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Editorial

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Editorial

Cholachat Rujikiatkamjorn PhD, FIEAust
Professor, Trasnport Research Centre, School of Civil & Environmental Engineering, Faculty of Engineering and Information Technology, University of Technology Sydney, NSW 2007;
Email: cholachat.rujikiatkamjorn@uts.edu.au

Welcome to Volume 174, November Issue of *Ground Improvement*, the Institution of Civil Engineers. This issue completes the 2021 volume, that has included a wide range of developments in ground improvements. There are 6 papers related to rigid inclusions, geosynthetics reinforcement and cemented soil. A summary of each paper is given below.

Noorbakhsh *et al*., (2021) showcase the innovative idea of applying tubular geotextiles (braid structures) as geosynthetic soil-reinforcement elements. Plate load tests on reinforced sand beds show favourable effects of the geotextiles including the increase in bearing capcity, stiffness and the reduction in settlement. The tubular reinforcement provides greater improvement in comparison to the planar reinforcement.

The second paper, by Rothhämel M and Laue (2021), presents the promising laboratory results on unconfined compressive strength of silty sand mixed with cement subjected to a total of 12 freeze-thaw cycles. The reaction of binder within the mix can still occur under the low temperature and continue throughout a certain number of freeze-thaw cylces inducing self healing benefits.

Vranna and Tika (2021) conducted a cyclic traixial testing of sand treated by 2 approaches including colloidal silica solution (passive) and cement (active) to assess its liquefaction resistance. It is found that the performcne of medium to loose sand treated with colloidal silica solution up to 6% can be improved under cyclic loading condition. The active application of 1% cement content seems to show the greater improvement compared to soil injected with colloidal silica solution.

The next paper by Chen *et al*., (2021) presents a unit cell of soil core mixed with cement, surrounded by soft marine clay subjected to cyclic simple shear tests. The stiffer soil core with an increased area replacement ratio can reduce the inclination of the hysteresis curve.

The prediction of concrete strength with different curing times via the model proposed by the American Concrete Institute was presented by Majdi A and Shakerifar (2021) to capture the variation of the unconfined compressive strength of soil–cement blend. The extended model was calibrated and validated using laboratory data, and can cover a brader range of particle size distribution with a variation of mixtures with curing time.

Yamchi and Ghazavi (2021) propose an elegant method using spaced reinforcing rings to improve the performance of floating stone columns. Laboratory experiments and numerical analyses were performed to show that punching shear failure at the base of the column can be prevented with a proper spacing of the ring and column length.

The dedication of the Reviewers and Associate Editor, as well as the ICE Publishing editorial team, are gratefully acknowledged. The papers have been peer-reviewed to meet the standards of the Journal. I would like to encourage the readers to visit the Journal website to check its most recent articles Ahead of Print allowing the community quicker access to fresh content. The Guest Editor also wishes to extend their sincere gratitude to the Chief Editor of *Ground Improvement*, Distinguished Professor Buddhima Indraratna, Director Transport Research Centre, the University of Technology Sydney for providing the opportunity and leadership.

Finally, I invite all the research community to submit their most relevant works to our Journal. It is time to consider new challenges, to continue the growth of our journal and to reach more readers with high quality articles.

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