

## Testing Linearity and Modelling Nonlinear Time Series

Timo Teräsvirta

*Abstract:* This paper discusses some of the recent developments in testing linearity of a time series against the alternative that the series has been generated by a nonlinear process. The focus is on testing linearity against parametric alternatives. Special attention is given to the situations in which the parametric nonlinear model only is identified under the alternative but not under the null hypothesis of linearity. The use of some of the linearity tests in the modelling of nonlinear series is considered and illustrated with an example.

*Keywords:*

*AMS Subject Classification:*