"Adaptive wavelet decompositions of stationary time series

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We introduce and examine particular wavelet-based decompositions of stationary time series in discrete time. It is assumed that the covariance structure of a time series is known. The decompositions are essentially characterized by uncorrelated detail coefficients, and a practically small length of associated high/low pass filters. Moreover, the approximation coefficients in the decomposition are typically correlated with a suitably chosen correlation structure. Applications to simulation and maximum likelihood estimation are also presented. The focus is somewhat on long memory time series."