

A New Prediction Model for Soil Compression Index

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Abstract : This paper presents a new prediction model for compression index of fine-grained soils using multi-gene genetic programming (MGGP) technique. The proposed model relates the soil compression index to its liquid limit, plastic limit and void ratio. Several laboratory test results for fine-grained were used to develop the models. Various criteria were considered to check the validity of the model. The parametric and sensitivity analyses were performed and discussed. The MGGP method was found to be very effective for predicting the soil compression index. A comparative study was further performed to prove the superiority of the MGGP model to the existing soft computing and traditional empirical equations.

Keywords : new prediction model, compression index soil, multi-gene genetic programming, MGGP

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