भारतीय प्रबंध संस्थान बेंगलूर
INDIAN INSTITUTE OF MANAGEMENT
BANGALORE

The Decision Sciences Area at IIM Bangalore welcomes you to a webinar, titled:

Lugsail lag windows for estimating time-average covariance matrices

by

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Date: 19th January, 2022
Time: 06:30 p.m. to 07:30 p.m.

Abstract:

Lag windows are commonly used in time series, econometrics, steady-state simulation, and Markov chain Monte Carlo to estimate time-average covariance matrices. In the presence of positive correlation of the underlying process, estimators of this matrix almost always exhibit significant negative bias, leading to undesirable finite-sample properties. We propose a new family of lag windows specifically designed to improve finite-sample performance by offsetting this negative bias. Any existing lag window can be adapted into a lugsail equivalent with no additional assumptions. We employ the lugsail lag windows in weighted batch means estimators due to their computational efficiency on large simulation output and arrive at some key theoretical results. Superior finite-sample properties are illustrated in a few examples.