

## Award-winning papers in 2012

Papers published in *Geotechnical Engineering* are eligible for awards from the Institution of Civil Engineers. Papers from any of the ICE journals can be nominated for several awards. In addition, each journal has awards dedicated to their specific subject area.

On Friday 18 October 2013, ICE president Barry Clarke presented awards to the following papers published in *Geotechnical Engineering* in 2012. The editorial panel nominated their best papers and an awards committee chaired by David Balmforth allocated the awards.

### Crampton Prize

The Crampton Prize, presented for the best paper on practical geotechnical engineering, was awarded to Orr (2012).

### Abstract

Eurocode 7, the new European standard for geotechnical design, together with the other Eurocodes for structural design, was implemented in 2010, and relevant parts of British Standards that covered the same ground were withdrawn. Since it is a single code covering all aspects of the design of all types of geotechnical structure, including geotechnical investigations and the determination and selection of geotechnical parameters, and since it is based on the limit state design method with partial factors, its implementation has resulted in many changes to geotechnical design practice. These changes to geotechnical design caused by the introduction of Eurocode 7 are reviewed, including the new terminology, the new associated European investigation, testing and execution standards, the way geotechnical parameters are selected, the way geotechnical calculations are carried out and the way safety elements are introduced. Some of the issues that have arisen and difficulties that have been



Trevor Orr receiving the Crampton Prize from ICE President Barry Clarke



Carl Brangan, Patrick Casey, Christopher Menkiti and Michael Long, winners of the John Mitchell Medal, with ICE President Barry Clarke

encountered with the introduction of Eurocode 7 are identified, and the plans for the future development of Eurocode 7 are discussed.

### John Mitchell Medal

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).

### Abstract

A good number of deep excavations have been recently completed in Dublin Boulder Clay, Ireland. These have included propped walls up to 25 m deep and permanent cantilevers 7.5 m high. Experience elsewhere in the world was used to design and construct these walls. However, case history data have shown that the behaviour of the walls in Dublin Boulder Clay is very rigid and much stiffer than comparable systems worldwide. It appears this behaviour is due to the inherent natural strength and stiffness of the soil and the slow dissipation of excavation-induced depressed pore pressures or suctions. There appears to be scope for developing more efficient designs and in particular for reducing propping requirements. For temporary works, the use of undrained parameters in serviceability limit state calculations together with implementation of the observational approach on site could be considered for future schemes.

### REFERENCES

- Long M, Brangan C, Menkiti C, Looby M and Casey P (2012) Retaining walls in Dublin Boulder Clay, Ireland. *Proceedings of the Institution of Civil Engineers – Geotechnical Engineering* **165**(4): 247–266, <http://dx.doi.org/10.1680/geng.9.00091>.
- Orr TLL (2012) How Eurocode 7 has affected geotechnical design: a review. *Proceedings of the Institution of Civil Engineers – Geotechnical Engineering* **165**(6): 337–350 <http://dx.doi.org/10.1680/geng.12.00062>.