

You are cordially invited to the

“PLAXIS + tij Model” Seminar in Singapore

Hosted by

*Department of Civil and Environmental Engineering
National University of Singapore & PLAXIS Asia*

sponsored by:

*JIP Techno Science (JIP), Geo-Research Institute (GRI),
Geotechnical Society of Singapore (GeoSS) &
Japanese Geotechnical Society (JGS)*

Date: 21 November (Wednesday)

Time: 1:00 pm to 5.50 pm

Venue: Lecture Theatre 1, Faculty of Engineering, NUS

**A/Prof Harry Tan Siew
Ann (NUS)**



Prof T. Nakai (GRI)



**Prof H.M. Shahin (Islamic
University of Technology)**



Mr H. Takahashi (JIP)



Abstract

The concepts of the tij-subloading soil constitutive model was developed and validated by Professor Teruo Nakai and his co-workers over the span of his long distinguished career at Nagoya Institute of Technology (NIT), Japan. This model is very sophisticated in its capability to model highly non-linear soil response of clays, silts, and sands, yet is elegantly simple in concept to understand how it works in simulation of complex soil behavior. For a long period, the model only exists in the university FEM code of Nagoya, and is very much unknown to the general geotechnical community outside of Japan. Over the past few years, Nakai with the

help of GRI and JIP, Japan had been able to implement a working form of the model in Plaxis+tij USDM form. This seminar is intended to highlight and illustrate the nature of the tij model, and how it can be useful to model realistic true 3D responses ranging from 3D compression loadings of very soft structured clays to behavior of sands. One significant key feature of the model is that its parameters are independent of intermediate principal stress and density, where density is one of the state parameter of the soil model.

Programme Details

Time	Presentation Title and Speaker
12.30 pm – 13.00 pm	Registration
13:00 pm – 13.15 pm	Opening address and welcome speech Prof Harry Tan (NUS) and Eddy Tan (PLAXIS Asia)
13:15 pm - 14:10 pm	Significance and Usefulness of Subloading t_{ij} Model By T. Nakai (GRI)
14:10 pm - 15:00 pm	Analyses of Geotechnical Problem Using Subloading tij Model By H.M. Shahin (Islamic University of Technology)
15:00 pm - 15:20 pm	Tea Break
15:20 pm - 15:40 pm	t_{ij} Model for PLAXIS User By Prof Harry Tan (NUS)
15:40 pm - 16:10 pm	Introduction of “PLAXIS+tij Model” By H. Takahashi (JIP)
16:10 pm - 17:25 pm	Examples of Analyses Using PLAXIS+tij Model <ol style="list-style-type: none"> Braced excavation in soft ground by T. Konda (GRI) Twin tunnelling by M. Suzuki (Chiba Institute of Technology) Bearing capacity of reinforced ground by Y. Isobe (GeoScience Research Laboratory) Bearing capacity of pile group by K. Kaneda (Takenaka Corporation) Earth retaining wall in soft ground with soil improvement by H. Kumagai (Takenaka Corporation)
17:25 pm - 17:50 pm	Discussions
17.50 pm	Closing

For general enquiry and registration, please contact Ms. Norela at **Tel: 6516 4314**, **Email: nor@nus.edu.sg**

For other matters related to the seminar, you can contact Prof Harry Tan Siew Ann at email: ceetansa@nus.edu.sg

Map

