

CALL FOR PAPERS



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

**MAY 21-23, 2025**

Discover the latest trend and innovations in the field of  
Sensors, Data Analytics and Monitoring of Structures -  
Connect with Experts, learn and share knowledge.

## Venue

Vigyan Auditorium,  
CSIR-Structural Engineering Research Centre  
CSIR Campus, Taramani  
Chennai - 600 113, India;

<http://imap2025.serc.res.in/>

<https://serc.res.in/>

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**CSIR-Structural  
Engineering  
Research Centre**



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information

## About CSIR-SERC

CSIR–Structural Engineering Research Centre (CSIR-SERC), situated in Chennai, India, stands as a beacon of excellence in the realm of structural engineering. Established in 1965 by the Council of Scientific and Industrial Research (CSIR) under Ministry of Science & Technology, Government of India, CSIR-SERC has since been at the forefront of pioneering research and development initiatives aimed at advancing the understanding and application of structural engineering principles. The centre boasts state-of-the-art infrastructure and cutting-edge laboratories equipped to undertake a wide spectrum of research activities encompassing structural analysis, design, testing, and validation. CSIR-SERC's dedicated team of multidisciplinary experts collaborates on diverse projects, ranging from development of innovative materials to development of sustainable structures. Notably, CSIR-SERC's contributions extend beyond the realm of R&D and academia, with active engagement in industry driven services, technology transfer, and industry partnerships, fostering innovation and driving sustainable solutions for the built environment. Through its commitment to excellence, innovation, and collaboration, CSIR-SERC continues to uphold its reputation as a premier institution in the field of structural engineering, both nationally and internationally. CSIR-SERC is renowned for its expertise in several thrust areas that are critical to the advancement of structural engineering. Additionally, CSIR-SERC excels in the domain of computational mechanics, leveraging advanced computational tools and numerical simulations to model and analyze complex structural behavior under various loading conditions. Furthermore, SERC is actively involved in the field of structural health monitoring (SHM), which plays a crucial role in ensuring the safety, reliability, and longevity of civil infrastructure. Utilizing cutting-edge sensor technologies, data analytics, and machine learning algorithms, CSIR-SERC develops robust SHM systems capable of real-time monitoring, assessment, and predictive maintenance of structures. By continuously monitoring structural performance and detecting early signs of deterioration or damage, CSIR-SERC's SHM solutions empower asset owners and managers to make informed decisions regarding maintenance, repair, and asset management strategies, thereby enhancing the resilience and sustainability of critical infrastructure networks. In essence, CSIR-SERC's multidisciplinary research endeavors, world class facilities and unique expertise underscore its commitment to advancing the frontiers of structural engineering and addressing the evolving challenges of the built environment.

## About i-MAP

The CSIR-SERC Diamond Jubilee Conference on 'Monitoring, Assessment, and Predictive Maintenance of Critical Infrastructure (i-MAP)', being organised to commemorate the glorious 60 years of CSIR-SERC's service to the nation, provides a pivotal platform for global experts, researchers, and practitioners to convene and exchange insights on safeguarding vital structures such as railway/highway bridges, power plant facilities, nuclear reactors, oil and gas refineries, Dam structures and other critical infrastructure components. Delving into innovative methodologies and cutting-edge technologies, i-MAP explores monitoring, assessment, and predictive maintenance techniques crucial for enhancing the resilience and reliability of these essential systems. By fostering collaboration and knowledge-sharing, the conference endeavors to address emerging challenges, mitigate risks, and devise sustainable strategies for the management of critical infrastructure in an increasingly interconnected world.

## Themes of i-MAP 2025

- Advanced monitoring technologies
- Smart materials and sensing technologies
- Active & Passive sensing, and sensor optimization
- Remote monitoring and inspection technologies
- Data analytics and Artificial Intelligence
- Integration of IoT and sensor networks
- Cyber-physical systems for critical infrastructures and Digital Twin (DT)
- Sustainability and environmental impact through monitoring & assessment
- Predictive maintenance strategies
- Strategies for capacity augmentation and life enhancement
- Asset management and life cycle assessment for critical infrastructure
- Risk & reliability assessment, and management
- Regulatory frameworks and compliance standards for monitoring & maintenance
- Human factors and behavioral considerations in infrastructure maintenance

|                               |     |  |
|-------------------------------|-----|--|
| <b>PATRON</b>                 | ... | <b>Dr. (Mrs.) N. Kalaiselvi</b> , Director General, CSIR |
| <b>CHAIRPERSON</b>            | ... | <b>Dr. (Mrs.) N. Anandavalli</b> , Director, CSIR-SERC   |
| <b>CO-CHAIRPERSON</b>         | ... | <b>Dr. S. Parivallal</b> , Advisor (M), CSIR-SERC        |
| <b>ORGANIZING SECRETARIES</b> | ... | <b>Dr. Srinivas Voggu; Dr-Ing. Saptarshi Sasmal</b>      |

**Abstracts are being called for oral / poster presentations during the i-MAP2025 conference. From the papers presented in the conference, authors of the selected papers will be asked to submit full length papers for possible publication in "Journal of Structural Engineering" after the required review process**

## Call for Submission of Papers

The CSIR-SERC Diamond Jubilee Conference on 'Monitoring, Assessment, and Predictive Maintenance of Critical Infrastructure (i-MAP 2025)', is meticulously planned to muster innovative ideas from researchers, scientists, academicians, industry professionals and students.

### Submission of Abstracts

Abstracts not exceeding 500 words matching with one of the themes of the conference can be submitted for presentation during the conference. The accepted abstracts will be intimated for which the extended abstract shall be submitted not exceeding four pages as per the format provided with the acceptance communication.

The abstracts should be submitted as per the template given below. Abstract Upload (Upload the abstract with your name as Filename and it should not consists any special characters like "-", "+", "/", "." Use the Template for abstract preparation, submit in **.doc/.docx format**).

**[abstract template.docx](https://forms.gle/SogcRq8ZKKaDc6jp6)** ( <https://forms.gle/SogcRq8ZKKaDc6jp6> )

Abstracts should be submitted using the Link provided below.

### **I-MAP 2025\_ABSTRACT SUBMISSION FORM**

**<https://forms.gle/G2JV1Jc2NvDTifUM6>**

## Publication in the Journal of Structural Engineering

Few of the papers presented during the conference will be selected by the review committee for publication in Journal of Structural Engineering, a peer reviewed journal. Decision of the review committee will be final for the selection of the papers for journal publication. Full length papers will be asked to submit for the selected papers and will be reviewed as per the journal policy for further publication in the journal.

## Conference Registration Fees

| Category | Particulars of Delegates                   | Registration Fee Upto Mar 31, 2025 (INR) | Registration Fee After Mar 31, 2025 (INR) |
|----------|--|--|---|
|          |  | Reg Fee (Incl GST @ 18%)                 | Reg Fee (Incl GST @ 18%)                  |
| 1        | Delegates (Industry / Research / Academia) | 8850/-                                   | 10030/-                                   |
| 2        | Student Delegates                          | 4720/-                                   | 5310/-                                    |
| 3        | Spouse / Accompanying Person               | 4720/-                                   | 5310/-                                    |
| 4        | Foreign Delegates                          | USD 200                                  | USD 250                                   |

**Registration is a must for attending the conference.  
The registration must be done through the link provided below.**

### **I-MAP 2025\_DELEGATE REGISTRATION FORM**

**<https://forms.gle/2UpYDzu56Tn4sxtE8>**

### **Important Dates**

|  |     |                   |
|--|-----|-------------------|
| <b>Submission of Abstract</b>  | ... | <b>25-03-2025</b> |
| <b>Intimation of Abstract acceptance</b>                             | ... | <b>31-03-2025</b> |
| <b>Submission of Extended Abstract</b>                               | ... | <b>25-04-2025</b> |
| <b>Intimation of the selected papers for the journal publication</b> | ... | <b>31-05-2025</b> |
| <b>Submission of full length paper*</b>                              | ... | <b>15-06-2025</b> |
| *(only for selected papers for journal publication)                  |     |                   |

## Sponsorship / Exhibition Oppotunities

This conference offers a unique opportunity for your organization / institution / company to highlight its commitment to fostering innovation and sustainability in the field of assessment of structures, sensors/hardwares, new products, etc. Various sponsorship packages are available, providing visibility and engagement options tailored to your goals.

**For Sponsorship or Exhibition stalls, the Conference Organisers may please be contacted.**



## Places to visit around Chennai

Chennai, the capital city of Tamil Nadu, is a vibrant hub that offers a rich blend of culture, history, and natural beauty. One of its top attractions is the Marina Beach, one of the longest urban beaches in the world, offering a serene escape from the city's hustle and bustle. Nearby, the Government Museum showcases an extensive collection of art, archaeology, and numismatics, providing a glimpse into India's history. For those interested in religious sites, the Kapaleeshwarar Temple in Mylapore is a stunning example of Dravidian architecture, dedicated to Lord Shiva. Another significant spiritual destination is San Thome Basilica, a beautiful church built over the tomb of Saint Thomas, one of the apostles of Jesus. Just outside Chennai, visitors can explore Mahabalipuram, a UNESCO World Heritage site renowned for its ancient rock-cut temples and monolithic sculptures, including the famous Shore Temple by the sea. Kanchipuram, known as the "City of a Thousand Temples," is another nearby gem, offering a deep dive into South Indian architecture and spirituality. For nature lovers, the Guindy National Park and Arignar Anna Zoological Park provide opportunities to experience India's diverse wildlife. Chennai's blend of historical landmarks, cultural richness, and natural beauty makes it a compelling destination for any traveler.



## Reaching CSIR-SERC

- The CSIR campus is approximately 4 kms away from Adyar Canal /Madhya Kailash Temple / CLRI / Regional Labour Institute bus stop and is located on the CSIR Road, Taramani
- The CSIR campus is located at around 15km from Chennai central / Egmore railway stations and 14 km from Chennai International Airport
- The CSIR campus can be reached by the bus / MRTS train from Central / Egmore Railway stations.

