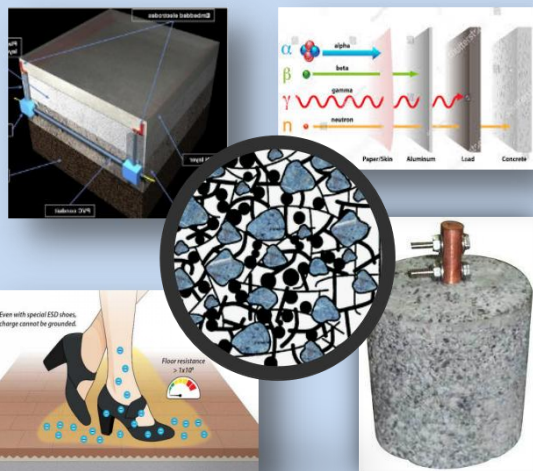


Online Advanced Course on Conductive Green concrete for Sustainable Infrastructure (ConGSI2023)

15th-16th February 2023



Organized by

**CSIR-Structural Engineering Research
Centre, CSIR Campus, Taramani
(An ISO 9001:2015 Certified Organization)
Chennai-600113, India
Website: www.serc.res.in**

Overview

CSIR-Structural Engineering Research Centre, Chennai, is one of the national laboratories under the Council of Scientific & Industrial Research (CSIR), India. CSIR-SERC has built-up excellent facilities and expertise for the analysis, design and testing of structures and structural components and development of new materials. As a part of the skill development program of CSIR, advanced courses are conducted at CSIR-SERC with the motive of creating skilled work force for the industrial/societal requirements. This course envisages to expose the audience to the recent advances in the new material development in the construction industry, especially, using industrial solid wastes.

Background

Sustainable infrastructure refers to green/smart buildings focusing on smart technologies, use of sustainable and durable building materials in construction. Towards developing smart cement composites, electrically conductive cement composites are new class of composites having many applications like self sensing, de icing, electromagnetic interference shielding, earthing, anti static, cathodic protection etc. Conductive cement composites are conventionally made using costly materials like carbon nano fibres, carbon nano tubes, graphite, graphene etc. However, industrial solid wastes such as carbon black, high carbon content ash, copper slag, metal shavings etc. can be used in the development of conductive composites. The composites made using industrial solid wastes not only make it cost effective but also make this composite environmental friendly by providing a new utilization for high carbon industrial solid wastes.

Objectives

The primary objective of the course is to provide an opportunity for the researchers, students, practicing engineers, academicians and consultants, belonging to the public and private sector organizations/institutions, and other engineering professionals to familiarize themselves with the term green cement composites and applications of electrically conductive cement composites in different fields. The course discusses in detail, the types of green concretes, applications of conductive cement composites such as self sensing, de icing, electromagnetic interference shielding, earthing and cathodic protection etc. Non destructive testing applications in conductive overlay concrete is also discussed.

Course contents

The course is envisaged to provide the necessary background and exposure on the electrically conductive concrete applications in different fields

Discussion Topics

- Green concrete
- Sustainability
- De icing
- Earthing/Grounding
- Cathodic protection
- Electromagnetic Interference shielding

Scan the QR code for
Course Promo



Fee

Rs.1000/- per participant inclusive of GST for Indian delegates and US\$25/- for foreign delegates. Presentation material (pdf format) and participation certificate shall be provided to all the registered participants. The brochure and details of the registration can be downloaded from the CSIR-SERC web site

<https://serc.res.in/course>

Registration

The course registration can be completed via online (<http://forms.serc.res.in/view.php?id=93656>). Please choose/select the intended course title in the online registration form and fill all the particulars and pay the registration fee by clicking the SBI collect in the registration form.

Prerequisites:

The registrants can ensure adequate knowledge on the background to the course contents through academic qualifications/working experience to fully exploit the benefits of attending the advanced course.

Requirements for the online mode:

Desktop/Laptop/Smartphone with good internet speed and sufficient data pack. A web link will be sent to the registered participants for joining the course.

Course coordinators, (ConGSI)

Dr (Ms). T. Hemalatha and Dr. S. Bhaskar

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Dr. N. Anandavalli, Director, CSIR-SERC

Inaugural Address



Speakers of the course

Conductive Green concrete for Sustainable Infrastructure

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Dr. S. Bhaskar, Chief Scientist, CSIR-SERC

**Electrically conductive cement composite for corrosion protection of steel reinforcement
Capabilities of conductive concrete in deicing the pavements**



Dr. T. Hemalatha, Principal Scientist, CSIR-SERC

**Conductive concrete using conventional and unconventional materials
Electrical conductivity of cement composites/concrete-Measurement techniques**



Dr. Prakash Nandagopalan, Associate Professor, IITB, Mumbai

Electromagnetic pulse shielding of conductive concrete



Dr. B.S. Sindu, Principal Scientist, CSIR-SERC

Performance based design of cementitious composites for sustainable infrastructure



Shri. G. Ramesh, Principal Scientist, CSIR-SERC

Non destructive testing techniques in the assessment of performance of conductive concrete



Dr. K. Senthilkumar, Scientist, CSIR-SERC

Conductive controlled low strength material (CLSM)



Shri. A. Saravanan, CEO, Ventura Engineering Services, Chennai

Earthing of structures- Importance and different techniques in practice