Special Issue

Artificial Neural Network Applications for Geotechnical Engineering

Message from the Guest Editor

Over the past decades, artificial neural networks (ANNs) have evolved from simple algorithms to deep learning models. ANNs are used in geotechnics and soil mechanics for site characterization, soil classification, and modeling behaviors like compaction, swelling, and liquefaction. They also predict load-bearing capacity and effectiveness of soil strengthening methods. In geotechnical engineering, ANNs act as surrogates for FEM calculations or soil descriptions. Classical, convolutional, and Long Short-Term Memory (LSTM) networks are used for interpreting CPTU cone or Flat Dilatometer sensor data. We seek articles on ANN use in soil mechanics and soil-structure systems. Topics include ANNs for test elaboration, site characterization, soil classification, and modeling soil behaviors. Research on ANN applications for predicting liquefaction, landslide risk, load-bearing capacity, and soil strengthening effectiveness is invited. ANNs as surrogates for FE computations, constitutive law descriptions, solving inverse problems, and deep learning ANNs in geotechnics are of interest. Submit your work to advance geotechnical engineering and soil mechanics!

Guest Editor

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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