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*"Nonlinear Econometrics"*

This course will focus on some central developments in nonlinear time series econometrics. In Lecture 1, a number of parametric nonlinear models will be considered and some of their properties discussed. All of them nest a linear model. They also have the property that they are only identified when they are genuinely nonlinear. This means that linearity has to be tested before fitting these models to the data.

The topic of Lecture 2 is linearity testing. In this context it is not a straightforward affair. This is because, due to the identification problem, the standard asymptotic theory is not valid in this testing situation and remedies to this difficulty will be considered.

Lecture 3 contains a presentation of a strategy for modelling with smooth transition regression models that form a class of models considered in Lecture 1. The three stages of modelling: specification, estimation and evaluation of these models will be considered.

Lecture 4 consists of examples of applying the modelling strategy outlined in Lecture 3 to a number of data sets, both univariate and multivariate.

If time permits, forecasting with nonlinear models will be discussed. This would be a short lecture of its own.