



**DEPARTMENT OF CIVIL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR  
AHMEDABAD 382424**

**Amit Prashant  
Associate Professor**

December 04, 2014

**Subject: Short Course on **Soil-Structure Interaction: Computer Applications and Material Models** to be held at **IITGN premises in Ahmedabad** during **19 – 23 Jan, 2015****

Dear Sir:

I enclose herewith a brochure for the above course. Since Soil-Structure Interaction plays a major role in design of important structures, we believe that this course may prove very useful to engineers interested in design and construction of infrastructure from civil engineering perspective. It may also be beneficial to students and researchers.

In the past, the course instructors have conducted numerous training courses on similar topics for professional engineers, researchers and students. All the courses were very much appreciated by the participants.

We therefore suggest that you consider sponsoring some of your engineers and researchers to this course.

Thanking you,

Yours sincerely,

Amit Prashant

Encl: Brochure of the short course



## Short Course on

# **Soil-Structure Interaction: Computer Applications and Material Models**

To be conducted at **Ahmedabad** during **19 – 23 Jan, 2015**

## **Course Objectives**

The aim of the course is to provide the participants an understanding of effectively simulating the soil-structure interaction problems using computer applications and realistic material models. At the end of the course, the participants are expected to have fair understanding of:

- Basics of Finite Difference and Finite Element Analysis
- Realistic material models for structural materials, soils and interfaces/joints
- Modeling of engineering systems and Soil-Structure Interaction (SSI) using computer methods for a number of practical problems in geotechnical engineering.

## **Participants**

The course is designed for

- Civil Engineers engaged in design and construction of structures.
- Senior professionals responsible for directing these activities.
- Students, Teachers and Researchers

## **Course Contents**

- Introduction to computer methods: Finite Element Method and Finite Difference Method.
- Constitutive models relevant to structural elements, geologic materials, interfaces and joints.
- Determination of material parameters and idealization of loading and boundary conditions.
- One-, two- and three-dimensional idealizations of structures such as axially and laterally loaded piles, group piles, footings, dams and embankments, slopes, retaining walls including reinforced systems, tunnels and caverns, pavements.
- Flow Through Porous Media: Seepage and consolidation.
- Dynamic analysis including liquefaction.
- Computer codes and practice sessions

## **Course Faculty**

The course will be conducted by

- Dr. Chandrakant S. Desai,  
University of Arizona
- Dr. Dhiman Basu, IIT Gandhinagar
- Dr. Gaurav Srivastava, IIT Gandhinagar
- Dr. Amit Prashant, IIT Gandhinagar

## **Certificate**

Participants who successfully complete the course will be awarded a certificate.

## **Venue**

The course will be conducted at IIT Gandhinagar premises in Ahmedabad.

## **Registration**

The course fee is Rs. 20,000/- (Rupees Twenty Thousand Only) per participant. It includes course material, lunch, and tea breaks. The fee is payable in advance by a crossed cheque or demand draft in favor of **Conference Account IIT Gandhinagar**, payable at Ahmedabad, or via online transfer at the account details given in registration form.

The postgraduate students and faculty of geotechnical engineering may request a discount in course fee.

Interested persons may register online at the course website:

<http://www.iitgn.ac.in/ssi2015/>

or

send the enclosed Registration Form to:

Mr. Nitin Shukla  
Organizer, Course on SSI-2015  
Indian Institute of Technology Gandhinagar  
VGEC Campus, Chandkheda,  
Ahmedabad – 382424  
Mob: 9737632133; Fax: 079-23972586;  
Email: n.shukla@iitgn.ac.in



Short Course on

**Soil-Structure Interaction: Computer Applications and Material Models**

To be conducted at **Ahmedabad** during **19 – 23 Jan, 2015**

**Registration Form**

**Name :**

**Designation :**

**Organization :**

**Postal Address :**

Phone (office):

Phone (home):

Phone (mobile):

Fax :

Email 1:

Email 2:

**Qualifications and Background :**

**Registration Fee :**

a) Enclosed is a crossed draft no. ....dated ..... for Rs. ....in favor of **Conference Account IIT Gandhinagar** payable at Ahmedabad.

**OR**

b) From the Account No. ...., bank transfer of Rs ....., with transaction ID ..... dated ....., has been done to the account details given below:

Bank: State Bank of India

Account name: Conference Account IIT Gandhinagar

Account no.: 33674204979

IFS Code: SBIN0011770

Note: During NEFT /bank transfer fill the Remarks column with the text, "**SSI-2015**"

**OR**

c) I shall send the registration fee by ..... (please indicate date).

(Signature)

**Please return to:**

Dr. Amit Prashant

Coordinator for Course on *Soil Structure Interaction*

Indian Institute of Technology Gandhinagar

Chandkheda, Ahmedabad – 382424

Fax: 079-23972586; Email: ap@iitgn.ac.in