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Award-winning paper in 2018.  
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## Announcement

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# Award-winning paper in 2018

Papers published in *Geotechnical Research* 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 4 October 2019, ICE president Andrew Wyllie presented an award to the following paper published in *Geotechnical Research* in 2018. The editorial panel nominated their best papers and an awards committee chaired by Robert Armitage allocated the awards.

## Thomas Telford Premium Prize

The Thomas Telford Premium Prize, presented for the best paper published in *Geotechnical Research*, was awarded to Jin *et al.* (2018).

## Abstract

Since guidelines for choosing 'most probable' parameters in ground engineering design codes are vague, concerns are raised regarding their definition, as well as the associated uncertainties. This paper introduces Bayesian inference for a new rigorous approach to obtaining the estimates of the most probable parameters based on observations collected during construction. Following the review of optimisation-based methods that can be used in back-analysis, such as gradient descent and neural networks, a probabilistic model is developed using Clough and O'Rourke's method for retaining wall design. Sequential Bayesian inference is applied to a staged excavation project to examine the applicability of the proposed approach and illustrate the process of back-analysis.

## REFERENCE

Jin Y, Biscontin G and Gardoni P (2018) A Bayesian definition of 'most probable' parameters. *Geotechnical Research* **5(3)**: 130–142,  
<https://doi.org/10.1680/jgere.18.00027>.



Thomas Telford Premium Prize winners Giovanna Biscontin (centre) and Yingyan Jin with ICE president Andrew Wyllie