Editorial

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In the last issue of *Ground Improvement* for 2013, we showcase five papers covering a wide range of important topics for the geotechnical community, including important advancements in radial consolidation prediction, use of soil relative density concept, ground anchors, strength of fibre-reinforced cemented soils and the behaviour of infinite beams resting on geosynthetics and stone columns.

Fifteen authors from seven different countries such as Australia, Brazil, France, India, Ireland, Malaysia, and Vietnam, make not just an excellent technical-scientific contribution to this November issue, but also confirm the internationalization of the *Ground Improvement* journal.

The work presented here by Tewatia *et al.* (2013) deals with the prediction of radial consolidation when vertical drains are used to accelerate the rate of consolidation. The authors have developed a Uchart for radial and 3D consolidation. They propose to reduce two variables into one single variable, to obtain a family of curves contained within a single master curve, which can be compared to the counterpart of vertical consolidation in a similar format. The theory, preparation and recommended procedure for the use of the radial U chart are described, and application examples are given.

Hamidi *et al.* (2013) takes a deep look into the known concept of soil-relative density and, more specifically, on the implication of the substitution of direct measurements with correlations to other field tests. The authors present a review of such correlations and discuss the reasons why this procedure should be abandoned as a ground improvement acceptance criterion. An alternative solution is proposed, to base acceptance directly on design criteria by defining design requirements instead.

Truong-Hong *et al.* (2013) investigates the economic benefits of incorporating ground anchors into bridge abutments via the reduction of lateral earth pressure. Design examples of two cross-sections of overpass bridges in urban environments are presented. A reduction of the number of piles and abutment volume, by 50 and 37% respectively, was achieved when compared with common design methods. This has also certainly had strong, positive implications for the aesthetic appearance of the bridges.

The study described by Consoli *et al.* (2013) examines the influence of fibre and cement content, as well as porosity/cement ratio on the strength behaviour of fibre-reinforced cemented soils. A laboratory test program was carried out by means of splitting tensile and unconfined compression tests, and a good proportion between tensile and compressive strength for fibre-reinforced and non-reinforced mixtures was found. Therefore, the authors suggest the possibility of assessing both types of strength for reinforced mixtures using the results of non-reinforced mixtures, and vice-versa.

Maheshwari and Chauhan (2013) study the behaviour of an infinite beam, which simulates the railway tracks resting on a soft soil, geosynthetic-reinforced, stone column improved earth bed under a constant speed-moving load. The authors describe how the granular field layer and geosynthetic layer were modelled, and how the stone columns and the soft soil were idealised. A parametric study is also presented on the effect of the response of the soil-foundation system.

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