

Abstract

Here, we present a new technique of noise effect attenuation in the 3D ground-penetrating radar (GPR) data analysis using the 2D directional continuous wavelet transform (DCWT). The proposed technique is based on the application of a Gaussian low pass filter to the modulus of the 2D DCWT for low scales. After application of the low pass filter, maxima of the CWT are mapped for all range of scales. Application to a noisy GPR data shows that the proposed idea can improve GPR data analysis by the continuous wavelet transform