VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

NEWSLETTER

ISSUE NO. 25 —— OCT - DEC —— 2025

School of Civil Engineering



"We shape our buildings; thereafter they shape us."

vit.ac.in/schools/sce
+91 416-2202221
sce.vit

CONTENTS

01	Vision, Mission & PEO	01
02	Dean's Message	02
03	Guest Lectures & Expert Sessions	03
04	SCE Events & Activities	05
05	Conferences	05
06	Sponsored Research Projects	06
07	Consultancy Projects	08
08	SCE Chapter Events	09
09	Student Achievements	10
10	Patents & Journals	11
11	Editorial Board	20



CDC Office Inaugration

VISION

To excel in Civil Engineering education and research with a global perspective and commitment to sustainability.

MISSION

- M1. Academic Excellence : Impart high-quality Civil Engineering education through innovative teaching methodologies and modern laboratory facilities
- M2. Research : Promote research, consultancy, and innovation addressing real-world civil engineering challenges with emphasis on sustainable infrastructure and societal needs.
- M3. Global Perspective & Industry Engagement : Prepare globally competent civil engineers through industry interaction and collaboration with national and international institutions
- M4. Ethics, Sustainability & Lifelong Learning : Produce socially responsible Civil Engineers with strong ethical values and leadership skills, dedicated to sustainable development and lifelong learning.

PROGRAM EDUCATIONAL OBJECTIVES

- PEO 1: Graduates will be successful Civil Engineering professionals/entrepreneur.
- PEO 2: Graduates will pursue higher studies and research for professional development.
- PEO 3: Graduates will demonstrate civic responsibility in addressing societal and environmental challenges

A Message from the DEAN



It gives me immense pleasure to present edition of the Newsletter of the School of Civil Engineering (SCE), VIT, which captures the achievements, initiatives, and milestones of our students and faculty members.

At SCE, we are committed to nurturing future-ready civil engineers who can address these challenges through strong fundamentals, innovation, technology, and a deep sense of social responsibility.

Students of the School of Civil Engineering actively engage in academic, research, co-curricular, and extracurricular activities, demonstrating their creativity, leadership, and commitment to holistic development. Our faculty members continue to make meaningful contributions through impactful research, high-quality publications, funded projects, industry collaborations, consultancy, and professional engagements, strengthening the school's academic excellence and its connection with the wider professional community.

I sincerely appreciate the contributions of our faculty members and students whose commitment and perseverance continue to strengthen the school. Their achievements bring recognition and pride to SCE and reinforce our shared commitment to excellence.

Together, let us continue to build on the strong legacy of the School of Civil Engineering and create a future driven by knowledge, innovation, sustainability, and societal impact. I look forward to witnessing many more accomplishments from the SCE community in the coming months.

With my best wishes for continued success and excellence.

With warm regards,

Dr. Saravanakumar M P

Dean

School of Civil Engineering

VIT, Vellore

GUEST LECTURES & EXPERT SESSIONS

LECTURES DELIVERED BY FACULTY

ENGINEERING SAFER ROADS: HOW CONSISTENCY IN DESIGN SHAPES DRIVER BEHAVIOUR

Faculty: Dr. Sasanka Bhushan Pulipati 23rd Oct, 2025

Connex Associates

The session explored the role of consistency in road design in shaping driver behaviour and improving road safety. It highlighted how uniform design elements and predictable road layouts can enhance driver expectations, reduce confusion, and help prevent accidents.



LECTURES ORGANISED

WATER RESOURCES - TECHNICAL AND MANAGMENT ASPECTS

Dr. Suresh P K 15th Oct, 2025

Deputy Director,

IHH Retired

A technical session focusing on effective planning, management, and sustainable utilization of water resources.

Faculty Coordinator: Dr. Jagadeesh P



AI-POWERED SUSTAINABILITY 5.0: ENGINEERING A BETTER WORLD

Dr. Rajesh Kumar D 17th Oct, 2025

Symbiosis International Deemed University Pune

An insightful session highlighting how AI can support sustainable engineering solutions and practices.

Faculty Coordinators: Dr. Mohan Ganesh G, Dr. Punitha Kumar A

GUEST LECTURES & EXPERT SESSIONS

LEARNINGS FROM ROAD SAFETY AUDIT STUDIES

Rashmi Ranjan Samal 3rd Nov, 2025

SR Engineering Consultancy Services,
Bhubaneswar

A session discussing key findings from road safety audits and methods to improve transportation safety.

Faculty Coordinator: Dr. Sasanka Bhushan Pulipati

APPLICATION OF DRONE TECHNOLOGY IN CIVIL ENGINEERING

AJ Arun Jeya Prakash 5th Nov, 2025

Director & CEO,
Aviocian Technologies Pvt Ltd New Delhi India

An informative session on the use of drones for surveying, monitoring, and various civil engineering applications.

Faculty Coordinators: Vasantha Kumar S, Vaani N



INNOVATIVE GEOSPATIAL APPROACHES FOR FLOOD RISK GOVERNANCE AND CLIMATE RESILIENCE IN TAMIL NADU

Dr. P Thirumurgan 13th Nov, 2025

Tamil Nadu Green Climate Company

A session exploring GIS and geospatial technologies for assessing and managing flood risks.

Faculty Coordimator: Dr. Parimala Renganayaki S,
Dr. Vignesh Rajkumar L



PROCESS DESIGN FOR WATER AND WASTEWATER TREATMENT ANDREUSE OF TREATED WASTEWATER

Deepak Kumar Sharma 17th Dec, 2025

Arshiya Consulting Engineers Pvt. Ltd.

A technical session covering the design and processes involved in effective water and wastewater treatment..

Faculty Coordinators: Parimala Renganayaki S,Vignesh Rajkumar L



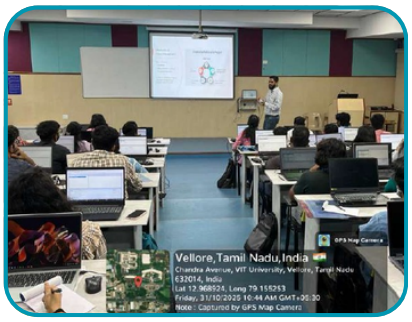
SCE EVENTS & ACTIVITIES

TWO-DAY HANDS-ON WORKSHOP ON MASTER PROJECT SCHEDULING

SCE, VIT Vellore 31st Oct – 1st Nov, 2025

A two-day hands-on workshop on "Master Project" was conducted on 31th October–1th November 2025, with 62 participants. The workshop provided practical exposure and enhanced participants' project development skills through interactive sessions.

Faculty Coordinators: Prasanna Venkatesan , Nina Lazar



TWO DAYS WORKSHOP ON DRONE TECHNOLOGIES

SCE, VIT Vellore 28th Oct – 29th Oct, 2025

A two-day workshop on "Drone Technologies" was conducted on 28th –29th October 2025, with 123 participants. The programme introduced participants to drone technology, its applications, and emerging developments through interactive and practical sessions.

Faculty Coordinators: Vaani, Saravanan S



CONFERENCES

THE TRANSPORTATION RESEARCH EFFORTS FOR ECOLOGICAL SUSTAINABILITY

24th– 25th Oct, 2025

VNR VJIET, Hyderabad

The Transportation Research Efforts for Ecological Sustainability (TREES 2025) conference was held at VNR VJIET, Hyderabad, bringing together researchers and professionals to explore sustainable, green and resilient transportation solutions

Faculty: Shishodiya Ghanshyam Singh , S. Vasantha Kumar



CONFERENCES

IEOM INDIA 2025

VIT Vellore Campus, Vellore 6th – 8th Nov, 2025

The 5th Indian International Conference on Industrial Engineering and Operations Management was conducted at VIT Vellore, providing a platform for researchers, academicians and industry professionals to share research and advancements in industrial engineering and operations management

Faculty: Sofi A, Amal Pradeep , G Ajay Sankar , Harshit Sajeevan & Bharath Biju Nair

ACECON 2025 6TH ASIAN CONFERENCE ON ECSTASY IN CONCRETE

Hotel Taj Deccan, Banjara Hills, Hyderabad 8th – 10th Dec, 2025

The 6th Asian Conference on Ecstasy in Concrete (ACECON 2025) was held in Hyderabad, focusing on innovations and emerging developments in concrete technology, sustainable construction and infrastructure

Faculty: Sofi A, Perla Mounica

SPONSORED RESEARCH PROJECTS

NANO LIME GROUTS FOR HERITAGE APPLICATIONS

Sponsored by: VIT Start Date: 27th Oct, 2025

Project Location: Vellore Project Value: ₹500000

The project focuses on developing and studying nano-lime grout materials for the conservation, repair, and preservation of heritage structures while maintaining their structural and historical integrity.

Principal Investigator: Prof. Thirumalini S (SCE)

A CLEAN ENERGY KIT FOR SUSTAINABLE HYDROGEN PRODUCTION FROM WASTEWATER THROUGH HYBRID MICROBIAL-PHOTO-ELECTROCHEMICAL

Sponsored by: VIT Start Date: 27th Oct, 2025

Project Location: Vellore Project Value: ₹390000

The research aims to develop a sustainable system for producing hydrogen from wastewater using hybrid microbial and photo-electrochemical technologies, contributing to clean energy generation and wastewater treatment.

Principal Investigator: Dr. Bhaskar Das (SCE)

INVESTIGATION ON UTILIZATION OF WASTE TIRE RUBBER AND RECYCLED CONCRETE FINES IN CONCRETE- A MULTISCALE APPROACH - TARE

Funded by: DST - SERB Start Date: 14th Nov, 2025

Project Location: Vellore Project Value: ₹1830000

The project investigates the incorporation of waste tyre rubber and recycled concrete fines into concrete. The study aims to promote construction-material recycling and develop more sustainable concrete solutions.

Principal Investigator: Dr. Sofi A (SCE)

EFFECTS ON LONG TERM BEHAVIOUR OF CONCRETE USING DIFFERENT MINERAL ADMIXTURES AND AGGREGATES

Funded by: VIT Start Date: 27th Oct, 2025

Project Location: Vellore Project Value: ₹193000

The project investigates the long-term performance and durability of concrete incorporating different mineral admixtures and aggregates, with the objective of improving sustainable and durable construction practices.

Principal Investigator: Dr. Abdul Rahim A (SCE)

FORMULATION OF PROSOPHIS JULIFLORA AND LPDE BASED MODIFIED BITUMEN FOR CONSTRUCTION OF PAVEMENTS

Funded by: VIT Start Date: 27th Oct, 2025

Project Location: Vellore Project Value: ₹375000

The research explores the use of Prosopis juliflora and LDPE in modified bitumen to develop improved pavement materials, promoting waste utilization and sustainable road construction.

Principal Investigator: Dr. Muthukumar M (SCE)

CONSULTANCY PROJECTS

PROJECT SCHEDULING AND CONTROL – TRAINING

Ramind Cold Forge Pvt.

Duration: 01st April – 01st Dec, 2025

Consultancy Value: ₹25000

INSTALLATION OF RADIANT COOLING SYSTEMS

Faculty: Balaji K, Karthikeyan S, Praveen Kumar. G, Sekar S K, Palanisamy K

CONDITION ASSESSMENT OF RC COLUMNS USING NON-DESTRUCTIVE TECHNIQUES

Needle Industries India Pvt. Ltd.

Duration: 21st Sep - 21st Oct, 2025

Consultancy Value: ₹161660

CONDITION ASSESSMENT OF RC COLUMNS IN KPF FACTORY USING NON-DESTRUCTIVE TECHNIQUES

Faculty: Prasanth S, Sekar S K

ESTIMATION OF SAFE BEARING CAPACITY OF SOIL

Techne Online Systems Pvt. Ltd.

Duration: 20th Aug - 31st Oct, 2025

Consultancy Value: ₹44800

ESTIMATION OF SAFE BEARING CAPACITY OF SOIL FOR THE PROPOSED CONSTRUCTION OF COMMERCIAL BUILDING AT VELLORE

Faculty: Visusam J

SCE CHAPTER EVENTS

INDIAN CONCRETE INSTITUTE

BEYOND THE CLASSROOM 7th Nov, 2025

Beyond the Classroom was an offline mentoring and career guidance session led by alumnus Mayank Garg, a Customer Support Specialist at Wolters Kluwer. The session focused on time management, balancing academics with co-curricular activities, placement preparation, and strategies for building a successful professional career.

CASA: CAMPAIGN AGAINST SUBSTANCE ABUSE 15th Dec, 2025

The ICI VIT Student Chapter conducted CASA (Campaign Against Substance Abuse), an engaging awareness session promoting healthy choices and emotional well-being. Through interactive activities and discussions on family support and self-care, the session encouraged students to avoid substance abuse and adopt positive coping strategies.

INDIAN SOCIETY OF EARTHQUAKE TECHNOLOGY

CUT 'N' CRAFT 29th Oct, 2025

The Cut 'N' Craft workshop, organized by the Indian Society of Earthquake Technology (ISET) Student Chapter, introduced children to paper crafting through hands-on activities. Participants explored their creativity by designing paper models, developing artistic skills, patience, and teamwork in an engaging learning environment.

MYTH VS REALITY: EARTHQUAKE EDITION 18th Dec, 2025

Myth vs Reality: Earthquake Edition, organized by the ISET Student Chapter, was an interactive online awareness event featuring quizzes and real-world case studies. The session explored earthquake behaviour, safety measures during seismic events, and modern techniques such as base isolation, damping systems, and retrofitting.

INDIAN GEOTECHNICAL SOCIETY

OUTREACH EVENT 6th Nov, 2025

The Indian Geotechnical Society (IGS) Outreach Event connected students with the United Nations Sustainable Development Goals (SDGs). The session explored global challenges, from poverty alleviation to climate action, encouraging students to embrace civic responsibility and contribute to sustainable development through local initiatives.

ALUMNI CONNECT 18th Dec, 2025

Alumni Connect, organized by the Indian Geotechnical Society (IGS), brought together students and alumni for professional networking and career guidance. The interaction offered insights into industry trends, mentorship opportunities, and international academic pathways, helping students explore career prospects and broaden their professional networks.

STUDENT ACHIEVEMENTS

SRM MUN 2025 31st Oct – 2nd Nov, 2025

SRM Institute of Science and Technology, Chennai

Fathima Nairah (*23BCL0092*)

Recognitions: Special Mention (ECOSOC) & Best Delegation Award

Exceptional performance representing the delegation, securing dual recognition at the conference.

Subash Nigam (*24BCL0054*)

Recognition: Best Delegation Award

Contributed significantly to the team's overall success and top position at SRM MUN 2025.

Vinant Gupta (*24BCL0103*)

Recognition: Best Delegation Award

Outstanding diplomatic representation, helping secure the coveted Best Delegation title.

Vrundan Hirenkumar Patel (*23BCL0063*)

Recognition: Best Delegation Award

Played a key role in driving committee discussions and earning top honors for the institute.

PATENTS & JOURNALS

PATENTS

INTERLOCKING MASONRY UNIT FOR RETAINING WALL AND LOAD-BEARING APPLICATIONS

Published**:** 24th Oct, 2025

Inventors: Ankit Kumar, Mohan Ganesh G, Harshit Kumar

A REINFORCED ORTHOTROPIC STEEL DECK ASSEMBLY FOR MITIGATING LONGITUDINAL RIB DECK JOINT CRACKING UNDER ECCENTRIC MOVING VEHICULAR LOADS

Published**:** 29th Nov, 2025

Inventors : Senthil Kumar N, Doredla Nagaraju

BIOCHAR-BASED DUAL ADSORPTION SYSTEM FOR MICROPLASTIC AND HEAVY METAL REMOVAL

Published: 16th Dec, 2025

Inventors : Vignesh Rajkumar L, Jananika K (*21BCL0127*)

THREE-DIMENSIONAL FINITE ELEMENT MODELING SYSTEM FOR SECANT PILE WALL ANALYSIS

Published: 16th Dec, 2025

Inventors : Visuvasam J, Shruti Mayura (*23MST0018*)

DEEP LEARNING SYSTEM FOR HETEROGENEOUS TRAFFIC MONITORING

Published: 05th Dec, 2025

Inventors: Vasantha Kumar S, Aditya Verma (*21BCL0014*), Adrian L Synrem (*21BCL0122*), Kristina Shrestha (*21BCL0274*)

RUBBERIZED GEOPOLYMER CONCRETE WITH ENHANCED MECHANICAL PROPERTIES

Published: 4th Dec, 2025

Inventors : Abdul Rahim A, Suryansh Soni (*21BCL0062*), Prabhav Singh (*21BCL0025*), Sanidhya Sethi (*21BCL0219*)

WASTE-DERIVED FE3O4/BIOCHAR COMPOSITE FOR PHOTOCATALYTIC DYE DEGRADATION

Published: 4th Dec, 2025

Inventors : Monali Priyadarshini, Aarsh Gangta (*21BCL0048*), Badal Raj (*21BCL0055*), Reuben R.J. Marbanaing (*21BCL0228*)

ZNO-NI NANOCOMPOSITE COATED STEEL REBARS FOR CONCRETE APPLICATIONS

Published: 4th Dec, 2025

Inventors: Shanmuga Priya T, S. Harthik Varshan (*21BCL0074*), M.C. Narun Kartthick G (*21BCL0101*), R. Ezhil (*21BCL0178*), V. Suhas (*22PHD0076*)

METHOD FOR REMOVING A PHARMACEUTICAL COMPOUND FROM AQUEOUS SOLUTIONS USING RECYCLED GRAPHITE FROM SPENT LITHIUM-ION BATTERIES

Published: 4th Dec, 2025

Inventors: I Shantha Kumar S, Niranjana Naveen (*21BCL0215*), Melissa Hemam G (*21BCL0251*), Daeborlangmi Shylla K (*21BCL0129*)

ALUMINUM-BASED METAL-ORGANIC FRAMEWORK FILTER FOR METHYLENE BLUE REMOVAL

Published: 4th Dec, 2025

Inventors: Monali Priyadarshani, Arindom Dutta (*21BCL0096*), Siddharth Tiwari (*21BCL0071*), Debasish Nayak (*21BCL0112*)

FINITE ELEMENT ANALYSIS METHOD FOR POST-FIRE REINFORCED CONCRETE COLUMNS

Published: 4th Dec, 2025

Inventors: Viswanathan T.S, Sayan Kanti Roy (*23MST0026*)

3D PRINTED CONCRETE BEAMS WITH LASER-CUT TRUSS REINFORCEMENT

Published: 4th Dec, 2025

Inventors: Jayaprakash J, Sanjeevi A (*21BCL0209*), Benesh K L (*21BCL0196*), Reuben Santosh Mathew (*21BCL0192*)

METHOD FOR PRODUCING PERVIOUS CONCRETE USING THERMO-MECHANICALLY TREATED RECYCLED COARSE AGGREGATE AND GROUND GRANULATED BLAST FURNACE SLAG

Published: 4th Dec, 2025

Inventors: Viswanathan T.S, Bonta Sanjay (*21BCL0022*), Shaik Nishar Ali (*21BCL0194*), Abdul Majeed (*21BCL0054*)

JOURNAL PUBLICATIONS

OCTOBER 2025

Rajesh R.; Senthil Kumar A.S., "Electrochemical Deposition of Zn–Ni Hexacyanoferrate on Spherical Glassy Carbon for a High-Voltage Aqueous Sodium–Zinc Ion Hybrid Battery," *Advanced Sustainable Systems*, DOI: 10.1002/adsu.202500859.

Varun Kumar T.H.; Muthukumar M.; Murugavelh M., "Statistical Optimization of Blending Conditions and Performance Evaluation of Optimal Bio-Asphalt Content," *Civil Engineering Journal*, **Vol. 11**, **Issue 8**, pp. 3330–3357, DOI: 10.28991/CEJ-2025-011-08-014.

Siva K.; Visuvasam J.A., "Web-Crippling Behaviour of Cold-Formed Screw Fastened Rectangular Hollow Flange Z-Section Beams Under Two-Flange Load Cases," *Civil Engineering Journal*, **Vol. 11**, **Issue 8**, pp. 3186–3207, DOI: 10.28991/CEJ-2025-011-08-07.

Priya T.S.; Chen T.-W.; Chen S.-M.; Balaji R.; Sarigamala K.K.; Kumar S.; Cheng W.-C., "$MoSe_2$ Nanoflower-Based Electrodes for High-Sensitivity and Rapid Detection of Ornidazole in Biomedical Diagnostics," *IEEE Sensors Journal*, DOI: 10.1109/JSEN.2025.3612455.

Varun Teja K.; Meena T.; Krishna M.V.N., "Performance and Integrity of Calcined Perlite Concrete at Varied Thermal Conditions: Mechanical and Microstructural Insights," *Journal of Materials in Civil Engineering*, **Vol. 37**, **Issue 12**, Article No. 4025451, DOI: 10.1061/JMCEE7.MTENG-21053.

R.; Sathiyamoorthy M., "Integration of GIS and AHP Techniques for the Sustainability of Groundwater Potential Zones in the Coastal Environs," *Frontiers in Water*, **Vol. 7**, Article No. 1668087, DOI: 10.3389/frwa.2025.1668087.

Amritha N.; Prasanth S., "Seismic Performances of Reinforced Concrete Buildings with Openings in Unreinforced Masonry Infill Walls: A Soil–Foundation–Structure Modelling Approach," *Frontiers in Built Environment*, **Vol. 11**, Article No. 1667289, DOI: 10.3389/fbuil.2025.1667289.

Tamilarasan S.K.; Kanna P.R., "Natural Circulation Performance of Supercritical CO_2 Dual Loop System—A Numerical Study," *Heat Transfer Engineering*, DOI: 10.1080/01457632.2025.2562718.

Kummara S.P.; Kumar S.N., "Assessment of Compressive Bond Performance of Steel Rebars in Precast Concrete," *Sādhanā*, **Vol. 50**, **Issue 3**, Article No. 182, DOI: 10.1007/s12046-025-02823-w.

Jugal Kishore M.J.; Pannem P.R.M., "Synergistic Effect of CNSA, Silica Fume, Metakaolin and Slag on Mechanical Properties of Concrete Mix," *Journal of Technology*, **Vol. 40**, Issue 3, pp. 151–168.

Shankar V., "Fabrication and Characterization of Corn Starch-Blended Polyhydroxybutyrate Films," *Journal of Environmental Nanotechnology*, **Vol. 14**, **Issue 3**, pp. 169–178, DOI: 10.13074/jent.2025.09.2531594.

Parthiban J.; Jambulingam R., "Biosynthesis of Lipase-Immobilized Zinc Oxide Nanoparticle and Its Role as a Nanocatalyst in the Biodiesel Production of the Lipid Obtained from Anabaena Cyanobacterial Species Isolated from Saline Water," *Letters in Applied NanoBioScience*, **Vol. 14**, **Issue 3**, Article No. 126, DOI: 10.33263/LIANBS143.126.

Parthiban J.; Jambulingam J., "Facile Synthesis, Characterisation, and Catalytic Application of Lipase Immobilized Nickel Oxide Nanoparticles for Biodiesel Production," *Journal of Environmental Nanotechnology*, **Vol. 14**, **Issue 3**, pp. 142–149, DOI: 10.13074/jent.2025.09.2521567.

Priya S.C.; Jambulingam R., "TiO_2 Nano-Photocatalyst-Driven CO_2 Biofixation and Lipid Accumulation in Brackish Water Cyanobacteria for Sustainable Biodiesel Production," *Journal of Environmental Nanotechnology*, **Vol. 14**, **Issue 3**, pp. 108–121, DOI: 10.13074/jent.2025.09.2521558.

Neelima J.; Singh R.K., "Recent Advances in Anion-Exchange Membranes for Electrolyzers, Fuel Cells and Redox-Flow Batteries," *Journal of Materials Chemistry A*, DOI: 10.1039/D5TA05392G.

Gupta S.; Babu P.; Haldar D.; Bag S.; Zaidi I.; Goel S., "The Intersection of Climate Change and Cancer Across Global Populations: A Bibliometric Analysis (2000–2024)," *Cancer Epidemiology*, **Vol. 99**, Article No. 102926, DOI: 10.1016/j.canep.2025.102926.

Sridhar D.; Parimalarenganayaki S., "Review on Urban Groundwater Pollution: An Indian Perspective—Sources, Analysis, and Management Strategies," *Desalination and Water Treatment*, **Vol. 324**, Article No. 101453, DOI: 10.1016/j.dwt.2025.101453.

NOVEMBER 2025

Gowtham G.; Arkin G.; Sasidhar K.B.; Balasubramanian S.; Murugavelh M.; Antunes E., "Sailing Towards Sustainability: Waste Ship Oil Sludge as Diesel Alternative," *Results in Engineering*, **Vol. 28**, Article No. 107960, DOI: 10.1016/j.rineng.2025.107960.

Subramanian S.; Ganapathy G.P., "An Analysis of the Hidden Vulnerabilities: The Role of Construction Quality in Seismic Risk Mitigation in Low-to-Moderate Seismicity Regions," *Results in Engineering*, **Vol. 28**, Article No. 108116, DOI: 10.1016/j.rineng.2025.108116.

Andal K.P.; Sanjay R.; Kumar A.S., "The Sustainable Fabrication of α-MnO_2/Graphene Oxide Composites from Waste Battery Graphite via In Situ Electrochemical Exfoliation for Supercapacitors and Aqueous Zinc-Ion Batteries," *Chemical Communications*, **Vol. 61**, **Issue 93**, pp. 18368–18371, DOI: 10.1039/D5CC02065D.

Janani P.; Ganesh G.M., "Synergistic Effects of Polypropylene Fibers on the Strength and Durability Properties of 3D Printed Concrete," *Structural Concrete*, DOI: 10.1002/suco.70387.

Hasanzadeh H.; Wang B.; Rönnqvist M.; Badji R.; Verma A., "Evolutionary Optimization for Neural Network-Based Discrete Choice Modeling: Enhancing Stability and Efficiency," *Transportation*, DOI: 10.1007/s11116-025-10682-x.

Ranjith R.; Sekar S.K., "Sustainable Electrical Insulator Waste Management: An Eco-Friendly Concrete Development and Property Assessment Using 3E Analysis," *Frontiers in Sustainability*, **Vol. 6**, Article No. 1695766, DOI: 10.3389/frsus.2025.1695766.

Ashok R.; Singh K.S., "Impact of Improved Initial Condition in a Medium Range Forecast of Super Cyclonic Storm Kyarr over Arabian Sea Using High Resolution WRF and Its Data Assimilation Technique," *Theoretical and Applied Climatology*, **Vol. 156**, **Issue 12**, Article No. 653, DOI: 10.1007/s00704-025-05871-8.

Kesavaram R.; Chandrasekaran S.S., "Comprehensive Investigation of Rainfall Infiltration and Progressive Failure Mechanism of the Kavalappara Landslide in Kerala, Comprising Geophysical and Geotechnical Factors," *Journal of Mountain Science*, **Vol. 22**, **Issue 11**, pp. 4133–4156, DOI: 10.1007/s11629-025-9534-2.

DECEMBER 2025

Tamilarasan S.K.; Kanna P.R., "Numerical Investigation of Thermohydraulic Performance in Supercritical CO_2-Based Dual Natural Circulation Systems," *Results in Engineering*, **Vol. 28**, Article No. 108411, DOI: 10.1016/j.rineng.2025.108411.

Sankaranarayanan M.; Jagan P.; Visuvasam J.A.; Chandrasekaran S.S., "Numerical Assessment of the Influence of Stone Columns on Liquefaction-Induced Seismic Effects in RC Structures," *Geomatics, Natural Hazards and Risk*, **Vol. 16**, **Issue 1**, Article No. 2579755, DOI: 10.1080/19475705.2025.2579755.

Vishnu Vardhan K.; Ganesh G., "An Experimental, Statistical, and Machine Learning Approach to Evaluate the Fresh and Mechanical Properties of Graphene Oxide Concrete," *Nondestructive Testing and Evaluation*, DOI: 10.1080/10589759.2025.2593424.

Thabrez M.; Manoj S.; Parimalarenganayaki S.; Lakshmanan L., "A Novel Weighted Hazard Index Framework for Evaluating Health Risks from Groundwater Contamination in Hassan Region, Southern India," *Physics and Chemistry of the Earth*, **Vol. 141**, Article No. 104176, DOI: 10.1016/j.pce.2025.104176.

Sridhar D.; Thabrez M.; Parimalarenganayaki S.; Lakshmanan L., "Integrated Risk Assessment and Management Strategies for Uranium and Other Potentially Toxic Elements (PTEs) Contamination in Groundwater: A Case Study from Krishnagiri District, Tamil Nadu, India," *Physics and Chemistry of the Earth*, **Vol. 141**, Article No. 104207, DOI: 10.1016/j.pce.2025.104207.

Sekar S.K.; Ranjith R.; Prasanth S., "Torsion Behavior of Reinforced Standard Strength Concrete Beams Using Ceramic Waste Powder," *Structural Concrete*, DOI: 10.1002/suco.70426.

Surendran H.; Akhas P.K., "A Study on Unlocking the Pozzolanic Potential of Toughened Glass Waste Powder for Sustainable Cement Paste Development," *Silicon*, DOI: 10.1007/s12633-025-03557-4.

Borkar R.L.; Putta C.L.; Platto M.; Beniwal N.; Banoth B.; Mehata A.K.; Ramasamy S.; Rengan A.K., "Re(I)-Quinolinate-Pyridyl Complexes with Disubstituted Benzimidazole Pharmacophores as Anticancer Agents," *Dalton Transactions*, **Vol. 54**, **Issue 47**, pp. 17531–17545, DOI: 10.1039/D5DT01577D.

Sunny A.G.; Jayaprakash J., "Unveiling the Printing Success of Concrete 3D Printed Models: A Simulation Study with Voxel Print and Abaqus Using Design of Experiments," *International Journal on Interactive Design and Manufacturing*, DOI: 10.1007/s12008-025-02455-8.

L.; R., "Efficient Decolourisation of Astrazon Pink Dye Using Biocarbon Derived from Prosopis juliflora Shells: Kinetics, Isotherms, and RSM-Based Optimization for Sustainable Wastewater Treatment," *Reactions*, **Vol. 6**, **Issue 4**, Article No. 57, DOI: 10.3390/reactions6040057.

S.K., S.; Ranjith R.; Prasanth P., "Sustainable Concrete Matrix Using Ceramic Electrical Insulator Waste as Binder and Filler—Performance Under Elevated Temperature," *World Journal of Engineering*, DOI: 10.1108/WJE-06-2025-0428.

EDITORIAL BOARD

EDITORS



Prateek Kumar
23BCL0021



Anushka Gattani
22BCL0101



Kunal Bhardwaj
23BCL0070



Athidharani KV
23BCL0011



Prashans Dixit
24BCL0138



Achintya Badbade
24BCL0172



Hemanth Panza
24BCL0013



Daksh Mahawar
24BCL0153

ADVISORY TEAM



Dr. Saravanakumar M P
Professor, Dean
School of Civil Engineering
VIT, Vellore



Dr. Sofi A
Professor, Associate Dean
School of Civil Engineering
VIT , Vellore



Dr. Dillip Kumar Barik
Professor, HOD - EWRE
School of Civil Engineering
VIT , Vellore



Dr. Bala Murugan S
Professor, HOD - SGE
School of Civil Engineering
VIT, Vellore

FACULTY COORDINATORS



Dr. Shanmuga Priya T
Professor
School of Civil Engineering
VIT , Vellore



Dr. Om Suganya
Associate Professor
School of Civil Engineering
VIT , Vellore

The People Behind the Progress

A community of educators, researchers and future engineers.



vit.ac.in/schools/sce

+91 416-2202221

sce.vit

ISSUE NO. 25 — OCT - DEC — 2025