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Award-winning paper in 2021.

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Announcement

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Award-winning paper in 2021

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 14 October 2022, ICE president Ed McCann presented an award to the following paper published in *Geotechnical Engineering* in 2021. The editorial panel nominated their best papers and an awards committee chaired by Tim Broyd allocated the awards.

Crampton Prize

The Crampton Prize, presented for the best paper on geotechnics practice, was awarded to Xu *et al.* (2021).

Abstract

Internal erosion induced by suffusion is a progressive process that can have negative consequences for dams, foundations and tunnel projects. The erosion ratio (denoting the ratio of the weight of cumulative eroded soils

to the total weight of soils) is an important parameter in characterising this process, reflecting variations in porosity and hydraulic conductivity during suffusion. In this study, an erosion equation expressing the variation in the erosion ratio with respect to the hydraulic gradient and time is derived under arbitrary hydraulic loading conditions. This equation is based on investigations into the influence of both the hydraulic gradient and of time on the process of soil erosion. The derived erosion equation is applied in a case study and the results are compared with existing test data. It is shown that the expression proposed in this paper is in good agreement with observations. Finally, the influences of the hydraulic loading history and an erosion rate coefficient on the soil erosion process are discussed.

Reference

Xu Z, Lin P, Xing H and Wang J (2021) Mathematical modelling of cumulative erosion ratio for suffusion in soils. *Proceedings of the Institution of Civil Engineers – Geotechnical Engineering* **174(3)**: 241–251, <https://doi.org/10.1680/jgeen.19.00082>.