

11. Conferences attended in the past five years

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12. Earthquake engineering related activities pursued by the applicant in past 5 years: (it may be attached as a separate enclosure):

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13. Other activities that show interest in Earthquake Engineering

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Signature:

Name:

Recommendation of the Head of the Institution

Signature:

Name:

Date:

Designation:  
(With Seal)



### Other Participants

Industries and Government departments desirous of utilizing this opportunity may depute participants at their own expense. A course fee of Rs. 10,000 (Rupees ten thousand only) in the form of crossed DD payable to “Registrar, Indian Institute of Science Bangalore 560012” should be paid by such participants. Only five participants on a first come first served basis will be selected under this category.

### For further details please contact

Dr. K S Nanjunda Rao  
Department of Civil Engineering,  
Indian Institute of Science  
Bangalore – 560012  
Email: ksn@civil.iisc.ernet.in  
Phone: 080-22932527(Office) 080-23511424(Home)

For more general information about NPEEE, please see website: <http://www.nicee.org/npeee>  
or Email: [npeee@iitk.ac.in](mailto:npeee@iitk.ac.in)

### Please mail applications to:

Assistant Registrar,  
Centre for Continuing Education  
Indian Institute of Science, Bangalore-560012  
Tel: 080-23600911, 22932247  
Fax: 080-2 3600911  
Email: office@cce.iisc.ernet.in

### Important Dates:

Last date for receiving applications: 25<sup>th</sup> November 2006  
Date for intimation of selections: 8<sup>th</sup> December 2006

## SHORT TERM COURSE

ON

## Seismic Resistant Design of Masonry and Reinforced Concrete Buildings

8–13 January, 2007

### Convener

Dr. K.S. Nanjunda Rao  
Department of Civil Engineering

### Sponsored by

Ministry of Human Resource  
Development, Govt. of India,  
National Programme on Earthquake  
Engineering Education



**Centre for Continuing Education**  
INDIAN INSTITUTE OF SCIENCE  
BANGALORE - 560012  
INDIA

## Preamble

Earthquakes pose one of the greatest challenges to designers of buildings and other civil engineering structures. About 75% of the fatalities attributed to earthquakes have been caused by collapse of buildings. In view of this there is an urgent need to ensure that our buildings are earthquake resistant to save precious lives and to reduce social and economic disruption. In order to address this issue the Ministry of Human Resource Development (MHRD), Govt. of India has launched the National Programme on Earthquake Engineering Education (NPEEE). Its aim is to build capacity in our technical institutions particularly engineering colleges, in the subject of earthquake engineering. Several short-term courses are being conducted all over the country to meet this objective. Indian Institute of Science, Bangalore, one of the resource institutions participating in NPEEE will be conducting a short-term course on “Seismic resistant design of masonry and reinforced concrete buildings” in the month of January 2007 for engineering college teachers. The coordinator of NPEEE at IISc is Dr. C.S.Manohar, Professor, Department of Civil Engineering. (Email: manohar@civil.iisc.ernet.in)

## Participants

Teachers of recognized engineering colleges are eligible to apply for the course. There is no fee for the course. Selected participants will be given all course materials and will be provided with free lodging in the Hoysala Guest House of IISc. The number of participants is limited to 25-30 for the course.

## Objectives

- To give a comprehensive exposure to earthquake engineering.
- To introduce fundamentals of structural dynamics relevant to earthquake resistant design.
- To understand the behaviour of masonry and R.C. buildings during past earthquakes.

- To introduce elements of design and ductile detailing of structures with reference to relevant BIS codes.
- To give exposure to seismic retrofitting strategies of masonry and R.C. buildings.

## Course Contents

Introduction to engineering seismology; earthquakes and their effects; damages to structures during earthquakes; introduction to structural dynamics-SDOF and MDOF systems; concept of response spectra; frequencies, mode shapes and earthquake resistant design of masonry buildings; BIS code based design procedures for analysis, design and ductile detailing of buildings; concepts of vibration absorber and base isolation; seismic retrofitting strategies; shock table testing of masonry building model; seismic resistant design provisions in various BIS codes.

## Resource Faculty

Prof. K S Jagadish, Prof B K Raghu Prasad, Prof Ananth Ramaswamy, Prof J M Chandra Kishen and Dr. K S Nanjunda Rao

## Travel and Stay

Return train fare by 3-tier AC and free stay on the campus of IISc will be provided for the selected out station (non-local) participants. In addition a per diem of Rs. 150 will be provided for seven days to cover food and other expenses.

## Venue

Short-term course will be held in the central lecture hall complex, Center for Continuing Education, Indian Institute of Science, Bangalore.

## Official Language

The official language of the short-term course will be English

Application form for teachers to participate in training programme “Seismic resistant design of masonry and reinforced concrete buildings”  
8 – 13 January 2007, IISc, Bangalore

1. Name:
2. Designation:
3. Name of College/Institution:

4. Address:

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5. Phone (Office): \_\_\_\_\_  
Phone (Home): \_\_\_\_\_
6. Email: \_\_\_\_\_
7. Qualifications:

Year	Degree	Specialization	University

8. Thesis titles (if applicable)  
M.E./ M.Tech:

Ph.D:

9. Courses taught in the past five years:

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10. Short courses attended in the past five years:

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