STATISTICS 804-4

Time Series Analysis

Course Outline

Some or all of the following:

1. The autocorrelation function and the spectrum. Spectral properties of stationary models.
2. Linear stationary models. Autoregressive and moving average processes. Mixed autoregressive-moving average models.
3. Linear nonstationary models. The autoregressive integrated moving average model.
4. Forecasting.
5. Model identification, estimation and diagnostic checking.

This course will survey topics in time series. Our goal will be breadth of coverage. There will probably be a substantial computing component mostly carried out in S.

(1) Survey of applications.
(2) Stationary processes.
(3) Spectral analysis and filtering.
(4) ARIMA models.
(5) Forecasting.

Textbook: Several relevant texts will be placed on reserve in the library.

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