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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.

Shengjun Zhai, MS Candidate



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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