FULLY AND PARTIALLY INTERPOLATED ADAPTIVE VOLTERRA FILTERS (WedAmPO1)

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Abstract :

This paper presents two simplified algorithms to implement adaptive Volterra filters. The central idea of the proposed approach is the use of sparse adaptive filters to reduce the number of coefficients to be adapted, which is the major drawback of adaptive Volterra filters. Such filters are obtained by removing some coefficients and then recreating them through an interpolating scheme. A second interpolated structure exploits also the block−size structure of the Volterra filter for coefficient reduction. Numerical simulation results are shown to ratify the good MSE behavior of the proposed structures.

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