, Shahrin used a scanning electron microscopy/X-ray technique to find the areas in cement samples that had the highest ratio of C-S-H relative to other constituent materials.

Once the C-S-H sites were identified, they were milled into cylinders 2 micrometers wide and 4 micrometers in height. These samples could then be subjected to micropillar compression.

"There are lots of ways to make cement, and it can be made with different constituents in different ratios," Shahrin says. "We've shown that the micropillar technique can be used to give us precise measures of C-S-H compressive strength in these different types of mixtures. This information can be used to help us understand how various processes, and the constituents added during cement production, can affect the cement's strength. It's basically a tool that can be used to develop better, stronger cement."

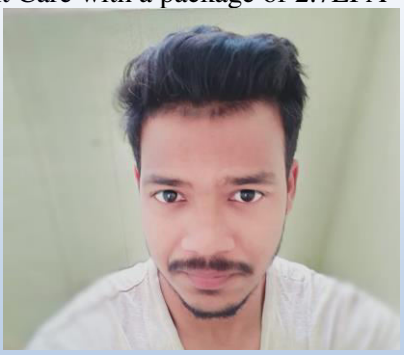
By
M Ravichandra Reddy(168T1A0147)

PLACEMENTS

N.Ashok Kumar (158T1A0106) has placed in **CINIF Technologies** as a Trainee Engineer with a package of 3.6LPA and also placed in Pathfront Pvt Ltd as a Technology – Specialist with a package of 3LPA

Gopala Krishna.T (158T1A0124) has placed in **CINIF Technologies** as a Trainee Engineer with a package of 3.6LPA and also placed in Pathfront Pvt Ltd as a Technology – Specialist with a package of 3LPA

Nabeel.Ahmed (158T1A0142) has placed in **CINIF Technologies** as a Trainee Engineer with a package of 3.6LPA and also placed in GlenWood as a Client Care with a package of 2.7LPA



Jetty.Venkata.Lahari (158T1A0192) has placed in GlenWood as a Client Care with a package of 2.7LPA

U.Divya Sai (168T5A0127) has placed in GlenWood as a Client Care with a package of 2.7LPA

CAREER IN CIVIL

Have you ever played "Age of Empires?" In the game, the better your infrastructure, the better your chances of winning. It's a perfect example of what civil engineering is all about. They build the world's infrastructure and in doing so, they shape the future of the nations. Interesting right? Apart from being fun and exciting, there is also a lot of responsibility involved as bad infrastructure can mean loss of life. A civil engineer is responsible for the design of safe structures so that it meets the standard building codes for each place. These structures must be designed keeping in mind many factors like maintenance, efficiency, and other economic concerns.

Career Prospects

As we saw earlier, civil engineers are in great demand. As such, they can work both in the public and the private sectors. Indian civil engineers are in great demand in Asia, Africa and the middle-east. The employment opportunities abroad are many and so are the financial incentives.

A degree in civil engineering offers the prospect of a stable career path, potentially high salary, and the opportunity to work on challenging projects.

Pros & Cons

Pros:

- The work is challenging, and the scope of growth is immense in a developing society.
- You derive the satisfaction of seeing your masterpieces.
- The pay is good and comes with many benefits.

Cons:

- The construction business is vulnerable to fluctuations in the economy.
- Civil engineers often work in varied settings shifting from posh modern offices to construction sites in remote areas.

Jobs & Salary

A civil engineer can work as a:

Consulting engineer – They are those who work on the design stage of a project, collaborating with architects and other professionals.

Contracting Civil Engineer – This is someone who oversees the actual construction. They deal with practical issues such as procuring materials and meeting deadlines, and helping to resolve any problems that may arise.

Maintenance engineer – Basically employed to maintain equipment and machinery used in manufacturing processes. This involves regular checking and monitoring, and overseeing the replacement, or upgrading of equipment.

Civil engineers can find work in the government sectors like the railways, the defence forces, National Highway Authority of India, government development authorities like the DDA and government housing authority, BHEL and many more.

The salary of a civil engineer depends on a number of things such as educational qualification, type of employer, industry, location of work and so on. It is also important to ensure that your educational qualification is from a reputed college. Besides a monthly salary, civil engineers in both the public as well as the private sector enjoy many perks and benefits.

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