

New modelling techniques in the analysis of tropical climate data

W. Tych and N. Chappell

Department of Environmental Science, University of Lancaster, Lancaster, U.K.

w.tych@lancaster.ac.uk

Unobserved Components Models and Dynamic Harmonic Regression are particularly well suited for detection, identification and extraction of trends and longer term cycles within time series data. Seasonal variation and its evolution constitute an inherent part of these models. The methods are based on dynamic stochastic state-space models family and because of this provide uncertainty information which can be used in rigorous statistical analysis of the results. Influence of exogenous variables, such as land use change impacts can be incorporated. In the paper we present these techniques along with detailed examples of tropical rainfall and discharge data.

Tuesday III (Talk)