



CIVIL ENGINEERING NEWSLETTER

AADHARA

EDITION OF MAY/JUNE. 2022

FEATURES:

STUDENTS' SECTION

FACULTY CONTRIBUTION

OSCs

VISION OF THE DEPARTMENT

TO BE A CENTRE OF EXCELLENCE IN CIVIL ENGINEERING EDUCATION THROUGH FULL - FLEDGED LEARNING EXPERIENCE ALONG WITH RESEARCH

MISSION OF THE DEPARTMENT

TO ACCOMPLISH OUR VISION, WE ARE COMITTED TO

- PROVIDE HIGH QUALITY TECHNICAL EDUCATION DOCTORAL PROGFAMMES IN CIVIL ENGINEERING.**
- CREATE EXCELLENT INFRASTRUCTURAL FACILITY AND STATE-OF-THE-ART LABORATORIES.**
- ENCOURAGE FACULTY AND STUDENTS TO CARRY OUT SOCIALLY RELEVANT RESEARCH THROUGH COLLOBORATION WITH INDUSTRY.**
- INCULCATE ETHICS AND ENSURE COMITTMENT TO THE SOCIETY WITH LEADERSHIP QUALITIES.**



STUDENTS' ACHIEVEMENTS

IITM SUMMER FELLOWSHIP PROGRAMME 2022

**STATE LEVEL NATURAL BODY BUILDING
COMPETITION**

STUDENT INTERNSHIP

FACULTY CONTRIBUTION

FACULTY CERTIFICATION

FACULTY R&D PUBLICATION

FACULTY SUPERVISOR RECOGNITION

FACULTY PhD VIVA VOCE

OTHER SIGNIFICANT CONTRIBUTIONS (OSCs)

WEBINAR

STUDENTS' ACHIEVEMENT

Ms. M. Oviyaa has been selected for the IITM Summer Fellowship Programme 2022 in the Building Technology & Construction Management (BTCM) stream of Department of Civil Engineering. The Fellowship is for a period of 60 days from 23rd may 2022 to 22nd 22nd July 2022 with a stipend of 6000 rs per month.



Prof. R G Robinson
Head of the Department

No.F.Civil/SF/2022
Date: 26.04.2022

To

Ms Oviyaa M

Dear Candidate,

Sub: Summer Fellowship Programme 2022 in IIT Madras from 23rd May 2022 to 22nd July 2022 - Reg.
* * *

I am happy to inform that you have been selected for the IITM Summer Fellowship Programme 2022 in the Building Technology & Construction Management (BTCM) stream of the Department of Civil Engineering based on your credentials.

Your summer fellowship is for a period of 60 days from 23rd May 2022 to 22nd July 2022. Please indicate the duration you will be available for the internship. Please note that you should be available for a minimum period of one month.

Those who need hostel accommodation please log on to the following link: <http://hosteldine.iitm.ac.in/iitmhostel>. Requests coming through this portal will only be entertained. You should also upload the offer letter for verification. The room allotment will be made on first-come-first basis subject to availability. After approval, you will be intimated of the allotment by email that you have provided in the online request form.

You will be paid a stipend of Rs. 6000/- p.m for a maximum period of two months. **You may have to pay approximately Rs.320/- per day in advance** for lodging and basic boarding charges on sharing basis. The payment can be made at the time of reporting to the campus.

Confirm your acceptance and date of joining by return mail to the HOD Office, Department of Civil Engineering email ID: ceoffice1@civil.iitm.ac.in on or before 4.30 PM on 28.4.2022.

With best wishes,

Yours sincerely,



(R G Robinson)
Head of the Department

STUDENTS' ACHIEVEMENT

Second year Civil Engineering student, Mr. M. Sanjay has participated and won 2nd prize in State level natural bodybuilding Competition in the 80kg category held at 17th April 2022.



Second year student S. Diveysh has undergone an Two week internship at Corner stone, Doha, Qatar. He was involved in Supervision works in construction activity of JW Mariot (48 storied high rise Commercial/ Residential building).



FACULTY CONTRIBUTION

FACULTY CERTIFICATION:

Mr. S. Sadheesh, Assistant Professor, Department of Civil Engineering has successfully completed a course on "Renewable Energy and Green Building Entrepreneurship" authorized by Duke University and offered through Coursera.




Mr. R. Vighnesh, Assistant Professor, Department of Civil Engineering has Successfully completed a course on "Primavera P6 Professional Project Management" authorized by Oracle.



FACULTY R&D PUBLICATION:

Mr. S. C. Boobalan, Assistant Professor, Department of Civil Engineering along with final year students M. Salman Shereef, P. Saravanaboopathi and K. Siranjeevi have published a research article titled "Studies on Green Concrete - A Review" in Materials Today: Proceedings.



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journal homepage: www.elsevier.com/locate/matpr

Studies on green concrete – A review

S.C. Boobalan*, M. Salman Shereef, P. Saravanaboopathi, K. Siranjeevi

Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Coimbatore 641008, India

ARTICLE INFO

Article history:
Available online xxxxx

Keywords:
Green concrete
Recycled materials
Industrial wastes
Geopolymer concrete
Eco-friendly bricks

ABSTRACT

Concrete is one of the most significant ingredients in the construction industry. Though it has numerous advantages such as durability, resilience, fire-resistant, strength, energy-efficient, lower carbon footprint and it causes a huge hidden impact on the environment due to its emission of carbon dioxide into the environment. In this review paper, we have discussed about the material selection criteria, industrial waste products and recycled waste materials for making the green concrete. The strength parameters, performance indicators and durability parameters of green concrete mix proportions partially replaced by the recycle, industrial and agricultural waste products. The objective of this comprehensive review is to give a broad idea of green studies carried out in the recent past and making the green concrete in future by fulfilling the entire shortcomings from the previous studies. And also, this review gives a comprehensive analysis of various waste materials to be partially replaced with concrete for making that to be sustainable environment friendly.

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Selection and peer-review under responsibility of the scientific committee of the International Conference on Advances in Construction Materials and Structures.

1. Introduction

Concrete is made by combining various ingredients such as cement, aggregates, water, and admixtures. Due to the infrastructure development in recent times, we are utilizing too much cement for constructing concrete structures. This development indirectly affects our environment in the way release of more carbon dioxide, greenhouse gases, and toxic substances into the atmosphere. Various researchers are identifying the enormous sustainable materials to add in the concrete to make the concrete sustainable and environment friendly. One such new innovation is Green Concrete, which was invented in the year of 1998, could be made with industrial and non-commercial waste products and utilizes the least amount of energy for its production, release a reduced amount of carbon dioxide into the environment [1]. The key advantage of making the green concrete is utilizing the industrial wastes, reduced carbon dioxide emission, lasts longer period and reduces the energy consumption [3]. The concrete that utilizes the waste materials as ingredients or its production process not leading to the destruction of the environment is calling it as green concrete. The proper disposal of commercial by-products is becoming a very big concern for many peoples and industries nowadays because of the increased volume of wastes generated and also operating cost of landfills is increasing day-by-day [23]. Nowadays many researchers and industries coming forward to replace the partial amount of cement with a few of the supplementary cementitious materials for reducing carbon dioxide emissions. They implemented various strategies to improve the sustainability of concrete [16]. The major advantage of green concrete is achieving strength in a very short time and the shrinkage rate would be lesser when compared to the conventional concrete made from Portland cement. Structures built with green concrete achieve greater corrosion resistance and are fire-resistant which would make the life of the structures becoming increased [18]. Adeed Khan et al (2020) discussed about the utilization of waste materials making the greener concrete. The green concrete mechanical properties and microscopic analysis conducted expressed the perfect hydration process and effective concrete bonding [2]. Waiching Tang (2020) discussed about the advances in Green concrete through its theoretical, modeling and experimental studies of the sustainable composite concrete. He focused mainly on the durability and long term performance of the concrete, structural reliability and modeling studies [6].

Sureshkumar et al. (2019) conducted the review of green concrete studies and discussed about the various recycled materials and industrial waste products in the manufacture of green concrete [7]. The broad review of the green concrete for the future had been conducted and discussed about the Life Cycle Assessment

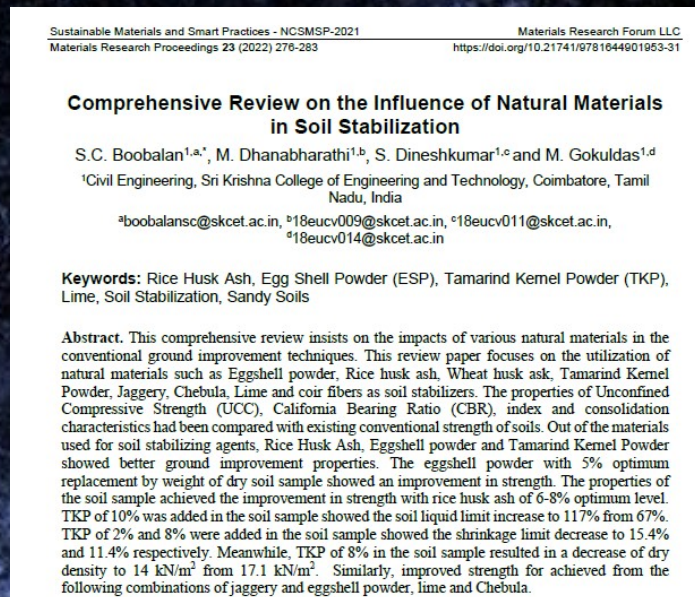
* Corresponding author.

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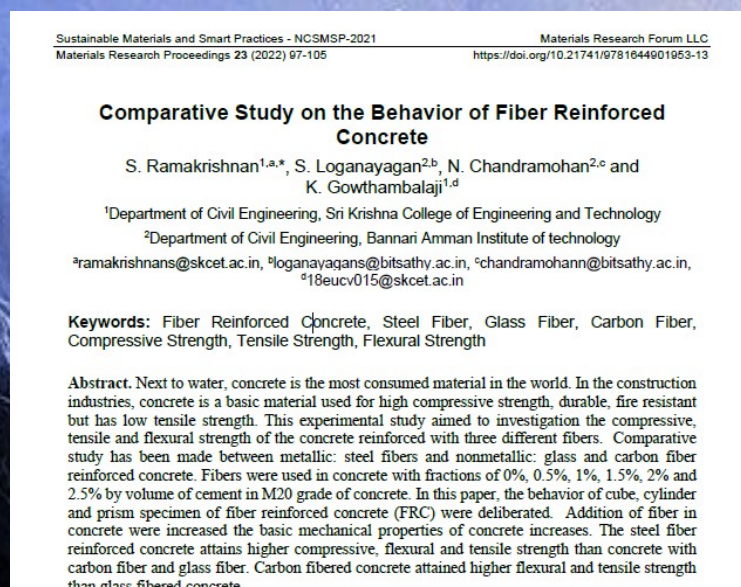
Please cite this article as: S.C. Boobalan, M. Salman Shereef, P. Saravanaboopathi et al., Studies on green concrete – A review, Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2022.04.392>

FACULTY R&D PUBLICATION:

Mr. S. C . Boobalan, Assistant Professor, Department of Civil Engineering along with Final year Students M. Dhanabharathi, S. Dineshkumar and M. Gokuldass have published a research article titled "Comprehensive Review on the natural materials in the soil stabilization" in Materials Research Forum LLC.



Dr.S. Ramakrishnan, Associate Professor, Department of Civil Engineering along with Final Year students K. Gowthambalaji have published a research article titled "Comparative study on the behaviour of fibre reinforced concrete" in Materials Research Forum llc.



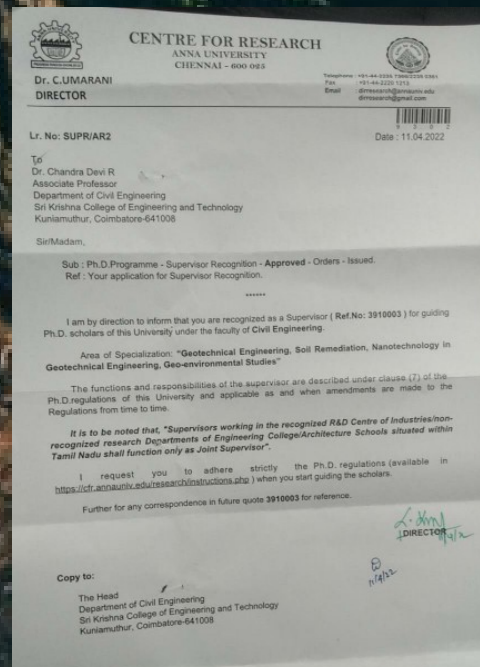
FACULTY R&D PUBLICATION:

Dr. Maruthachalam and Mr. S. C. Boobalan, Professor & Head and Assistant Professor, Department of Civil Engineering have published a Research article titled "Investigation on influence of size of aggregate and effect of strength on altering the ratio in low nominal concrete mixes" in Materials Today: Proceedings.



FACULTY SUPERVISOR RECOGNITION:

Dr. R. Chandra Devi, Associate Professor, Department of Civil Engineering has been recognized as supervisor for guiding PhD Scholars of Anna University under the specialization of Geotechnical Engineering, Soil remediation and Geo - Engineering studies.



PhD VIVA VOCE

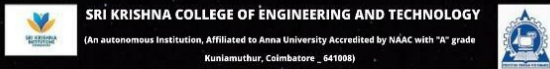
Mr. M. R. Ezhilkumar, Assistant Professor of Department of Civil Engineering has successfully defended his thesis on "Study on vertical profiles of fine and coarse particulate matters in diverse street geometries of Chennai metropolitan city" and was highly lauded by the committee members.



OSCs

Webinar on "ROAD TO INDIA SKILLS 2023"

Institution Innovation Council (IIC) of Civil Department organized a webinar on "Road to India Skills 2023" on 16th May 2022. Ms. Ajanya Ashok, BIM Labs was the resource person. Ms. Ajanya Ashok delivered a brief lecture on Digital Construction and Building Information modeling, process and workflow followed in the BIM practice in practical conditions. Different tools used in BIM were discussed and important BIM- related projects in india were spotted. She showed some light on the benefits of BIM and ways to build a career using BIM.



Webinar on
ROAD TO INDIA SKILLS 2023
Many Aspirations.
One Platform

DATE: 16/05/2022

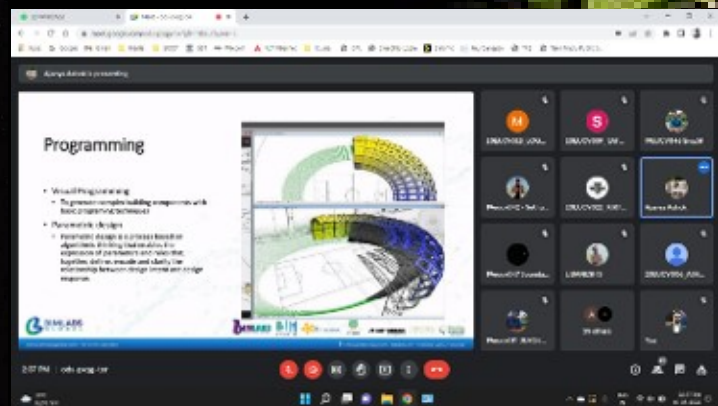
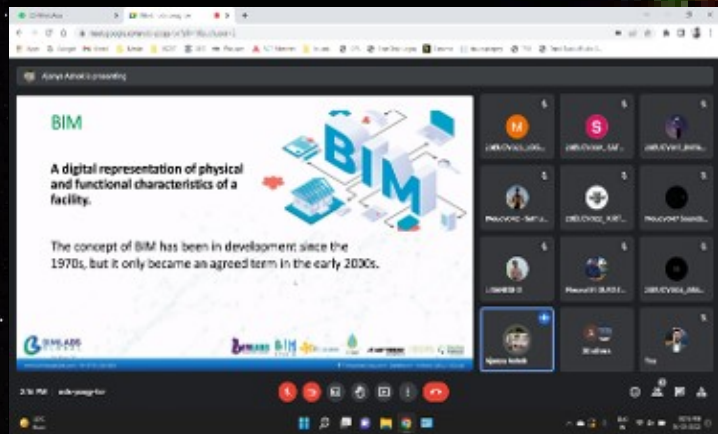
EVENT FLOW:

DURATION: 2.30 Hours **INAUGURATION:** 20 Minutes

TIME: 2 to 4.30 pm

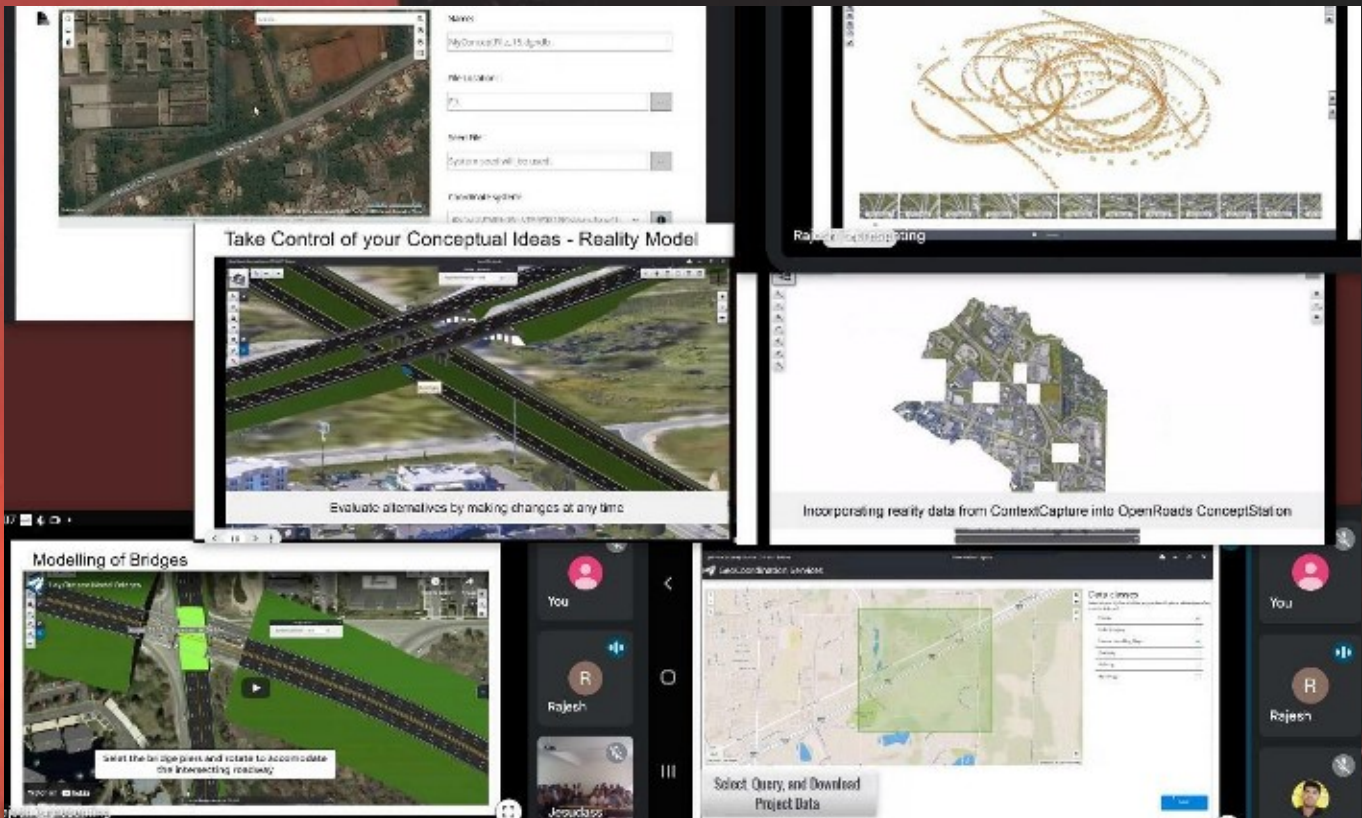
INAUGURATION OF THE PROGRAM: Dignitaries from Chandigarh University, BIMLABS and NSDC

MEET LINK: <https://meet.google.com/ods-pxqg-txr>



Webinar on "INNOVATIONS IN ROAD DESIGN USING BENTLEY OPEN ROADS"

Research & Innovation Cell (R & I), Department of Civil Engineering in association with Institutional Innovation Council (IIC) organized a webinar for the second year Civil Engineering students on "Innovations in road design using Bentley Open Roads" on 09th may 2022. Mr.S.Rajesh kumar, Director, Techs Apps Consulting Ltd. was the resource person. Students were given broad exposure on open roads concepts and its significance.



2018 - 2022 FAREWELL PHOTO:



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