

Workshop on

## **EARTHQUAKE RESISTANT PRACTICES FOR UNDERGRADUATE STUDENTS OF ARCHITECTURE**

**June 18-25, 2022, IIT Kanpur**

National Information Centre of Earthquake Engineering (NICEE) at IIT Kanpur is committed to furthering earthquake safety in the built environment through empowering stakeholders in the building delivery process by information sharing and dissemination of the state of the art in earthquake engineering. NICEE has also actively engaged in awareness, sensitization and training programmes for faculty in architecture and civil engineering disciplines in colleges all over India through the NPEEE program that was in operation from 2003 till 2007. The National Advisory Committee of NICEE unanimously felt need of targeting the architecture professionals of tomorrow by offering training modules to the students of architecture in colleges all over India. The objective of this workshop was primarily aimed to equip the participants with the necessary expertise to arrive at architectural designs that are inherently adequate in resisting earthquake loads at a conceptual level.

To meet this objective, a pilot Workshop for Undergraduate students of Architecture in Earthquake Resistant Design Practices was first offered in 2008. The workshop was a grand success and it was decided to make it an annual event. The 13<sup>th</sup> National Workshop for UG students of Architecture was held at IIT Kanpur, in the online mode, during June 18-25, 2022, in which 70 students who had completed six semesters of studies in their respective architecture programmes, from 21 institutes representing Bhutan and 12 cities from all over India participated in the 8-day workshop.

### **Workshop 2022**

The general objective of the workshop was to sensitize the students to earthquake safety issues and in capacity building in the basics of earthquake resistant design at a conceptual level. It was expected that lectures and hands-on studio sessions in tackling a design assignment will help students in internalizing earthquake resistant practices as an integral part of their design decision making. The resource faculty for this workshop was from architecture and structural engineering disciplines in an attempt to recreate as closely as possible real life architectural practice. The selected participants were each sent a NICEE publication titled "Earthquake-Resistant Confined Masonry Construction" authored by Svetlana Brzev and Keya Mitra. The participants were advised to go through the book before coming for the workshop.

The following faculty members, Prof. Meera Shirolkar, Sujata Mehta and Vasudha Gokhale - Dr. B.N. College of Architecture for Women, Pune; Prof. Ruchira Das- Department of Architecture, West Bengal, Prof. Bhavna Vimawala and Nehal Desai - Sarvajanik University Surat, Prof. Nayanmoni Chetia - Jorhat Engineering College, Assam and Prof. Baharul Hussain - Jorhat Engineering College, Assam were the

resource persons of the workshop 2022. In addition, special lectures for the benefit of participants were delivered by Ar. Vikram Hundekar, Prof. Svetlana Brzev, Dr. Shailesh Agarwal and Mr. Rajat Avasthi.

### **Design Problem**

The design brief was an architectural design assignment where they were required to design an Office Complex on a site in Gandhidham, a city located in Kutch district, Gujarat. Gandhi Dham is a municipality and the economic capital of Kutch, and it is a fast-developing city in Gujarat state, on a one-hectare plot. The workshop participants were divided into thirty five 2 member groups where each member was from a different institute. They were asked to develop a design proposal which should be rational in functional, structural and aesthetic terms. While the participants were encouraged to adopt innovative design approaches, the objective of this design exercise was to evaluate their understanding of earthquake resistant architecture and application of the same in a design project.

### **Evaluation of Design**

The evaluation of the designs was also done in online mode only. The Jury Board consisted of following members:

Prof. Keya Mitra, IEST Shibpur, Howrah  
Dr Sheeba Valsson, Principal, SDMCA Nagpur  
Prof. Rajiv Kacker, College of Architecture, Lucknow  
Ar. Vikram Hundekar, Director, Mitimitra Consultants, Pune  
Ar. Rebecca Jadon , Dean , School of Architecture & Design, ITM University, Gwalior  
Prof. OR Jaiswal, VNIT Nagpur  
Prof. Rupen Goswami, IIT Madras, Chennai  
Er. Karnail Singh, FIE, Certified Professional Engineer(I), Chandigarh  
Er. Narayan Kochak, N. Y. Kochak Consulting Engineers & Structural Designers, Pune

The jury looked particularly for a clear understanding of structural system that would be effective in withstanding earthquake loads. The designs of following participants were appreciated by the jury members:

Ojasvi Khandhia	Dr. D Y Patil College of Architecture, Pune
Chetana Srinath	School of Architecture, Bangalore
Kritika Gadiya	Manohar Phalke College of Architecture, Mumbai
Shivani Suman Agrawal	National Institute of Technology, Raipur
Anjali Vardani	VNIT, Nagpur
Avdhesh Kumar	Mizoram University, Mizoram

Sahil Singh	Dr. D Y Patil College of Architecture, Pune
Gurneet Singh	Manohar Phalke College of Architecture, Mumbai
Deepika Ghalley	College of Science and Technology, Bhutan
Nikita Ganesh Mohol	Dr.BNC College of Architecture for Women, Pune
Sanath Sujay Shivam	BGS School of Architecture and Planning, Bangalore
Janhavi Gosewade	SMM College Of Architecture, Nagpur
Manasi Deshmukh	SMM College Of Architecture, Nagpur
Pavan Kumar M.S	School of Architecture, Bangalore
Taha Boxwala	Allana College of Architecture, Pune
Neha Gupta	National Institute of Technology, Raipur
Sagar Rajopadhye	VNIT, Nagpur
Shreesha H R	BGS School of Architecture and Planning, Bangalore
Sal S S	VNIT, Nagpur
Alisha Khan	Aligarh Muslim University, Aligarh

The workshop was sponsored by CSIESPL, New Delhi and several supporters of NICEE.