

In this study, Genetic Expression Programming (GEP) model has been developed to estimate Marshall Stability (MS) of lightweight asphalt concrete containing expanded clay. Experimental details were used to construct the model. The amount of bitumen (%), transition speed of ultrasound (μs), unit weight (g/cm^3) was used as input variables and Marshall Stability (kg) values were used as output variables. The performance of models was comprehensively judged using several statistical verification tools. The results revealed that GEP models are fairly promising approach for the prediction of the Marshall Stability of lightweight asphalt concrete containing expanded clay.