

2021년 제 10회 통계세미나

고려대학교 통계연구소와 BK21 통계학교육연구팀이 다음과 같이
공동으로 세미나를 개최하오니 많은 참여 바랍니다.

일시 : 2021년 10월 8일 (금) 오전 10시

장소 : 고려대학교 정경관 201호

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Principal component analysis in the wavelet domain

<Abstract>

This paper proposes a new principal component analysis method in the wavelet domain, which is useful for dimension reduction and feature extraction of multiple non-stationary time series. The proposed method is constructed using a novel combination of eigen analysis and the local wavelet spectrum defined in the locally stationary wavelet process. Therefore, we can expect the proposed method to reflect a more generalized non-stationary time series beyond some limited types of signals that existing methods have performed. We investigate the theoretical results of estimated principal components and their loadings. The results of numerical examples, including the analysis of real seismic data and financial data, show the promising empirical properties of the proposed approach.

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