

Time Series and Financial Econometrics (Module 5) (September 3 - September 8, 2012) Bertinoro

Lecturers

Giuseppe Cavaliere	Università di Bologna
Eduardo Rossi	Università di Pavia
Luca Fanelli	Università di Bologna
Riccardo "Jack" Lucchetti	Università Politecnica delle Marche
Emanuele Bacchiocchi	Università di Milano
Davide Raggi	Università di Bologna

Coordinator

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Basic Requirements

Intermediate knowledge of econometrics to a level comparable with Chapters 2 to 6 of :

- Hamilton J. (1994) , *Time series analysis*, chapters 1,2,3,5,7, 8

Reference textbook for the course:

- Hamilton J. (1994), *Time series analysis*, Princeton University Press.
- Lütkepohl, H. (2006), *New introduction to multiple time series analysis*, Springer-Verlag.
- T. Andersen, J.-P. K. Richard A. Davis, and T. Mikosch (eds) (2009), *Handbook of Financial Time Series*, Springer.

Time Series Econometrics

• Stationary ARMA modeling • Structural time series models, state-space models and the Kalman filter • Unit roots processes • Vector autoregressive models and cointegration • Structural VARs and dynamic macroeconomic models • Bootstrapping econometric time series models • Panel unit root and cointegration tests • Multivariate GARCH • Nonparametric volatility measurement • Stochastic volatility models

Lab Sessions

• Introduction to GRETL and OX with economic applications.

Venue and timetables

The Module will last one week and will be held in the **University Residential Centre**, Via Frangipane 6, 47032 Bertinoro (FC). Participants will be accommodated at the Centre guest quarters, (as an exception, in case of reduced availability of rooms in the Centre, they will be accommodated in local hotels). Lectures and tutorials will be in English, with the following schedule (provisional):

Monday to Friday: *lectures:* 9.00-10.50, 11.10-13.00, 15.30-17.20; *tutorials:* 17.40-19.30. **Saturday:** *lectures:* 9.00-10.50, 11.10-13.00.

For the computer tutorials, participants will use their mobile PCs, after installing the software (freeware) used. Exceptionally, who does not own a laptop, must inform in advance the coordinator (and will use the facilities of the Centre).