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MASTER'S THESIS PRESENTATION

Simultaneous Inference of Covariances for Long Memory High-dimensional Time Series

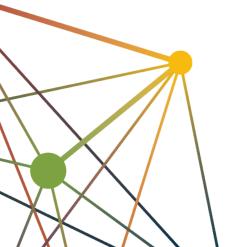
WHEN May, 12th, 2021 6:00 PM, CDT WHERE Via ZOOM

ZOOM information will be provided in the email announcement for this seminar.





We consider the problem of simultaneous inference of covariances for high-dimensional time series. We derive a Berry-Esseen type bound for the Kolmogorov distance between the maximum scaled deviance of the sample covariance matrix and its Gaussian approximate. The proof relies on martingale approximation, m-dependence approximation and a triadic blocking technique. The implied result takes milder conditions compared to current state-of-the-art results; The maximum dimension allowed is exponentially increasing with the sample size, and the temporal dependency pattern is extended, i.e. the result could be applied to long-memory time series.



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