

Conference "Econometric Models of Climate Change"

October 27-28, 2016

CREATES, Aarhus University, Denmark

**Conference organizers:**

- Eric Hillebrand (Aarhus University and CREATES [ehillebrand@creates.au.dk](mailto:ehillebrand@creates.au.dk)),
- Felix Pretis (Oxford University, Climate Econometrics, [felix.pretis@nuffield.ox.ac.uk](mailto:felix.pretis@nuffield.ox.ac.uk)),
- Tommaso Proietti (University of Rome, Tor Vergata, [tommaso.proietti@uniroma2.it](mailto:tommaso.proietti@uniroma2.it))

**Thursday, October 27, 2016**

8.30 Registration

9.00 Welcome Eric Hillebrand, Felix Pretis, Tommaso Proietti

9.15 – 10.15 **Myles Allen** (University of Oxford): Adaptive mitigation: can climate policy learn from macro-economic policy?

**Session 1: Climate Sensitivity & Glacial Cycles**

**Chair:** Robert K Kaufmann

10.15 – 10.45 **J. Isaac Miller** (University of Missouri): Decomposing Climate Sensitivity: A statistical approach for a spatially heterogeneous planet

10.45 – 11.00 Coffee Break

11.00 – 11.30 **Stephan B. Bruns** (University of Kassel), Zsuzsanna Csereklyei (Australian National University), David I. Stern (Australian National University): Econometric estimation of the climate sensitivity accounting for atmosphere-ocean equilibrium

11.30 – 12.00 Trude Storelvmo (Yale University), Thomas Leirvik (University of Nordland, Norway), Peter C.B. Phillips (Yale University): Examining the potential of econometric methods to assess Earth's climate sensitivity

12.00 – 12.30 **Robert K. Kaufmann** (Boston University), Felix Pretis (University of Oxford): A new view of glacial cycles: A multivariate disequilibrium approach

**12.30 – 13.30 Lunch**

During lunch & coffee, the following posters are on display:

**Kirsten Wiebe**, NTNU Indecol, Trondheim, Norway, "The impact of renewable energy diffusion on European consumption-based emissions"

**Nadine Marmai**, University of Turin, Italy, "A statistical analysis of precipitation extremes and the innovative responsiveness of farmers in rural Tanzania"

Max Janum, **Martin Greiner**, Aarhus University, "Impact of synthetic climate change on a simplified renewable European electricity network"

**Tobias Geiger**, Katja Frieler, Potsdam Institute for Climate Impact Research, Potsdam, Germany, "On the quantification of the cross-disaster impact of climate change on long-term economic growth"

## **Session 2: Breaks**

**Chair:** Thomas Sterner

13.30 – 14.00                    Matthew T. Holt (University of Alabama), **Timo Teräsvirta** (Aarhus University): Global hemispheric temperature trends and co-shifting: A vector shifting-mean autoregressive analysis

14.00 – 14.30                    **Luke P. Jackson** (University of Oxford), Felix Pretis (University of Oxford), Simon Williams (National Oceanography Centre, UK): Was that a break? Applying indicator saturation to a problem in Geodesy

14.30 – 15.00                    **David F. Hendry**, Felix Pretis (University of Oxford): Quantifying the uncertainty around break dates in models using indicator saturation with applications to climate econometrics

15.00 – 15.30                    Samson Mukanjari, Thomas Sterner (University of Gothenburg): Was Paris an ambitious climate agreement? Evidence from fossil markets

15.30 – 16.00                    Coffee Break

## **Session 3: Forecasting & Storms**

**Chair:** Andreea G. Halunga

16.00 – 16.30                    Mengheng Li (Free University Amsterdam), **Siem Jan Koopman** (Free University Amsterdam), Rutger Lit (Free University Amsterdam), Desislava Petrova (Catalan Institute for Climate Science): Long term forecasting of El Niño events via dynamic factor simulation

16.30 – 17.00                    Alessandro Attanasio (Institute of Atmospheric Pollution Research, Rome), Alessandro Giovanelli (University of Rome Tor Vergata), **Marco Lippi** (Einaudi Institute, Rome), Antonello Pasini (Institute of Atmospheric Pollution Research, Rome), Umberto Triaca (University of L'Aquila): Forecasting global temperature with time-series models

17.00 – 17.30                    **Andrew B. Martinez** (University of Oxford): The impact of forecast uncertainty on hurricane damages and fatalities

17.30 – 18.00                    Adriana Cornea-Madeira (University of York), Theo Economou (University of Exeter), **Andreea G. Halunga** (University of Bath): Bootstrap-based significance tests in PARX models with applications to storm occurrences in the northern hemisphere

19.00                                Dinner

*Friday, October 28, 2016*

**Session: Time Series Properties of Climate Data I**

**Chair:** James W. Taylor

9.00 – 9.30                    **Claudio Morana** (University of Milan Bicocca), Giacomo Sbrana (NEOMA Business School, Mont-Saint-Aignan): Modeling time varying volatility and correlations in temperature anomalies

9.30 – 10.00                Andrew C. Harvey (University of Cambridge), **Ryoko Ito** (University of Oxford): Dynamic time series models for observations with many zeros

10.00 – 10.30                Xiaochun Meng, James W. Taylor (University of Oxford): Modeling daily maximum and minimum temperature with a bivariate time series model and a copula to capture dependence across locations

10.30 – 11.00                Coffee Break

**Session: Time Series Properties of Climate Data II**

**Chair:** Eric Hillebrand

11.00 – 11.30                Yoosoon Chang (Indiana University), Robert K. Kaufmann (Boston University), Chang Sik Kim (Sungkyungwan University), **J. Isaac Miller** (University of Missouri), Joon Y. Park (Indiana University), Sungkeun Park (Korea Institute for Industrial Economics and Trade): Time series analysis of global temperature distributions: Identifying and estimating persistent features in temperature anomalies

11.30 – 12.00                Peter Grabarczyk, **Martin Wagner** (Technical University Dortmund): The environmental Kuznets curve for carbon dioxide emissions: A seemingly unrelated cointegrating polynomial regressions approach

12.00 – 12.30                **Eric Hillebrand** (Aarhus University) and Tommaso Proietti (University of Rome Tor Vergata): Phase changes and seasonal warming in early instrumental temperature records

**12.30 – 13.30**                **Lunch**

**Session: Trends**

**Chair:** Jesús Gonzalo

13.30 – 14.00            **Marina Friedrich**, Hanno Reuvers, Stephan Smeekes and Jean-Pierre Urbain (Maastricht University): Autoregressive wild bootstrap inference for nonparametric trends in irregularly spaced climate time series

14.00 – 14.30            Theodoros Zachariadis, Christos S. Savva, Demetris Koursaros, **Nektarios Michail** (Cyprus University of Technology): Anthropogenic greenhouse gas emissions and global temperature: Do they relate and how?

14.30 – 15.00            Lola Gadea (University of Zaragoza) and **Jesús Gonzalo** (University Carlos III Madrid): TRENDS in distributional characteristics: Existence of global warming

15.00 – 15.30            Coffee Break

**Session: Climate & Economic Models**

**Chair:** Jan R. Magnus

15.30 – 16.00            **Alena Miftakhova** (University of Zurich), Kenneth L. Judd (Stanford University), Thomas S. Lontzek (University of Zurich), Karl Schmedders (University of Zurich): Statistical approximation of high-dimensional climate models

16.00 – 16.30            **Felix Pretis** (University of Oxford): Exogeneity in Climate Econometrics

16.30 – 17.00            Masako Ikefuji (Yamanashi Gakuin University), Roger J. A. Laeven (University of Amsterdam), **Jan R. Magnus** (Free University Amsterdam), Chris Muris (Simon Fraser University): Expected utility and catastrophic risk in a stochastic economy-climate model

17.00    Closing remarks            Eric Hillebrand, Felix Pretis, Tommaso Proietti