Editorial

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It is with great pleasure that I welcome you to this, the November 2017 issue of *Ground Improvement*. This edition completes the series for 2017, a series that has covered a wide range of exciting developments in ground improvements. In previous editions this year, papers have dealt with novel materials and approaches together with further developments in our understanding of how ground improvement methods work, including the important role of site assessments and data collection. There are many global challenges that ground improvement methods are applied to, many of which are used as part of the ongoing development of our infrastructure base. To meet these challenges, it is vital to ensure that our ground treatments are resilient to whatever the future may hold (Mitchell and Kelly, 2013). This only comes from increasing our understanding of the wide range of aspects associated with ground improvement approaches. The papers in this issue highlight a number of the aspects and hopefully these can be taken forward to meet the challenges faced with the continuing development of our infrastructure base.

Papers in the edition can be grouped into two main themes, the first of which covers deep compaction techniques. Here the first of three papers, de-Freitas *et al.* (2017) deals with ongoing research examining treatment of collapsible lateritic soils, transforming a hazardous collapsible deposit, into a good foundation material. Here they show how producing compacted columns formed from the host ground, can significantly enhance the foundation soil. The ultimate goal of this work is to produce guidelines for practical use, something we look forward to finding out more about in the near future.

The second paper in this group presents an interesting tool, drawn from cone penetration test data, to provide reliable predictions of the effectiveness of a rolling dynamic compaction techniques (Ranasinghe *et al.*, 2017). This work provides a potentially value tool for pre-planning and concept design phases of a project's development. Completing this sub-set, is the work presented by Tarawneh *et al.* (2017), who provide an interesting case study from Kuwait City, examining dynamic replacement and dynamic compaction, from which key lessons and recommendations are made.

The next group consists of two papers. The first by Schanz and Elsayy (2017) examined, using a suite of laboratory tests, the influence of different lime fractions and lime-sand mixtures on the behaviour of highly expansive soils. Interesting they found that using lime-sand mixtures was more effective in treating swell potential than improving strength of expansive soils, suggesting that 10% hydrated lime mixed with 50% sand achieved the best results. Premkumar *et al.* (2017) in the second paper of this sub-set present results from an experimental study investigating the effect of brown coal fly ash on

the behaviour of dispersive clayey soils. This study showed how the erosive nature of dispersive soils could be reduced using brown coal fly ash, with 6% proving to be an effective percentage, but with 9% being needed to improve strength in the longer term.

To finish this final edition for 2017, Kelly (2017) provides a review of Bouassida's Design of column-reinforced foundations.

I hope that you find these papers useful, stimulating and informative and that these papers spark debate on further developments of the role of ground improvements. As these papers show, ground improvement must first be founded in sound engineering and scientific practice. Can I therefore, actively encourage you to discuss these papers to help further shape our understanding and development of current and future ground improvement processes. If our readership has any issues or comments related to the journal in general then the editorial panel is always pleased to receive feedback. We look forward to hearing from you.

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