

Workshop Report

Workshop on Earthquake Resistant Practices for Students of Architecture Colleges across India

Online Lectures: June 7–8, 2025

Design Studios: June 16–20, 2025

Venue: IIT Kanpur

Organized by: National Information Centre of Earthquake Engineering (NICEE), IIT
Kanpur

The **National Information Centre of Earthquake Engineering (NICEE)** at the **Indian Institute of Technology (IIT) Kanpur** continues its mission of promoting earthquake safety in the built environment by empowering professionals and students involved in the building delivery process. Through systematic information dissemination, training, and awareness programs, NICEE has played a pivotal role in advancing earthquake engineering education across India. Earlier, through the **National Programme on Earthquake Engineering Education (NPEEE)** implemented from 2003 to 2007, NICEE successfully conducted a series of training programs for architecture and civil engineering faculty, thus establishing a strong foundation for professional sensitization in this field.

Recognizing that architects are key initiators of building projects and act as crucial coordinators among multiple stakeholders in the construction process, NICEE identified the importance of educating architecture students on seismic safety principles early in their academic journey. To achieve this, NICEE participated in various national architectural conventions, including the **NASA 2007 Convention at MANIT, Bhopal**, the **SAARCH Convention 2008 in New Delhi**, and the **SAARC NASA Convention in Pune**, thereby expanding its outreach to future professionals. Subsequently, the **NICEE National Advisory Committee** unanimously endorsed the idea of organizing dedicated workshops for undergraduate architecture students to build awareness and competence in earthquake-resistant design practices. In line with this vision, the first **Workshop on Earthquake Resistant Design Practices for Architecture Students** was organized in 2008. The overwhelming response and success of that inaugural event led to its establishment as an annual flagship program.

Workshop 2025

The **17th edition** of this national-level workshop was conducted in **2025** in a **hybrid format**, combining **online technical sessions (June 7–8, 2025)** and **offline design studios (June 16–20, 2025)** at IIT Kanpur. A total of **36 students** from various architecture institutions across **Maharashtra (Mumbai, Khalapur, Pune)**, **New Delhi, Raipur (Chhattisgarh)**, and **Surat (Gujarat)** participated in the seven-day workshop. All participants had completed six semesters of their undergraduate architecture program, ensuring a balanced mix of technical understanding and design ability.

Inaugural Session-

The inaugural session was chaired by **Prof. Priyanka Ghosh**, Head, Department of Civil Engineering, IIT Kanpur. In his address, he welcomed the participants to the IIT Kanpur campus and appreciated NICEE's sustained initiatives in spreading earthquake awareness. He emphasized the importance of introducing young minds to earthquake engineering concepts at this formative stage and encouraged participants to ask questions and engage deeply during the workshop. **Prof. Vasudha Gokhale** welcomed the students and advised them to prepare for an intellectually demanding yet enjoyable experience over the coming days.



Figure 01- Inaugural day – From left Cdr Suresh Ailawadi, Dr Sujata Mehta, Dr Bhavna Vimawala, Dr Vasudha Gokhale, Dr Chinmoy Kolay, Dr Priyanko Ghosh, Dr Durgesh Rai, Dr Meera Shirolkar, Dr Nehal Desai and Dr Ruchira Das.

Prof. Meera Shirolkar briefed the participants on the workshop structure and objectives. She explained that students would undertake a comprehensive architectural design assignment that required integrating structural and seismic considerations. The use of **RESIST software** would allow participants to test their design concepts for seismic adequacy and derive appropriate member sizes, bridging the gap between design intent and structural rationality. She urged participants to act as ambassadors of this initiative and spread awareness about the importance of earthquake-resistant design among their peers and institutions.

Prof. Chinmoy Kolay traced the evolution of NICEE and acknowledged the pioneering contributions of **Prof. Sudhir K. Jain**, **Prof. C.V.R. Murty**, **Prof. Javed N. Malik**, and **Prof. Durgesh C. Rai**, whose collective efforts have shaped the national discourse on earthquake engineering. He reiterated the critical message that “*earthquakes don't kill, buildings do*”, highlighting the moral responsibility of architects and engineers to create safe built environments. **Prof. Durgesh Rai**, Coordinator of NICEE and Professor at IIT Kanpur, presented an overview of NICEE's ongoing initiatives and underscored the essential role of architects in advancing seismic safety awareness within the construction sector.

The workshop featured a distinguished panel of **resource faculty** from both architectural and structural engineering backgrounds to simulate real-world interdisciplinary collaboration. The

technical sessions were delivered by **Dr. Harikumar (GeoHazards International, New Delhi)**, **Dr. Keya Mitra (IEST, Shibpur)**, **Dr. Vasudha Gokhale** and **Dr. Meera Shirolkar (Dr. B.N. College of Architecture for Women, Pune)**, and **Dr. Atanu Dutta (Jorhat Institute of Science and Technology, Assam)**. These sessions provided conceptual grounding on seismic behavior of structures, architectural configuration, and performance-based design principles.

The **hands-on design studios** were mentored by **Dr. Meera Shirolkar**, **Dr. Vasudha Gokhale**, **Dr. Sujata Mehta** (Dr. B.N. College of Architecture for Women, Pune), **Dr. Bhavna Vimawala** and **Dr. Nehal Desai** (Sarvajanik University, Surat), **Dr. Ruchira Das** (Architecture Women's Polytechnic, Chandernagore), **Dr. Chinmoy Kolay** (IIT Kanpur), and **Dr. Durgesh Rai** (Coordinator, NICEE). Prior to the studio sessions, participants were provided with NICEE publications and preparatory reading materials to strengthen their understanding of seismic design concepts.

Design Problem –

The **design problem** assigned for the workshop was to develop a proposal for a **Working Women's Hostel in Srinagar, Jammu & Kashmir (Seismic Zone V)**. The objective was to evaluate students' ability to apply earthquake-resistant principles in an architectural design project that is functionally efficient, structurally sound, climatically responsive, and aesthetically coherent. Participants were divided into **18 two-member teams**, each representing students from different institutions to promote collaborative learning.

Over the course of the studio, students prepared **site plans, floor layouts, elevations, structural systems, and RESIST analyses**, integrating concepts of clear load paths, rational structural planning, and appropriate lateral load-resisting systems. The submissions were evaluated on **June 20, 2025**, by an eminent jury comprising **Dr. Soumen Mitra (IEST, Shibpur)**, **Ar. Vikram Hundekar (Practicing Architect, Pune)**, and **Dr. Durgesh Rai (NICEE, IIT Kanpur)**.

The evaluation criteria included site analysis and contextual response, conceptual clarity, functional zoning, area efficiency, and integration of structural systems within architectural design. The jury paid particular attention to the correctness of lateral load-resisting elements, gravity column alignment, and interpretation of RESIST reports. Six of the most innovative and structurally consistent designs were shortlisted for final recognition.

The **valedictory session**, held after the final jury, was graced by **eminent jury members**, who appreciated the students' enthusiasm and the faculty mentors' efforts in nurturing technical competence and creative thinking. The session concluded with the announcement of **award-winning designs** securing **first, second, and third positions**, recognizing excellence in architectural expression integrated with seismic safety. A **vote of thanks** was proposed by **Cdr. Suresh Ailawadi (Retd.)**, who acknowledged the contributions of all faculty mentors, participants, and the **support extended by CSIESPL, New Delhi**, and the **donors and supporters of NICEE**.

The 2025 workshop once again reaffirmed NICEE's commitment to its long-standing vision—bridging the gap between architectural creativity and structural safety. Through this sustained annual initiative, NICEE continues to shape a new generation of architects equipped with the knowledge and sensitivity to design for resilience and safety in the built environment.

- First Position- 1. Adwait Sawant, Sir J.J. College of Architecture, Mumbai
2. Disha Laxman Pradhan, S.B. Patil College of Arch. & Design, Pune



- Second Position- 1. Aditya Barge, S.B. Patil College of Arch. & Design, Pune
2. Gauri Santosh Rawale, DY Patil University, Mumbai



Third Position- 1. Sumra Manav H, IDPT-SCET, Surat
2. Sneha S Ghuse, Sir J.J. College of Architecture, Mumbai

