SHAKING THE FOUNDATIONS of Geo-Engineering Education

Galway, Ireland
4th-6th July 2012
‘Sit down before the facts as a little child; be prepared to give up every preconceived notion, follow humbly and to whatever abysses nature leads, or you shall learn nothing.’

Thomas Henry Huxley

TC306, the technical committee of the ISSMGE responsible for Geo-Engineering Education, is organising the landmark conference Shaking the Foundations of Geo-Engineering Education (SFGE) 2012 to be held in Galway, Ireland, from 4 – 6 July 2012. The conference is planned to have a significant impact on and provide a reference point for effective and engaging education in geo-engineering worldwide. The conference will examine and resolve key educational questions such as: what should educators teach; what pedagogies should be adopted to maximise effective learning; and what can we learn from one another to improve our students’ experience?

Unique Workshop Feature
SFGE 2012 has been carefully crafted to engage and challenge delegates through inspiring lectures in the mornings and hands-on workshops in the afternoons. Active participation in these workshops will reward you with ideas and techniques to stimulate and engage your students.

This conference will make a difference and it will establish a firm foundation for geo-engineering education in the future. Make it your priority to attend, to participate and to re-energise your teaching. We owe it to our students, to our profession and to society.

IMPORTANT DEADLINES

First bulletin issued, call for papers: 15 June 2011
Deadline for abstracts: 31 August 2011
Deadline for full papers: 15 Jan 2012
Registration: T.B.A.

Selection of Invited Lectures
Invited papers will be selected from submissions showing creativity and innovation in teaching.
SFGE 2012 Conference Chair:  
Dr. Bryan McCabe,  
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Chair TC306  
Dr. Declan Philips, University of Limerick, Ireland  
Prof. David Airey, University of Sydney, Australia
Dr. Marina Pantazidou, NTU Athens, Greece  
Dr. David Nash, University of Bristol, UK  
Prof. Mounir Bouassida, National Engineering School of Tunis, Vice-Chair TC306

Papers are invited on the topics below. Papers on other topics relevant to geo-engineering education are also welcome. In addition to the pre-selected keynote speakers, a number of invited lectures will be selected from submissions exhibiting creativity and innovation in teaching.

1. Essential course content in geo-engineering (academic and industry perspectives)
2. Basic concepts and how best to reinforce them
3. Advanced concepts; how and when they should be introduced (e.g. critical state theory)
4. Bridging the gap between geotechnical engineering, geology and hydrogeology
5. Field trips and laboratory exercises as valuable learning experiences
6. Reusable learning objects in geo-engineering instruction
7. Learning from past mistakes - the role of case histories and forensics in geo-engineering education
8. Student-centred learning in geo-engineering, e.g. active/enquiry-based learning/PBL, etc.
9. The role of computing and software at undergraduate level
Prof. John Atkinson

John Atkinson has undergraduate and postgraduate degrees in Civil Engineering and in Soil Mechanics from Imperial College. He was a Research Assistant in the Cambridge University Engineering Department and Senior Lecturer at University College Cardiff before coming to City University as Reader in 1980. He was promoted to the Chair in Soil Mechanics in 1985.

John Atkinson is author of several text-books on Soil Mechanics and Foundation Engineering and is well known as a lecturer in UK and abroad and has made fundamental contributions to geo-engineering practice worldwide. He is currently Visiting Senior Principal with Coffey Geotechnics and provides technical leadership, consulting services and professional development training to Coffey Geotechnics staff in Australia and to EDGE Consultants in UK.

Prof. Paul Mayne

Paul Mayne is Professor of Civil Engineering at Georgia Tech, having previously served in geotechnical consulting practice in the Washington DC-Virginia-Maryland area. Since joining academia, he has sought to bridge the gap between theory and practice, using case studies in his teachings and research activities as well as pragmatic approaches to engineering solutions. In recent years, Dr. Mayne has given invited lectures internationally, provided CPT workshops to professional societies and private firms, as well as authored numerous publications and technical papers. He is the chair of ISSMGE TC 16 on In-Situ Testing.
KEYNOTE LECTURES

Dr. Brian Simpson
Brian Simpson OBE is the director of Ove Arup & Partners Ltd and a principal of Arup Geotechnics. He is a Visiting Professor at City University and Special Professor at the University of Nottingham. Brian has a particular interest in the decision-making process of design, and has been involved in the development of Eurocode 7 (Geotechnical Design), having been a member of its drafting panels and vice-chairman of the CEN (Comité Européen de Normalisation) committee on Eurocode 7. He was lead author of a Commentary on Eurocode 7 published by EMAP, and has recently published papers on European comparisons of retaining wall designs. He is the current chairman of the BSI committee on geotechnical codes, BS 5930, in which the topic of pile design is much under debate for the National Annex of Eurocode 7.

Prof. Rich Felder
Rich Felder is the Hoechst Celanese Professor Emeritus of Chemical Engineering at North Carolina State University. He is co-author of Elementary Principles of Chemical Processes, an introductory chemical engineering text now in its third edition. He has contributed over 200 publications to the fields of science and engineering education and chemical process engineering, and writes “Random Thoughts,” a column on educational methods and issues for the quarterly journal Chemical Engineering Education. With his wife and colleague, Dr. Rebecca Brent, he co-directs the National Effective Teaching Institute (NETI) and regularly offers teaching effectiveness workshops on campuses and at conferences around the world.

Prof. Steve Ressler
Stephen Ressler is Professor of Civil Engineering at the United States Military Academy at West Point and a Distinguished Member of the American Society of Civil Engineers (ASCE).

Professor Ressler’s papers on engineering education have won seven Best Paper awards from the American Society for Engineering Education (ASEE). He has also won numerous awards from the ASCE, including the President’s Medal and the 2011 Outstanding Projects and Leaders Award—the organization’s highest award. His other accolades include the Bliss Medal for Outstanding Contributions to Engineering Education from the Society of American Military Engineers and the Norm Augustine Award for Outstanding Achievement in Engineering Communications from the American Association of Engineering Societies.

A colonel in the Army Corps of Engineers, Professor Ressler has served on military engineering assignments around the world. He is also a developer and principal instructor for the Excellence in Civil Engineering Education Teaching Workshop, which has trained more than 500 civil engineering faculty members from more than 200 colleges and universities.

Dr. Brian Simpson

Prof. Rich Felder

Prof. Steve Ressler
The committee would like to honour Prof Burland’s significant contribution to mankind through his teaching and inspiration of so many young women and men throughout the world. John Burland is an exemplar for all teachers and a yardstick against which we can measure our own performance. His contribution to society goes far beyond the world of soil mechanics and for this we are all enriched.

Peter Drucker once remarked “Teaching is the only major occupation of man for which we have not yet developed tools that make an average person capable of competence and performance. In teaching we rely on the “naturals,” the ones who somehow know how to teach.” We have in John Burland a “natural” and his keynote address is sure to inspire and delight a privileged audience.

“And still they gazed, and still the wonder grew, that one small head could carry all he knew.”

*The Deserted Village*

W. B Yeats

**ENGINEERING EDUCATION JOURNAL**

The Organising Committee is investigating the possibility of having exemplar papers from SFGE 2012 progress to publication in a leading educational or technical journal (with upgrading as appropriate). Shortlisted papers may come from excellent contributions submitted before the conference and included in the proceedings, or newly formulated papers based upon the outcome of workshop discussions at the conference. This is intended to encourage a high standard of scholarly submissions to the conference.

**GALWAY CITY & COUNTY**

Galway is a city to be savoured and remembered. It began as a small fishing village centred around the estuary of the River Corrib, and today it is the third city in the Republic of Ireland after Dublin and Cork, and one of Europe’s fastest growing cities, with a population of 72,000.

Galway is unique among Irish cities because of the strength of its Irish language, music, song and dancing traditions - it is often referred to as the ‘Bilingual Capital of Ireland’. The city is well known for its ‘Irishness’, and mainly due to the fact that it has on its doorstep the Galway Gaeltacht (Irish-speaking area). The Irish language can be heard in use by locals and is visible on the city streets. There is a certain chemistry and vibrancy to this friendly university city. Music, festivals, horse racing, pubs, restaurants, shops, theatres, and most of all Galway people, combine to create this atmospheric medieval city.

The Twelve Bens mountain range
Connemara, County Galway
www.sfge2012.com

For further information contact:

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