July - September 2025 Vol. 9, No. 3

e-STRUCT

e-Newsletter of CSIR-Structural Engineering Research Centre

In this issue

The e-STRUCT newsletter showcases a journey of continued resilience in the quarter gone by, coupled with optimism for a better future through the scientific activities and myriad events that are part of day-to-day life on the CSIR-SERC campus. I am very happy to present Vol. 9, No. 3, 2025 issue of e-STRUCT. This edition of the newsletter showcases the varied skills of the CSIR-SERC community, highlighting our R&D pursuits, achievements, skill development initiatives, and other significant events & endeavors during July - September 2025.

CSIR-SERC celebrated the 84th Foundation Day of CSIR with great enthusiasm on 26 September 2025. Open Day was observed on the occasion of CSIR Foundation Day and all laboratories of CSIR-SERC were kept open on that day during 9:30 AM to 2:30 PM. Elaborate arrangements were made to receive the visitors. Technologies, products, and state-of-the-art facilities were showcased and demonstrated for the benefit of the visitors. A record number of 9700 visitors, including school and college students, teachers, professionals from the industry, entrepreneurs, and the general public, visited the CSIR campus and the Tower Testing & Research Station (TTRS) campus of CSIR-SERC with great enthusiasm.

Two technologies of CSIR-SERC were transfered to industry and an agreement was signed with M/s. Mudbhary and Joshi Construction Private Limited, Nepal, for Testing of tower: 132kV D/C "DA" type suspension tower. This issue's research highlight is about coupled dynamic analysis of floating offshore wind turbine under mooring line failure. In this quarter, nine major projects were undertaken, various capacity development programmes and events were held. This has indeed been a challenging but eventful quarter and as always, we look forward to more exciting opportunities in future.

With best wishes,
Dr. N. Anandavalli
08.12.2025

Research highlights

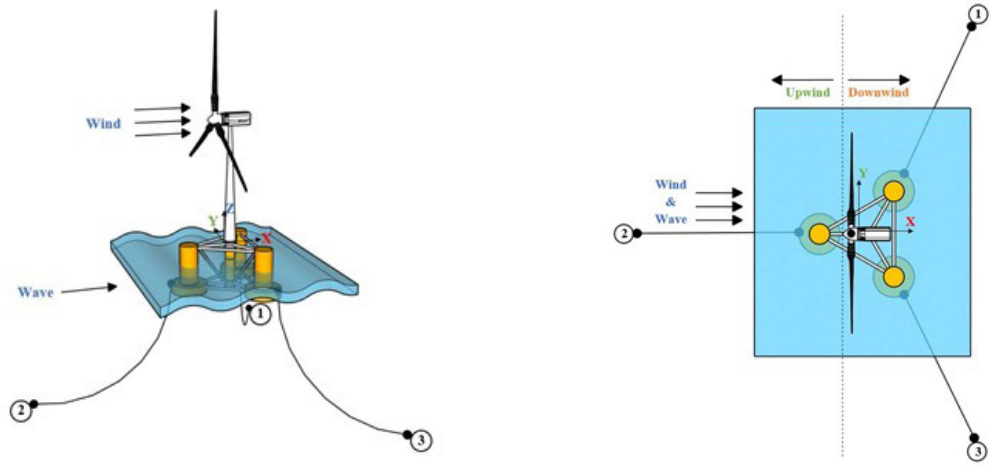
Coupled dynamic analysis of floating offshore wind turbine under mooring line failure

Floating offshore wind turbines (FOWTs) have gained significant global attention in recent decades due to their potential to harness wind energy in deep water regions, where traditional fixed-bottom offshore wind turbines are not feasible. Fixed-bottom turbines are limited to shallow waters, whereas FOWTs can be deployed in deep seas, offering access to uninterrupted and abundant wind resources. Among various FOWT configurations such as spar buoys, tension leg platforms (TLPs), barges, and semisubmersibles, the semisubmersible platform stands out for its several advantages. While spar buoys achieve stability through ballast and TLPs rely on vertical tethers anchored to the seabed, semisubmersible platforms are stabilized by buoyancy. The semisubmersible platform consists of multiple buoyant pontoons interconnected by a bracing system, which enhances structural stability under turbulent wind conditions and adverse weather. They are highly scalable, suitable for a wide range of turbine sizes, and are easier to maintain with better accessibility for service operations, making them ideal for deep water applications. One critical aspect of semisubmersible platforms is the risk of mooring line failure, which must be thoroughly investigated due to the challenges posed by deep water environments. Mooring lines are essential for maintaining the platform position and stability. The analysis typically considers different environmental conditions, combining various wind models such as normal turbulence and extreme turbulence and sea states, including normal and severe conditions. Dynamic analysis is conducted under the turbine operational state, accounting for scenarios involving intact mooring as well as the failure of individual mooring lines (lines 1, 2, or 3) (Fig. 1). The semisubmersible platform includes a central column attached to the turbine tower and three peripheral columns connected via a bracing system. At the base of each peripheral column, a wider diameter cylinder is incorporated to reduce the platform motion and enhance stability. This part enables the platform to support the turbine effectively while maintaining the position and performance under harsh offshore conditions.

Environmental conditions and numerical simulations

The design load cases (DLCs) corresponding to the operational condition of the wind turbine are incorporated into the numerical simulations. To model the wind conditions during operation, two wind models are considered: Normal Turbulence Model (NTM) and Extreme Turbulence Model (ETM). Similarly, wave conditions

are simulated using two sea state models: Normal Sea State (NSS) and Severe Sea State (SSS). In the mooring configuration, mooring lines 1 and 3 are positioned on the downwind side, while mooring line 2 is located on the upwind side. The wind and wave directions are aligned with an inclination of 0° relative to the global X-axis, meaning both wind and wave forces act along the X-axis. Mooring line 2 runs parallel to this direction, directly facing the incoming environmental loads. A fully coupled aero-hydro-servo-elastic-mooring analysis is performed using the open-source, medium-fidelity simulation tool OpenFAST, enabling an integrated assessment of the floating wind turbine dynamic behaviour under various environmental conditions. The aerodynamic loads on the floating offshore wind turbine (FOWT) are computed using the AeroDyn module of OpenFAST, which applies the blade element momentum (BEM) theory. Turbulent wind inflow is generated using the Kaimal spectrum through the TurbSim tool. The HydroDyn module calculates the hydrodynamic loads on the floating platform using a hybrid approach, which combines linear diffraction theory and the Morison equation. Irregular sea states are represented using the JONSWAP wave spectrum. The MoorDyn module is employed to compute the mooring line tensions by implementing the lumped mass method. To simulate the mooring line failure, the source code of the MoorDyn module is modified and recompiled accordingly. The total simulation time of 4600 s is considered for the analysis. The mooring line failure event is introduced at 2000 s from the simulation start time. Rotor speed control is managed by the ServoDyn module, which utilizes the generator torque and blade pitch controllers. The floating platform is modeled as a rigid body, while the blades and tower are modeled with structural flexibility using the ElastoDyn module.



(a) Side Elevation (b) Plan

Fig. 1 Semisubmersible offshore wind turbine

Effects of mooring line failure on semisubmersible offshore wind turbine

The time series of both translational and rotational platform responses are presented in Figs. 2 and 3, with a vertical dotted line indicating the moment of mooring line failure at 2000 s. A magnified view of all six degrees of freedom (DOFs) motions is provided for the time interval between 1900 and 2100 s on the right side of both the figures, highlighting the transient responses following mooring line failure. From these figures, it is evident that motions in all six DOFs increase due to mooring line failure, with platform surge drift showing the most significant amplification. The failure of the upwind side mooring line (ML2) has a more pronounced effect than the failures of the downwind side lines (ML1 and ML3), as ML2 is aligned with the wind and wave direction (0°). The ML2 failure predominantly affects surge, heave, and pitch motions, while ML1 and ML3 failures have a greater influence on sway, roll, and yaw responses. The surge, heave, and pitch responses take longer period to stabilize after the transient phase during ML2 failure compared to ML1 and ML3 failures. Similarly, sway, roll, and yaw responses require a prolonged period to reach steady state following failures of ML1 and ML3 compared to ML2 failure. During ML2 failure, the platform exhibits a larger downwind side shift with an increased surge response. During ML1 failure, the platform shifts toward the negative Y-axis on the upwind side, while it shifts toward the positive Y-axis on the upwind side during ML3 failure. Overall, the sway direction drift increases significantly for both ML1 and ML3 failure scenarios.

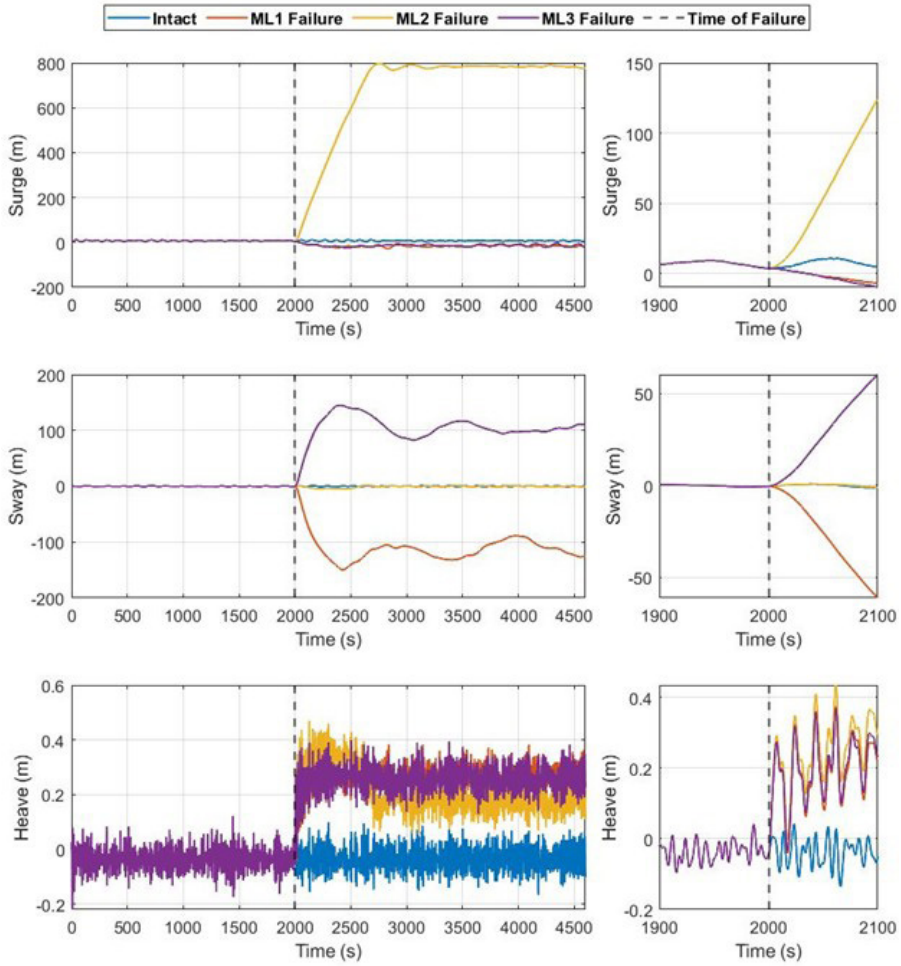


Fig. 2 Time series of translational platform responses during intact and failure scenarios of mooring lines

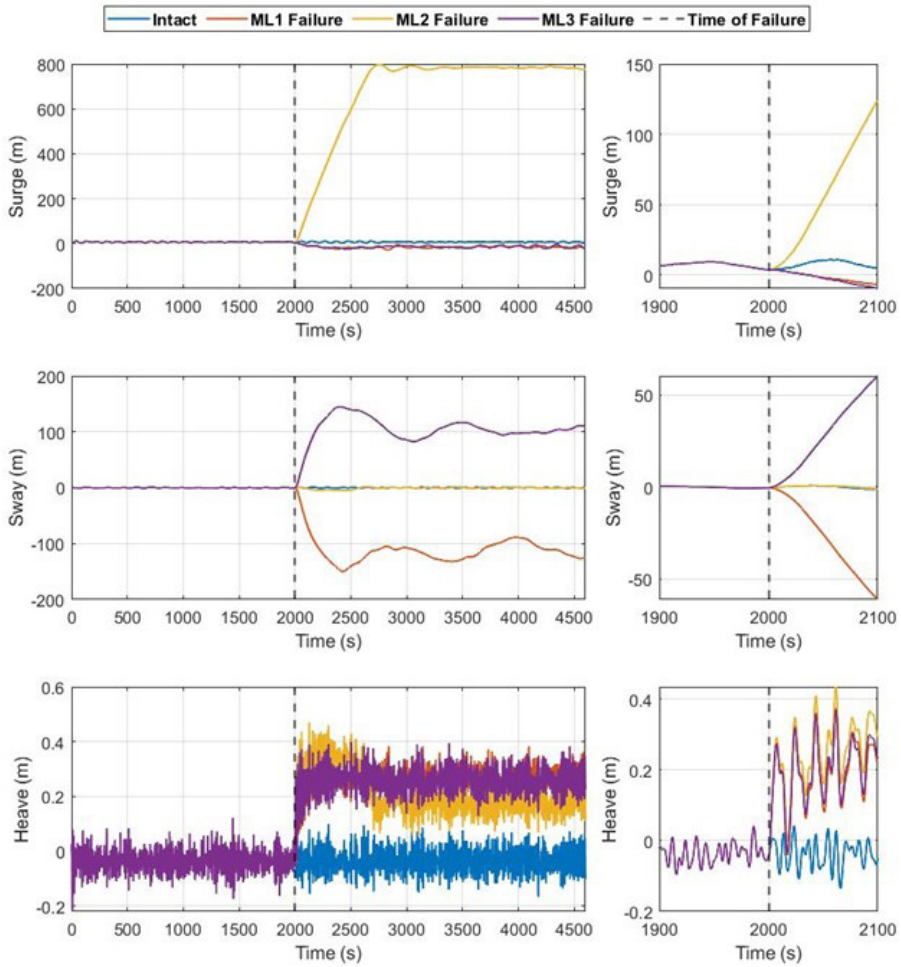


Fig. 3 Time series of rotational platform responses during intact and failure scenarios of mooring lines

Major Projects Undertaken

- Fatigue life evaluation of flash butt welded rail joints
- Quasi-static performance evaluation of metro couplers
- To conduct ultrasonic pulse velocity test and rebound hammer test of TG deck slab and civil foundation of Unit 2 and Unit 5 of NTPC Super Thermal Power Station at Barh, Bihar
- Performance test of semi-permanent coupler and balanced draft gear
- Performance evaluation of AAR-H coupler and balanced draft gear
- Endurance test of AAR-H coupler and balanced draft gear
- Condition assessment of Ottappalam Municipality Bus Stand Shopping Complex, Ottappalam, Palakkad and recommendation for repair measures
- Evaluation of existing prestress in superstructure of Tartala flyover in Kolkata
- Condition assessment & stability check of identified steel structures of NSPCL Plant, Rourkela

Technology transfers/MoUs

- A memorandum of agreement (MoA) between CSIR-SERC and M/s. Mudbhary and Joshi Construction Private Limited, Nepal, was signed for the project **Testing of Tower:132kV D/C "DA" Type Suspension Tower**, on 1 September 2025.

- The technology titled **Emergency Retrieval System for Power Lines (ERS)** was licensed to M/s. IAC Electricals Private Limited, Kolkata, on 28 July 2025.

- The technology titled **High Velocity Multi-Hit Resistant Movable Protective Booth** was licensed to M/s. Kistler Morse Automation Limited, Hyderabad, on 21 August 2025.

Capacity development

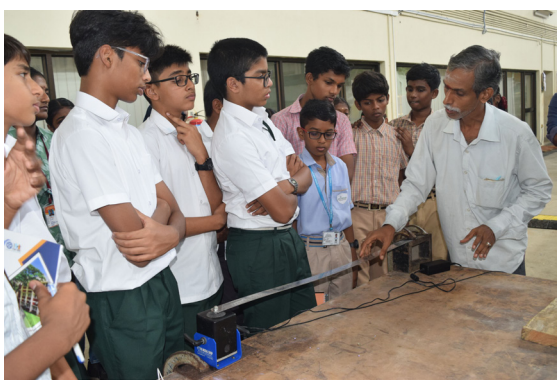
Jigyasa

Visit of school student winners of the Sastra Prathiba by Science India Forum - The winners (Sastra Pratibhas) of Vidhyarthi Vigyan Manthan (VVM), organized by Science India Forum, visited CSIR-Structural Engineering Research Centre, Chennai (CSIR-SERC) on 9 July 2025 and interacted with scientists. A total of 15 visitors (10 students and 5 representatives of Science India Forum, Bahrain) visited the campus. The event was coordinated by Dr. S. Maheswaran, Senior Principal Scientist, and Dr. S. Sundar Kumar, Principal Scientist. The students expressed gratitude for the opportunity stating that it sparked their interest in science and research. The students also visited various laboratories of CSIR-SERC, interacted with the scientists and had a glimpse of ongoing research activities of the centre.

National level science aptitude examination winners from across Tamil Nadu visit to CSIR-SERC - A total of 90 students across Tamil Nadu who have participated in the national-level science aptitude examination called Vidyaarthi Vigyaan Manthan (VVM) and secured top three levels from each district visited CSIR-SERC on 10 July 2025, on a one-day science field trip.

CSIR-SERC celebrates One Day as a Scientist week from 21-25 July 2025 - The Council of Scientific & Industrial Research (CSIR) is fostering scientific curiosity among young minds through its outreach initiative - ***One Day as a Scientist***. This program provides students a unique opportunity to experience the life of a scientist by engaging directly with research activities at CSIR-SERC laboratories. The program was inaugurated by Dr. Vinay K. Nandicoori, Director, CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB), through an address delivered via MS Teams. Dr. N. Anandavalli, Director, CSIR-SERC, interacted with the students and encouraged them to pursue careers in science. The event was coordinated by Dr. Maheswaran and Dr. Sundar Kumar.

On an average, around 80 students from various schools participated in the program at CSIR-SERC each day. They visited several laboratories within CSIR-SERC and the CSIR Madras Complex (CMC), explored core research areas, toured advanced facilities, interacted with scientists, and took part in hands-on scientific demonstrations. The initiative aims to inspire the next generation by providing real-world exposure to science and promoting careers in research and innovation. CSIR-SERC remains dedicated to nurturing scientific thinking through such immersive experiences.



CSIR JIGYASA ATL Workshop - A two day, CSIR JIGYASA ATL workshop was organized during 21-22 August 2025, exclusively for the students of the adopted schools in Tenkasi districts of Tamil Nadu. Ten scientists of CSIR-SERC and CMC visited the schools and delivered lectures on topics related to basic science, the latest scientific advancements and battery experimental, smart building and bridges, etc, and also witnessed the facility created under the ATL program. About 425 students and 25 teachers were invited to participate in the workshop. The following lectures were delivered during the workshop:

Government Higher Secondary Schools, Neduvayal Achampudur and Sundarapandiapuram, Tenkasi District

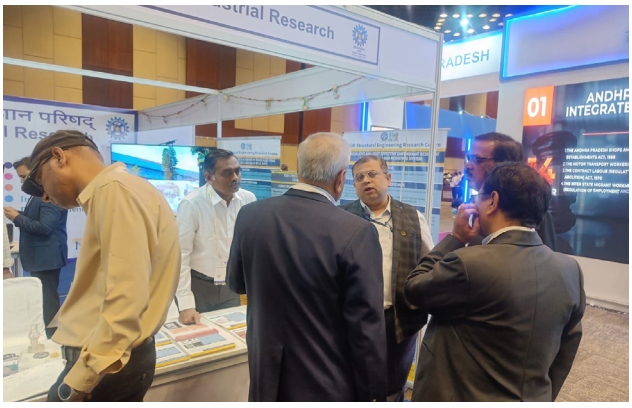
- Dr. N. Anandavalli, Director, CSIR-SERC, delivered a lecture on ***Inspire from Nature; Protect it for Future***
- Dr. B. Arun Sundaram, Senior Principal Scientist, CSIR-SERC, delivered a lecture on ***Smart Bridges: How AI and Sensors are Building the Future***
- Dr. S. Sundar Kumar, Principal Scientist, CSIR-SERC, delivered a lecture on ***Introduction about CSIR-SERC, CSIR JIGYASA ATL Workshop, Earthquakes and Building and Hands-on Session: Science Based Simple Experiments***
- Shri V.P. Anand, Senior Scientist, CSIR-CSIO (Chennai Unit), delivered a lecture on ***Role of AI in Our Day to Day Lives***
- Shri R.D. Sathish Kumar, Principal Technical Officer, CSIR-SERC, delivered a lecture on ***Intellectual Property Rights - an Overview***

Government Higher Secondary Schools, Sivagurunathapuram and Kadayanallur, Tenkasi District

- Dr. S. Parivallal, Chief Scientist & Advisor (Management), CSIR-SERC, delivered a lecture on ***Bridges in the Journey of Human Civilisation***
- Dr. S. Maheswaran, Senior Principal Scientist, CSIR-SERC, delivered a lecture on ***Introduction to CSIR-SERC, CSIR JIGYASA ATL Workshop & Hands on Session***
- Shri A.K. Farvaze Ahmed, Principal Scientist, CSIR-SERC, delivered a lecture on ***Role of Physics and Chemistry in Civil Engineering***
- Dr. D. Kalpana, Senior Principal Scientist, CSIR-CECRI (Chennai Unit), delivered a lecture on ***Bubbles, Balloons and Beyond the Fascinating Journey of Hydrogen Energy***
- Dr. T. Hemalatha, Principal Scientist, CSIR-SERC, delivered a lecture on ***Climate Change and Civil Engineering***

Participation in Exhibitions

CSIR-SERC participated and exhibited its expertise and technologies in ***One-day Infrastructure Industry Meet 2025*** held on 18 August 2025 at Andhra Pradesh University, Vishakhapatnam, organised by DG(R&M), DCW&E, DRDO. CSIR-SERC showcased its technologies, High velocity multi-hit resistant movable protective booth/shack for security personnel, Portable lightweight foldable module for make-shift hospitals and other needs and Laced steel-concrete composite panels.



CSIR-SERC participated in the ***ASME International Mechanical Engineering Congress & Exposition (IMECE 2025) India,*** held during 10-13 September 2025 at Hyderabad. CSIR-SERC showcased its technologies, Emergency Retrieval System (ERS) for power lines, Energy-dissipating replaceable fuse elements for steel beam-column connection and Fatigue life and fracture assessment of pipelines for power plant and oil & gas industry.

CSIR-SERC participated in the ***Innovation Expo*** organised at the FICCI Bharat R&D Summit 2025, held during 25-26 September 2025 at New Delhi, with the overarching theme *Innovating Together: Industry-Academia Collaboration*. CSIR-SERC showcased Emergency Retrieval System (ERS) for power lines, FlowTech: a floating foundation technology for offshore renewable energy structures, Adaptive vibration control devices using Magneto-Rheological Elastomers (MRE), Low-cost, lightweight sandwich SECRO built panels for housing and Bullet resistant movable security booth. The CSIR-SERC stall attracted significant attention and was visited by notable dignitaries such as Dr. M. Ravichandran, Prof. Sudhir Kumar Barai, among other key stakeholders.

Visits

Shri Santosh Kumar Sarangi, Secretary, Ministry of New and Renewable Energy (MNRE), Government of India along with Dr. N. Kalaiselvi, Director General, CSIR and Secretary, DSIR, visited CSIR-SERC, Chennai, and CSIR-CECRI, Chennai Unit at the CSIR Madras Complex on 18 August 2025. The visit was also attended by Dr. K.J. Sreeram, Director, CSIR-CLRI, Dr. K. Ramesha, Director, CSIR-CECRI, and Dr. Rajesh Katyal, Director General, National Institute of Wind Energy, Chennai.

As part of the programme, Dr. N. Anandavalli, Director, CSIR-SERC, delivered a presentation highlighting the achievements and proposed R&D initiatives of CSIR-SERC. Dr. M. Keerthana, Principal Scientist, CSIR-SERC, provided an overview of the centre's multidisciplinary R&D activities in renewable energy. The presentation covered advancements in wind energy (offshore and onshore), solar energy (land-based, floating in inland water bodies and floating offshore solutions) and hydroelectric energy. Ongoing research on carbon capture, utilization, and storage (CCUS) was also highlighted. In addition, Dr. Ramesha, briefed the delegation on the CSIR-CECRI's diverse activities and contributions. During the visit, the dignitaries also engaged in interactions with scientists from both CSIR-SERC and CSIR-CECRI, exchanging ideas and insights on current and future research directions.

Events

84th CSIR Foundation Day was celebrated with great enthusiasm at the CSIR Campus in Taramani, Chennai, by CSIR-Structural Engineering Research Centre (CSIR-SERC) and CSIR Madras Complex (CMC).

Open Day was observed on the occasion of the 84th Foundation Day, on 26 September 2025 by CSIR-SERC and CMC comprising the regional units of CSIR-CECRI, CSIR-CEERI, CSIR-CSIO, CSIR-NEERI and CSIR-NML. All laboratories in the CSIR Campus were kept open for the general public between 9:30 AM and 2.30 PM. Elaborate arrangements were made to receive the visitors. Technologies, products, and state-of-the-art facilities were showcased and demonstrated for the benefit of the visitors. A record number of 9700 visitors, including school and college students, teachers, professionals from the industry, entrepreneurs, and the general public, visited the CSIR campus and the Tower Testing & Research Station (TTRS) campus of CSIR-SERC with great enthusiasm. They had a first-hand glimpse of multifarious and multi-discipline R&D programmes currently going on in the laboratories and the technologies developed. The visitors showed keen interest and passionately interacted with the scientific staff.

The foundation day function was held on 8 October 2025 at 2.30 PM and was presided over by Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC. Dr. Shivakumar Kalyanaraman, Chief Executive Officer, Anusandhan National Research Foundation (ANRF), New Delhi, and Dr. Manish Jaiswal, Director, National Automative Test Tracks (NATRAX), Indore, were the chief guests of the function.

Dr. Jaiswal delivered the CSIR Foundation Day lecture on *Vehicle Proving Ground – Opportunities and Challenges*. In his lecture, he gave a brief on National Automotive Test Tracks (NATRAX), its laboratories, facilities and significance, vehicle dynamics testing on track, vehicle development model, current status of ADAS systems and autonomous technologies, ADAS testing facility, challenges in new vehicle testing, sustainable material and track maintenance challenges, etc. Dr. Kalyanaraman, delivered the CSIR Foundation Day address on AI for Science and Engineering The New Frontier. In his lecture, he gave a brief introduction to ANRF, ANRF Core & ANRF RDI, and the strategic approach of ANRF across the TRL spectrum. He also spoke about AI revolution in scientific research, SARAL: democratising research using AI & social media, Mission AI for science and engineering and how ANRF envisions to revolutionize science and engineering in India.

Every year, during the foundation day function, Dr. M. Ramaiah Prize is presented for the best technical papers published by the scientists of CSIR-SERC. For the year 2024-2025, two papers were selected by the Committee as best papers and two papers were chosen for certificate of merit. The Director congratulated all the authors of the papers selected, and the chief guest presented Dr. M. Ramaiah Prize to the winners.

Every year, as a part of CSIR Foundation Day celebrations, an inter-school quiz programme, Eureka, and CSIR open day science competitions for the wards of employees of CSIR-SERC and CMC are organized. This year, Eureka 2025 was organized on 16 September 2025 at the CSIR Campus, which turned out to be a success. Twenty-four schools from in and around Chennai participated in the event. CSIR open day science competition was held on 14 September 2025 at the CSIR campus and more than 100 students participated. Prizes were distributed for the winners of the competitions on 8 October 2025, during the foundation day function by Dr. Anandavalli.

Celebration dedicated to Hindi: Hindi Fortnight 2025 was celebrated during 26 August - 16 September 2025, at CSIR-SERC and CMC with the aim to promote the use of Hindi, sensitize the scientific and administrative staff of the institute towards the language, and make Hindi an integral part of the work culture.

On this occasion, a Hindi workshop was organized on the topic *Development and Activities of Marine Renewable Energy in India,* on 26 August 2025. Throughout the celebrations, competitions highlighting various dimensions of Hindi were organized. These included Hindi typing, dictation, picture description, quiz, antakshari, technical seminar, poetry recitation, and conversation. Scientists, Technical Officers, Administrative Staff and Contract Employees participated with great enthusiasm. The celebrations concluded on 16 September 2025 with a Valedictory function.

Other Notable Events

Phenome India - Phase II - a unique health check-up camp for the CSIR family, was held during13 - 16 July 2025. CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi, has launched a pioneering health initiative titled Phenome India - CSIR Health Cohort Knowledgebase (CSIR Cohort - PI-CHeCK) for the CSIR community. The PI-CHeCK study aims to develop personalised risk prediction scores for cardio-metabolic disorders in the Indian population. The long-term study will gather a wide range of information, including clinical questionnaires, lifestyle and dietary patterns, body composition, imaging assessments, blood biochemistry, and molecular assay data, capturing the health diversity of India's population. The health camp was coordinated by Dr. S. Maheswaran, Senior Principal Scientist and Shri P. Vasudevan, Senior Technical Officer (2). The four-day event saw the participation of around 220 individuals.

79th Independence Day was celebrated at CSIR-SERC & CMC as well as at the TTRS, on 15 August 2025. Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC, hoisted the national flag. As a part of the function, a crèche and day care facility for the children of permanent employees of CSIR-SERC and CMC was inaugurated in the CSIR Taramani campus. Director and staff members took an active participation in the planting of sixty numbers of saplings at the Tower Testing and Research Station, Tirusulam.

53rd Shanti Swarup Bhatnagar Memorial Tournament Zonal-I (Indoor), was held during 29 August - 01 September 2025 - The Shanti Swarup Bhatnagar Memorial Tournament (SSBMT), organized by the CSIR Sports Promotion Board (SPB), brings together participants from various CSIR institutes to promote team spirit, leadership and unity. As one of India's premier R&D organisations, the CSIR under the Ministry of Science and Technology, Government of India, operates a nationwide network of 37 laboratories. Held in memory of Dr. S.S. Bhatnagar, the first Director General of CSIR and a pioneer of Indian science, the tournament is a key annual event.

In this first zonal, eight CSIR laboratories participated with great enthusiasm viz., CSIR-4PI, CSIR-CECRI, CSIR-CIMAP, CSIR-IICB, CSIR-NAL, CSIR-NBRI, CSIR-NGRI and CSIR-NIScPR. Participants competed in a variety of indoor sports, including Badminton, Bridge, Carrom, Chess and Table Tennis. The inaugural ceremony was graced by Shri Karthikeyan Murali, Chess Grand Master and Ms. Vadivel Jayalakshmi, Olympian, as Chief Guests. Dr. N. Anandavalli, Director, CSIR-SERC and Coordinating Director, CMC and Dr. K.J. Sreeram, Director, CSIR-CLRI, Chennai delivered the inaugural address. The chief guests released the Souvenir to mark the commencement of the tournament.

The valedictory function was held on 1 September 2025. Shri Robin Singh, Former Indian Cricketer was the Chief Guest of the function. Prof. Pradeep Kumar Ramancharla, Director, CSIR-CBRI & Pesident, CSIR SPB was the Guest of Honour. The winners were awarded with trophies.

Science Summit at the 80th United Nations General Assembly, 2025 (SSUNGA80) - The session titled *Shaping Infrastructure for Safer Tomorrow* was held on 11 September 2025, as a part of Science Summit at the 80th United Nations General Assembly, 2025 (SSUNGA80), jointly organized by CSIR-SERC and CSIR-Central Building Research Institute (CSIR-CBRI). The event brought together leading experts, industry professionals and academicians to deliberate on the most pressing issues in achieving safe, sustainable and climate-resilient infrastructure in India. The program was divided into two main themes: Material, Monitoring and Mitigation (3M) and Climate Resilient Building and Technologies. Collectively, the event concluded that India's future-ready infrastructure will rely on swift, coordinated action across sectors, blending policy, technology and local expertise to ensure a safer, sustainable and low-carbon built environment for all.

Invited talks/lectures

- Dr. M. Keerthana, Principal Scientist, delivered a lecture on ***Structural Safety under Wind Loads: From Analysis to Applications***, as a part of STEM Week Celebration organised by KV CLRI, on 15 July 2025 at KV, CLRI, Chennai.
- Dr. P. Prabha, Principal Scientist, delivered a lecture on ***Use of High Strength Steel in Construction*** in the Conference on Steel Manufacturing and Supply, during 11-12 September 2025 at NTPC-EOC, Noida organised by NTPC, Quality Assurance & Inspection (QA&I) Department.
- Dr. A. Cinitha, Principal Scientist, delivered a lecture on ***Preliminary Visual Inspection Studies for Detailed Condition Assessment of Steel Structures*** in the Conference on Steel Manufacturing and Supply, during 11-12 September 2025 at NTPC-EOC, Noida organised by NTPC, Quality Assurance & Inspection (QA&I) Department.
- Dr. V. Marimuthu, Senior Principal Scientist, delivered an expert lecture on ***Design of Composite Deck Slabs as per IS:11384*** in the online Short-Term Training Programme on *Design and Construction of Steel-Concrete Composite Structures,* jointly organised by NIT, Trichy and INSDAG, Kolkata on 23 September 2025.

Honours/awards/recognitions/nominations/PhDs

- CSIR-SERC received ***Outstanding Contribution in the Projects of National Importance*** on 26 July 2025 from M/s. L&T Valves, Chennai.
- CSIR-SERC received ***Jury Special Award*** on the category of ***Outstanding Retrofitting Techniques on a Structure*** for the project titled *Development of novel retrofitting strategy against scouring action of railway masonry arch bridge through field measurements* given by 4th Civil Engineering & Construction Review (CE&CR) on 22 August 2025 at New Delhi.
- Dr. N. Anandavalli, Director, CSIR-SERC, was awarded ***First-Ever INSA Women Associates (IWA)*** - a new initiative of the Indian National Science Academy to strengthen diversity, inclusion and gender equity in research on 26 September 2025.
- Dr. S. Bhaskar, Chief Scientist, was nominated as ***Member of Board of Studies (BoS)*** of Department of Civil Engineering, SR University, Warangal, Telangana.
- Dr. B.S. Sindu, Principal Scientist, was selected as an ***INAE Young Associate 2025*** in civil engineering discipline by Indian National Academy of Engineering (INAE), a prestigious national body that fosters excellence in engineering research, education and innovation in India.

Paper publications

- **SCI Journals - 2**
- **Reputed Indian Journals - Nil**