

4th International Workshop on Technologies for Low-Carbon 8

Technologies for Low-Carbon & Lean Construction (TLC2)

A Centre of Excellence at IIT Madras





27th January 2025

3rd Young Researchers' Symposium (YRS) & Award

28th January 2025

One day workshop on TLC2

The TLC2 Workshop is an annual event aimed at disseminating the recent findings and identifying the new challenges in the areas of TLC2 through collaborations with renowned national and international experts



Tentative list of Speakers



Dr. O. Burkan Isgor Oregon State University, USA



Dr. Hemanta Doloi University of Melbourne, Australia



Dr. Antonia Pacios
Technical University
of Madrid, Spain



Dr. R. K. M. Bharadwaj University of Sharjah, UAE



Dr. A. John Babafemi Stellenbosch University, South Africa



Dr. Makarand Hastak Purdue University, USA



Dr. K. Siva Teja Chopperla

IIT Gandhinagar,

India



Mr. Srinivasan T Larsen & Toubro, India



Dr. Aritra Pal IIT Madras, India



Dr. Anil Sawhney
Royal Institution of Chartered
Surveyors (RICS), USA



IIT Madras Research Park, Chennai, India

Early bird registration for TLC2 workshop 2025 is open now: https://code.iitm.ac.in/code-programs/TLC2-2025/

Category	Young Researchers' Symposium (YRS) Monday, January 27, 2025	One day workshop on TLC2 Tuesday, January 28, 2025
Industry - Practicing engineers	Rs. 2000	Rs. 4000
Academia - Faculty members, Scientists, Part-time Research Scholars	Rs. 1000	Rs. 2000
Academia - Students, Full-time Research Scholars	Rs. 1000	Rs. 1000



28th January 2025

08:00-09:00AM

4th International Workshop



Technologies for Low-Carbon & Lean Construction (TLC2)

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One day workshop on TLC2

Registration

09:00-09:20AM	Inaugural session: Welcome address by Prof. Manu Santhanam Chief Guest: Prof. Benny Raphael, IIT Madras
09:20-09:30AM	Discussion Leader (Prof. Ravindra Gettu)
09:30-10:00AM	Dr. O. Burkan Isgor Challenges related to reinforcement corrosion in low-clinker systems
10:00-10:30AM	Dr. Antonia Pacios Transforming Waste into Wealth: ${\rm CO_2}$ Sequestration through Mineralization of Slag and Other Byproducts
10:30-11:00AM	Tea/coffee Break
11:00-11:30AM	Dr. Adewumi John Babafemi FRC & 3D Printed Concrete

Assessing Alternative SCMs for Use in Concrete 12:00-01:00PM Lunch Break 01:00-01:10PM

11:30-12:00AM

01:10-01:40PM

01:40-02:10PM

02:10-02:40PM

02:40-03:10PM

03:10-03:40PM

03:40-04:00PM

04:00-04:30PM

04:30-05:00PM

Discussion Leader (Prof. Koshy Varghese)

Dr. Hemanta Doloi

Dr. K Siva Teja Chopperla

Making Affordable Housing Sustainable: The Importance of Blending with Local Cultures and Practices Dr. R. K. Mantha Bharadwaj

Impact of Automation and Information Technology on Sustainability Dr. Makarand Hastak Topic of Presentation: TBD

Mr. Srinivasan T Implementing Sustainability through Contract Specifications Tea/Coffee Break

Talk by YRS winner Dr. Aritra Pal

Closure

Progress Monitoring

Dr. Anil Sawhney Whole life carbon assessment standard: decarbonizing the built environment

Time Overruns and Unsustainable Projects: The Importance of Quick and Reliable Project



3rd Young Researchers' Symposium & Award

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Technologies for Low-Carbon & Lean Construction

27th January 2025 (Monday) | 9 am to 5 pm IST |@ Research Park, IIT Madras

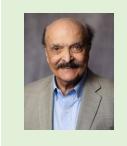
About the symposium

Young Researchers' Symposium (YRS) is an international forum for senior PhD students and recent doctoral graduates to showcase their cutting-edge research outcomes in the areas of Technologies for Low-Carbon and Lean Construction (TLC2).

Prestigious
Prof. Surendra P. Shah
Award is given to the best
speaker of YRS

The previous symposium featured participants from top universities, including:

- · Politecnico di Milano, Italy
- · University of Toronto, Canada
- Ghent University, Belgium
- · University of Leeds, UK
- Monash University, Malaysia
- Thapar Institute of Engineering & Technology, India
- The University of Sheffield, England
- University of Capetown, South Africa
- Oregon State University, USA
- UPC Barcelona, Spain
- IIT Madras, Hyderabad & Palakkad, India
- · Anna University, India



PROF. SURENDRA P. SHAH

Presidential Distinguished Professor, Center for Advanced Construction Materials, University of Texas at Arlington, USA Distinguished Professor, IIT Madras



YRS finalists 2024 Final Control September 19 TEXT & Description of Control September 19 TEXT & Description of

Themes (but not restricted to...)

- Supplementary/alternative cementitious materials
- Identification, processing, and valorization of waste for use in concrete construction
- Service life and life cycle assessment, sustainability and carbon footprint of construction industry
- An Integrated Test-Bed for large-scale processes and visualization
- Organizational and policy research for largescale and accelerated construction technology
- Implementing lean techniques in construction projects

What you need to do?

Send a 200 words abstract and a 5-minute video on your PhD thesis by 15th December 2024

Travel grant of upto EUR 2000 (two thousands) could be available to selected speakers travelling from outside India





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Technologies for Low-Carbon & Lean Construction (TLC2)



A Centre of Excellence at IIT Madras				
27th January 2025 3rd Young Researchers' Symposium & Award 2025				
09:00 – 09:10 AM	Welcome Address by Prof. Ravindra Gettu			
09:10 – 09:30 AM	Development of cementitious materials with improved sustainability and high temperature performance	Vikash Kumar Singh IIT Gandhinagar, India		
09:30 – 09:50 AM	Utilization of Demolished Concrete Waste For Roller Compacted Concrete Pavement(RCCP) Applications	W. R. A. Nalaka Jayantha University of Moratuwa, Sri Lanka		
09:50 – 10:10 AM	The Influence of Safety Leadership on Safety Performance through Safety Climate in the Construction Industry	S. Senthamizh Sankar SRM Institute of Science and Technology, India		
10:10 – 10:30 AM	Development of carbon sequestering earth-based 3D printable "cementless" material for construction under different environmental exposures	Pitabash Sahoo Indian Institute of Science Bengaluru, India		
10:30 – 10:50 AM	Investigation on the Behavior of Rubberized Mortar and Concrete under Cyclic Loading	Ma Cho Zin Win Yangon Technological University, Myanmar		
11:00 – 11:30 AM	Tea/coffee Break			
11:30 – 11:50 AM	Reusable Fire-Resistant RC Column Rehabilitation Scheme with Fibre Reinforced Polymer Composites	Mohamed Elshorbagi Western Sydney University, Australia		
11:50 – 12:10 PM	Understanding Salt Weathering in Combined Substrate-Mortar Masonry Systems	Anupama V A IIT Madras, India		
12:10 – 12:30 PM	Print Technique and Material Modification In 3D Printing of Concrete	Avinaya Tripathi Arizona State University, USA		
12:30 – 12:50 PM	Development of eco-friendly and cost-effective foam concrete using high-volume supplementary cementitious materials: Analysis of microstructural, mechanical, and durability properties	Arvind Vishavkarma IIT Kanpur, India		
12:50 – 02:00 PM	Lunch Break			
02:00 – 02:20 PM	Studies on Enhancement of Stability, Rheology and Mechanical Performance of 3D Printable Foam Concrete	Uday Boddepalli IIT Guwahati, India		
02:20 – 02:40 PM	Development of Calcium Sulfoaluminate-Belite Cement using Alternative Raw Materials	Bipina Thaivalappil IIT Madras, India		
02:40 – 03:00 PM	A PFEM numerical framework for the simulation of 3D printing with advanced cementitious materials	Giacomo Rizzieri Politecnico di Milano, Italy		
03:00 – 03:30 PM	Tea/Coffee Break			
03:30 – 05:00 PM	Poster Presentations by Young Researchers			
05:00 – 05:30 PM	About RILEM by Dr. Surender Singh, RYC Chair			
05:30 – 05:45 PM	Dedication of the Award Talk by Prof. Surendra P. Shah (Online)			

05:45 - 06:00 PM Announcement of the Prof. Surendra P Shah Awardee & Best Poster Awardee for 2024 Closure