

EVOLUTIONAL PROCESS OF PAVEMENT ROUGHNESS EVALUATION BENEFITING FROM SENSOR TECHNOLOGY

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Abstract - The present paper deals with a view of the availability of high-speed sensor profilers, which has given dramatically increased possibilities to analyze imperfections in pavement surfaces such as roughness. Technical parameters of such profilers, for sensing and analyzing pavement surface profile are described. In addition, the main investigation concentrates on the evolutionary process of pavement roughness evaluation. For this purpose a high-speed laser profiler is used to sense roughness data on the surface of a road section that is analyzed both using the International Roughness Index (IRI) and the Power Spectral Density (PSD) approach. Based on the analysis results, some interesting options are shown considering pavement performance in terms of roughness.