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Editorial

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As chairman of the *Geotechnical Engineering* (GE) advisory panel I would like to welcome you to the last issue of 2013. At the beginning of the year the GE editorial panel set itself several goals. The main one was to enhance the international standing and reach of the journal. Hopefully this is reflected in the sustained increase in the journal's impact factor (0·569) over the last 2 years, with the journal recording its highest number of citations for 10 years. This has been achieved partly by creating a panel membership that includes strong international representation from key industrialised nations. More importantly, the journal continues to ensure rigorous quality control of papers and upholds strong publishing principles. Thus published papers contain previously unseen novel content and material that can lead to a significant change in practice and advances in academic research. The journal encourages a healthy mix of papers from both industrial and academic authors alike but asks that academic authors explain the potential applications for take up by practice. Similarly, industrially motivated papers or case studies should demonstrate how project construction and design methodologies are influenced by previously published research or exemplars of good practice. As always, the 'acid test' used on papers is that they are of immediate use or value to a practising geotechnical engineer. In order to maintain this identity I would ask authors to use this test and to check that their papers are best suited to this title. For instance, the ICE Publishing portfolio contains other relevant geotechnical journals such as *Géotechnique*, *International Journal of Physical Modelling in Geotechnics*, *Ground Improvement* and *Geosynthetics International*. New additions to the ICE Publishing portfolio in 2014 include *Environmental Geotechnics* and *Geotechnical Research*.

One of the ongoing goals of the panel is to reduce the time between submission and availability of accepted papers while maintaining quality and author confidence in the review process. I would like to thank the panel and reviewers for all of their hard work over the last 12 months. This has resulted in consistent quick first response to authors with first review comments returned within 4 months or less. The journal team also appreciates that readers and authors would like to see articles in press as quickly as possible. To achieve this, the journal moved to a new thicker issue for 2013 with an increase from 64 to 96 pages allowing the publication of three to four additional articles per issue. This allows the journal to handle more papers and for papers to appear in print more rapidly. If you cannot wait for papers to appear in press you can view accepted papers using the journal's Ahead of Print facility at http://www.icevirtuallibrary.com/content/serial/geng/fasttrack.

At the close of the year it is usual to acknowledge the contribution of panel members who are standing down after 3–4 years of valued input to the journal. I would like to express my thanks to seven members who are leaving the editorial panel at the end of 2013. We are grateful for the support and hard work provided by Andrew Bell, Grahame Bunce, William Craig and Kevin Stone. We also very much appreciate the service provided by our international panel members; Ken Gavin, Farhang Ostadan and Jaime Santos who are retiring from the panel this year. We had a very good response to our call for new panel members who I will introduce in the New Year.

In October I was lucky enough to attend the annual ICE awards ceremony. In the case of the journal, the occasion recognises papers published in the previous year; once again the panel was pleased to submit a number of GE papers for consideration. Two GE papers were selected to receive awards. The John Mitchell Medal, awarded for the best paper in geotechnical practice, site-based innovation or geotechnical safety, was awarded to Long *et al.* (2012) for their paper entitled 'Retaining walls in Dublin Boulder Clay, Ireland'. The Crampton Prize, awarded annually for the best paper on practical geotechnical engineering, went to Orr (2012) for his paper 'How Eurocode 7 has affected geotechnical design: a review'. It was very rewarding to help celebrate the authors' success; a brief report of the awards will be included in the February 2014 issue.

This issue contains eight papers (double the number this time last year) and a discussion piece. The first paper, by Winter *et al.* (2013) on the landslide hazard risk posed to the Scottish road network, is close to my own areas of interest both from the perspective of living and travelling in the upland regions of Scotland but also as an area that I have studied and published on (Milne *et al.*, 2010). This paper by Winter *et al.* (2013) highlights that although the UK is often thought of as relatively inert in terms of geohazards (such as earthquakes) we do experience other problems, especially in upland areas, such as landslides and debris flows that have the potential to disrupt transport networks. The paper looks at how a pan-Scotland geographic information system assessment was used to identify roads at risk. These were subsequently subjected to site inspection to allow hazard ranking and directed mitigation and management. The paper also highlights that risk to life and limb may not be the only major decision-making criterion especially where rural areas rely on key transport arteries for economic survival.

From Scotland we move to a series of five papers contributed by

authors primarily located in Ireland. The first two papers are partner papers by Gavin *et al.* (2013) and Tolooiyan and Gavin (2013) concerned with the field testing and numerical modelling of non-displacement piles in sand. Full-scale continuous flight auger piles (of varying diameter) were loaded using maintained load test (MLT) and constant rate of penetration (CRP) testing procedures to allow creep effects to be quantified for over-consolidated glacial sand. Comparison of MLT results with cone penetration test (CPT)-based correlations matched routine design approaches (α from 0·22–0·23) whereas CRP tests mobilised higher end bearing resistance (α up to 0·3), which corresponded well with finite-element (FE) modelling where creep was ignored. The Gavin *et al.* (2013) paper also identifies a useful database of 20 static load test results in sand with CPT correlations. The companion paper uses FE analyses to investigate the effect of pile geometry and in situ conditions on the α-CPT correlation in more detail. This study found that for deep piles α was insensitive to diameter changes and only marginally affected by density changes. These companion papers are then followed by another paper on piled foundations (Hemmingway and Long, 2013) in which the focus is energy piles and their required site investigation and analysis. The paper aims to increase the available guidance and data on thermal response testing of such installations. It details the methods and outcomes of both field and laboratory thermal response testing. It recommends that, although the analytical line source method is widely used in practice for performance evaluation, other methods outlined in the paper should also be explored. This paper follows on well from our April themed issue on 'Geotechnical challenges for renewable energy developments' which contained two papers related to energy piles, (Bourne-Webb *et al.*, 2013; Loveridge and Powrie, 2013).

The next four papers are concerned with the behaviour of soft soils. The paper by O'Kelly (2013) on shear strength–moisture content relationships of sewage sludge (biosolids) looks at how the behaviour of this three-phase material (gas production occurring over time owing to biodegradations) is influenced by mineralogical, physiochemical and biological properties. These are elements that most of us do not need to consider. Various methods of laboratory determination of shear strength are used and the effects of varying strain rate are also considered. The second paper looking at soft soils considers the heave induced by stone column installation in clay (McCabe *et al.*, 2013). The paper uses field heave measurements to highlight the potential impact of stone column construction on adjacent structures and shows how similar effects have been found for driven piles. Parallel FE analyses were undertaken to investigate how soil stiffness and column length further influence heave. This work was undertaken as part of the Geo-Install project, which had its own conference in Rotterdam in March 2013 which considered a broad range of geotechnical installation effects and how these are quantified and included in modelling (Hicks *et al.*, 2013). This is similar to the focus of the 2015 GE themed issue 'Construction processes and installation effects'. The final two papers consider the effect of preloading in soft soils. Venda Oliveira *et al.* (2013) investigate the mechanisms of creep mitigation through preloading by one-dimensional and triaxial creep testing. This theme is continued by Sasar and Haeri (2013) who have developed an improvement of the Asaoka settlement prediction method that considers the effect of creep. This has subsequently been tested on published case study data and found to give improved predictions of final settlement and agreement with in situ piezometer readings. Both this paper and that by Gavin *et al.* (2013) highlight the value of publishing highly detailed case study information and how this may be used to develop new understanding of common problems and improved analysis techniques.

This issue finishes with a discussion by Vardanega prompted by the above-mentioned prize-winning paper written by Orr (2012) (Orr and Vardanega, 2013). Vardanega argues that model factors introduced in the UK Eurocode 7 national annex have been designed to mimic former practice and remove the need for a separate serviceability limit state (SLS) check. Orr highlights though that Eurocode 7 requires separate SLS verification but this can either be direct or indirect (i.e. low shear strength mobilisation will keep the settlements within SLS limits). Personally, I feel this highlights the shortcomings of many codes (especially those that are prescriptive) in that they can be interpreted in different ways which in itself can lead to conflict between parties. Removal of ambiguity, clarification of meaning and clear statements on how the code is intended to be interpreted would seem the greatest challenge faced by code writers. The briefing note by Atkinson in the October issue also considers 'Issues that tax engineers designing geotechnical works to Eurocode 7' (Atkinson, 2013: p. 429).

I hope you find this issue interesting and stimulating. If you would like to raise any particular points regarding the papers published in the issue please consider contributing to the journal in the form of a discussion piece. Instructions on the preparation and submission of a discussion are included at the end of each paper.

For up-to-date information on *Geotechnical Engineering* and Ahead of Print papers please visit http://www.icevirtuallibrary.com/content/serial/geng.

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