ESF workshop on 'Econometric time-series analysis applied to climate research'
Frascati, Italy, 6-7 September 2007.

Main objectives of the workshop

We want to bring top experts in theoretical and applied time-series econometrics together with top experts in climate science, with the specific goal of interdisciplinary knowledge transfer. The idea of the meeting is to explore the possibilities for applying some highly advanced statistical methods, which have already proven fruitful in macroeconomics and finance, in the field of climate science. This will be done by presenting and discussing selected statistical problems in climate research with the aim of stimulating further collaboration between econometricians and climate scientists.

Preliminary programme

September 5, 2007   Arrival

September 6, 2007
  9:00-9:15   **Welcome**

Session 1: Introduction to statistical analysis of climate data

  09:15-10:15   **Douglas Nychka**: NCAR's Geophysical Statistics Project

  10.15-10.30   **Coffee break**

Session 2: Current issues in climate research

  10:30-11:15   **Anders Moberg**: Reconstruction methods of past climate from proxies
  11:15-12:00   **Eduardo Zorita**: Statistical downscaling methods
  12.00-12:45   General discussion

  12:45-14.:00   **Lunch break**

Session 3: Regressions, dynamic models and causality

  14:00-14:45   **Richard Reichel**: Spurious regression
  14:45-15:30   **Søren Johansen**: Statistical analysis of multivariate nonstationary time series
  15:30-15:45   **Coffee break**
  15:45-16:45   **Katarina Juselius**: Applying the cointegrated VAR approach to climate data
  16:45-17:15   **Robert Kaufmann:** Cointegration analysis of hemispheric temperatue relations

17:15-18:00	General discussion of correlations versus causality
19:00-	**Dinner**

September 7, 2007

Session 3: Applications to climate data

09:00-09:45	**Dave Stainforth**: Sensitivity of Earth's climate to external forcings
09:45-10:30	**Gabriele Hegerl**: Detection of climate change and attribution of causes
10:30-11:15	Discussion/coffee

Session 4: Fractional integration and climate data

11:15-11:45	**Luis Albériko Gil-Alana**: Fractional integration and long range memory
11:45-12:30	**Armin Bunde**: On fractional integration detected in observed climate series
12:30-13:00	General Discussion
13:00-14:00	**Lunch**
14.00-14.30	ESF representative

Session 4: Plans for the future

14:30-17.00	Discussion of future plans for collaboration or proposals. Summer schools, ERC and ESF possibilities discussed. Series of 5-minutes presentations of current projects/ideas by workshop participants A few solicited presentations of 'what next' scenarios.

September 8, 2007   **Departure**

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Speakers are asked to leave a few minutes for clarifying questions in connection with each lecture