10th GEAR Quarterly Lecture
15 May 2024, 2:00-3:30 p.m. GMT (London time)
University of Reading, Whiteknights, Edith Morley 175 (hybrid)

Dr Jennifer Castle
(Magdalen College, University of Oxford)

"Econometric Forecasting of Climate Change"

The talk will draw on joint work with David F. Hendry and J. Isaac Miller. The speaker will discuss how climate scientists and climate econometricians produce forecasts, drawing parallels between the scenario projections of climate scientists based on varying initial conditions and the conditional forecasts of econometricians capturing model uncertainty. The success of forecasts made by either approach hinges on the ability to handle unanticipated shifts as climate change is characterised by 'the change in the change'. The speaker will further discuss the importance of identifying and modelling location shifts and how doing so improves the verisimilitude of the model and its forecasts. Using indicator saturation estimators to capture in-sample shifts, improved econometric models and their forecasts can be achieved, as demonstrated within a system of four of the key climate variables, atmospheric CO_2, global mean surface temperature deviations, ocean heat content deviations and global sea-level rise research. As usual, the lecture will be synchronously recorded and available for viewing *ex post* from the University of Reading's Research YouTube channel. Here is the MS Teams link to join – but do try to come in person!

Jennifer Castle is an Associate Professor and Official Fellow in Economics at Magdalen College, Oxford, and Director of Climate Econometrics, Nuffield College and Smith School of Enterprise and the Environment, Oxford. Her research interests lie in the fields of model selection, forecasting, and climate econometrics.

The lecture is free to attend, online or in person, but if you come in person please send an e-mail to register your interest to Rachel Tregidgo at r.a.tregidgo@reading.ac.uk