

ONLINE STAKEHOLDERS MEETING

## MITIGATING EFFECTS OF WIND AND SEISMIC HAZARDS ON TALL BUILDINGS

DATE : 31-AUG-2023

TIME: 10.00AM-12.00PM

PLATFORM : MS TEAMS

### ABOUT US

CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai is a national laboratory with focus on structural engineering under the Council of Scientific and Industrial Research (CSIR), India. CSIR-SERC has been actively contributing to carrying out R&D activities, including numerical, field, and laboratory studies in disaster mitigation of structures. Our institution stands out as the sole facility in India that has both an advanced triaxial seismic testing facility and a wind tunnel testing facility, conveniently situated on the same campus. The services of the centre are being extensively used by the central and state government, public and private sector undertakings. The institute has contributed greatly towards the welfare of our nation by providing timely engineering interventions and has been providing novel and cost-effective solutions to the challenging problems faced by the industry, society and strategic sectors.

For more details on the facilities and expertise, visit [www.serc.res.in](http://www.serc.res.in)

### NEED OF THE DAY

In light of rapid urbanization and population growth, the construction of tall buildings has become a prevalent trend. Tall buildings are being built to offer numerous advantages in terms of sustainability and economics, making them attractive choices for urban sites facing limited land availability. However, such building infrastructure faces threats from multiple natural hazards, that are probable to occur at different stages during their serviceable life.

India's geographical location makes it susceptible to a range of natural hazards, in particular wind and seismic events. As the frequency and severity of these hazards rise, finding a delicate equilibrium between creating robust yet sustainable tall buildings have emerged as a pressing challenge. In line with global priorities like the United Nations Sustainable Development Goals and the Sendai Framework for Disaster Risk Reduction, there is a growing imperative to construct robust buildings and their components, capable of withstanding a range of hazards.





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## ABOUT THE PROJECT

The proposed project centers on developing efficient solutions to mitigate the effects of wind and earthquake on tall buildings. The objective is to ensure that these structures remain functional, habitable, and safe throughout their intended design life. The project aims to develop a comprehensive design framework for evaluation of cross wind and torsional spectra for tall rectangular buildings, which will be useful as a ready reckoner for designers during early stages of design of tall buildings. Methodologies for enhancing the seismic performance of the tall buildings using secondary control devices for structural and non-structural components will be identified. Our collaborative efforts aim to bridge the gap in existing design guidelines and strategies, ensuring that buildings are equipped to withstand wind and seismic hazards.

By harnessing multi-disciplinary expertise and utilizing cutting-edge testing facilities available at CSIR-SERC, we are poised to achieve our project's vision. This endeavour will yield comprehensive solutions, enhancing the resilience of tall buildings against wind and earthquake. As we embark on this journey, we are committed in contributing to disaster risk reduction and sustainable development, aligning with the global call for resilient infrastructure.

## FOR PARTICIPATION

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**MS Teams Meeting Link :**

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_NTdINjBlMjltMmM0My00Yzk1LThiMGQtZTkWNGVhNjllZTRl%40thread.v2/0?context=%7b%22Tid%22%3a%22b867f20e-8a9c-4603-b5ab-39c3840dfb64%22%2c%22Oid%22%3a%22994b1684-5fa0-4fdc-af71-b50b63199924%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NTdINjBlMjltMmM0My00Yzk1LThiMGQtZTkWNGVhNjllZTRl%40thread.v2/0?context=%7b%22Tid%22%3a%22b867f20e-8a9c-4603-b5ab-39c3840dfb64%22%2c%22Oid%22%3a%22994b1684-5fa0-4fdc-af71-b50b63199924%22%7d)

## TENTATIVE PROGRAM

10:00 - 10:05 AM	Introduction
10:05 - 10:15 AM	Welcome Address by Director, CSIR- SERC
10:15 - 10:30 AM	Briefing about the Project
10:30 - 11:00 AM	Stakeholders Perspective
11:00 - 11:10 AM	Break
11:10 - 11:40 PM	Panel Discussion - Open Forum
11:40 - 11:55 PM	Closing remarks by Director, CSIR-SERC
11:55 - 12:00 PM	Vote of Thanks

## PROJECT COORDINATORS

Dr. C. Bharathi Priya, Principal Scientist,  
Advanced Seismic Testing and Research Lab  
Dr. Mohit Verma, Principal Scientist,  
Advanced Seismic Testing and Research Lab  
Dr. M. Keerthana, Principal Scientist,  
Wind Engineering Lab