Time Series Analysis

Information at a glance

Course: Time Series  
Web site: www.dst.unive.it/~sammy  
Professor: Cristiano Varin

Purpose of the course. The aim of this course is to provide graduate students with an understanding of statistical methods for empirical analysis of time series arising in many domains of Economics. The course will cover traditional topics such as stationary and non-stationary stochastic processes, autoregressive moving average models, state-space models, model selection and model fitting.

Prerequisites. Basic Probability and Statistical Inference.

Teaching method. The course is organized in ten lectures of two hours each. Besides theoretical lectures, particular attention will be paid to computer classes with R. This is a freely available open-source programming environment working on different platforms (Unix, Linus, Mac OS-X, Windows) with add-on packages designed for time series analysis.

Examination policy. Written exam.

Contents.

1. Characteristics of Time Series  
2. Time Series Regression and Exploratory Data Analysis  
3. ARIMA Models  
4. State-Space Models

Reading material

Textbook


Further readings

University Press.
Further references may be given during the course.

Web material

Hyndman, R.J. and Zeileis, A. CRAN Task View: Time Series Analysis. [www.cran.r-project.org/web/views/TimeSeries.html](http://www.cran.r-project.org/web/views/TimeSeries.html)