

Award-winning paper in 2010

Papers published in *Ground Improvement* 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 Monday 24 October 2011, ICE president Peter Hansford presented an award to the following paper published in *Ground Improvement* in 2010. The editorial panel nominated their best papers and an awards committee chaired by Barry Clark allocated the awards.

The Telford Premium prize was awarded to: Basu P, Basu D and Prezzi M (2010) Analysis of PVD-enhanced consolidation with soil disturbance. *Proceedings of the Institution of Civil Engineers, Ground Improvement* **163**(4): 237–249, <http://dx.doi.org/10.1680/grim.2010.163.4.237>

Abstract

Soil disturbance caused by the installation of prefabricated vertical drains (PVDs) in soft soil deposits has a detrimental effect on the rate of consolidation. The current practice of accelerating consolidation using PVDs captures the effect of soil disturbance typically by reducing the in situ hydraulic conductivity in the disturbed zone, and by assuming that the hydraulic conductivity is spatially constant over the entire disturbed zone and that preloading is instantaneous. Through recent laboratory and field studies it has been shown that the hydraulic conductivity varies spatially in the disturbed zone surrounding a PVD. Based on the data available in the literature, four possible profiles were identified for the spatial variation of the hydraulic conductivity in the disturbed zone. Analytical solutions were developed for the rate of consolidation considering these hydraulic conductivity profiles for instantaneous and time-dependent preloading. This paper shows that the consolidation rate depends not only on the hydraulic conductivity profile in the disturbed zone but also on the preloading rate.



ICE president Peter Hansford presents the Telford Premium prize to Monica Prezzi