

SCE e-NEWSLETTER

SCHOOL OF CIVIL ENGINEERING (SCE)

VIT - A Place to Learn; A Chance to Grow



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VISION

- To be internationally recognized in Civil Engineering through groundbreaking contributions and exceptional leadership for sustainable development of the society.

MISSION

- To pioneer the emerging technology in Civil Engineering.
- To address the complex societal scale challenges in areas of resilient infrastructure, smart and sustainable cities, water and energy security, climate change, mobility of goods and people, and environmental protection.
- To inspire and nurture innovative leaders and entrepreneurs.

DEAN'S MESSAGE

It is my immense pleasure to welcome you all to view the Fourteenth issue of SCE e - Newsletter by the School of Civil Engineering (SCE), Vellore Institute of Technology (VIT), Vellore, Tamil Nadu, India. This issue brings out the accomplishment of VITians which include the students and faculty of SCE that has transpired between January - March 2023. This issue highlights the active participation and contribution in various outreach activities by faculty members and the achievements of undergraduate & postgraduate students and Ph.D. research scholars.

I hope you all enjoy reading the updates and achievements of students and faculty members of SCE and extend your co-operation and support for all our future accomplishments.

2nd NATIONAL CONFERENCE ON SPECIAL CONCRETE

The Second National Conference on Special Concrete was organized by the Department of Structural and Geotechnical Engineering, School of Civil Engineering, at VIT University, Vellore from 23rd to 24th March 2023. A total of 62 people actively participated and 54 papers were received from various institutions and 42 articles were selected for presentation. The conference was inaugurated by Dr. Piyush Chaunsali, Assistant Professor, IIT Madras, Chennai, and Dr. Amol Patil, Senior Specialist & General Manager, Master Builder Solutions India Pvt Lim, respected Dr. Partha Sarathi Mallick, Pro-Vice Chancellor, VIT –Vellore and Dr. A. S. Santhi, Dean – School of Civil Engineering, VIT – Vellore, gave the welcome address and insisted students to work towards providing sustainable solutions in concrete. Dr. Piyush Chaunsali felicitated the gathering with a keynote address on "Enhancing sustainability and durability using calcium sulfoaluminate-based binders". Dr. Amol Patil addressed the gathering with a keynote address on "Innovation application of GGBS for green and sustainable concrete". At the Valedictory Function Er. E Dhanesh, Assistant General Manager JSW Cement Ltd, Chennai provided a special note on awareness to the industry and society about sustainable development in modern construction.



WATER CONSERVATION WEEK 2023

Water is one of the most important renewable natural resources for supporting life. Only 2.5% of water on the Earth is fresh water, and over two-thirds of this is frozen in glaciers and polar ice caps. One-third of the developing world will face severe water shortages in the twenty-first century even though large amounts of water will continue to annually flood out to sea from water-scarce regions. Hence to create awareness among the student community and public about the importance of water conservation, the School of Civil Engineering organized the “Water Conservation Week 2023” program at Vellore Institute of Technology, Vellore from 20th to 24th March 2023. The program was inaugurated by our Pro Vice-Chancellor Dr. Partha Sarathi Mallick in the presence of our Dean Dr. A.S. Santhi and HODs Dr. S. Mahenthiran and Dr. A. Punitha Kumar. The Guest of Honour was an eminent professor from IISC Bangalore Dr. D. Nagesh Kumar who delivered a lecture on “Remote Sensing, GIS and DEM for Water Conservation”. The event was coordinated by Dr. M. Uma Shankar, Professor and Dr. L. Vignesh Rajkumar, Assistant Professor, SCE, VIT, Vellore. Various competitions such as Guest lecture, short videos contest, poster presentation, Idea thon, and drawing competition exclusively for staff kids was conducted during this week and a large number of students actively participated in the program and winners were awarded cash prizes.



NATIONAL/INTERNATIONAL EVENTS ORGANISED

Dr. A. Sofi, organized a one day workshop on “Concrete mix proportioning for practical engineers in construction Industry” at School of Civil Engineering in association with Ultra Tech cements Ltd. on 22nd February, 2023. The workshop was mainly conducted for the practicing engineers working at site. Around 38 practicing engineers from various sites have attended the workshop.



Dr. T. Meena, Dr. A. Sofi, Dr. J. Visuvasam & Dr. B. Divya Priya jointly organized a “Two days Design-a-thon event for students of SCE. Around 180 students participated for the event both internally and externally. The design-a-thon 2 days event aim the students to design and make a model. Mr. Anas Mohammed, Proprietor Architecture Studio, Vellore judged the event and announced the best 3 models. Cash prizes of Rs. 6000/- was given to first model, Rs.3000/- to second model and Rs.2000/- to third model and 10 consolation prizes were given of cash prize Rs.1000/- for each team.



NATIONAL AND INTERNATIONAL LECTURES

Dr. S Neelamani, Senior Research Scientist, Kuwait Institute for Scientific Research, Kuwait, delivered a lecture on “Challenges and opportunities in Ocean Engineering” organized by Ms. S. Aiswarya, Assistant Professor, SCE on 24th March 2023

Shri Pradip Kumar Choudhury, Consultant and Former Principal Scientist, National Jute Board, Ministry of Textiles, Government of India delivered a lecture on “Natural Geosynthetics for Geotechnical Engineering Applications” organized by Dr. M. Muthukumar, Professor, SCE on 20th March, 2023.

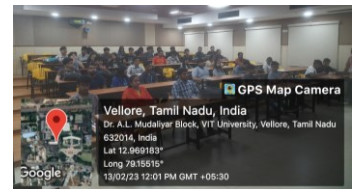
Dr. S.N.Ullas, Director, Verdhand Building Alternatives Pvt.Ltd, Bangalore delivered a guest lecture on the topic “Alternative Masonry Materials and Technologies” on 13th February, 2023. A total of 51 students attended the expert lecture organised by Dr. A. Sofi, Professor, SCE, VIT.

Mr. C. M. Suresh Babu, Quality Assurance Manager, Riverlinx CJV Project Office, Edmund Halley Way, London, UK, delivered a lecture on “Necessity for Tunneling and Underground structures in Construction” on 06th March 2023. A total of 80 students have actively participated the expert lecture conducted by Dr. P. Porchelvan, Professor and Prof. J. Malathy, Assistant Professor, SCE, VIT.

Mr. M. Satheesh Kumar, Engineer-Marine, COWI India Pvt. Ltd, Chennai delivered an Industry expert lecture on “Geotechnical Site Investigation and Piling” organized by Dr. L. Vignesh Rajkumar and Prof. J. Malathy, Assistant Professor, SCE, VIT on 22nd February 2023.

Dr. Anthony Foucher, CEA, laboratoire des Sciences du Climate et de l’Environnement, Paris, France delivered an International Expert Lecture on “Impacts of past and present agricultural Intensification on soil/land degradation: case studies around the world” organized by Dr. L. Vignesh Rajkumar and Prof. J. Malathy, Assistant Professor, SCE on 1st February 2023.

Dr. Pooja Preetha, Assistant Professor, Department of Civil Engineering, Alabama A&M University, Alabama, USA delivered an International Expert Lecture on “Floods and Flood Vulnerability” organized by Dr. L. Vignesh Rajkumar and Prof. J. Malathy, Assistant Professor, SCE on 15th February 2023.



Dr. M Anbarasu, Associate Professor, Government College of Engineering Salem, delivered a keynote lecture on “Flexural Response Assessment of Cold-formed Ferritic Stainless Steel Closed Built-up Beams” during the 22nd SET conference organized by Dr. J. Visuvasam, Assistant Professor, SCE on 23rd January 2023



Ms. Sruti Modekurty, Technologist delivered a lecture on “Climate Change and Sustainable Development” organized by Dr. M. P. Saravanakumar, Professor, SCE on 10th January 2023



Prof. Fulvia Chiampo, Politecnico di Torino, Italy delivered a lecture on “Sustainable Water Resources Planning and Management” organized by Dr. S. Parimala Renganayaki, Associate Professor, SCE on 9th February 2023.



Mr. Shyam Sundar, Project Manager, Principal Structural Design Consultant delivered a lecture on “Static and Dynamic Analysis of Structures” organized by Dr. T. S. Viswanathan, Professor and Dr. S. Hareesh, Assistant Professor, SCE, VIT on 29th March 2023



Dr. L. Kalpana, Hydrologist, Institute of Water Studies, Chennai delivered a lecture on “Hydrological Network for Water Resources Assessment” organized by Dr. S. Parimala Renganayaki, Associate Professor, Dr. P. Jagadeesh, Professor, SCE on 30th March 2023.

ASCE - STRUCTURA

The American Society of Civil Engineers Student Chapter – Vellore Institute of Technology, organized the 2nd edition of the “**Structura Student Conference 2023**”. The 3-Day Conference featured a series of lectures from 13 - 15 January 2023, visiting topics that help broaden participants' horizons.

Innovative Solutions for Pavement Stabilization by Prof. Rohan Rajendra Deshmukh, Assistant Professor, M.G.M's College of Engineering and Technology, Kamothe, Navi Mumbai

Application of Microbial Electrochemical Technologies for Wastewater Remediation Facilitating Value-Added Product Recovery and Reuse by Dr. Sovik Das, Assistant Professor, Indian Institute of Technology, Delhi

Application of Artificial Intelligence in Seismic Zonation of Liquefiable Fine Soil Deposits by Dr. Sufyan Ghani, Assistant Professor, Sharda University, Delhi

Tunneling Construction: Past, Future and Scope by Dr. Malavika Varma, Geotechnical Engineer, Sarathy Geotech & Engineering Services Pvt. Ltd.

Construction and Project Planning - An Outlook by Mr. Ravindran Namasivayam, Senior Project Manager, Infrastructure Division, Galfar Al Misnad Engg & Contracting W.L.L., Qatar

Mechanics of Discrete and Continuum Materials, Systems and their Impacts on Interdisciplinary Applications by Dr. S. Joseph Antony, FRSC Faculty of Engineering, University of Leeds, UK

FACULTY OUTREACH



Dr. A. Sofi, Profesor, SCE, VIT, Vellore organised an Industrial visit to Ultra Tech Cements Ltd, Arakkonam, Vellore on 23.03.2023, for B.Tech Civil Engineering students. A total of 47 students and 2 faculty members visited the plant to see the manufacturing process of various types of cement in the plant.



Dr. L. Vignesh Rajkumar & Prof. J. Malathy, Assistant Professor, SCE organized a one-day field trip to Vainu Bappu Observatory, Kavalur, Vellore on 29th March 2023. A total of 40 students and 3 faculty members visited the observatory.



Dr. M. Muthukumar, Professor, SCE and Dr. Omsuganya, Professor, SCE, VIT, Vellore organised a one-day field trip to “Underground metro rail construction” at Chennai on 18th February, 2023. The underground construction was carried out by Chennai Metro Rail Limited (CMRL).

PUBLICATIONS

Anbarasu, M., Kasiviswanathan, M., Kathiresan, M., and G Mohan Ganesh, G. (2023), ‘Numerical Parametric Study and Design of Pultruded GFRP Composite Channel Columns’, Sustainability, Vol. 15(1), Paper id: 837, <https://doi.org/10.3390/su15010837>

Belarmin Xavier C.S., Abdul Rahim A. (2023), ‘Optimization and characterization of the ternary blended iron rich natural binder concrete system’, Construction and Building Materials. (Impact factor: 7.693)

Thabrez M., Parimalarenganayaki S., Brindha K., Elango, L. (2023), ‘Fuzzy logic-based health risk assessment of fluoride in groundwater used as drinking source in Sira region, Tumkur, India’, Environmental Geochemistry and Health. (Impact factor: 4.898)

Venkatesan, V. and Muthukumar, M (2023). Experimental and Numerical Study of Group Effect on the Behavior of Helical Piles in Soft Clays under Uplift and Lateral Loading. Ocean Engineering. Volume 268, 113500, <https://doi.org/10.1016/j.oceaneng.2022.113500>

Sai Pradeep, P and Muthukumar, M. (2023) Microstructural Characterization of Lime Modified Bagasse Ash Blended Expansive Clays using Digital Image Analysis. Environmental Earth Sciences. DOI: <https://doi.org/10.21203/rs.3.rs-1554778/v1>

Vignesh A., Thyaaanesh K., Manjri Anil Dighade, A. Sofi (2023) Study on post curing properties of concrete using nanosilica as admixture, The Indian Concrete Journal, Vol:97, No.2, pp:14-21.

T S Kumanan, A Sofi (2023) Investigation of the stability of recycled clay adobes by statistical regression analysis– A preliminary study, Materials Today: Proceedings, DOI: <https://doi.org/10.1016/j.matpr.2023.03.453>

EDITORIAL TEAM

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