

Empirical Mode Decomposition (EMD) and Nonstationary Oscillation Resampling (NSOR): I. their background and model description

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요 지

Long-term nonstationary oscillations (NSOs) are commonly observed in hydrological and climatological data series such as low-frequency climate oscillation indices and precipitation dataset. In this work, we present a stochastic model that captures NSOs within a given variable. The model employs a data-adaptive decomposition method named empirical mode decomposition (EMD). Irregular oscillatory processes in a given variable can be extracted into a finite number of intrinsic mode functions with the EMD approach. A unique data-adaptive algorithm is proposed in the present paper in order to study the future evolution of the NSO components extracted from EMD.

핵심용어 : Nonstationary, Oscillation, Resampling, Time Series