

عنوان مقاله:

Evaluation of Axial Bearing Capacity of Piles in Sandy Soils by CPT Results

محل انتشار:

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خلاصه مقاله:

Predicting ultimate axial bearing capacity of pile foundation is an important and complicated problem in geotechnical engineering. Cone penetration test (CPT) is a reliable in-situ test, widely used in analysis and design of pile foundations. In this study, new CPT-based axial pile bearing capacity model is presented for sandy soils using evolutionary polynomial regression (EPR), a branch of evolutionary approaches. A relatively comprehensive database is gathered and divided into training and testing sub-sets to avoid over-fitting. This database includes cone tip resistance and sleeve friction of CPTs, geometry and bearing capacity of piles. The presented model is compared to some previously published ones and its preference is demonstrated statistically and probabilistically.

کلمات کلیدی:

pile, bearing capacity, cone penetration test

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