

Abstract

Recent advances in time series analysis

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We made use of the Reproducing Kernel Hilber Space (RKHS) methodology, according to which hierarchies of kernels are generated via the multiplication of the biweight density function with corresponding orthonormal polynomials.

Optimal bandwidth parameters have been selected to ensure optimal boundary kernels in terms of reducing total revisions and fast detection of turning points as new observations are added to the series.

We applied the new set of asymmetric filters to leading, coincident and lagging indicators of the US economy.

The empirical results show that the bandwidth selected to minimize the distance between the gain functions of the asymmetric and symmetry filters should be preferred since they gave 50% reduction of total revisions relative to the Musgrave filter and smaller time lag in detecting true turning points.