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DEPARTMENT OF MECHANICAL, ELECTRICAL & ELECTRONICS AND CIVIL ENGINEERING

CIRCULAR

Ref: PERIIT/MECH/ 2022-2023/EVEN/14 Date: 01/04/2023

The Department of Mechanical, Electrical & Electronics and Civil Engineering is organizing International Conference on **"CORE ENGINEERING AND TECHNOLOGY"** on 04-05-2023 (Tuesday) at 10.00 am.

I request all the students to attend the Conference and expecting your cooperation throughout the session.

HOD-MECH

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4 MAY 2023
10 AM

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ORGANIZES

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CORE ENGINEERING & TECHNOLOGY - ICCET'23

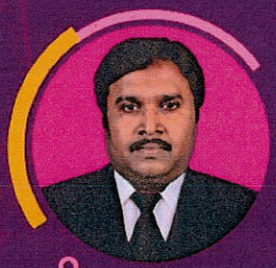
We cordially invite you to join with us

Chief Guest

Dr. C. SHARMEELA
Professor,
Dept of Electrical and Electronics Engineering,
Anna University, Chennai.

INAUGURAL

Dr. R. SENTHIL
Professor & Former Head of the Department,
Dept of Civil Engineering,
Anna University, Chennai.



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Professor & Head of the Department,
Dept of Mechanical Engineering,
Anna University, Chennai.

VALEDICTORY

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System Consultant
Chelchris Infotech Pvt Ltd,
UK

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Dr. R. Divahar, Associate Professor and Head of Department of Civil Engineering, AarupadaiVeedu Institute of Technology.

Dr. S. Senthil Selvan, Professor, SRM Institute of Science and Technology, Chennai.

Dr. R. Vidjeapriya, Associate Professor. Anna University, Chennai.

Dr. B. Ramesh, Professor, Saveetha School of Engineering. Chennai.

Dr. Balaji, Professor, Panimalar Engineering College, Chennai.

Dr. Dinakaran, Professor, S.A Engineering College, Chennai.

Dr. R. M. S. Parvathi, Professor & Dean-PG,Head-CSE, Sri Ramakrishna Institute of Technology, Coimbatore.

Dr. S. Surya, Assistant Professor (Sr.G), Mepco Schlenk Engineering College, Sivakasi.

Dr. B. T. Geetha, Associate Professor, SIMATS, Saveetha University, Chennai.

Dr. D. Vijendra Babu, Professor, Department of ECE, Vellore Institute of Technology, Vellore.

Dr. S. Lakshmi, Associate Professor, Department of EEE, Bharath Institute of Higher Education & Research, Chennai

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4TH MAY 2023

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ON

CORE ENGINEERING AND TECHNOLOGY

ORGANIZED BY

DEPARTMENT OF MECHANICAL ENGINEERING,
ELECTRICAL & ELECTRONICS ENGINEERING
AND CIVIL ENGINEERING

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Registration Form

Name of the Authors	D. GokulNath R. Umamaheswari M. Umesh
Department	Electrical and Electronics Engineering
College Name	Agni College of Technology
Paper Code	EEE 02
Title	Advanced Driver Assistance System for Distance Control and Collision Avoidance
Payment - Yes / No	Yes

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Registration Form

Name of the Authors	S. Sunil Kumar S. Safrin Nooryahan S. Shanmugasundharam
Department	EEE
College Name	Agni College of Technology
Paper Code	EEE 10
Title	Accident Prone zone Indication System with Automatic Speed Control
Payment - Yes / No	Yes

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Registration Form

Name of the Authors	Jayalekshmi Ramakrishnan, Sathish
Department	EEE
College Name	Sri Ramanujar Engineering College
Paper Code	EEE 42
Title	Design and Modelling Hybrid Renewable Energy System Based Electric Vehicle Charging Station.
Payment - Yes / No	Yes.

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Registration Form

Name of the Authors	Shanmugam B
Department	EEE
College Name	St. Peter's University
Paper Code	EEE046
Title	~~Three phase &~~ Single phase Reaction Less Induction Machines; motors, Alternators & transformers.
Payment - Yes / No	✓ ER21WhBa0E.

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Registration Form

Name of the Authors	R.Pradeep, A.Thirumani akash, R.Vishnukumar T.Vinithrabanu
Department	MECHANICAL
College Name	Prince Shri Venkateshwara Padmavathy Engineering college
Paper Code	MECH 010
Title	An Experimental Investigation of a Biogas
Payment - Yes / No	Yes

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04 MAY 2023

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Dr. C. Sharmeela, Professor and Head of EEE department was invited as chief guest on behalf of department of Electrical and Electronics Engineering.

Dr. C. Sharmeela holds a B.E. in Electrical and Electronics Engineering, M.E. in Power Systems Engineering from Annamalai University, Chidambaram and a Ph.D. in Electrical Engineering from College of Engineering, Guindy, Anna University, Chennai respectively. At present, she holds the post of Professor and Professor-In-Charge, Power Engineering and Management, Department of Electrical and Electronics Engineering, C.E.G., Anna University, Chennai. She has done a number of consultancies on Renewable Energy Systems such as Solar Photo Voltaic (SPV) Power System, Power quality measurements and design of compensators for industries. She has coordinated and organized several short-term courses on power quality for Tamil Nadu State Electricity Board Engineers, TN, India.

She has also delivered several invited talks and trained around 1000 engineers on the importance of Power Quality, Power Quality Standards and Design of SPV power system for more than 12 years in leading organizations such as CII, FICCI, CPRI, MSME, GE (Alsthom) and APQI. She has authored over 30 journal papers in refereed international journals, co-authored 15 book chapters, edited five books and authored one book. Her areas of interest include Power Quality, Power Electronics applications to Power Systems, Smart Grid, Energy Storage Systems, Renewable Energy Systems, Electric Vehicle, Battery Management System and Electric Vehicle Supply Equipment. She is a senior member of IEEE, Fellow of the Institution of Engineers (India), Life Member of ISTE, Central Board of Irrigation and Power (CBIP), New Delhi, India and SSI, India. She has a teaching/research and consultancy experience of more than 21 years in the areas of power quality and power systems.

Around 300 papers were received for presentation in this International Conference ICCET'23. Out of these papers, 174 papers were shortlisted for final presentation. Both online and offline presentation were done during this conference.

Dr. R. PALSON KENNEDY, M.E., Ph.D.
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Fig. 1 ICCET'23 Inaugural Function

Fig. 2 our chief guest Dr. C. Sharmeela has inaugurated the International Conference by lighting the lamp.

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Fig. 3 Mrs. S. L. Sreedevi Head of the department EEE facilitated the chief guest

Fig.4 Memento Presentation to Dr. C. Sharmeela

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Fig. 5 Inaugural address by our Principal

Fig. 6 Guest Lecture by the Chief Guest

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Fig. 7 Interaction of External Participants with the Guests

Fig. 8 Conference Hall with participants and faculties

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Fig. 9 Released the Conference Proceedings

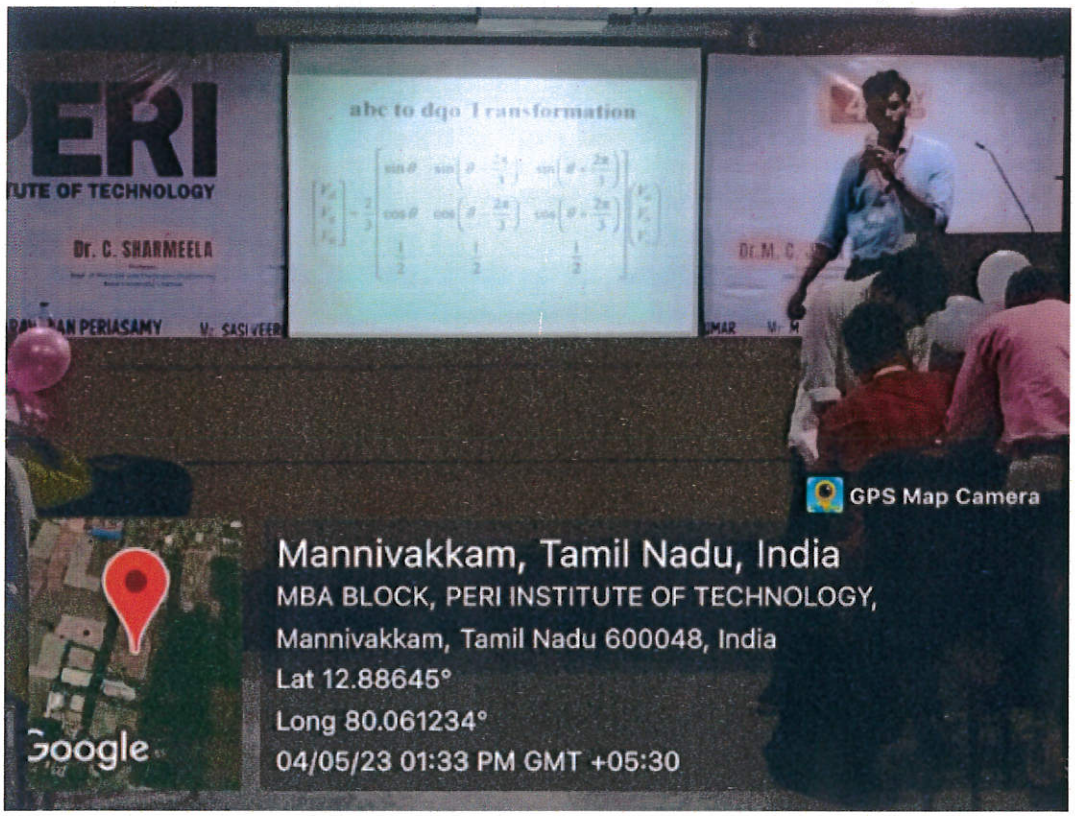

Fig. 10 Participant presenting their paper

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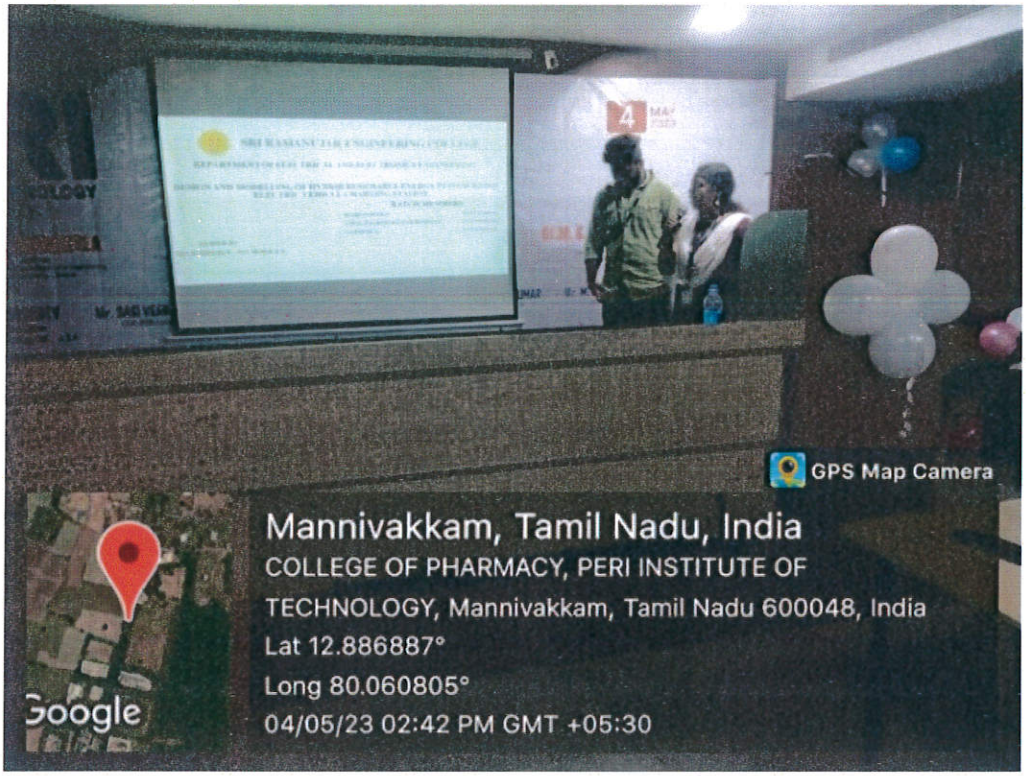

Fig. 11 Participant answering for the question

Fig. 12 Paper Presentation by External Participants

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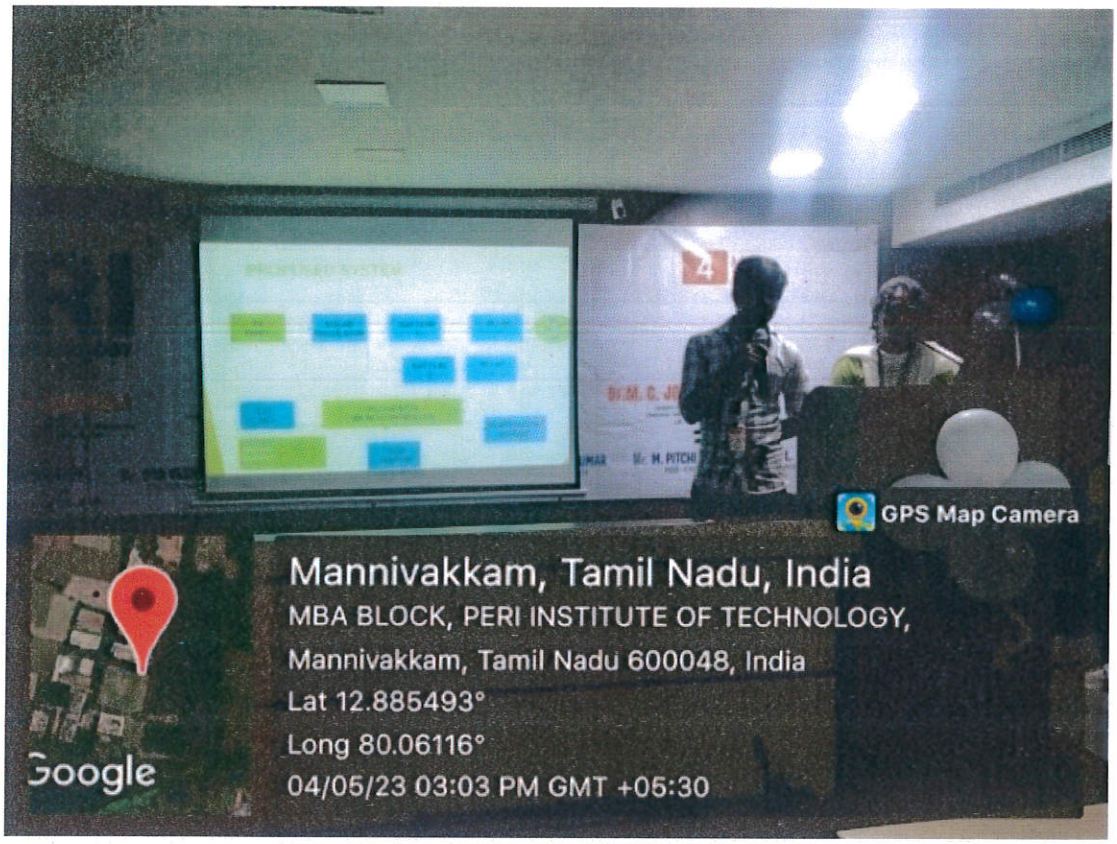

Fig. 13 Paper Presentation by External Participants

Fig. 14 Valedictory Function of the International Conference

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Fig. 15 Certificate distribution for the Participants

Fig. 15.1 Certificate distribution for the Participants

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Fig. 16 Award and Certificate distribution for the Best Paper

Fig. 17 Vote of thanks by Mrs. S. L. Sreedevi, HOD/EEE

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Design of Transmission Line Tower as Per IS 802 Loadings

Simon J[1] Mr. Santhosh[2] Mrs. G. Hemalatha[3]

[1]PG Student, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-600089

[2,3]Asst Professor, SRM Institute of Science and Technology, Ramapuram Campus, Chennai-89

Abstract

Power distribution converts Direct current from Power plant to Alternate Currents, which required transmission line to transmit the power from Power Generation unit to small, medium, and large distribution network. Geometry of transmission line towers are mainly based on Ground clearance, Phase to phase distance.Transmission line tower structure to be designed by considering design load parameters such as: RELIABILITY– Climatic loads designed for Serviceability over life, SECURITY– Failure containment loads due to sudden failure of components and SAFETY– Construction and maintenance loads. Design Approach: Limit state – Optimistic methods used for designing members and connections and Serviceability state – Working stage method used for deflection check. The objective of this project is to performance analysis of sample 220kV Double Circuit (DC) Transmission line Towers with IS 802 loadings. Mechanical Static Tension calculation of both conductor and earth wire are calculated as per IS 5613-2-1 for with wind, every day and Minimum temperature with or without ice. Environmental Load calculations and load calculations are as per IS 802. Autodesk Robot Structural Analysis is used for 3D Structural Analysis and design of Structural members. With the sample deign of transmission line towers the following are best concluded: Least weight of the tower implies greatest economy in the transmission line cost. The wind force normal to conductor found the worst of all. The result given by Robot Structural Analysis has been found to be complying with IS-800: 1984 and all the members were safe. XBX – bracing system is found to be optimum and economical in design of transmission line towers in both strength and cost of material.

Keywords: Transmission line towers, Robot Structural Analysis, XBX bracing

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Analytical Study of Concrete filled steel Tubular Column (CFST) with external confinement

Deepika J[1], S.D. Kumar[2], A Mathivanan[3], G. Swaminathan[4]

[1]Department of Civil Engineering, SRM Institute of Science and Technology, BharathiSalai,Ramapuram, Ch-600089, TamilNadu, India

[2,4]Assistant Professor,Faculty of Mechanical Engineering, SRM Institute of Science and Technology,BharathiSalai, Ramapuram,Ch-600089, Tamil Nadu, India

[3]Associate Professor, Faculty of Mechanical Engineering, SRM Institute of Science and Technology,BharathiSalai, Ramapuram,Ch-600089, Tamil Nadu, India

Abstract

Concrete filled steel tube (CFST) structural members have been widely used in engineering projects for their superior strength and ductility. However, the different lateral dilation characteristics between concrete infill and steel tube have caused imperfect composite interaction during the early loading stage. To overcome this issue, external steel confinement in the form of rings was previously suggested to minimize the lateral expansion of the steel tube and enhance the concrete confinement effects. In this study, investigations on the structural behavior of CFST column with external steel confinement was carried out by conducting numerical studies as well as theoretical studies. The Finite element (FE) model was developed and verified based on experimental findings. Besides that, this study analyzed thefailuremodes,axialload–strainrelationshipofthecompositecolumncomponents.Parametricanalysiswasalsoundertakentoevaluatetheimpactofheightofthecolumn,gradeofconcrete,numberofrings,diameterofring,corediameter,andthicknessofsteeltube.Theresultssuggestthat the use of external steel confinement can enhance the compressive behavior of CFSTs better than increasing the thickness of the steel tube when using the same steel ratio. The analytical investigations were carried out by using Eurocode-4 to predict the load-bearing capacity of CFST columns under axial compression. Finally, the load carrying capacities of CFST columns under axial compression obtained through experimental and simulation studies were compared and the results are presented.

Keywords: CFST column, external steel confinement, finite element analysis.

Dr. R. PAUSON KENNEDY, M.E., Ph.D.,
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This is to certify that **Dr. C. SHARMEELA** Professor / Department of EEE College of Engineering, Guindy, Anna University for her service as a **Jury Member** for the international conference - **ICCET-2K23.**

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This is to certify that Mr / ~~Ms.~~ ASHISH . J

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This is to certify that Mr / ~~Ms~~. G. Rajesh

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