The Institution of Engineers, Malaysia

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EVENING TALK ON GEOTECHNICAL FINITE ELEMENT ANALYSIS

(Organised by the Geotechnical Engineering Technical Division, IEM)

BEM Approved CPD/PDP Hours: 2.0 Ref No: IEM17/HQ/272/T

Day/Date : Thursday, 14th September 2017
Time : 5:30 pm – 7:30 pm
Venue : Auditorium, Wisma IEM, PJ
Presenter: Dr. Andrew Lees

Presentation Outline:

Modern geotechnical design is increasingly reliant on numerical analysis methods, e.g. finite element analysis (FEA), yet such techniques are barely covered in a university education. Perhaps this has led to inappropriate use of numerical analysis tools by untrained staff. This technical talk will outline recent developments to address the need for better training and management for numerical analysis activities in geotechnical design. These include new training resources, tools for managing competency and proposed changes to design codes to incorporate design by numerical analysis. Some new hints and new FEA modelling techniques will also be presented, focussing on geogrid applications in railways, working platforms and retained structures.

Biodata:

Dr. Andrew Lees is a geotechnical engineer with specialist knowledge and 17 years' experience of the practical application of numerical analysis tools in geotechnical design and has published extensively in this field. He graduated with a B.Eng. in Civil Engineering at the University of Southampton in 1996, where he also obtained a PhD in the field of centrifuge modelling and FEA of soil-structure interaction in 2000. He was then a geotechnical engineer at Mouchel International until 2004 when he took up a lectureship at Frederick University, Cyprus where he taught geotechnical engineering until 2015. In 2007, he also set up and continues to run the successful consultancy Geofem specialising in geotechnical FEA. In 2016, he was also appointed Senior Application Technology Manager at Tensar International where one of his tasks is to improve techniques of modelling geogrid-stabilised soils by FEA. He is particularly active in the development of new techniques and guidance in geotechnical numerical analysis through his role as Convenor of the Eurocode 7 Evolution Group on numerical methods, his participation in the redrafting of Eurocode 7 and his role as scientific coordinator of the European COGAN Project on competency and training in geotechnical numerical analysis. He authored the textbook *Geotechnical Finite Element Analysis* published by the ICE in 2016 as well as the NAFEMS guidebook *Obtaining Parameters for Geotechnical Analysis*. He is a Chartered Engineer and member of the ICE and BGA.

ANNOUNCEMENTS TO NOTE

- **Non-IEM members** may also attend the talk but will need to pay a registration fee of **RM50** and an administrative fee of **RM15.** GST is inclusive.
- Limited seats are available on a "first come first served" basis (maximum 100 participants). **To secure your seat, kindly register online at www.myiem.org.my.**

ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of **RM15** is payable for talks organized by IEM. GST is inclusive.
- IEM Student Members are however exempted.

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Ir. Lee Peir Tien
Chairman, Geotechnical Engineering Technical Division, IEM