

عنوان مقاله:

Numerical Analysis of Granular Soils Bearing Capacity, Reinforced with Innovative Grid-Anchor System

محل انتشار:

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خلاصه مقاله:

In this research a new reinforcing element that includes attaching elements (anchors) to ordinary geogrid for increasing the pull-out resistance of reinforcements is introduced. Reinforcement is therefore consists of geogrid and anchors with cubic elements that attached to geogird, named (by the authors) Grid-Anchor. Three-dimensional numerical study was performed to investigate the bearing capacity of square footing on sand reinforced with this system; the effect of depth of the first reinforcement layer, the vertical spacing, the number of reinforcement layers, the angle of anchors, and the distance that anchors are effective were investigated. Results show that Grid-Anchor system of reinforcing can increase the bearing capacity 2.74 times greater than the ordinary geogrid bearing capacity and 4.43 times greater than for non-reinforced sand.

کلمات کلیدی:

Numerical analysis, Bearing capacity, Square footing, Reinforced sand, Grid-Anchor

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