

Special Service and Features



CSIR-SERC Diamond Jubilee Conference on Monitoring, Assessment and Predictive Maintenance of Critical Infrastructure (i-MAP 2025)

Posted On: 21 MAY 2025 5:39PM by PIB Chennai



CSIR-Structural Engineering Research Centre (CSIR-SERC) today inaugurated its Diamond Jubilee International Conference on “Monitoring, Assessment, and Predictive Maintenance of Critical Infrastructure (i-MAP 2025)” at the CSIR complex in Chennai. This international conference, running from May 21-23, 2025, marks 60 years of CSIR-SERC's dedicated service to the nation.

The inaugural event was honored by Shri Ravindra Kumar Goel, Principal Executive Director (Bridges), Ministry of Railways, as the Chief Guest, and Shri T. Archunan, Director (Projects) and Board Member, Chennai Metro Rail Ltd (CMRL), as the Guest of Honour.

The function was inaugurated with the lighting of Kuthuvilakku. Dr. Srinivas Voggu, Chief Scientist, CSIR-SERC and Organizer, i-MAP 2025 gave a brief of this conference.



Shri Goel delivered the Diamond Jubilee Conference lecture titled Indian Railways – Bridge Infrastructure: An Overview. In his address, Shri Goel highlighted the significant history of Indian Railways, noting that its initial infrastructure was established in 1853. Today, the network comprises approximately 1,63,810 bridges. He underscored the crucial role of academic and research organizations like the IITs and CSIR-SERC in enabling the cost-effective maintenance of most meter gauge bridges, emphasizing the ongoing necessity of Structural Health Monitoring (SHM).

Shri Goel further explained that Indian Railways employs its own rigorous inspection mechanisms for bridges and actively collaborates with academic and research institutes on numerous projects for bridge monitoring and maintenance. Acknowledging the considerable challenges in bridge maintenance, he stated that Indian Railways is actively seeking better solutions at reduced costs. He also

stressed the importance of specialized expertise in bridge engineering and briefly outlined various government initiatives aimed at achieving this. He also detailed the Railway Bridge inspection classifications, types, and frequencies aimed at extending the lifespan of bridges. Shri Goel further shared valuable insights on water level monitoring in bridges during floods and the application of 3D River Bed Mapping.

Dr. N. Ananadavalli, Director, CSIR-SERC and Coordinating Director, CMC, delivered the inaugural address, highlighting the paramount importance of SHM in bridge construction and management. She drew a compelling analogy between monitoring human health and the necessity of SHM for ensuring bridge safety and predicting future challenges. She quoted the famous Thirukkural: "நோய்நாடி நோய்முதல் நாடி அதுதணிக்கும் வாய்நாடி வாய்ப்பச் செயல்." Dr. Ananadavalli also acknowledged the inherent challenges within SHM systems, underscoring its significance with the powerful statement: "Mechanics helps to understand, Assessment helps to decide, Structural Health Monitoring (SHM) helps to predict." She also spoke in brief on the important projects carried out by CSIR-SERC for the Indian Railways, energy sector, etc.



Shri Archunan, the Guest of Honour, released the i-MAP 2025 conference Proceedings. While addressing the gathering, noting that the Chennai Metro Rail project is one of the world's largest undertakings. He emphasized the critical role of the technologies employed in its execution. He also highlighted that the current

pace of R&D is inadequate for the growing demands and pointed out that necessary testing facilities are also not available in the country at present. He called upon the academic and research institutions to work towards bridging this gap and pace.

Shri Goel inaugurated the Diamond Jubilee Conference's exhibition pavilion both virtually and in person.

AD/NB/AG/KR

(Release ID: 2130300) Visitor Counter : 80

Read this release in: Tamil