



ADAPTIVE ITERATIVE LAYERED SPACE-FREQUENCY EQUALIZATION FOR SINGLE-CARRIER MIMO SYSTEMS (MonPmPO1)

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✳ **Abstract :** We propose an adaptive iterative layered space-frequency equalization (AILSFE) structure for multiple-input multiple-output (MIMO) time-varying frequency selective channels, which incorporates iterative frequency-domain equalization (FDE) with hybrid interference cancellation. It is shown that AILSFE significantly outperforms the previously proposed LSFE with a modest increase of complexity, and can provide better performance than Iterative-block decision feedback equalizer (IB-DFE) at comparable complexity, with a relatively small number of iterations.