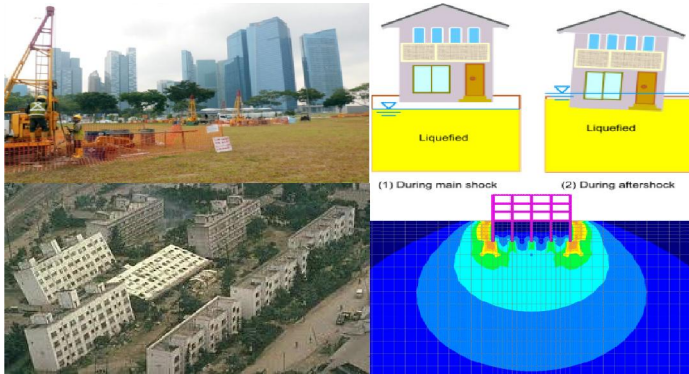


# CEP Short Term Course on Site-Specific Geotechnical Investigations for Buildings & Critical Structures

7 - 9 December 2017 at IIT (BHU)



## Organized by

Department of Civil Engineering  
Indian Institute of Technology  
(Banaras Hindu University)  
Varanasi-221005



## Coordinator

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## ABOUT THE COURSE

The short course focuses mainly on the recent advancements made in Site-Specific Geotechnical Investigations for Buildings & Critical Structures. Engineering design of foundation for medium to high rise structure is a creative, iterative and open-ended process, subject to many constraints. The complexity and uncertainty involved with the natural geologic environment makes the design of foundation for structure unique. Earthquakes are the naturally occurring events, which are mostly responsible for the property damage all around the world. The damages due to earthquakes are referred to as Seismic hazards. Liquefaction, landslides, structural disasters are most common seismic hazards. Preventing seismic events is not possible, however evaluation of seismic risks and taking effective measures in foundation design of buildings & critical Structures is very much possible, for such emergencies. To fulfill the current day requirements, Civil Engineers need awareness and knowledge of the advancements made in Site-Specific Geotechnical Investigations for Buildings & Critical Structures. The workshop will cover the fundamentals of planning of geotechnical exploration and interpretation of the data collected with respect to their application in practice.

## PROGRAM SCHEDULE

### Day 1: 7<sup>th</sup> December 2017

Session 1: Challenges and Opportunities for Geotechnical Engineers.  
Session 2: Advances in Geotechnical Investigations for Buildings & Critical Structures.  
Session 3: Site-Specific Ground Response Analysis.  
Session 4: Modeling Techniques on Ground Response Analysis.

### Day 2: 8<sup>th</sup> December 2017

Session 1: Challenges in Foundation Design.  
Session 2: Evaluation of Liquefaction Potential (IS 1893).  
Session 3: Modeling Techniques on Seismic analysis of Foundation.  
Session 4: Modeling Techniques on Liquefaction Potential Evaluation.

### Day 3: 9<sup>th</sup> December 2017

Session 1: Soil Structure Interaction Effects in Design of Buildings & Critical Structures.  
Session 2: Seismic Hazard Analysis for Buildings & Critical Structures.  
Session 3: Modeling Techniques on SSI Effects in Design of Buildings.  
Session 4: Modeling Techniques on Design of Critical Structures.

## WHO SHOULD ATTEND?

This short course is designed specifically for engineers, consultants, faculty members, Post Graduate and Undergraduate Students of Civil Engineering to get acquainted with the various advanced aspects of Site-Specific Analysis of Buildings & Critical Structures.

## Note:

Personal laptops are encouraged.  
Scientific calculator is compulsory.

## ABOUT IIT (BHU)

Indian Institute of Technology (BHU), Varanasi is a public engineering institution located in Varanasi, U.P, India. Founded in 1919 as the Banaras Engineering College, it became the Institute of Technology, Banaras Hindu University in 1968. It was designated an Indian Institute of Technology in 2012. IIT (BHU), Varanasi has 13 departments and three inter-disciplinary schools.

For more details, visit: <http://iitbhu.ac.in/>

## ABOUT GEOTECHNICAL ENGINEERING DIVISION, DEPARTMENT OF CIVIL ENGINEERING

Geotechnical Engineering division addresses a wide range of problems posed by the spatial variability and complex material properties of soils and rocks. Geotechnical Engineering Division is involved in research activities related to soil testing, soil modeling, numerical analyses, Geotechnical Site Characterization, Ground Response analysis, Liquefaction Potential Evaluation and Estimation of Dynamic Properties of geomaterials, Dynamic Soil Structure Interaction Effects, Soft soil behavior and slope stability including progressive failure. Civil Engineering department has taken up various research projects apart from regular teaching. It has a created cooperation with industries to work for the various tasks given by Govt., Semi-Govt. and other Private organizations. It is particularly dedicating in providing solutions to the people of the country with technical solutions and guidelines. For more details, visit:

<http://www.iitbhu.ac.in/civ/>

## CERTIFICATE

A certificate of completion of the course would be issued to all the participants.

## LOCATION

Varanasi Railway Station is well connected to almost all parts of the India. Also it is well connected via Air to Delhi, Mumbai, Kolkata, Hyderabad, and Bangalore. The Institute is located in the south of the Varanasi city and about 7km away from Varanasi Railway Station and 30km from the Babatpur (Varanasi) airport.

## REGISTRATION FEE

- **IIT (BHU) student: Rs. 1000/-**
- **Non-IIT (BHU) student : Rs. 2,500/-**
- **Faculty & Industry professional: Rs. 5,000/-**

- Registration Fee Includes cost of study material, tea & working lunch.
- Last date for Registration is 26<sup>th</sup> November, 2017, after that Rs. 500/ extra will be charged.
- Number of seats are limited to 40.
- For registration, send DD/cheque drawn in favour of **STC SSGI** payable at Varanasi, U.P to Coordinator.
- For Online Registration Please Visit:  
<https://docs.google.com/forms/d/1AiztdbNqVT0IN5Ifn3JO0ZjOa4687eSLwBUIHBxf9C0/edit>

## ONLINE REGISTRATION FEE PAYMENT

Account holder name: **STC SSGI**  
Bank name: **State Bank of India**  
Branch: **IT-BHU,**  
Branch code: **11445**  
Account No.: **37235817669**  
Account type: **Current**  
IFS Code: **SBIN0011445**

## ACCOMMODATION

Shared accommodation in the IIT guest house will be provided on payment basis. Rooms in IIT guest house are limited and will be allotted on first come, first served basis. Participants interested to stay outside the campus in hotels can make their own arrangement.

## COURSE TEAM

In addition to faculty from IIT (BHU), following experts from Academic and Research Institutes are delivering lectures:

1. Prof. N. R. Patra, IIT Kanpur
2. Prof. B. Umashankar, IIT Hyderabad
3. Prof. Pradeep Kumar Ramancharla, IIIT Hyderabad
4. Prof. Chandan Ghosh, National Institute of Disaster Management, New Delhi

## ADDRESS FOR COMMUNICATION

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[outreach.gte@gmail.com](mailto:outreach.gte@gmail.com)

## COMMITTEES

### Patron:

Prof. Rajeev Sangal, Director, IIT (BHU)  
Prof. A.S.K. Sinha, Dean of Academic Affairs, IIT(BHU)

### Chairman:

Prof. Prabhat Kumar Singh, Head Civil Engg, IIT (BHU)

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Prof. Devendra Mohan  
Prof. P.K.S. Dikshit  
Prof. S.B. Dwivedi  
Dr. Brind Kumar  
Dr. Bala Ramudu Paramkusam  
Prof. R.K. Agarwal  
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Mr. Suresh Kumar  
Dr. Manash Chakraborty  
Dr. Pabitra Ranjan Maiti

### Treasurer, IIT (BHU):

Dr. Anurag Ohri



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**7<sup>th</sup> - 9<sup>th</sup> December 2017**

**Registration Form**

Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Position: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone No: \_\_\_\_\_

E-mail: \_\_\_\_\_

Fax:

I enclose a crossed demand draft drawn in favour of “**STC SSGI**” payable at Varanasi.

D.D. No/ Reference Number: \_\_\_\_\_ dt. \_\_\_\_\_

Bank:

Amount: Rs.

Date:

Signature