INTRODUCTION

A course on **Probability Methods in Earthquake Engineering** is planned to be conducted at IIT Madras during 11th – 15th July 2005 under the aegis of National Programme on Earthquake Engineering (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 institutes consisting of the IITs and IISc. Details of NPEEE may be found at http://www.nicee.org/npeee.

As a resource institute for the project, a series of *four short term courses* will be conducted at the Department of Civil Engineering, IIT Madras during June - July 2005. The first course is on "Seismic Retrofit of Multistoried Buildings (SRMB 2005)". The second one is on "Soil Dynamics and Earthquake Engineering (SDEE 2005)". The other two are (3) Finite Elements in Earthquake Engineering (FEEE 2005) and (4) Probability Methods in Earthquake Engineering (PMEE 2005).

The course on **Probability Methods in Earthquake Engineering (PMEE 2005)** is specially designed for Teachers of Engineering Colleges who are involved or likely to be involved in teaching of the subject at the Undergraduate and Postgraduate levels. The course will attempt to introduce the fundamentals of Probability, Random Processes and Stochastic Structural Analysis in the context of earthquake engineering and Seismic Hazard and Risk Assessment. A test will be conducted at the end of the course to evaluate the value addition of the training.

OBJECTIVES

1. To give a broad perspective of the probability concepts, random processes and their applications to earthquake engineering.
2. To highlight the issues involved in the reliability analysis and seismic risk assessment of structures.

COURSE CONTENTS

1. Stochastic Structural Analysis
2. Stochastic (Random) Processes
3. Probabilistic Theory of Structural Dynamics
4. Random Processes in Time and Frequency Domains
5. Statistical Properties of Random Processes
6. Response of SDOF and MDOF Systems to Random Environments
7. Simulation Methods and Reliability Analysis
8. Stochastic Modelling of Ground Response
9. Seismic Hazard and Risk Assessment.

REGISTRATION FORM (PMEE 2005)

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.

MAIL TO

Dr G R Dodagoudar
Coordinator, PMEE 2005
Department of Civil Engineering
Indian Institute of Technology Madras
Chennai 600 036

The course is planned to be conducted at the Department of Civil Engineering, IIT Madras, which has considerable expertise in the area of Probability Methods, Random Processes and Earthquake Engineering. The Faculty of Geotechnical and Structural Engineering Divisions of IIT Madras who have teaching, consultancy and research experience in the subject will deliver lectures. Both theory and tutorial sessions will be conducted.

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-AC double room accommodation will be provided on a shared basis during the course period.
- Last date for Registration **30 June 2005**

CORRESPONDENCE

Dr G R Dodagoudar/ Dr B. Nageswara Rao
Coordinator, PMEE 2005
Department of Civil Engineering
Indian Institute of Technology Madras
Chennai 600 036

Email: goudar@civil.iitm.ernet.in
bnrao@iitm.ac.in
Phone: (044) 2257 8286, 8498
Fax: (044)-2257 0545

National Programme on Earthquake Engineering Education (NPEEE)

Short Term Course on

Probability Methods in Earthquake Engineering

July 11 -15, 2005

Coordinators
Dr G R Dodagoudar
Dr B Nageswara Rao

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