Modeling Slump Flow of Concrete using Genetic Programming

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Abstract

The present study applied genetic programming (GP) to estimate the slump flow of high-performance concrete (HPC) using seven concrete ingredients. GP optimizes functions and their associated coefficients simultaneously and is suitable to automatically discover complex relationships between nonlinear systems. The results demonstrated that GP generates a more accurate formula and has lower estimating errors for predicting the slump flow of HPC than multiple linear regressions (MLRs).

Keyword：genetic programming, slump flow, high-performance concrete.