Eleventh Issue | January 2018

SONA COLLEGE OF TECHNOLOGY
Learning is a Celebration!

Indian Concrete Institute

ICI STUDENT CHAPTER

DEPARTMENT OF CIVIL ENGINEERING

SONA CREA

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PRINCIPAL'S MESSAGE

I am gratified to know that the Department of Civil Engineering is bringing out the eleventh issue of their technical magazine "SONA CREA" of this academic year (2017-2018). This is a productive technical material and subsidiary skill-developing tool for the students. I wish the Civil Engineering Department a very big success in all their ventures. I also applaud the coordination and efforts behind the team to bring out this issue. I wish them all success.

Dr. S.R.R. SENTHIL KUMAR
Principal

HOD'S MESSAGE

I am exhilarated in establishing the eleventh issue of the magazine "SONA CREA" of our Civil Engineering Department, which is a reference of the most recent trends and activities in construction field. This magazine should be a good source of guidance for faculty and coming batches of students in choosing activities of their choice in their future for building their careers.

I appreciate the efforts of the Editorial team who have done an excellent job in compiling activities over the semester and disseminate them through this Magazine as well as on the website. I am glad to welcome students with more interest in bringing the article with more bright concepts and innovative ideas in the next issue. I wish them to experience victory in all of their future endeavours.

Dr. R. MALATHY
HoD / Civil
Convenor/ ICI Student Chapter

ICI STUDENTS CHAPTER COORDINATOR MESSAGE

This issue marks the eleventh issue of our Newsletter SONA CREA, that aims to keep our students past and present updated about the happenings in our Civil Engineering Department.

This newsletter will feature updates about our programs, articles, success stories from our students and faculty members, event information as well as research activities. We have particularly designed the newsletter also as a platform for the students to update their knowledge in civil engineering and to expose their talents with us. Therefore, I humbly encourage all of you to make use of this platform to remain active and vibrant. Let me reiterate that we welcome all contributions from faculty members and students so that we can make this newsletter a place for our collective voices.

M. ARIVOLI
AP/ CIVIL
ICI Students Chapter Coordinator

ICI STUDENTS CHAPTER PRESIDENT MESSAGE

Most of the people dream about their goal but we work for our goal and we nailed it too.

It's my immense pleasure to be a part of this 11th issue. I feel much proud to lead this ICI chapter which is consistently active group of the department. We have conducted so many events, workshops and seminars that motivated the students towards the successful career. Also special lectures by eminent persons from L&T,JSW companies, have stimulated the students and also the professionals.

I extend my gratitude to the Head of the Department Dr.R . Malathy, who have supported and guided us in all way. In addition, staff Coordinator Prof. M. Arivoli who helped us.

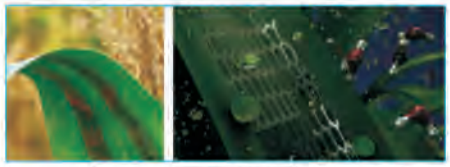
K. Dhamini
Final yr / Civil
ICI Students Chapter President

ENGINEERS MAKE WEARABLE SENSORS FOR PLANTS, ENABLING MEASUREMENTS OF WATER USE IN CROPS

S. Priscil Nidhu
Assistant Professor/CIVIL

Forgot to water that plant on your desk again? Don't worry! ***It may soon be able to send out an SOS.***

Humans are getting very comfortable with the concept of wearable technology. We have these devices on our wrists and around our necks, so why not use them in other applications, like farming? Not a bad idea, since we'll need more food than ever to feed the world.



Plant Tatoo Sensor Carbon honeycomb – Graphene Sensor

"This is a new, emerging science, and it's still in its infancy". It is now possible to measure the time it takes for plants to move water from their roots, to their lower leaves, and then to their upper leaves. Researchers have developed graphene-based, sensors-on-tape, also called as "plant tattoo sensor" which can be attached to plant leaves that provides data to farmers about water use in crops. The tiny graphene sensor – a carbon honeycomb just an atom thick – capable of conducting electricity and heat as well as being strong and stable, can be taped to random leaves of plants. The graphene-on-tape technology has also been used to produce wearable strain and pressure sensors, including sensors built into a "smart glove" that measures hand movements. These sensors are made with graphene oxide, a material very sensitive to water vapor. The water vapor present in the leaves is responsible for the conductivity of the material that can be quantified to measure transpiration accurately. The best part is that plants sustain no damage and does not affect the growth of plants or crop production from the application of the sensors. External humidity levels doesn't affect sensor's performance and as the sensitive material of the sensor faces the leaf, it physically protects the tape from dust. These plant based sensors are capable of measuring the thickness and electrical capacitance of leaves which determines the water requirement of plants is becoming a promising factor in intimating the farmers when to activate the irrigation systems, preventing both wastage of water and parching of plants (drying of plants). They send very precise information about moisture content in plants to a central unit setup in field, which communicates or transmits the information to the irrigation system inorder to water the crops. The entire setup can be powered wirelessly using batteries or solar power. They are the indicators to tell the farmers exactly what the best time to irrigate their crops is. The leaves naturally swells when it receives adequate water, but, however as soon as the plant starts experiencing any form of water stress, the thickness of plant leaves starts to shrink which in turn changes the electrical capacitance. The first leaf sensor technology was developed by Leaf Sens in the year 2001. This technology has the potential to save around 30% to 50% of irrigation water by reducing the irrigation time from once in every 24 hours to about every 2 to 2.5 days by sensing the impending water deficit stress. The growth of the plant slows down when the soil dries out reducing the photosynthesis activity that leads to damage of their tissues. The plants begin to wilt when they reach the permanent wilting point while others show no visible signs of trouble until they have experienced significant harm. It was found that the average time taken by stomata to open is about 7 minutes when exposed to light and 53 minutes to close on falling darkness, but this change during dry conditions. It was further identified that, when plants are deprived of water, the average time to open drastically increases to 25 minutes and the closing time falls to 45 minutes. It had been estimated that one sensor could be placed every 20 or 30 acres to provide optimum information to irrigate the entire crop.

Opening of Stomata

How does it work?

The sensor is applied in a simple, peel-and-stick adhesive fashion. When plant starts to dry, its leaves contract. This change can be measured in electrical voltage. A wire leads from the sensor to a small box located on the stalk or at the bottom of the plant. The box converts the electrical current to data to a cell phone, or computer, so a farmer can use the data to turn irrigation equipment on or off. The voltage reading input from the leaf sensor is taken and is converted into a number understood by us. When the algorithm senses this number, it activates the entire aeroponic system to provide the right amount of moisture to the roots.

So even before the keenest eye of a farmer finds out a plant starting to wilt, the sensor can transmit a message to "supply water".

"We've got a long way to go, but one day farmers will be able to pick up a pack of these devices like candy from a convenience store." Such a remarkably promising sensor may provide farmers with actionable information on the real-time drinking habits of their crops.

BUILDING INFORMATION MODELLING – FUNDAMENTALLY DIFFERENT

S.Karthika
Assistant Professor/CIVIL

"Building Information Modelling (BIM) is a collaborative way of working underpinned by digital technologies. These technologies allow more efficient methods of designing, delivering and maintaining physical built assets throughout their entire lifecycle".

Building Information Modelling is one among the various digital technologies that is capturing people's imagination in recent times. BIM has huge potential to shift the paradigm in the construction process and is becoming increasingly apparent. By driving design, cost and schedule optimization and integrated solutions through BIM, project management can become smarter and significantly more economical.

Complete information of a particular project can be created and managed before, during and after its completion. BIM can carry a digital description of every aspect of the built asset. In other words, BIM is a digital repository.

Surprisingly, BIM is not a new concept dating back to references in the 1960s, but it is only in recent times that BIM, which at its core is a 3D design and modelling software, has made its presence felt significantly. The reasons are not hard to find as BIM facilitates 3D visualization and intelligent engineering.

The building information modelling process covers geometry, space, light, geographic information, quantities, and properties of building components. BIM can be used to demonstrate the entire building life cycle, including the processes of construction and facility operation.

Building Information Modelling Applications

The BIM application process can be used during design and architecture process creating a clear picture for better and more integrated designs.

The software will be used to foresee problems and coordination between different contractors and generate construction documents and process that will later be implemented during the physical process. It is ideal when there are many trades executing at the same moment or when schedules are compressed. There are multiple applications for BIM so it can be used by the groups like Architecture, Sustainability, Structures, MEP, Construction Management, Utilities, Road Construction, Scheduling and Property Management

Industry groups are trying to develop one standardized BIM model that can be used to integrate all different types of modelling systems. By doing this, they will facilitate the coordination and communication in the design-construction-operation team less than one single platform. The purpose of this movement is to create a single data centre, with multiple CAD and specs depending on the discipline that you are working for.

All data will then come together allowing it to be used for take-offs, analysis, coordination and important project milestones. This effort will help standardize the process and will establish a base that can be used during the bidding process so everyone can be judged using some standard guidelines.

Benefits of BIM

- BIM provides a way to work concurrently on most aspects of building life cycle process.
- Provides a way to change traditional architectural phases and data sharing.
- The modeling process integrates actual construction pieces and parts
- BIM can be used as a tool to estimate and complete construction cost forecasting
- Used to monitor actual building performance data
- Collect data on warranty, aging, defects, and installation time
- Determine whether a temporary construction set up is needed
- Can be used to sequence planning or determining how the phases of a project should be scheduled
- Detect or avoid construction and design issues early in the game preventing change orders and unforeseen conditions
- Reporting, scheduling, submittals can be part of the BIM process and communication will be greatly enhanced

U BOOT TECHNOLOGY

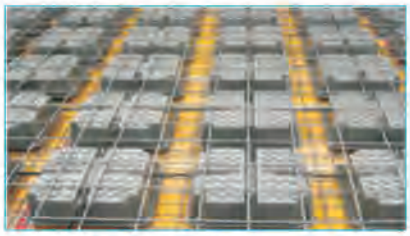
Introduction

R. Ramya
III Yr/CIVIL

U – Boot Beton is a recycled polypropylene formwork that was designed to create lightened slabs and rafts. The use of U – Boot Beton formwork makes it possible to create mushroom pillars, with the possibility to have the mushroom in the thickness of the slab. U Boot Beton formworks in the concrete casting will create a grid work of mutually perpendicular beams closed from the bottom and the top by a

flat plate that is created with a single casting . This results in considerable reduction in the use of concrete and steel.

It is cost saving, faster construction time and improvement of construction quality which fulfil with the three basic goal in the construction which is time, quality and cost.



Recycled polypropylene formwork

Load Distribution

In U boot beton, reinforced concrete slab bi-directionally transmitted loads are directly transferred to the pillars and from this to the foundation.

Less Weight

Comparatively it is weight less and can be handled quickly on site without using cranes or other mechanical lifting devices which save time and cost. The size of the beton is 52X52 cm. The height of the beton is available in 10,16,20,24, 28 cm.

Accessories

- Spacer joint
- Connection bridge
- Closing plate

Applications

- It perfectly suits for high rise buildings.
- We can build span up to long distance without using beam.
- Thickness of slab and column are comparatively less while reducing the thickness of slab we can build one extra storey compared to normal buildings.
- It is particularly suited for structures that require considerable open spaces, such as executive, commercial and industrial buildings as well as public, civil and residential structures.
- It possible to more irregularly distribute the pillars, as beam do not need to be created.
- It reduce the use of more columns, in necessary situations we can eliminate the pillars. Example: Car parking.

COMPRESSED STABILIZED EARTH BLOCKS

Introduction

D. Ramya
III Yr/CIVIL

Soil Cement Blocks or Compressed Stabilized Earth Blocks (CSEB) are dense solid blocks compacted using a machine with a mixture of soil, sand, stabilizer (cement/lime) and water. Standard sizes are (305x143x100mm) and (230x190x100mm). At 7% of cement the wet compressive strength of 3-4 MPa can be obtained. CSEB can be used for wall construction without any new technological problems. The Soil cement blocks can be constructed using cement mortar, lime mortar, lime pozzolana mortar or mud mortar. Normal cement mortar of 1:6 proportions has been used in the construction of soil-cement block walls of several buildings. To improve the bonding frogs have been introduced on both faces.

Need for alternative building materials

Demand for new buildings as well as the cost of building construction is growing at a steady pace. Bricks, cement, steel, timber, plastics, glass, are some of the commonly used conventional materials. Manufacturing processes are detrimental to the environment. Use of conventional materials alone to satisfy the demand for new buildings, can drain the available energy resources and cause environment degradation.

Centre for ASTRA (Application of Science and Technology to Rural Areas) formed in the Indian Institute of Science, Bangalore, has developed alternative building technologies looking at utilization of local materials and reducing energy consumption to achieve cost reduction.

Manufacturing Process

Soil Suitability and Stabilization for CSEB reveals not every soil is suitable for CSEB in particular. Top soil and organic soils must not be used. A good soil for CSEB is more sandy than clayey.

Soil Test

Grain size distribution, to know quantity of each grain size. Plasticity Characteristics, to know the quality and properties of the binders (clay and silts). Compressibility, to know the optimum moisture content, which will require minimum of compaction energy for the maximum density.

Cohesion, to know how the binders bind the inert grains. Humus content to know if there are organic materials which might disturb the mix.

Stabilizer proportion

Cement stabilization = 5% average. The minimum is 3% and the maximum is 8%. Lime stabilization = 6% average .The minimum is 2% and the maximum is 10%.

Curing

The mud blocks stabilized with cement or lime must be cured for 21 days by a gentle sprinkling of water. The top of the stack of blocks must be covered by straw or gunny cloth to prevent evaporation of water. After 28 days curing, the stabilized mud blocks (SMB) are used for wall construction.

Cost effectiveness

A finished CSEB wall is generally: 48.4 % cheaper than wire cut bricks. 23.6 % cheaper than country fired bricks.

Energy consumption:

(Kg of CO_2/M_2)

4.9 times less than wire cut bricks.15.1 times less than country fired bricks.

Advantages

- It is a local and bio-degradable material.
- Limiting deforestation.
- Energy efficiency and eco friendliness.
- It is Cost efficiency.
- Adapted material.
- Transferable technology.
- A job creation opportunity.
- Flexible production scale.

Disadvantages

- Ignorance of the basics for production & use.
- Wide spans, high & long building are difficult to do
- Low technical performances compared to concrete.
- Untrained teams producing bad quality products.
- Over-stabilization through fear or ignorance.
- Under-stabilization resulting in low quality products.
- Low social acceptance due to counter examples.

FLOATING SUSPENSION BUILDING

Introduction

Thinakaran Chandrasekharan
III Yr/CIVIL

A floating building is a building designed to float over water based on Archimedes principle which states that –"the upward buoyant force that is exerted on a body immersed in a fluid, whether fully or partially submerged, is equal to the weight of the fluid that the body displaces and acts in the upward direction at the center of mass of the displaced fluid". In addition to that a specially designed suspension platform is added to the foundation of the building which makes the foundation isolated and enhances the safety as well stability of the building. The building is also designed to be self-productive and is also ensure to reach as close as possible to green building concept by recycling the wastes produced by inhabitants.

Real-time Features

Suspension Enabled Comfort

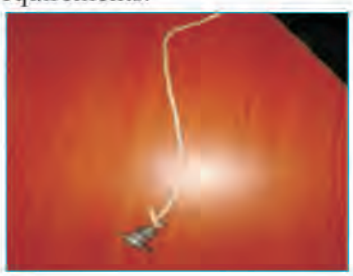
To insure the stability of the building from frequent tides and waves in sea entire weight of the building has been put on a giant suspension made with combination of leaf-disc spring and helical springs for small scale. Out of those two type of springs, leaf-disc spring cuts the frequent shock and minute vibrations due to tides and waves. Whereas, horizontal sway are expelled by helical springs added to the suspension. By combining number of leaf-disc spring, hydraulic pistons and helical springs, a frame is made. This frame removes all the vibrations from the building and also acts as an isolated base bending (Horizontal motion) is controlled by giant helical springs.

Dual Fiber-glass walls

Making use of fiber glasses enables us to produce a very light weight building as the dead load will be very less compared to that of concrete. Moreover, walls has to be built with two layers of fiber glasses. Why dual fiber glass? In coastal areas, temperature will be considerably high at day and low at night. Sea breeze (due to highest specific heat energy of water 4200 J) at day as well as night. And single fiber-glass (if used) as walls will conduct huge amount of heat and controlling heat will add an extra expense of energy source. Whereas using two of fiber glasses together will trap in air (insulator) in the gap which will cause drastic lowering of heat transfer through walls. The transfer of heat through two layers will be roughly 94% lower than that of one layer.

Safe and ready for disasters

Top level of base frame is anchored to the sea bed using several steel ties which can be detached any time as per requirement. This gives us freedom of changing the position and orientation of building. Technology has become highly advanced these days and therefore in the cases of dangers, the building can easily be shifted to safe zone temporarily or permanently as per our requirements.



Self-productive and 3R enabled

Floating alone is a sea is no more delightful unless the building is self-dependent. Hence, the energy and other basis resources designed to be made available in the building so that it doesn't have to depend on land resources. For example, fresh water is obtained from rain water harvest, RO filtrations as well as specially designed 12 hours continuous solar water vaporizer which enables to obtain fresh water from saline water using solar power.

Similarly, wind energy and solar power is used for electrical energy production. These provides sufficient electrical energy for daily household consumption and also stands out to be green energy sources and does not tend to harm natural resources. In addition to that, electricity is also produced from piezo electric crystals coated over the suspension frames. These coatings of piezo electric crystals also help to prevent corroding of metals used in the suspension frames.

Future Scope of Floating Suspension Buildings

This building design, after successful construction will appear to be slightly expensive due to the location and uneasy availability of the materials of construction. But on long run the design as well as the concept will be worth spending. At present the design and the concept of the building can be implemented for the holiday (vacation) houses for outing and exploring purposes. It can be used as analogue to Pent houses. Concepts of view changing buildings are being implemented these days and an approach of hanging tower is also out for visualization. This concept enables entire building to be transported to different time and hence can be put into any place as per desire as long as the locations are connected by sea networks. It can be used as research centers for performing several researches on sea animals that can't be brought to the lab for experimental purposes.

It may look a piece of holiday outing location for those who are far away from coastal areas but for the people who are solely dependent on the products and byproducts of sea and oceans, this type of design is very important. The building concept will not just ensure their safety but it will also enable us to step our footprints to create a society on the sea resources.

Fishing and earning money from sea oceans are major sources of income for most of the countries like India, Maldives, etc. where sea resources are abundant and this type of floating building may serve under such conditions with enhanced income sources while it will also enhance the income from tourism sectors.

JEDDAH TOWER

Introduction

T. Sanju Priya
III Yr/CIVIL

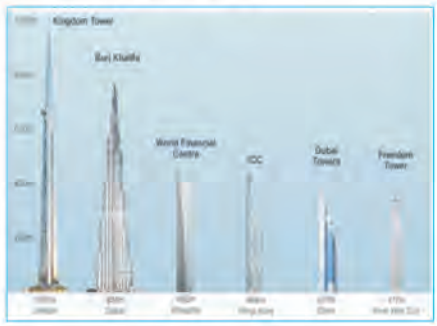
Jeddah Tower also known as Kingdom Tower and Mile-High Tower, is a skyscraper under construction in Jeddah, Saudi Arabia, at a preliminary cost of SR4.6 billion (US$1.23 billion). If completed in 2020 as planned, the Jeddah Tower will reach an unprecedented height, becoming the tallest building in the world as well as the first structure to reach the one-kilometre-high mark.

It is the centrepiece and proposed development known as Jeddah Economic City that will be located along the Red Sea on the north side of Jeddah. The development of Jeddah Tower seeks to bring great changes in terms of development and tourism to the city of Jeddah, which is considered the most liberal city in Saudi Arabia.

Comparison chart of tallest buildings

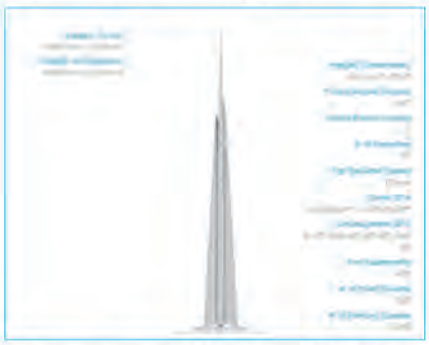
The design, created by American architect Adrian Smith, who also designed BurjKhalifa, incorporates many unique structural and aesthetic features. The creator and leader of the project is Saudi Arabian prince Al-Waleed bin Talal, the wealthiest man in the Middle East.

It is predicted to be the tallest building than BURJ KHALIFA.



Construction Details

The multivariate form of the tower is rationalized by a "Y"-shaped plan and a continuously smooth taper, which will significantly reduce structural loads by obviating the need for the complicated outrigger transfers and belt trusses required in a setback approach.



Furthermore, each wing of the tower will terminate at different heights, allowing them to taper at different rates and establish a distinct three-part spire. The supporting structure for the

building is comprised entirely of cast-in-place reinforced concrete walls, coupling beams, and conventionally reinforced plate concrete floor framing. Due to the continuous and uninterrupted vertical nature of the walls, a highly efficient jump form system is utilized that will permit a continuous and uninterrupted construction process.

A series of balconies interrupt the smooth exterior, serving to provide both a cool outdoor element for occupants and shading for the tower's surface, **reducing direct solar radiation**. Inside the tower, office floors are located at the bottom to take advantage of larger floor plates. These are followed by hotel, serviced apartments, and residential units of different sizes. At the very top, a massive penthouse will allow a tenant to reside at the crown of the building. Originally designed as a helipad, a circular sky terrace protrudes from one of the top levels, a feature that will be the highest of its kind in the world.

Construction work in progress

Foundation Type

Pile foundation detailingbase plan

JEC achieved new world records using latest technologies for high rise buildings' foundation construction - 270 piles were cast in situ reaching 105m below the natural ground level and with diameter that varies between 1.5–1.8m.The raft is considered one of the world's largest one-piece reinforced steel foundations with thickness ranging between 4.5–5m. Both piles and raft are supported with anti-corrosion technologies to preserve the steel reinforcement using a constant electric current system known as the Cathodic Protection.In addition, strain gauge instrumentation and load cells have been built-in to detect any changes in the soil and provide continuous readings about any environmental changes to the area around the foundations. Finally, earthing and lightning prevention systems were installed into the raft piling foundation.

Specifications

The tower will have 58 high-speed elevators including the double-decker high-speed elevators reaching a speed of 12 metres/second, in addition to other distinctive features making the Kingdom Tower an iconic landmark that will be a source of pride for the Kingdom of Saudi Arabia and its people."

The Kingdom Tower features 170 stories, seven stories of which will be allocated for the five-star Four Seasons Hoteloffering 200 rooms, eleven stories for 121 luxury serviced apartments, and seven stories for offices.

The tower will also have 61 stories that include 318 housing units of various types, a gym, spa, cafes and restaurants, several sky lobbies and world's highest observation floors located on the top floors 660m high enabling visitors to view the city of Jeddah from the sky.Located on an area of more than 5.3mn m^2, the Kingdom City will provide a contemporary lifestyle environment supported by an integrated advanced infrastructure.

OUR PROJECT

We have made this model only by using chalk pieces,fevicol and coated with silver paint on it.

The scale of our model is 1:1000

GEO JUTE FABRIC

Jute

Jute is a long, soft, shiny vegetable fibre that can be spun into coarse, strong threads .It is produced primarily from plants in the genus corchorus , which was once classified with the family Tiliaceae, and more recently with Malvaceae. "Jute" is the name of the plant or fibre that is used to make burlap, hessian or bunny cloth.

Geo Jute Fabric

Geo textiles

Geotextiles is one kind of technical textiles made from jute. It is defined as any permeable textile material that is used with foundation, soil, rock, earth, etc, to increase stability and decrease wind and water corrosion. A geotextile may be made up of synthetic or natural

fibers.In contrast, a geo membrane is a continuous membrane type linear or barrier geomembranes must have sufficiently low permeability to control migration of fluid in a constructed project, structure or system. It is a polymeric material. The average molecular weight (MW) and its statistic distribution. Increasing the average MW results in increasing

- Tensile strength
- Elongation
- Impact strength
- Stress crack resistance
- Heat resistance

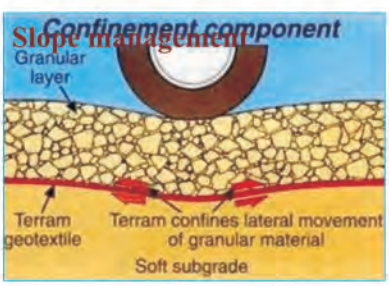
Properties of geo jute

- Stiffness
- Heat resistance
- Tensile strength
- High modulus
- High chemical resistance
- High tenacity
- High bulkiness
- High sound and heat insulation property
- Low thermal conductivity
- Antistatic property
- 100% bio-degradable and environment-friendly
- Strong, coarse, and organic.

Applications of geo jute textiles

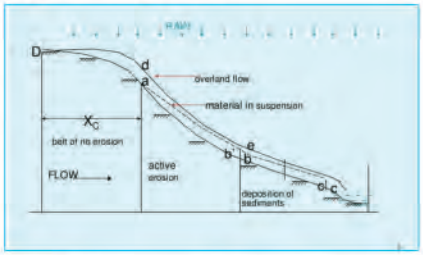
There are at least 80 specific applications of geo jute that have been developed.

- Separation
- Drainage
- Filtration
- Reinforcement
- Protection



Slope management

Slope management



Consolidation of soft soil

Control of surface soil detachment

Uses in civil engineering

Geo textiles are part of a wider group of civil engineering membranes called geosynthesis. They are used in civil engineering earthworks to reinforce vertical and steep banks of soil, to construct firm bases for temporary or permanent roads and highways to line ground drains so that the soil filters itself and prevents soil from filling up the drainpipes and to prevent erosion behind rock and stone facing on river banks and its coast.

Civil engineering works where geo textiles are employed can be classified into the following categories;

Application of jute fabric Road works and Railway Works

River Canals and Coastal Works

Application of jute fabric Agriculture

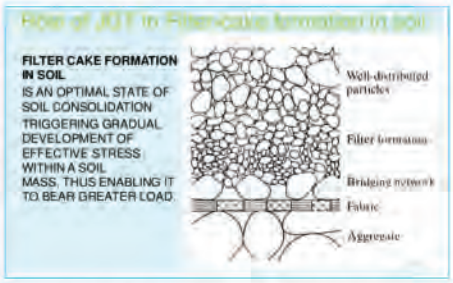
Cost of geo jute textile

- Non woven polyester geotextile fabric- 0.10/Meter
- Non woven geotextile fabrics-0.28/Square Meter
- Geo textile fabrics-0.25/square Meter
- Geo textile for landfill-0.65/square Meter
- White Geotextile sheets-0.4/Square Feet
- Soil Erosion Control Non woven Geotextiles-0.11/Square Meter
- Geotextile Filtration-0.30/unit

Geotextile testing

- Physical testing
- Chemical testing
- Eco testing
- Biological testing
- Geotextile testing
- Composites testing
- CBR test
- Dynamic Perforation Test
- AOS(Apparent opening size test)
- Water permeability test
- Water flow rate test

Durability of jute geo textile



- Loss of strength of JGT after a year is not a deterrent-by that time ,JGT provides a self sustaining sub grade for most soils
- The gain in strength of the sub grade compensates the loss of strength of JGT within the same time frame
- With the passage of time soil dependence

GUEST LECTURE ON "CHALLENGES IN SPECIAL CONCRETE AND NON-DESTRUCTIVE TESTING"

Our Department of Civil Engineering arranged a Guest Lecture on "Challenges in Special Concrete and Non-Destructive Testing" held on 17th July 2017 at M.B.A. Conference hall. Dr. M. Muthukannan (Professor and Head, Department of Civil Engineering, Kalasalingam University) delivered the guest lecture on this topic. Third year of our UG Civil Engineering Students were benefitted as audience and end of the session good interaction was done. The guest lecture was an eye opening and it motivated the students about concrete oriented projects, innovative work on special concrete and testing procedure about NDT equipment.

Dr. M. Muthukannan delivering about Non-Destructive Testing

INAUGURATION IEI STUDENTS CHAPTER

On 24.07.2017 Institute of Engineers India (IEI) held its inauguration ceremony at Sona College of Technology (SCT), Salem. Dr. Santhosh Babu, IAS was invited as the chief guest of the day. The function started with the welcome address by Dr. R.Malathy, HOD of Civil Engineering, SCT, followed by lamp lighting ceremony, Presidential address by Dr. M. Usha, Principal, SCT, Felicitation address by Dr. V. Jayaprakash, Director, SCT and Er. K. Pandian, chairman of IEI , Salem. Then students chairman of IEI, SCT Mr. R. K. Haree Prasaad introduced his team of office bearers. After which Ms. N. Savitha , ast.prof ,civil engineering introduced the chief guest to the gathering. Then chief guest Dr. Santhosh Babu addressed the gathering with his eminent speech on the topic "Innovation and Leadership" and motivated them to pursue their dream with passion and made them realise the role of engineers in the society , he also asked the students to make proper use of social networks so that it eventually turns out to be professional media that enhances networking among students and professionals. He quoted on patriotism that "Patriotism is not fighting for people or country its about how you love and serve your nation". He said that the people must be good givers to the society avoiding on only being takers from the society. On the whole his speech had motivated the students to achieve their goals along with an eagerness to serve the country and its people.

IEI students chapter co-coordinator with office bearers

INDUSTRIAL VISIT - COCHIN

The Department of Civil Engineering, Sona College of Technology organized two days industrial visit to Cochin on 26 and 27 of July 2017 for B.E Civil engineering final year students (Section A- 33, Section B – 29 and Section C – 30, Total of 92 students). Visit was organized with the prior permission and guidance of honorable Principal of Sona College of Technology, Dr.M.Usha and our beloved Head of the Department Dr.R.Malathy. The students were accompanied by four faculty members Prof.S.Karthika, Prof.S.Prabakaran, Prof.M.Soundararajan, Prof.S.Kalaiselvi.

First day (26.07.2017), students visited ISRO – VSSC Museum Trivandrum.Second day (27.07.2017) morning visited Techshore Inspection Services Pvt Ltd, Cochin. The students were divided into batches and then taken into the site with proper safety measures by wearing safety shoes and helmets. The officials guided the students at construction site.

ISRO – MUSEUM – TRIVANDRUM

Vikram Sarabhai Space Centre (VSSC) is the lead Centre of Indian Space Research Organisation (ISRO) under the Department of Space (DOS), Government of India. The Centre is named in fond memory of Dr Vikram A Sarabhai, the great visionary and the father of Indian Space Programme. VSSC pioneers in rocket research and launch vehicle projects of ISRO. The Centre also pursues research and development activities in associated areas like propellants, solid propulsion technology, aerodynamics, aero structural and aero thermal fields, avionics, polymers and composites, guidance, control & simulation, computer and information,

mechanical engineering, aerospace mechanisms, vehicle integration and testing, space ordnance, chemicals and materials. The museum has full-scale model of PSLV and PSLV heat shield on its premises. The museum also has scaled down (one fifth in size) models of GSLV, GSLV Mk-III and ATV.

TECHSHORE INSPECTION SERVICES PVT LTD – COCHIN

A presentation was given by the company representative about the company profile, services, trainings, applications and current scenario. Procurement and Construction company offering wide range of innovative services and engineering solutions in the field of Oil and Gas, Power and other major industries in the disciplines of Mechanical, Civil, Instrumentation and NDT professional training have been given in the disciplines. Techshore services are being rendered by a group of professionals who are having enormous experience in the field of engineering in the aforesaid disciplines. They offer various services like project management, process technology, construction, planning, professional and corporate training where additional high-level assistance etc.,This company is focused on providing high value added services for every part of the Oil and Gas, Power and other major industries. This company provides fast-track design, build and maintenance solutions for a variety of industries through fully undertaking Mechanical, Civil and Instrumentation works.

The representative had given demo on the Non-destructive Testing (Ultrasonic Pulse velocity method and Rebound Hammer method). These methods were very useful to find the compressive strength of the concrete without breaking the concrete. The students were divided into 30 members group and allowed for the demonstration. Finally, the calculation procedure was taught by the company representative and also the applications of civil engineering point of view were explained.

Students at Techshore Inspection Services Pvt Ltd

INAUGURATION OF ASSOCIATION OF CIVIL ENGG. ACE-2017

Dr.R Malathy, HoD of Civil Engineering Department addressing the gathering

ACE 2017- 2018 Association of civil Engineering an Intra department technical Association, was inaugurated by our Civil Engineering department of Sona College of Technology on **11th August, 2017** at **A.P.J.Abdul Kalam Hall** in the presence of Management, students and faculty members of Civil Engineering Department. We invited the guest of honor Er.T.Kathiravan, President, Salem civil engineers association, who gave an inaugural address to gatherings. The welcome address by **Dr.R.Malathy, HoD of civil Engineering department,** SCT. The inauguration was Felicitating by Mr.Thyagu valliapa vice chairman, Sona group of institutions. The introduction of office bearers and association activities was given by **Mr. M.Hari Prasath, Student chairman –ACE**. The Civil Engineering association inaugural program was coordinated by Mr. K.PRAKASH, Assistant professor, Department of Civil Engineering.

SONA-TECHSHORE CENTRE OF EXCELLENCE FOR NON DESTRUCTIVE TESTING (NDT) TRAINING

The Civil Department of Sona College of Technology in association with ICI and IEI had conducted Training on Non Destructive Testing (NDT) collaborate with Techshore Inspection Services, Cochin. The Training was scheduled between 11.08.2017 to 21.08.2017(10days) for 51 students. We have also signed a MoU between Sona and Techshore and opened a **"Sona Techshore"- Centre of excellence for Non Destructive testing (NDT)** on 11.08.2017which has created a momentum to enhance their knowledge in the field of NDT. All the faculty of civil department eagerly attended the inaugural session.

Mr.K.Ravindran, Founder, Techshore Inspection Services was the chief guest and trainer for the training programme. The inaugural session was started with the prayer song followed by welcome address shared by Dr.R.Malathy, HOD of Civil Department. She described about the importance of Non Destructive Testing in the field of Civil Engineering. Dr.V.Jayaprash, Director-Industry connect has gave valuable suggestions to UG and PG students for the placement opportunities in field of NDT. Dr.M.Usha, Principal, address the gathering and praised the civil department for their wonderful technical activities. Mr.K.Ravindran gave valuable ideas in the field of NDT and placement opportunities in NDT. Our Vice Chairman Shri.Thiyagu Valliappa presided over the function by signing a MoU with Techshore Inspection services and opened a Sona Techshore – Centre of excellence of NDT at SERC lab. The Inauguration was completed in a grand manner. After

that the training session was started with 51 students at Dr.A.P.J.Abdul kalam conference hall.

MoU signed "Sona- Techshore" Centre of excellence for NDT

Centre of excellence for Non Destructive testing

Training on Ultrasonic Pulse Velocity

Students Interaction with trainer Mr.K.Ravindran

Mr.Ravindran.K (trainer) done fabulous job on all the 10 days and completed the training well planned manner. Dr.R.Malathy, HoD/Civil of Sona College gave tremendous support in conducting training for Sona students. Prof.R.S.Surendar, AP/Civil coordinated the 10 days training programme and gave support to the training.

The Sona Techshore Centre of excellence for NDT has gave platform for UG and PG students to enhance their knowledge in the field of Non Destructive Test which will be an eye opening for their future career ahead.

GUEST LECTURE ON BUILDING PLANNING

A Guest lecture was organized on 16.08.17 for the II year Civil Engineering students. All the second year civil engineering students attended the lecture. The event started at 11.00 am in the presence of Dr.R.Malathy, HOD / Civil and the resource person for the lecture is Architect Mr. M.N. SARAVANA KUMAR, Partner, Four Core Architects, Salem. The event was conducted as a part of the syllabus for Computer aided building drawing laboratory to cover the Industrial lectures.

The resource person explained about the National Building code - NBC, which was published in 1968 and also the role of NBC as a National Instrument providing guidelines for building construction and also the contents of the code elaborately in its every usage. Also he explained about the publication and revision of the code and major changes made during revision. In detail, NBC has been grouped into 5 groups and further gave information about its classification. He said about the development control of buildings and various classification of buildings and tabulated explaining Land use, open spaces, width and length of buildings, layouts etc. He gave explanation on various central and state governing bodies like Tamilnadu Government Gazzette. Technically into the presentation, he explained Floor space Index - FSI, set backs of a building, and finally about the spaces excluded from the FSI and coverage computation. Thus the lecture came to an end successfully.

His speech was motivational, enlightening every content in a very simple and effective way. The lecture was very useful in planning aspects of building.

Mr. M.N. Saravana Kumar explaining About the National Building Code

SONA CIVIL STUDENTS INTO GREEN INITIATIVES IN YERCAUD

Civil Engineering students have taken initiative for VRIKSHA 2017-Tree Plantation Event" at Yercaud in association with Yercaud Youth Welfare Association and Makkal Paadhai which is headed by Saghayam IAS. During this event, around 500 trees were planted in three places namely Alangara lake,Government hospital and Government school. While travelling around 500 seed balls were thrown along the sides of the road. Here are the newspaper cuttings of the event for your reference. We feel proud that our Sona Civil Engineering students contributed for the greener environment and conservation of 100 years lake.

Students planting near Alangara Lake

AWARENESS PROGRAMME ON "HOW TO SUCCEED IN GATE & IES IN ONE CHANCE"

Department of Civil Engineering organized an awareness programme on **"How to Succeed in GATE &IES in**

one chance" in association with ACE academy, Hyderabad on 22nd August 2017 at PG Auditorium, Sona College of Technology. Dr.P.Manikandan, Prof.G.Aruna and Prof.A.Meenachi faculty of Civil Engineering organized this programme under the guidance of Dr.R.Malathy, Head of the department, Department of Civil Engineering.

Dr.R.Malathy welcomed the chief guest of the function Mr. *Mahipal Reddy Mandadi*, Sr.Manager-Strategic Marketing &Alliance, ACE Academy Hyderabad and *Mr.Nirmal Kumar*, Assistant manager-Academic Relation, ACE Academy Chennai and also the gathering. Around 600 hundreds students from all the UG departments were participated in this programme including first year B.E civil engineering students. The programme had three sessions and same was executed by the organizers. In the morning session the students were from all the engineering discipline except civil, the second session exclusively engaged by civil engineering students of all years and third session was for first year civil students. In each session Mr. *Mahipal Reddy Mandadi* gave the excellent motivational speech to the students. He clearly explained about the difference between engineering semester exams and competitive exams. Next he listed out the competitive exams like as GATE, ESE (IES), and PSUs jobs etc. He clearly explained about why GATE?, why ESE (IES)?, what are all the eligibility criteria for the same.

Mr. *Mahipal* simply describes about GATE "GATE *is the GATEWAY to career*". He initially discussed the about benefits of the GATE on educational institutions and PSUs sectors. He clearly outlined on what are all the educational institutions (IITs, NITs and reputed institutes) and foreign countries that accepts the GATE score programmes for PG and Ph.D programmes. And also he addressed that what are all the PSUs recruited the GATE qualifiers for job interviews. He also outlined about fellow programmes in management –IIMs and what are all IITs accept for the GATE score. Mr. *Mahipal* gave excellent motivational speech to the first year civil engineering students and also addressed about GATE and ESE. After the motivational speech on first year students Mr. *Mahipal* complete his speech with GATE preparations totally improve the academic excellence. Dr.R.Malathy honours the chief guests by momento finally Prof.A.Meenachi proposed the vote of thanks.

Mr. Mahipal Reddy Mandadi initially discussing about benefits of GATE

GUEST LECTURER ON "PREPARATION OF ROUGH COST ESTIMATE OF BUILDING"

Er.S.Lakshmanan briefing about the preparation of rough cost estimate

Department of Civil Engineering in association with ICI and IEI Students Chapter, jointly organized lecture on "**Preparation of Rough Cost Estimate of Building**" on August 23rd, 2017. Inauguration was made in the august presence of Dr R Malathy, HoD/Civil, and Er.S.Lakshmanan, Charted and Retired Civil Engineer cum Manager of Ramco cements Ltd. Dr. R. Malathy briefly explained the importance of this guest lecturer and introduced the keynote speaker. Er.S.Lakshmanan briefed about the preparation of rough cost estimate for the various types of buildings and the cost arriving methods for the earthquake buildings. In this guest lecture, the current government PWD rates were discussed. He discussed many shortcuts to arrive the building cost using thumb rule. This guest lecture was organised for the benefit of Civil Engineering final year students which is a part of their curriculum.

GUEST LECTURE ON "BYE-LAWS AND DEVELOPMENT CONTROL REGULATIONS"

A guest lecture was organized in Civil Department, under the guidance of Dr. R. Malathy, HOD/ Civil by Prof. M. Arivoli , Prof.P.Ashok kumar and Prof. Karthika for the final year and PG students and on the topic "Bye-Laws And Development Control Regulations"by Er. DS. Panneer Selvam, Proprietor of Sri Vijay Constructions, Salem on 28.08.2017. Almost 145 students attended the lecture and were enriched with the knowledge of how to get approval for building plans from local bodies, the procedures followed in dimensioning a building as per National Building Code of Practice and some information regarding online approval process through website which asks for necessary information with guidelines. He also added that this online procedure has made it easy to get approval in less than a month wherein offline procedures takes almost a year. The session was an interaction between the guest and the students and was made interesting by students asking various questions related to the topic as it is one among their curriculum. This lecture was a great opportunity for students who will become an entrepreneur and start up their own firm, as these were the basic knowledge required for an engineer.

Er. DS. Panneer Selvam delivering lecture

Guest interacting with the students

"KATTIDAM 2K17" FOR II YEAR STUDENTS

Sometimes you just need a little spark to help you to come up with flying colours. Civil engineering department of "SONA COLLEGE OF TECHNOLOGY" on **01/09/2017**(Friday) conducted a build expo "**KATTIDAM 2K17**" along with ULTRA TECH CEMENT ltd.

The main objective of the programme is not only to conduct the expo but also to make the students get into the direct contact with the shopkeepers/dealers to obtain the knowledge of the product with proper checklist, composition, properties,testing, marketing, relevant codebooks of the product and to take remedies to build interest in it. The construction materials were displayed by the students from 2pm to 4pm.The materials were displayed in category wise .There was a good explanation and participation by the students. The guest and the professors were very much impressed by the innovative products and the marketing services they went down.

At 4pm **Dr.R.Malathy**, Head of the Department of civil engineering delivered the welcome address and the guests were **Er.B.Selvakanthan** (President – Building Information Center), **Er.Venkatachelam** (Chairman – South Civil Engineering Association), **Er.R.Ganesan** (Secretary – CEA, Salem) addressed the students about the innovation in civil engineering and their future scope.

The valedictory function was then started and the prizes were distributed to best of 6 students whose products were innovative and adaptable for the present modern technology in construction. Certificates were issued to all the students for their participation and performance. Finally by 5pm we have concluded with vote of thanks.

Students explaining to Er.R.Ganesan, Dr.Jeyaprakash and Dr.R.Malathy

Prizes were distributed for innovative

CONCRETE DAY CELEBRATIONS 2017

The formation day of Indian Concrete Institute, September 7, is celebrated as "Concrete Day" all over India. Indian Concrete Institute is devoted to the betterment of structural concrete, interested in advancement of concrete, construction technology, concrete products, R&D, education in the field of concrete and construction technology. As part of concrete day celebrations, on behalf of ICI student's chapter, a special lecture on "Biomimetics in concrete" is organized on 7th September 2017. Dr.R.Malathy, HoD/Civil elaborately lectured about Biomimetics -studies biological processes can be effectively used in the development of innovative engineering materials and systems. The special lecture was attended by 140 students and many faculties.

Dr.R.Malathy, HoD/Civil elaborately lecturing

AWARENESS ON LMCTS MOBILE APP

An awareness session was organized for students of civil department, under the guidance of Dr. R. Malathy, HOD/ Civil on the usage of TN - LMCTS mobile app which is Legal Metrology Complaint Tracking System. Mr. Arul, Assistant Labour Inspector, Salem explained the importance of this app. He said it was developed for android phones which help consumers to file complaints against errant traders on overcharging, expiry date of goods, misbehavior, etc., It enables the Labour Department of TamilNadu to enforce Legal Metrology Act 2009 within 24 hours of filing complaint. The complaint can be uploaded as an image or video or conversation, etc., in which the details of the consumer will be confidential. He also encouraged the students to download it and share this awareness with society. He clarified the doubts raised by the students and it was an interactive session.

Mr. Arul, Assistant Labour Inspector guiding students about LMCTS mobile app

PG ORIENTATION PROGRAMME

The orientation program for ME construction engineering and management and Structural engineering students was conducted on 14.09.2017 with around 42 students. The program was organised by the respective class councellors Prof.P.Ashok Kumar and Prof.P.Priyadarshni. The idea of this program is to give a brief introduction to the students about the civil department and the various activities done here.

We started with the welcome address given by Dr.R.Malathy, Head of the Department and followed by the Inaugural address delivered by the chief guest of the day Mr.V.Sriraman, Founder, Prayojana Construction Management Training Institute. Following this the department activities like Board of Studies, Students chapters, Projects and internships, Continuing Education was explained by the respective faculty incharge.

An exclusive seminar was arranged for the students by the chief guest Mr.V.Sriraman on Construction Challenges in Civil Engineering field. We thank the management and Principal Dr.M.Usha for giving us this opportunity to conduct this program fruitful. We also extend our heartful thanks to Head of the Department Dr.R.Malathy for her support in taking forward this program and a special mention of thanks to all the faculty members of civil department for their involvement in this program.

Mr.V.Sriraman delivering lecture Construction Challenges

COMPETITIONS CONDUCTED BY ICI STUDENTS CHAPTER

The ICI student chapter of Civil engineering department has more than 300 student members. In order to arrange to train personnel for the needs of changing concepts in the technology many events are conducted under ICI banner. Group discussion is organized for second and third year students, which will be helpful for their activities. Prelims of Group discussion was conducted on 13.07.2017 for each group consisting 10 members. Those selected from the prelims, has participated in the final, which is judged by placement faculty. A multimedia event on the topic recent trends in civil engineering is also conducted on 14.07.2017 to exhibit student's technical knowledge. Photography event is conducted on the theme" Elevations of the campus" on 14.09.2017. More than 20 participants displayed their colorful images. The images were judged by Mrs.Kalaivani and Mr.Senthil from Sonaversity. The event "Elevation in Rangoli' had overwhelmed response from the students . More than 12 groups of students participated and drew the renowned elevation using rangoli. This event is judged by Dr.R.Malathy, HoD/Civil. The winners of these events are awarded with certificates.

Students participating in group discussion

Students with their photos

Mr.Senthil and Mrs.Kalaivani from Sonaversity judging the images

Students with their elevation

Students explaining about their theme

GUEST LECTURE ON "INTELLECTUAL PROPERTY RIGHTS AND INNOVATIONS"

A guest lecture on "**Intellectual Property Rights and Innovations**" was conducted in A.P.J.Abdul Kalam Hall on 16/09/17. **Dr.M.Kanthababu, Director, Centre for Intellectual Property Rights, Anna University, Chennai** has delivered the lecture session about patenting, copyright, trademark etc and had interacted about the clarifications that have araised to our students and faculty members.

Dr.M.Kanthababu, Director, delivering about patenting, copyright

CORE-2017

CORE 2017, an Intra department technical symposium, was organized by Association of Civil Engineering of Sona College of Technology on 19th September, 2017 at SONA PG Auditorium in the presence of students and faculty members of civil Engineering department. We invited the Mr.S.Venkataramani, Director, Quansys-project Management consultancy, Bangalore. He gave a special address and keynote address on the topic of "Think Beyond" - An intro to Project Management and Challenges. The welcome address by Dr.R.Malathy, HoD of civil Engineering department, SCT. Dr.V.Jayaparakash, Director-Industry-connect felicitated the gatherings. The program was organized by Mr.K.PRAKASH, Asst prof, coordinator of association of civil engineering. The paper presentation, poster presentation and multimedia were conducted by organizers of CORE. The certificates and medals were distributed to the students who won and participated in the events by our chief guest. The talk about CORE and vote of thanks was given by Mr. M.Hari Prasad, Student chairman –ACE.

Mr.S Venkataramani honors the students

GUEST LECTURE ON ENTREPRENEURSHIP DEVELOPMENT AND CAREER PLANNING

A guest lecture was organized in Civil Department, under the guidance of Dr. R.Malathy, HOD/ Civil by Prof. S. Priscil Nidhu for the final year students on the topic "Entrepreneurship Development and Career Planning" by Er. V. Balaji Subramanian, Managing Director, Sri Vijayabarathi Constructions, Dharmapuri on 20.09.2017. Almost 30 students attended the lecture who were interested in becoming an entrepreneur. He started the lecture by playing a video which motivated the students. The resource person briefed the various stages involved to become a successful entrepreneur and the skills and qualities needed. He also discussed the various hurdles that they have to come across. He then motivated the students by showing his completed projects which had many challenges. The session was interactive and interesting by students asking various questions to enhance their personality.

Er. V. Balaji Subramanian motivating students

POSTER PRESENTATION

Department of civil engineering organized poster presentation event on 17.09.17, 18.09.17 & 19.09.17 for the students of second, third and final year. The topics given to the students were "Construction Company Profile" to second years and "Innovations in Civil Engineering" for third and final year students. Students participated in teams and around 120 posters were displayed. The posters were judged by three panels of members accompanied by Dr. R. Malathy, Head of the Department for each year individually and the best posters were appreciated and awarded.

Dr. R. Malathy and faculties judging the posters

GUEST LECTURE ON RIVER TRAINING WORKS

Dr. A. Ranganathan explaining the components of river training works

A guest lecture was organized in Civil Department, under the guidance of Dr. R.Malathy, HOD/ Civil for the final year students on the topic "River Training Works" by Dr. A. Ranganathan, Research associate, IMTI, PWD Trichy on 22.09.2017. This lecture is one of the topics in irrigation engineering which is a part of the curriculum. Almost 120 students attended the lecture. The resource person started the session by giving small activities to the students which made them enthusisastic. He then explained the terms used in irrigation and briefed about the components of river training works. He discussed the conditions in constructing protective structures with real time examples. The students gained good knowledge about various new terms in irrigation. He then discussed the opportunities available for the students in PWD sector.

GUEST LECTURE ON REMOTE SENSING AND GIS TECHNOLOGIES

Dr. Abhijat Arun Abhyankar explaining about geostationary and sun-synchronous satellites function

Dr. Abhijat Arun Abhyankar, Associate Professor, NICMAR, Pune delivered a lecture on Remote Sensing and GIS Technologies to B.E. Civil; Engineering Students on 22.09.2017 afternoon for about one and a half hours. He explained what is remote sensing, how do geostationary and sun-synchronous satellites function and how resolutions (spatial, temporal, radiometric, and spectral) are determined from remote sensing satellite imageries. He also presented a simulation scene on flood inundation – rise in flood level and its effects. He worked out some examples on how pixel values - reflectance values - (0-255 grey levels) are derived from digital values. About 30 students attended the guest lecture. The students interacted with the Professor with much enthusiasm and learned the concepts very well.

TWO DAYS WORKSHOP ON "TALL BUILDINGS"

The two days workshop on the topic "Tall Buildings" was organized on 26th & 27th of September 2017 in the Department of Civil Engineering. The workshop was inaugurated and welcome address was given by Dr.R.Malathy, HOD / Civil. The workshop was organized by the second year M.E. Structural Engineering students. The resource person for this workshop was Md Ahmadullah Thakuria who is currently an Engineer at Civil Simplified division of Skyfi Labs, an education company founded by IIT Kanpur alumni, which works on

transforming textbook geniuses into productive engineers. He is part of the team of engineers that is responsible for the Development & Delivery of their Offline Project-based courses including the classroom training programs.

On the first day, lecture was given in the topic "Introduction about tall buildings and their importance". On the second day, hands-on training was given to all the participants using E-TABS software. In this workshop totally 42 students from M.E. Structural Engineering and two Civil Engineering faculties were benefited. The workshop enlightened the participants on Design of tall building using software.

Md Ahmadullah Thakuria in hands-on training

GUEST LECTURE EMERGING CONSTRUCTION TECHNOLOGIES & METHODOLOGIES

A guest lecture was organized in Civil Department, under the guidance of Dr. R. Malathy, HOD/ Civil by Prof. S. Priscil Nidhu for the students of V & VII semester on the topic "Emerging Construction Technologies & Methodologies" by Er. Ajit Sabnis, Managing Director, InCiCon-AG, Bangalore on 26.09.2017. Almost 30 students attended the lecture and were enriched with the recent techniques adopted in construction. He briefed about auto level plastering machine, form work techniques, scaffolding, tilt up construction technology, slip form techniques by showing them videos. He also explained the different phases of project management in construction and discussed about the emerging buildings which are made smart, intelligent, energy efficient, electrochromatic, biomimicry and earthquake resistant using advanced techniques. The session was interactive and interesting by students asking various questions related to the subject. The opportunities and advancements in construction field were discussed. He concluded by saying that we as civil engineers are responsible for what we construct and play a vital role in the development of Nation's growth.

Er. Ajit Sabnis briefing about auto level plastering machine, formwork techniques, scaffolding

CONGRATULATIONS

AICTE-CII IndPact Award for Best Industry Linked Department of the year 2017

Department of Civil Engineering Received Best ICI Student Chapter Award at state level-2017

Department of Civil Engineering Received Best IEI Student Chapter Award at regional level-2017

Dr .R.Malathy received "Best Paper Award-2017" at National level, from Indian concrete Institute for her publication in the ICI Journal.

Dr.P.Manikandan is specially recognized for highest paper Publication by Arunai international research foundation

Dr.P.Velumani is awarded for outstanding doctoral thesis in the field of concrete in ICI-UltraTech award 2017

A.Navien receiving gold medal for the project "solar tree" in National Design Research Forum

A.Navien and P.A.Revathi receiving 1st prize for solar tree project in Build Expo 2017-18

Lavina Anitha A receiving best NSS student award

DEPT. OF CIVIL ENGG. CONGRATULATES

Dr.G. Aruna, Assistant Professor, for the successful completion of PhD in the year 2017 Thesis Title: Behaviour of Cold-Formed Steel Built-Up closed Columns Under Compression

TOPPERS LIST

Name	Rank
VII Semester	
LakshmiPriya C	I
Susmitha T	II
Shaakirah S	III
Sriswetha C	III
Kavipriya R	III
Lavanya T	III
V Semester	
Revathi P A	I
Menaka B	II
Vijay G	II
Kanimozhi P	III
Arumugam Maharaja M	III
Shushil Prasad Chaurasi	III
III Semester	
Chittal B	I
Sathya S	I
Paras Kumar Gupta	II
Soumya s	III