

National Information Centre of Earthquake Engineering

Indian Institute of Technology Kanpur



April 2014 - March 2015 *Report*

New Outreach Activity

A workshop on Structural Analysis Programs ETABS and SAP2000 was conducted at IIT Kanpur during March 16-19, 2015. During the workshop, in addition to discussion on modeling, analysis and design of structures in SAP/ETABS environment, several case studies of real-life projects and structures were presented which involved higher order of nonlinear static and time-history analyses using these softwares so that design solutions are based on true understanding of structural behaviour even upto collapse. The mix of theoretical and practical aspects helped the participants understand the concepts and clarify their doubts. The participants appreciated the lectures delivered by Prof. Durgesh C. Rai of IIT Kanpur and Mr. Rajiv Sharma of CSI-ESPL, New Delhi. Dr. Vaibhav Singhal, IIT Kanpur, helped with the preparation of technical contents for various lectures. The resource persons of this workshop have been generous enough to donate their time and efforts for which NICEE expresses its deep gratitude. This workshop was attended by 62 participants who are practicing professionals from leading engineering design firms, academicians and students from all over the country. Participants have travelled from far off places representing several reputed engineering design firms, organizations and institutes, viz. Larsen & Toubro Limited, Tata Power, ITC Limited, AECOM, SEMAC Consultants, CPWD, MES, IIT Delhi and Gandhinagar, NIT Silchar and Srinagar, AMU Aligarh, IET Lucknow, NITTTR Kolkatta, GEC Delhi, IEC Ghazibad, Thapar University Patiala, PDA Engg. College Gulberga, Basaveshwar Engg. College Bagalkot, VNRVJIET Hyderabad, Sobha Limited, Ducon Consultants, Taru, M3M India, Softskil Consultants, Mahaveer Group, Rushabh Consultants, ASI Consultants, Satish Marathe Consulting Engineers, Metro Consultants, Parth Associates, Anagha Engineering Consultants, Civil-Aid Technoclinic Pvt. Ltd., Royal Hakoning, Jurong Consultants, etc. The participants expressed a satisfaction level of more than 80% with the manner in which the workshop was conducted. This workshop was supported by Computers & Structures Inc. (CSI).



From the Coordinator

In keeping with the agenda of Seismic Safety, NICEE has been conducting several workshops for society at large. A four day Outreach Workshop on Structural Analysis using ETABS and SAP2000 for practicing structural engineers was held at IIT Kanpur, during March 16 – 19, 2015. The aim of this workshop was to help the participants with the usage of advanced features of these softwares for improved understanding of nonlinear and dynamic behaviour of Structures. These softwares are also being distributed by NICEE at a notional cost to educational institutions for over a decade now. The efficient and effective use of the software will help the participants to design and analyze seismically safe structures. The Punjabi translation of IITK-BMTPC Earthquake Tips is in advanced stage and we are hopeful that we will be able to publish it during the current year. More publications on confined masonry is on the anvil which will the propagation of its use for earthquake resistant construction in high seismic zones. NICEE continued to receive good support from its well-wishers during the year. Your support is important to us and we look forward to your continuous support and guidance in the forthcoming years. We welcome your suggestions and feedback at nicee@iitk.ac.in.

Institutional Members

NICEE thanks its Institutional members and acknowledges their continued support to NICEE.

PLATINUM SUBSCRIBING MEMBERS Indian Institute of Technology Gandhinagar

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Inter School Quiz on Earthquake Tips

NICEE conducted an Inter School Quiz competition on IITK-BMTPC Earthquake Tips, the final round of which was held on 26 January 2015 at Outreach Auditorium, Indian Institute of Technology Kanpur, Kanpur.

66 schools from 32 cities participated in the preliminary rounds which were held in Ahmedabad, Delhi, Faridabad, Gurgaon, Indore, Kanpur, Ludhiana and Nagpur. In the final round of the quiz on 26 January, 10 schools - who were the winners of their respective preliminary rounds, viz. Air Force School, Kanpur; Karam Devi Memorial Academy, Kanpur; Centre Point School, Wardhman Nagar, Nagpur; Shah Faiz School, Ghazipur; Delhi Public School, Gurgaon; Green Field School, Delhi; Delhi Public School, Gandhidham; Mukundlal Public School, Yamunanagar; Wendy Junior High School, Gwalior and Gwalior Glory High School, Gwalior participated.



Winners of Final Quiz – Wendy Junior High School represented by Ruchir, Harsh, Utkarsh and Abhishek.

The quiz had four rounds: Round Robin, Picture Round, Rapid Fire Round and Lucky Number Round. The questions were mostly from the publication IITK-BMTPC Earthquake Tips by Prof. CVR Murty and some questions were based on the past earthquakes in India and in other countries. The winning team of the finals with 130 points was Wendy Junior High School, Gwalior represented by Mr. Ruchir Rathore, Mr. Harsh Jain, Mr. Utkarsh Shukla and Mr. Abhishek Yadav. The team from Centre Point School, Nagpur secured the second position scoring 110 points while the team from Gwalior Glory High School, Gwalior scored 100 points to bag the third position. The quiz was supported by BMTPC, New Delhi, Computers & Structures Inc. (CSI) and Poonam and Prabhu Goel Foundation at IIT Kanpur. The preliminary round of the quiz at Indore was conducted by Prof. Rakesh Khare and Prof. Raana Pathak along with their team, at Ludhiana by Prof. HS Rai and his team, at Faridabad and Delhi by Prof.

Bhuwan Kumar and his team, at Gurgaon by Ar. Archana Chandra and her team, at Nagpur by Prof. OR Jaiswal and Prof. Ratnesh Kumar and their team whilst at Gandhinagar by Prof. Ajanta Sachan and her team. Prof. Amit Bose of DDF Consultants, Delhi was instrumental in helping us locate the volunteers for conducting the quiz in several cities. NICEE takes pride in the efforts put in by them and their support teams, and acknowledges with gratitude their unstinted support to NICEE activities. The school quiz has now become an important annual event of NICEE. It will be our endeavour to include more and more cities from the neighboring areas during forthcoming years. For further details and procedure for participating in the quiz please visit http://www.nicee.org/Quiz/

Workshop for Architecture Students

The sixth workshop on Earthquake Resistant Practices for Undergraduate Students of Architecture was conducted at IIT Kanpur during June 30 – July 05, 2014. The workshop was attended by 61 students from 20 colleges representing 17 cities of India. The aim was to sensitize the students of architecture in earthquake resistant design practices through technical lectures followed by design studios where they were given guidance in earthquake resistant design by working on an architectural design project. The resource persons included:



Prof. Vasudha Gokhale of Dr. B. N. College of Architecture for Women, Pune; Prof. Alpana Dongre of VNIT, Nagpur; Prof. Atanu Dutta of Jorhat Engineering College, Jorhat; Prof Indrani Gogoi, Assam Engineering Institute, Guwahati and Prof. Nehal Desai, SCET Surat. The final designs were evaluated by a Jury board consisting of Dr. A.K. Mittal, Retired Structural Engineer from CPWD; Prof. Alpana Dongre, VNIT Nagpur; Prof Indrani Gogoi, Assam Engineering Institute, Guwahati and Prof. Rajeev Kacker, College of Architecture, Lucknow. The workshop was sponsored by Council of Scientific and Industrial Research,

New Delhi; Computers & Structures Inc. (CSI) and Poonam and Prabhu Goel Foundation at IIT Kanpur. For more information, visit: http://www.nicee.org/Architecture Workshop/Arch Ws 2014 Report 2014.pdf



PG Literature Review Workshop

This Annual Workshop was conducted at IIT Kanpur during June 05 – 14, 2014. Twenty six Postgraduate students from 12 colleges across India participated in this. The participants were encouraged to make use of available literature at NICEE library and the Kelkar Library of IIT Kanpur for doing quality research work. They were also provided access to internet for downloading the published research literature. The participants had interaction with Prof. Durgesh C. Rai and Dr. KK Bajpai of IIT Kanpur.

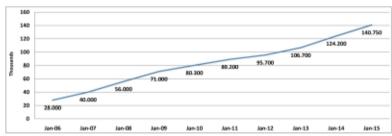
The sponsors of the workshop were Indian National Science Academy, New Delhi; Computers & Structures Inc. (CSI) and Poonam and Prabhu Goel Foundation at IIT Kanpur.

For more information please visit:

http://www.nicee.org/MTech_Workshop

Aggressive Dissemination of Literature

During the year 16,550 copies of books, monographs, and CDs, were distributed. Till date, NICEE has distributed 1,40,750 such items.



Institutional Membership

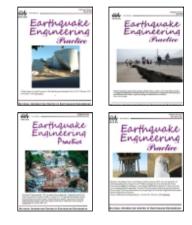
You may like to encourage your organisation to take up institutional membership of NICEE. For details: <u>http://www.nicee.org/AboutNICEE.php</u>?id=18

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₹ 4 lakh (US\$ 10,000) per year or more GOLD SUSCRIBING MEMBERS

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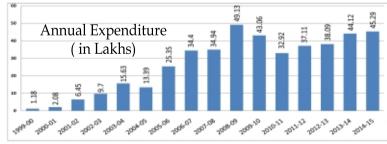
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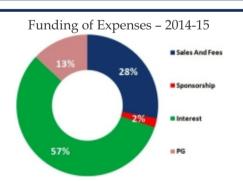


Earthquake Engineering Practice

The quarterly periodical *Earthquake Engineering Practice* continues to gain popularity. Its subscription list as of March 2015 stands at 3,245 from 69 countries. The periodical is being financially supported by the Computers & Structures Inc. (CSI), Poonam and Prabhu Goel Foundation at IIT Kanpur, and the numerous other donors of NICEE. The annual expenditure on the periodical is to the tune of ₹ 16.0 lakhs. To make it self-sustaining we invite advertisements/ sponsorships from the corporate sector.

NICEE Financials





With a healthy growth of NICEE activities, the overall expenditure during the year stood at about ₹ 45.29 lakhs (₹ 44.12 lakhs last year). This was covered by a healthy mix of resources from various sources: 28% from sales and fees, 2% from sponsorships, 57% from interest from endowment and 13% from Poonam and Prabhu Goel Foundation at IIT Kanpur.

The sale proceeds from publications and monographs were $\overline{\mathbf{x}}$ 12.52 lakhs as compared to $\overline{\mathbf{x}}$ 12.07 lakhs last year. The number of donors this year were 59 (77 last year) contributing a total of $\overline{\mathbf{x}}$ 11.02 lakhs with an average donation of $\overline{\mathbf{x}}$ 18,673/- ($\overline{\mathbf{x}}$ 4.25 lakh last year with average of $\overline{\mathbf{x}}$ 5,582/-). Since inception, NICEE has received one or more donations from a total of 501 donors with an overall median of $\overline{\mathbf{x}}$ 3,000: this is a great endorsement of NICEE's activities by its friends and well wishers.

₹ 4,00,000/- and above

IIT Gandhinagar, Ahmedabad, GJ

₹ 1,00,000/- to ₹ 3,99,999/-

PNC Infratech Limited, Agra, UP

₹ 20,000/- to ₹ 99,999/-

Computers & Structures Inc-India (CSI-India), New Delhi VMS Consultants Pvt. Ltd., Mumbai, MH Rajesh Ashok Vaidya, Mumbai, MH

₹ 4,000/- to ₹ 19,999/-

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NICEE Team

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