TNO DIANA BV is pleased to invite you to a free training course on 3D Finite Element Analysis for Geotechnical & Tunnel Engineering. The course will be held on 27-28 November 2008. The training course consists of a balanced mixture of lectures and hands-on computer analyses with midasGTS finite element software. Modelling strategies will be discussed and personalised advice will be provided on a one-to-one basis.

Course Description

Benefits

- The course focuses on the application of the finite element method in geotechnical and tunnel engineering. The lectures will be followed by exercises to provide participants with hands-on experience.
- The course will be oriented on 3D modeling concepts and handling of complex geometries such as tunnel intersections.
- Gain insight in the workings of finite elements and get started with midasGTS graphical user interface.
- Learn good-practice in finite element modeling and gain skills in 2D and 3D model building.

Software:

Exercises and case studies are based on the software midasGTS, the 2D and 3D finite element package. This new generation program has been designed for the deformation and stability analysis of underground works and geotechnical structures. Its intuitive and highly interactive graphical interface allows 3D finite element modelling of general geotechnical applications including tunnels, as well as for foundation, excavation or embankment problems. The analysis capabilities encompass construction stages, soil-structure interaction, slope stability, seepage, vibration and earthquakes.

Who should attend

The course is aimed for practicing engineers or academics who wish to learn more about 3D finite element analysis techniques using midasGTS. The course content will be relevant to current and potential users of finite element software and engineers involved in consultancy services.

Format

- Timing for the course both days: 9.00am - 5.30pm
- Participants may take their own laptop.
- A full trial version of the midasGTS software, valid for 30 days, will be provided to all participants for use during the course and afterwards.
Registration Form

Please complete and return this form to:
Maria Bazan, TNO DIANA BV,
Schoemakerstraat 97, 2628 VK, Delft, Netherlands
fax: +31 15 276 3019  email: courses@tnodiana.com

Confirm attendance days:  □ 27 November, day 1  □ 28 November, day 2

Surname: ................................................................. Title: (Mr/Ms) .................................................... First name: ..............................................................

Job title: ................................................................ Organisation: ................................................................

Address: ................................................................ Postcode: ................................................................. Country: ..........................................................

Tel: ................................................................. Fax: .................................................................

Email: ..............................................................

Availability of own laptop? .................................................................

Note: Please complete separate forms for each delegate. Photocopies of this form are acceptable.

Outline Agenda

27 November
• Introduction to FE based Geotechnical Analysis
• Good-practice in finite element modelling
• Introduction to material modelling and parameter assessment
• Drained and undrained static analysis
• Assessment of factor of safety by c-phi reduction method
• 2D modelling exercises (shallow foundation benchmark)

28 November
• 3D geometrical modelling concepts
• Advanced 3D meshing algorithms and mesh generation
• Construction stage analysis
• A to Z for 3D model building, analysis, and processing of results using representative case studies (Tunnel and deep foundations)

About the Instructors

Dr. Olivier Gastebled received his PhD and MSc in Civil Engineering from Herriot-Watt University, Edinburgh, Scotland. He obtained his engineering degree from INSA Lyon, France. He has over 10 years of research and consultancy experience in the field of finite element modelling in civil and geotechnical engineering.

Dr. Ahmed Elkadi received his PhD and MSc in Civil Engineering from Delft University of Technology, Delft, The Netherlands. He obtained his engineering degree from Cairo, Egypt. He has over 13 years of experience in both research and consultancy in the field of geotechnical and civil engineering.