GENE EXPRESSION PROGRAMMING BASED PREDICTION OF UNCOMPACTED VOID CONTENT OF AGGREGATE

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ABSTRACT
As Asphalt Concrete (AC) mixture is predominantly composed of aggregates, morphological properties of aggregate (like texture, shape, size, angularity) affect mechanical properties of AC significantly. This work captures the morphological characteristics of aggregate through Angle of Repose (AoR), Angle of Internal Friction (AoI) and Uncompacted Void Content (UVC). For this purpose aggregates from two different sources were artificially textured and tested. Using Gene expression programming approach, relations relating AoR, AoI and UVC were developed. The models thus developed exhibited a nonlinear relationship between these variables. Various statistical parameters indicated numerically significant relationships between these variables.