

عنوان مقاله:

Comparison of Time and Wavelet Domain Approaches In Nonparametric Detrending of fMRI Time-Series

محل انتشار:

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خلاصه مقاله:

fMRI time-series are contaminated with unknown low frequency fluctuations which are called 'trend' or 'confounds'. Conventional methods of trend removal try to consider a model with a specific degree of smoothness for trend. In this paper, we estimate trend components using partially linear models (PLM). PLMs allow one to combine detrending and analysis of time-series in one scheme. In addition, we developed estimation procedures in time and wavelet domains for a nonparametric trend. We applied proposed methods on simulated and experimental data, and compared their performance with simple (linear) detrending through measuring the detection sensitivity, false alarm rate control, and variance of estimation.

کلمات کلیدی:

(fMRI - Trend removal - drift - PLM (partially linear models

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