

“On the use of frequency-domain and time-domain electromagnetic scattered data for the neural network based characterization of subsurface scenarios”

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Abstract – In this paper, we investigate the performances of a neural network based inverse scattering approach to reconstruct the characteristics of a buried inhomogeneity. The proposed analysis focuses on the exploitation of either frequencydomain or time-domain data and in the identification of the information content of the scattered data with respect to the inversion algorithm taken into consideration. Results will be given as far as the reconstruction of an unknown layer embedded in a known, homogeneous background is concerned.