



ADAPTIVE LAGUERRE-VOLTERRA FILTERS OPTIMIZATION BASED ON LAGUERRE SPECTRA (WedAmPO1)

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✳ Abstract :

In this paper, the optimization of Laguerre-Volterra filters (LVFs) is carried out adaptively. Each kernel is expanded on an independent Laguerre basis. An analytical solution to Laguerre poles optimization is provided using the knowledge of the expansion coefficients, also called Fourier coefficients, associated with an arbitrary Laguerre basis. These coefficients are estimated by means of the Normalized Least Mean Squares (NLMS) algorithm. The proposed method allows optimization of both the Fourier coefficients and the Laguerre poles.