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Green Diwali

CIVIL ENGG NEWSLETTER

AADHARA

Edition of Sept./Oct. 2019

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An exclusive look at this unique event which signifies the word "sustainable"

STUDENTS' SECTION

COCENA – TALENT QUIZ COMPETITION 2019

4th Year Civil Engg students Mr. M . Sadhasivam and M s. C.U. Lavanya have won first prize in Talent search quiz competition 2019 organized by Coimbatore Civil Engineers Association (COCENA) held on 13/09/2019.

This is the second consecutive time our college has won this quiz competition following the brilliance of Mr. T. Moun karthick and Mr. S Krishna kumar last year.





SKCET- CHESS ZONALS 2019

Our SKCET chess team won third place in Zonal level Chess competition 2019 held at SKCET on 05/09/2019.

One among the victorious team was our 2nd year civil student Ms. Arundhathi.



ENGINEER'S DAY CELEBRATION

Civil Engineering Department exhibited students' innovative ideas and paid a fitting tribute to Er.M.Visvesvaraya as a part of Engineer's Day 2019.

The teams displayed a wide array of innovative projects and the winners were awarded prizes and cash.





EMICA2K19

3rd Year Civil Engineering students Mr. R. Shankar and Mr. S. Santhosh bagged the first prize in "Technical quiz" in the national level technical symposium EMICA 2K19 held at Tamilnadu College of Engineering. The same team won third prize in "Paper presentation" and second prize in "Technical Connection".



IIC DEBATE


As a part of Institution Innovation Cell (IIC) celebrations, Civil Engg Department organized a debate on "Innovation, an epitome of evolution and prosperity" and students from various years participated in the debate.

SRI KRISHNA COLEGE OF ENGINEERING AND TECHNOLOGY
Coimbatore

Department of Civil Engineering

Institution's Innovation Council

Innovation day- Dr. A.P.J Abdul Kalam's birthday
(15- Oct)



Debate on the topic
"Innovation an epitome of evolution and prosperity"

Venue: C4-17
Date: 27.09.2019
Time: 11 am -12 pm

Coordinators numbers:
8489667953
9080235472



FACULTY CONTRIBUTION

FACULTY CONTRIBUTION

VIGILANCE AWARENESS WEEK

On behalf of Civil Engineering Association, a guest lecture has been arranged on the topic of "Integrity-a way of life" was given by Mr. C. Rajesh, Deputy superintendent of Police, Coimbatore as a part of Vigilance Awareness Week 2019

He addressed the students about the meaning of Vigilance and Anti-corruption, ill effects of corruption, corruption index and ways to reduce corruption.



FACULTY PUBLICATION

Mr. S. Prabhath Ranjan Kumar and Mr. R.Vighnesh & M s. S. Maiyuri published a paper "Self Healing of mirco cracks in linings of irrigation canal using coir fibre reinforced bio-concrete" in International Journal of Innovative Technology and Explor ing Engineering (IJITEE). It is available online for download in the journal website.

International Journal of Innovative Technology and Exploring Engineering (IJITEE)
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Self Healing of Microcracks in linings of Irrigation Canal Using Coir Fibre Reinforced Bio-Concrete

S. Prabhath Ranjan Kumar, R. Vighnesh, G. Karthikeyan, S. Maiyuri

Abstract— Development of cracks in the concrete leads to mitigation of the strength and durability of the concrete structures. This paper deals with the application of self-healing concrete for an irrigation canal in a village near Erode. The self-healing of concrete is a result of calcite precipitation by bacteria (*Bacillus Megaterium* MTCC 2353) mixed with natural fibres. Here, the compressed soil made irrigation canal which has been used by the farmers for agricultural purpose over a century was lined with the self-healing concrete in order to reduce the evaporation and infiltration of water into the soil thereby improving and increasing the functionality yield of the canal. A controlled crack width is assured by means of the fibres used which substantially increase the tensile capacity of the concrete. The properties of the fibre reinforced bio-concrete was evaluated by conducting flexural and compression tests along with study of amount of crack-healing in concrete with and without the use of bacteria.

Keywords: *Bacillus Megaterium* MTCC 2353, Compressive Strength, Flexural Strength, Alkaliphilic, XRD.

I. INTRODUCTION

Concrete is an essential component of construction materials used in most of the buildings. Also Concrete is a material which possesses micro cracks within its matrix due to a variety of reasons, one being shrinkage. This creates an opportunity for the hostile materials gases to go through its pore structure and severely dent its durability. In order to reduce such an access, bio concrete may perhaps be used as one of the solution. It is a unique category of concrete in which the calcite precipitating bacteria is used along with the typical ingredients of concrete. Calcite precipitation will augment the density of concrete, thereby increasing the strength in addition to the durability of concrete. Due to microbial activities of the bacteria, microbologically induced calcite precipitation (MICP), a highly impermeable calcite layer is formed which increases the performance of concrete structures. This microbial concrete presents a potentially enormous lengthening in service-life of infrastructure, substantially reducing the maintenance costs

and also considerably increases the safety of structures. The Bacterial Concrete can be made by embedding bacteria into the concrete that are able to constantly precipitate calcite. This phenomenon is called Microbiologically Induced Calcite Precipitation (MICP).

The study is conducted on investigation of the usage of two component bio chemical healing agent which involved impregnation of clay pellets with calcium lactate and microorganisms under vacuum. The oxygen measurements within the concrete showed that the bacteria remain feasible and functional for several months. The bio concrete healed a crack of 0.46 mm width in comparison to 0.18 mm autogenously healing of normal concrete. [5]. The experiments were conducted on the compression strength and water permeability of self-healing concrete (*Bacillus* species). The results showed an enhancement in the compression strength and reduction in water permeability of the self-healing concrete when compared to that of the typical concrete [6]. Various tests conducted on concrete mixed with different bacterial stains (4 types of *Bacillus* species) to check its capacity to improve compression strength as well as the self-healing capacity showed that the *Bacillus Megaterium* bought from MTCC gave the highest strength as well as healed the crack efficiently. [8]. The examination on the ability of the bacteria to stay alive at elevated temperatures showed that the bacteria, extracted from soil sustained up to 90°C. The maximum temperature recorded inside concrete was 70°C. [10]

This study emphasizes on the self-healing concrete which can be preferred in construction of the lining of the canal. This special concrete has the capacity of healing cracks up to width of 0.4 mm which prevents the loss of water from the canal. This healing capacity of the concrete is provided by the *Bacillus Megaterium*. The bacterial concrete must be cured in a separate curing medium which contains calcium chloride and urea mixed in normal water to improve the calcite precipitation of bacteria.

II. MATERIALS AND METHODOLOGY

A. Materials

1. Cement

Ordinary Pozzolano Cement (OPC) of 53 Grade conforming to IS: 12269-1987 was used throughout the project. Cement was stored in air tight bags to prevent lumping due to the presence of moisture. The preliminary tests of cement were performed and results were obtained to

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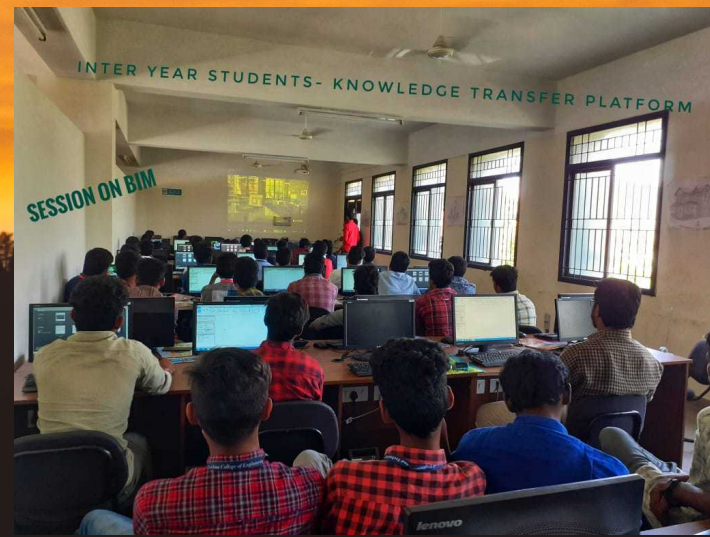
KNOWLEDGE TRANSFER

BIM WORKSHOP

Final Year Civil engineering students gave a session on "Intro to REVIT architecture" to their second year juniors. REVIT and it's BIM application was a part of the subject "ACAP", handled by Prof. A. Jesudass. This session proved to be a platform for knowledge transfer.

Appreciation must be given to the following final year students for this session.

Mr. C. Mukesh
Mr. V. Prabhakaran
Mr. N. Sarath kumar



BOARD OF STUDIES

The 8th BoS meeting was organised by the Civil Engineering department for finalizing the curriculum and syllabi for the regulation 2018.

BoS Members

- 1) **Dr. R. Thenmozhi**, Professor and Head, Civil Engg, GCT, Coimbatore.
- 2) **Dr.G. Prince Arul Raj**, Professor and Director, E&T, Karunya University,
- 3) **Dr. S. Kalirajan**, JGM and Head, Special Initiatives (Nuclear) - L&T Construction, Chennai.
- 4) **Dr. V. G. Kalpana**, Assistant Professor, CIT, Coimbatore



GREEN DIWALI



Powered By



A TOUCH OF GREEN

"To serve the people who are in need, within our limits" has been the single point agenda of EAGAI - Social Club. We have been celebrating green diwali with the support of the college, department, students and intra departmental clubs like CESA studio - Photography club, Manvaasam - Eco green club. This event has been organised for the past three years in places like Dhumanur, Kondanur and Panapalli government schools located near Anaikatti, Coimbatore. The various events we conduct in green diwali are mainly to provide awareness of using crackers and giving them knowledge of celebrating the "Festival of lights" in an environmentally friendly manner. The activities are providing lunch for the children, conducting games, cultural dance, singing and finally awareness of zero plastic."

**- PRABHATH RANJAN KUMAR
FACULTY COORDINATOR - EAGAI**



SKCET Civil Engineering department "Green Diwali" Celebrations at Government Primary school, Panapalli, Coimbatore.

The various events which were organized were

1. Awareness of "Green Diwali"
2. Awareness of rainwater harvesting.
3. Awareness of zero plastic
4. Conducting games and providing lunch for children.
5. Distribution of prizes



"BE WHO YOU ARE
CREATED TO BE
AND YOU WILL SET
THE WORLD ON
FIRE"



MEDIA FRENZY



SKCET-Inanintha Karangal celebrate 'Green Deepavali' at Anaikatti tribal village

Coimbatore, Oct 23: About 50 students and faculty members took part in a joint effort, part of the event which included Green Diwali, and safeguarding birds. Panapalli Village. The students to refrain from bursting crackers to participate in various events conducted at Panapalli School, Panapalli Village. The



Tribal village celebrates green Diwali

Express Features

The students of Sri Krishna College of Engineering and Technology, along with the social club Eagai, eco-green club Manvaasam and NGO Inanintha Karangal celebrated a green Diwali with tribal schoolchildren and people at Panapalli near Anaikatti recently.

Nearly 50 students and faculty members conducted various events in the village following the theme of celebrating a green Diwali. Awareness camps on rainwater harvesting, air pollution and the evils of plastic pollution, a tree plantation drive, games for teachers and students, and a tribal dance show were conducted.

The event witnessed a celebration without bursting crack-



Nearly 50 students and faculty members conducted various events in Panapalli village

ers. The public was informed of the ill-effects of firecrackers on the environment and local fauna like birds.

Prizes were distributed for the winners of each event. Nearly 30 students from classes 1 to 5 from Government Primary School, Panapalli participated in various events. J Janet, principal of the school, and head of the Department of Civil Engineering, Sri Krishna College of Engineering and Technology, D Maruthachalam took part in the programme.



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Green Diwali celebrated with tribals



Students of the department of civil Engineering of Sri Krishna College of Engineering and Technology celebrated 'Green Diwali' among tribal school children and tribal people at Panapalli village near Anaikatti. Social club 'Eagai', eco club 'Manvaasam', CESA Karangal were part of the celebrations. Around 50 students and faculty members conducted various events, such as awareness sessions on rainwater harvesting, air pollution, plastic pollution, a tree plantation drive, games for teachers and students and tribal dance. The event witnessed the Diwali celebration without firing crackers and also asked public and students to avoid crackers to protect the environment by reducing pollution. Prizes were distributed for winners of each event. Joshua from Inanintha Karangal, principal of the college J Janet, head of the department of civil engineering Maruthachalam were also present.

Workshop on business analytics



Bharathiar School of Management and Entrepreneur Development (BSMED), Bharathiar University, along with 'MakeIntern & Echoes', an event of IIM Kozhikode, organised a five-day workshop on Business Analytics from October 14 to 18. The programme sought to give a holistic understanding on statistical and data science and its applications using Python platform. G Barani, associate professor, welcomed the gathering. Rupa Gunaseelan, professor and director in charge, BSMED, delivered the presidential address where she spoke about the importance of machine-learning techniques. The trainer, data scientist Kanchan Bhowmik, delivered the inaugural address. He spoke about the importance of analytics and how it

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கோவை **சுரல்**
 மார்ச் 23, 2019

ஆனைக்கட்டியில் பசுமை தீபாவளி

பெ.நா.பாளையம், ஆக். 18-ஆனைக்கட்டியில், இயற்கையை காக்க வலியுறுத்தி, பழங்குடியின மக்களின் குழந்தைகள் பட்டாக வெடிக்காமல், பசுமை தீபாவளியை கொண்டாடினர்.

ஆனைக்கட்டி வட்டாரத்தில், உட்கும் மேற்பட்ட மலை கிராமங்கள் உள்ளன. இங்குள்ள பண்புள்ள மலைக் கிராமத்தில் வசிக்கும் பழங்குடியினரை ஒதுக்கிவைத்து, பட்டாக இல்லாத பசுமை தீபாவளியை, கிருஷ்ணா இன்ஜினியரிங் கல்லூரி சிவில் துறை மாணவர்கள் கொண்டாடினர்.

இதில், பங்கேற்ற குழந்தைகளுக்கு, வினாக்கள் கார்ட்களால் தயாரிக்கப்பட்ட பென்சில்கள் வழங்கினர். அதன் பின் பக்கத்தில் ரப்பருக்கு பிளாக கத்திரி, வெண்கலம், பச்சை மினகம் உள்ளிட்ட விதைகளை உள்ளிட்டு இலட்டுகளை செய்து, கல்லூரி மாணவர்கள், இவ்விழாவை நடத்தி வருகின்றனர். விழாவில், கிருஷ்ணா இன்ஜி., கல்லூரி சிவில் துறையை சேர்ந்த, மிகவும் மேற்பட்ட மாணவர்கள் கலந்து கொண்டனர்.





AWARDS SECTION



STAR FACULTY AWARDS

Best Faculty

Dr. P. Saravanakumar

Contributor to the department

Mr. M. R. Ezhil Kumar

Special Contribution

Mr. S. Prabhath Ranjan Kumar,
Mr. S. Sadheesh and
Mr. V. Yogeshwaran.



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INTO THE SUNSET

