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NEWSLETTER

JANUARY



TLC2 Workshop 2025

The TLC2 workshop 2025, which took place on January 27-28 at Research Park, IIT Madras, was a resounding success with over 150 participants from both industry and academia. This two-day event, organized in collaboration with the RILEM Association, featured 10 distinguished speakers from academia who presented insights on a variety of topics pertaining to construction materials and management. The selection of topics was particularly relevant, addressing pressing issues related to sustainability in the construction sector. The workshop fostered meaningful discussions and knowledge exchange, contributing to the advancement of sustainable practices in the industry.

3rd Young Researchers' Symposium

The TLC2 Workshop 2025 started with our flagship event, Young Researchers' Symposium (YRS). Thirteen bright and dynamic researchers showcased their PhD work on various topics related to alternative binders, 3D printed concrete, carbon sequestration, lean construction, displaying remarkable enthusiasm and passion for their fields.

Warm welcome to Dr. Aritra Pal as he joins the Civil Engineering Department at Indian Institute of Technology, Madras as an Assistant Professor. We are excited to have him in the BTCM Division and the CoE on TLC2. We look forward to his valuable contributions and wish him all the best in his future endeavor.



IIT Madras Open House 2025

Institute Open House "IITM for All" (Anaivarukkum IITM) at Indian Institute of Technology, Madras provided us a great opportunity to present our innovative approaches and advancements in low-carbon and lean construction. Engaging with a diverse audience allowed us to share our insights and demonstrate our commitment to sustainable building practices. It was a proud moment, highlighting our dedication to contributing positively to the construction industry and promoting environmentally friendly solutions. Undoubtedly the best way to kick start the new year by engaging with young and fresh minds of the next generation.

3rd Young Researchers' Symposium (YRS)



YRS participants with Profs. Manu Santhanam, O Burkan Isgor and Mantha Bharadwaj



Ms. Bipina receiving Prof. Surendra P Shah Award 2025 from Prof. Manu Santhanam



Ms. Ms. Nilakanmani Manimaran receiving Best Poster Presentation Award From Profs. Aritra Pal, Antonia Pacios Alvarez and Ravindra Gettu



Ms. Ms. Nilakanmani Manimaran and Ms. Bipina with their guide Prof. Piyush Chaunsali

3rd Young Researchers' Symposium (YRS)

The Young Researchers' Symposium (YRS), is a premium forum for promoting and supporting young researchers working on TLC2 areas. After rigorous scrutiny of applications received after a global call, finalist are selected to present their work at YRS.

Profs. O Burkan Isgor and R. K. Mantha Bharadwaj headed the jury for selecting the best YRS speaker who receives the prestigious Surendra P. Shah Award on Technologies for Low-Carbon and Lean Construction (TLC2) – 2025.

Ms. Bipina Thaivalappil from IIT Madras was adjudged as the Best Young Researcher for her PhD thesis on "Development of Calcium Sulfoaluminate-Belite Cement using Alternative Raw Materials" and recommended by the Jury for the prestigious Prof. Surendra P Shah Award 2025. Congratulations Bipina!!!

The YRS event includes a poster presentation session for MS & PhD students working in TLC2 areas. Profs. Antonia Pacios Alvarez and Aritra Pal were the judges for the poster session. Ms. Nilakanmani Manimaran won the Best Poster presentation award for her work on "Valorisation of Biomass Ash for Construction Materials". Congratulations!!

Congratulations to Ms. Anupama V A, Mr. Giacomo Rizzieri, Mr. Amit Chauhan and Ms. Keerthi V T for receiving the special jury awards for their awesome presentation!!!

Avinaya Tripathi from Arizona State University, Ma Cho Zin Win from Yangon Technological University, Myanmar and W. R. A. Nalaka Jayantha from University of Moratuwa, Sri Lanka received Young Researchers' Symposium travel grant.

TLC2 Workshop 2025

The 4th TLC2 workshop, organized by CoE on TLC2 and IIT Madras in association with RILEM, was inaugurated by Prof. Manu Santhanam, Dean IC & SR, IIT Madras. Prof. Manu spoke on the initiatives planned by CoE on TLC2, ongoing research projects and future plans. Prof. Benny Raphael, Head, Department of Civil Engineering welcomed the participants with a brief speech on the overall progress of Civil Engineering Department at IIT Madras.

This year, the TLC2 workshop brought together experts across the globe to delve into the latest research on concrete materials and construction management, focusing on the critical themes of circular economy and sustainability.



Prof. Ravindra Gettu delivered a talk in the beginning of the first session on construction materials as discussion leader summarizing the current research projects at CoE on TLC2 on alternative binders, 3D printed concrete, textile reinforced concrete and precast/prefabricated construction. A wide range of topics have been presented by the eminent speakers, particularly focusing on the pressing challenges associated with corrosion in low-clinker systems, innovative approaches like CO₂ sequestration through the mineralization of slag and other byproducts, which presents an exciting opportunity to not only manage waste but also mitigate carbon emissions, exploration of alternative supplementary cementitious materials (SCMs) for Use in Concrete and prospect and challenges in using Limestone Calcined Clay Cement in Concrete Floors.



Prof. Koshy Varghese, discussion leader for the afternoon session on Construction Management, gave an overview of the need to incorporate automation in construction sector, practicing safety norms and quality monitoring in the field. Affordable and Sustainable Housing, Resilient Built Environment, Sustainable Urban Resilience by Reducing Complexity with Intelligent Planning Units (IPUs), Standardized Contract Specifications, Importance of Quick and Reliable Project Progress Monitoring, decarbonizing the built environment were the key topics for discussion.



We are honored to have hosted such a successful TLC2 workshop with our amazing lineup of speakers across the globe: Profs. Adewumi John Babafemi, O Burkan Isgor, Antonia Pacios, Makarand Hastak, Bharadwaj R. K. Mantha, K. Siva Teja Chopperla, Srinivasan T, Hemanta Doloi, Aritra Pal and Anil Sawhney. Thank you for inspiring our students and participants with your wonderful presentations and insightful comments!!!

IIT MADRAS OPEN HOUSE 2025



IIT Madras Director Prof. V. Kamakoti in CoE on TLC2 stall with TLC2 faculty members and college students

Quick Updates:

As part of its 'Anaivarukku IITM' (IITM for All) initiatives, IIT Madras successfully organized the Institute Open House 2025 on January 3rd & 4th. This event welcomed individuals from diverse backgrounds, providing them with an opportunity to visit and delve into the cutting-edge labs and Centres of Excellence (CoEs) within the institute.

The CoE on TLC2 played an active role in the Open House, where our research scholars eagerly showcased their intriguing work. The fun activities for school children were planned and designed to raise awareness of the endless possibilities of using 'waste materials' to create sustainable concrete. Participants explored use of sonic navigation and ranging(S) technique at AR-VR lab to estimate volume of Construction and Demolition waste. A huge crowd gathered to explore the first 3D printed concrete house of India. The construction process and technology were explained and complete house tour was arranged for the visitors.

