عنوان مقاله:

Effect of Different Comouter vision Configurations on Estimating the Mechanical Properties of Asphalt Mixture

محل انتشار:

کنفرانس بین المللی علوم و مهندسی (سال: 1394)

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خلاصه مقاله:

A non-contact computer vision methodology is utilized in this study for measuring and estimating the deformation and subsequently mechanical properties of asphalt mixture concrete including modulus of elasticity. Since traditional methods are time-consuming and need large amount of instruments the proposed methodology is capable of deformation measurement in an efficient and cost-effective way with accurate results. Two experiments with different photogrammetric configurations are conducted. A comparison study is performed to evaluate the efficiency, feasibility as well as the sensitivity of the proposed computer vision method. Statistical analysis such as calculation of the Absolute Average difference (AAD) and Root Mean Square Error (RMSE) shows no significant difference among the measured data obtained by the conventional methods such as Linear Variable Differential Transformer (LVDT) and the estimated data through the proposed computer vision method

کلمات کلیدی:

asphalt mixture, measurement of mechanical properties, computer vision, image processing

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