

2nd PFDM 2023

PAVEMENT FUNCTIONAL DESIGN AND MANAGEMENT

INTERNATIONAL SYMPOSIUM

27 - 29 April 2023, Guimarães, Portugal

Surface inspection and characterization: texture

Manuel F. M. Costa

The inspection and characterization of the texture of rough surfaces, like most of the ones that can be found in pavements, it's a difficult and complex process. The success of the process is highly dependent not only on the metrological tolerances but also on the particular characteristics of the surface, both physical and compositional but also on what concerns its tridimensionality. In this communication we will give a brief overview of most common surface texture inspection methods focusing of optical and non-contact/non-invasive ones. Texture characterization parameters and functions will be briefly presented going from 2D profilometric surface texture analysis height, spatial and hybrid parameters and functions to the 3D parameters including a mention to the recently published revision of the 2012' 3D areal surface texture ISO standard, the ISO 25178-2:2021. Fractal characterization and Fourier analysis technics will also be briefly addressed giving some examples of the inspection of asphalt and other samples inspect using the MICROTOP.06.MFC microtopographer at the Microtopography Lab of the Physics Department of the University of Minho.