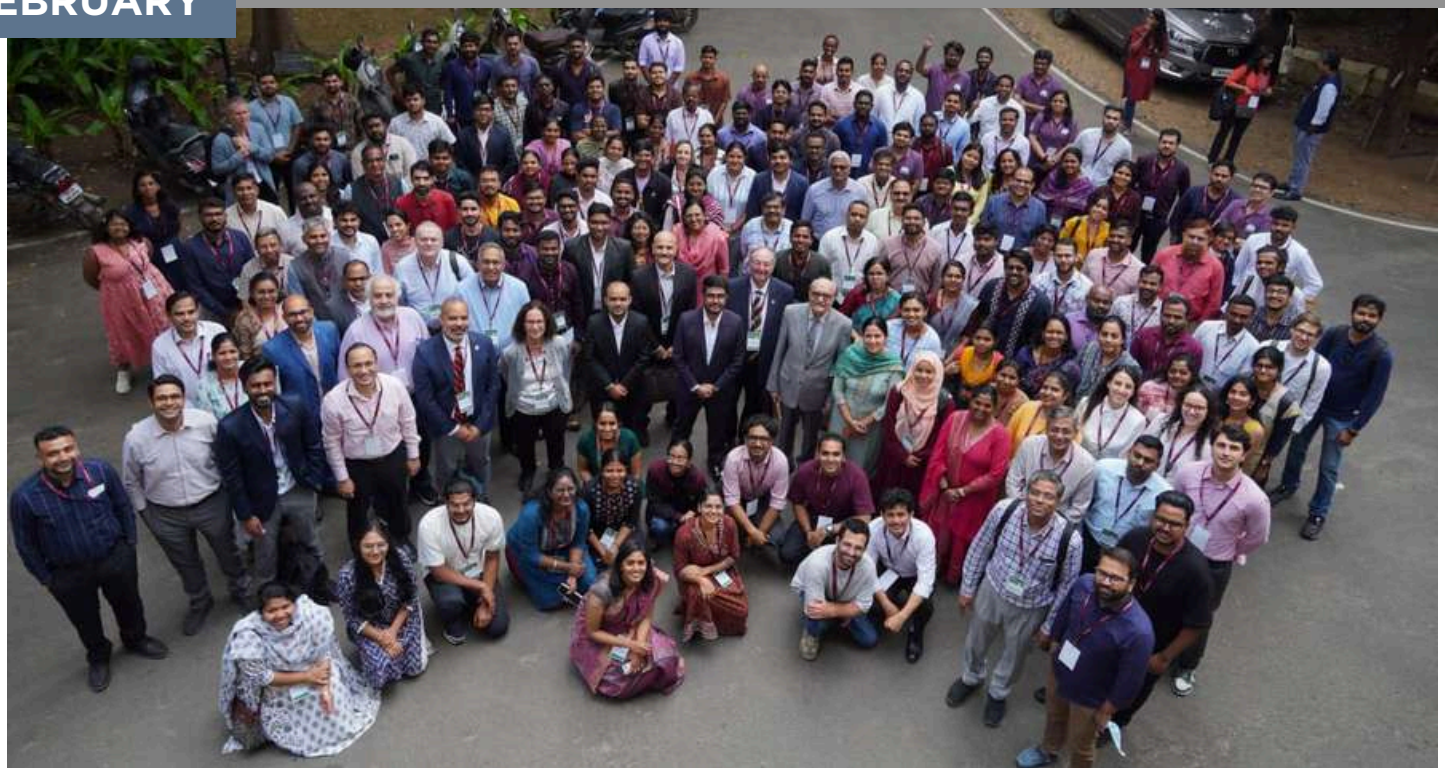
Centre of Excellence on
Technologies for
Low Carbon & Lean
Construction

NEWSLETTER

FEBRUARY



The 5th TLC2 Week on Technologies for Low-Carbon and Lean Construction (TLC2) was organized by the Centre of Excellence on TLC2 in association with RILEM Association from January 27th-30th, 2026, at the Indian Institute of Technology Madras. The TLC2 Week witnessed the enthusiastic participation of more than 175 participants from Industry, Academia, Government organizations and the student community. The event aimed to disseminate the recent findings and identify new challenges in the areas of TLC2 through interactions with relevant national and international stakeholders working in these areas.

January 27: Young Researchers' Symposium (YRS)
January 28-30: Three-Day TLC2 Workshop

25
Invited Spakers

10
Technical sessions

15
YRS finalists from 10 Academic Institutes

6
Industry Speakers

The Young Researchers' Symposium (YRS) on TLC2, is a premium forum for promoting and supporting young researchers working on TLC2 areas. After rigorous scrutiny of applications received after a global call, 17 young researchers, mainly senior Ph.D. scholars and recent PhD graduates, were invited to present their work. The Best YRS Speaker receives the prestigious Surendra P. Shah Award on Technologies for Low-Carbon and Lean Construction (TLC2). The YRS event started with a welcome address by Prof. Ravindra Gettu.

- Profs. Barzin Mobasher, Alexandra Bertron and Pat Rajeev served as the Jury for the oral presentation.
- Andrea Marcucci, from Politecnico di Milano, Italy and Ramakrishna Samanthula from IIT Madras, India were adjudged as the two best young researchers for their oral presentation and received the Surendra P Shah Awards 2026. Keerthi V T from IIT Madras, India, was given Special Recognition for her oral presentation.
- Young Researchers' Symposium travel grants were awarded to Luiza Rodrigues Meira de Miranda, Veronica Bertolli and Rubendran Loganathan.

Topic of Presentations by the awardees

An Advanced Tunnel Refurbishment Methodology Based on Slip forming Fast-Setting Steel Fibre Reinforced Concrete - Andrea Marcucci

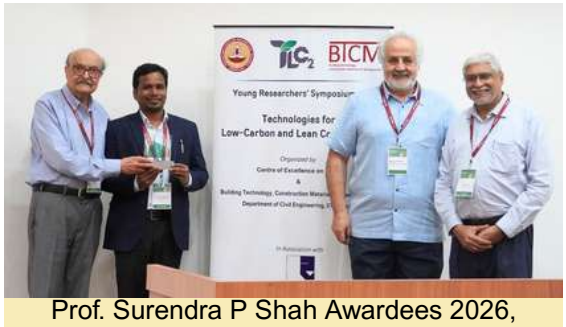
Study of the Tensile Response of E-Glass Textil-Reinforced Concrete and it's Applications in Design - Ramakrishna Samanthula

Electrochemical studies towards non-destructive testing of large-scale galvanic cathodic protection systems in reinforced concrete structures - Keerthi V T

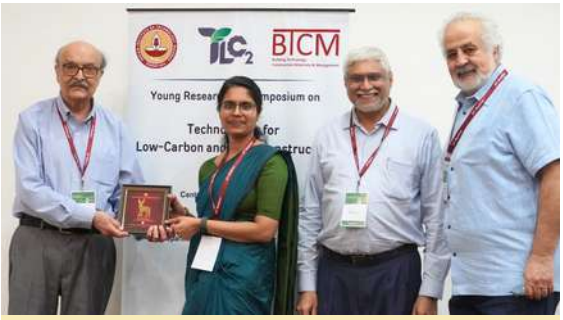
Best Poster Presentation Award

- The YRS event includes a poster presentation session by MS & PhD students working in TLC2 areas. Profs. Shweta Goyal, Deepak Kamde, Anusha Basavaraj, and Varun Reja served as the jury for the poster session.

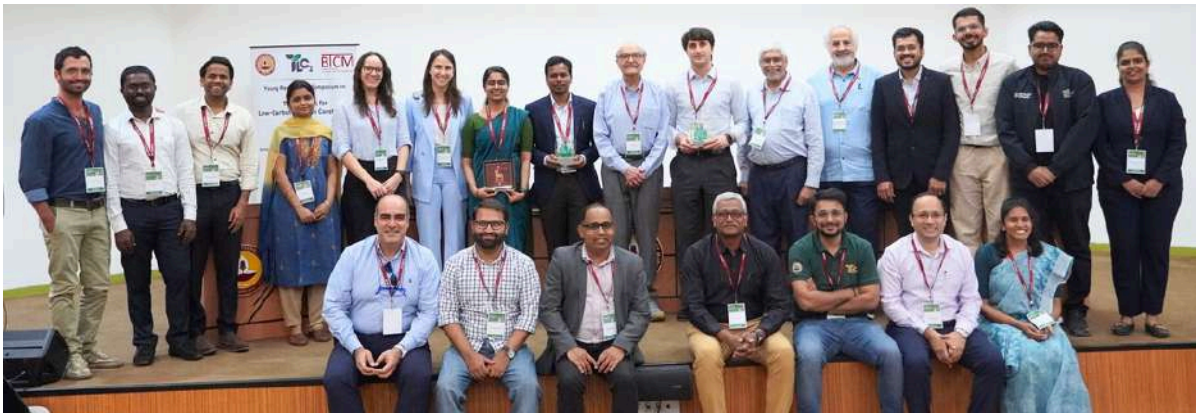
Young Researchers' Symposium (YRS) 2026 awardees



Prof. Surendra P Shah Awardees 2026, Andrea Marcucci (T) and Ramakrishna Samanthula (B) with Profs. Surendra P Shah, Barzin Mobasher and Ravindra Gettu

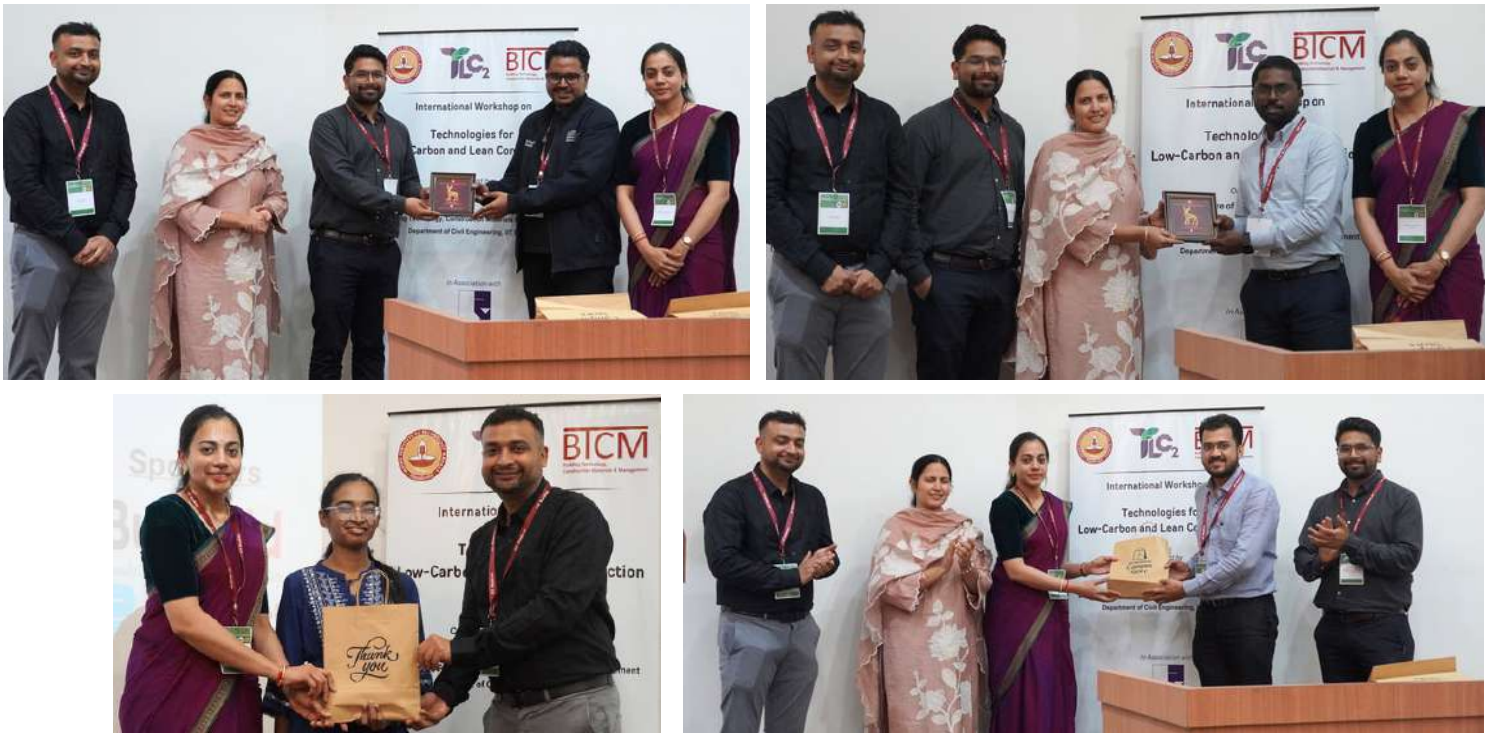


Ms. Keerthi was given a Special recognition award for her oral presentation



YRS 2026 finalists with the Jury, invited speakers and TLC2 Professors

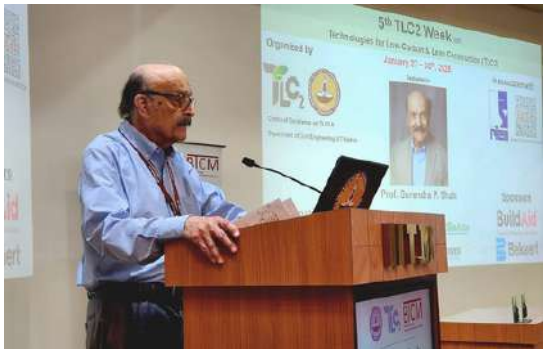
Best Poster Presentation Awardees



The Best Poster Award went to (Clockwise from top) Rubendran Loganathan, Yogesh R, Pratik Kumar Goyal and Shrinidhi Shankar.

5th TLC2 Workshop

The 5th TLC2 Week was dedicated to the esteemed academician Prof. Surendra P. Shah in celebration of his 90th birth anniversary year. This event paid tribute to his outstanding contributions to the field of concrete science and technology worldwide, highlighting his pioneering work in multiple domains. The TLC2 workshop was inaugurated by Prof. Manu Santhanam, Dean IC & SR, IIT Madras and Coordinator, Centre of Excellence on TLC2 at IIT Madras.



During the workshop, eight sessions were held on 3D Concrete Printing, Alternative and Low carbon binders, Corrosion assessment and service life design, Durability, Textile Reinforced Concrete, Construction automation, Precast Engineering. In each session, the discussion leaders set the stage with a brief introductory talk on the theme of the session followed by presentations by invited speakers. This year, 25 eminent speakers from academia and industry were invited for the workshop.

A major highlight of TLC2 Week was the keynote by Professor Surendra P Shah, a legend whose lecture on "Carbon Conscious Concrete with Functional Materials" provided valuable insights, expected to inspire future research. We extend our sincere appreciation to all participants and wish Prof. Shah the best of health.

The TLC2 Centre has completed five years, and to celebrate, a special session was held to showcase its achievements, from 2021-2025. Profs. Surender Singh and Aritra Pal led the discussion, highlighting TLC2's diverse research strengths, publications, knowledge-sharing efforts, and brand-new research facilities. They also touched upon major scaling initiatives, like forming the TLC2 Consortium with industry partners, launching the TLC2 Journal – Research Data & Reports, and the current key projects.

TLC2 Week speakers and their topics are as follows:

Speakers	Topics
Surendra P Shah, Northwestern University, USA & Distinguished Professor, IIT Madras, India	Carbon Conscious Concrete with Functional Materials
Barzin Mobasher Arizona State University, USA	Brittle to Ductile Transition Aspects of Reinforced Concrete
Liberato Ferrara, Politecnico di Milano, Italy	A holistic approach to the design of 3D concrete printing materials and processes, combining experiments, Computational Particle Fluid Dynamics modelling and AI- driven experiments
KVL Subramaniam, IIT Hyderabad, India	Insights from LCA analysis of Material Efficient Structural Systems Produced by Concrete Printing
Radhakrishna G Pillai, IIT Madras, India	Corrosion assessment and service life design of concrete structures
Devin Harris, University of Virginia, USA	Evaluation of In-Service Concrete Structures using Non-Destructive Methods
Yuvaraj Dhandapani, University of Leeds, UK	Unlocking the Potential of Calcined Clay as a Manufactured SCM in the UK: Recent Advances and Industrial Trials
Alexandra Bertron, INSA Toulouse, France	Biogeochemical interactions between cementitious materials and their environments in the context of the durability and sustainability of strategic civil engineering infrastructures.
Johann Plank, Technical University of Munich, Germany	Innovations in New Admixture Technologies for Low Carbon Binders
Piyush Chaunsali, IIT Madras, India	Development of Calcium Sulfoaluminate-Belite Cement Using Industrial Wastes
Pat Rajeev, Swinburne Univ. of Technology, Australia	Printability to Performance: A Dual Assessment of 3D-Printable Concrete
Biranchi Panda, IIT Guwahati, India	Integrating Manufacturing into sustainable 3D printed concrete design
Shravan Muthukrishnan, TU Dresden, Germany	Outcomes of RILEM 304-ADC interlaboratory study on compressive mechanical properties of 3D printed specimens
Hanuman Naik, Simpliforge Creations, India	Concrete 3D Printing under High-Altitude and Low-Oxygen (HALO) Conditions Using Local Materials
Mirosław J. Skibniewski, University of Maryland, USA	Construction 5.0 for Low-Carbon Technologies
Leon Olde Scholtenhuis, University of Twente, Netherlands	Digital Twins at the Interface of Underground Infrastructures and Building Energy Renovation Projects
Philippe Jost, Sika Switzerland	Novel products and technologies to enable the decarbonization of the construction industry
Arjun Mudambi, TRC, India	Precast Engineering: The Ancient Blueprint for Modern Construction
Marian Bosche Rekveldt, TU Delft, Netherlands	Creating value by projects: fit for purpose project management
Ashwin Mahalingam, IIT Madras, India	Why Sustainable Technologies DO NOT Get Adopted
Dhruvesh Shah, BuildAid, India	Effect of durable repair of multi-storey building on life cycle cost and carbon footprint - case study
Sri Sai Baba Ankala, Ex-Chief Engineer, Indian Railways	Challenges in the design and construction of expressway tunnels
Alva Peled Ben-Gurion, University of the Negev, Israel	Advancing Concrete with Textiles: Sustainable and Durable Solutions
Gonzalo Ruiz, Universidad de Castilla-La Mancha, Spain	Leveraging SFRC compressive behaviour for superior ductility and sustainability in composite structures
Navneet Narayan, Bekaert India	Industry experience of sustainable concrete reinforcing solutions using steel fibres