**Indian Geotechnical Society TC-8 Workshop on Numerical and Physical Modelling**

**(Sponsored by the TATA TISCON)**

Department of Civil Engineering of Guru Nanak Dev Engineering College, Ludhiana in association with the IGS-Ludhiana Chapter is conducting one day workshop on **3rd October, 2015** with an aim to frame guidelines on different aspects of the ‘**Numerical and Physical Modelling’**. It will be conducted by a panel of experts from different IITs and academicians who have years of experience in the design and consultation related to engineering structures.

This workshop aims to understand various issues of evaluation of different parameters generally required in the successful and efficient numerical and physical modelling of engineering problems with special emphasis on geotechnical engineering. This is because of the fact that the soil is a complex material formed by the weathering of rocks. During this process, different types of soils with a wide spectrum of diverse properties are formed. As all engineering structures have to rest on the soils which vary from site to site; even at a given site, soil properties vary from layer to layer in the founding ground, it becomes mandatory for designers to take these variations into account while predicting the response of structures founded thereon. Nevertheless, with a growing need for better infrastructure, proper understanding of the nature of the ground and accurate estimation of soil properties are essential for the safe and economic design of engineering structures. Recent advancements in the computing power and algorithms have given a big boost to consider these effects into the routine design practice and it has become possible to consider the soil-structure interaction while simulating the response of structures. The workshop tries to refresh the fundamental and mandatory dos-and-don’ts that must be considered while modelling. The title of the presentations by the experts in given below:

**Programme schedule**

|  |  |
| --- | --- |
| **Registration** | 0800 - 0900 hours |
| **Inaugural function** | 0900 - 0930 hours |
| *Finite Element Methods for Analysis of Constructions on Soft Clay Soils*  K. Rajagopal, IIT Madras | 0930 - 1015 hours |
| *Numerical Modelling for Nonlinear Seismic Soil-Structure Interaction and Liquefaction*  B. K. Maheshwari, IIT Roorkee | 1020 - 1105 hours |
| *Reliability Based LRFD Approach for External Seismic Stability of Reinforced Soil Walls*  B. M. Basha, IIT Hyderabad | 1110 - 1155 hours |
| *Lumped Parameter Modelling of Geosynthetic-reinforced Earth Beds under Static and Moving Loads*  Priti Maheshwari, IIT Roorkee | 1200 - 1245 hours |
| **Lunch break** | 1245 - 1400 hours |
| *Physical modelling of typical geotechnical structures*  J. T. Shahu, IIT Delhi | 1400 - 1445 hours |
| *Centrifuge-based Physical Modelling of Geotechnical Structures*  B.V.S. Viswanadham, IIT Bombay, Mumbai | 1450 - 1535 hours |
| *Reliability Based LRFD Approach for External Seismic Stability of Reinforced Soil Walls*  B. M. Basha, IIT Hyderabad | 1540 - 1625 hours |
| **Panel discussion and concluding** | 1630 - 1700  hours |

**Delegates:**

About 175 in numbers --- 117 registered PG students + 15 sponsored delegates from TATA (mostly- consultants, Engineers from Govt departments and testing laboratories) + Faculty from different colleges.

**Finance at hand:**

Registration fee = Rs 1,53,000 /-

Sponsorships (TATA) = Rs 40,000/-

IGS funding = Rs 60,000/-

GNDEC funding = Rs 50,000/-

On-spot registration (expected) = Rs 50,000/-