

INTRODUCTION

A course on **Computational Techniques for Seismic Analysis** is planned to be conducted at IIT Madras during 18th – 22nd December 2006 under the aegis of National Programme on Earthquake Engineering Education (NPEEE).

In the aftermath of the Bhuj earthquake in 2001, the NPEEE was initiated with the support of the Ministry of Human Resource Development (MHRD) to develop better teaching capability in the area of Earthquake Engineering. As a part of this strategy, several short term courses are planned to be conducted at all the resource institutions. Details of NPEEE may be found at <http://www.nicee.org/npeee>.

Every phenomenon in nature can be described using certain basic laws of physics and axioms developed over the years. Engineers and scientists studying practical problems are faced with the task of developing and evaluating mathematical and numerical models to understand the phenomena and ultimately design and manufacture systems for human convenience and comfort. Two such numerical methods are the Finite Element Method and Meshfree Method.

As a resource institute for the programme, the course will be conducted in the Department of Civil Engineering, IIT Madras, Chennai.

The course is designed to introduce issues that are deemed essential for understanding of the basic concepts of finite element and meshfree methods. This course (**CTSA 2006**) is specially developed for Teachers of Engineering Colleges who are involved or likely to be involved in teaching of the subject at the Undergraduate and Postgraduate levels. A test will be conducted at the end of the course to evaluate the value addition of the training.

OBJECTIVES

- To give basic concepts of finite element and meshfree methods of seismic analysis of structures.
- To illustrate the usage of these methods in earthquake resistant design of buildings and bridges.

COURSE CONTENTS

1. Introduction to finite element and meshfree methods
2. Structural dynamics – An introduction
3. Programming the dynamic analysis of structures
4. Seismic analysis of RC buildings and bridges
5. Finite element analysis of ground response
6. Seismic analysis of fluid-solid systems
7. Seismic soil-structure interaction
8. Seismic analysis of pile supported structures
9. Usage of SAP 2000NL.

REGISTRATION FORM (CTSA 2006)

1. Name:

2. Designation:

3. Mailing address:

Telephone:

Fax:

E-mail:

4. Educational qualifications:

5. Experience:

6. Motivation for attending the course and future plans

7. Name of the Sponsoring Organisation/College/University

8. Boarding and Lodging required: Y/N

9. Signature and date:

Note:

- In addition to this form, candidates should fill the NPEEE application form for teachers to participate in the training programme and get the recommendation of the Head of their Institution on the same.

National Programme on Earthquake Engineering Education (NPEEE)

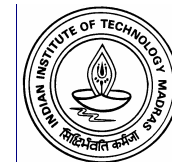
Short Term Course on

Computational Techniques for Seismic Analysis

18th – 22nd December 2006

Coordinators

Dr B Nageswara Rao
Dr G R Dodagoudar



Department of Civil Engineering
Indian Institute of Technology Madras
Chennai - 600 036

RESOURCE FACULTY

The following faculty who have considerable expertise in the area of Finite Element and Meshfree Methods will be involved in the theory and tutorial sessions.

Dr. B. Nageswara Rao
Dr. G. R. Dodagoudar
Prof. A. Meher Prasad
Prof. Devdas Menon
Prof. A. Boominathan

IMPORTANT DETAILS

- Only permanent full-time faculty of AICTE recognized engineering colleges are eligible to apply. **Only 30 seats are available.**
- Cancellation after registration is highly discouraged and application will be given low preference during selection for future courses.
- Candidates are eligible for III AC train fare from the nearest station on production of a copy of the ticket. Non-A/C double room accommodation will be provided on a shared basis during the course period.
- Last date for Registration **20th Nov. 2006.**

CORRESPONDENCE

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