

**AT HOME – The Earth’s Climate Past, Present and Future**

**THURSDAY 9 January 2014**

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This meeting has been organised by David Pick

**PROGRAMME**

Chairman David Pick

10:30 Arrival, coffee

11:00 Welcome, notices

11:10 Past Climate; Chris Folland

11:45 The Intergovernmental Panel on Climate Change; John Mitchell

12:20 Forecasting the Future Climate; Tim Palmer

13:00 Lunch

14:15 Observing the Climate; Ian Strangeways

14:50 Policy Considerations; Simon Buckle

15:25 Improving resilience challenges and linkages of the energy industry in changing climate; Shanti Majithia: Energy & Climate Advisory

16:00 Tea and dispersal

Institute of Physics, 76 Portland Place, W1B 1NT. Nearest underground stations are Oxford Circus and Regents Park.

This meeting is open to visitors. Please contact John Belling, [john.a.belling.secrems@gmail.com](mailto:john.a.belling.secrems@gmail.com), 07986 379935, 42 Cunningham Park, Harrow, Middx, HA1 4QJ, if you wish to attend. He needs to know numbers by 6 Jan.

Costs are £32 with lunch or £10 without lunch. The lunch is the usual sit down hot buffet with a glass (or two) of wine.

## Brief CV of the speakers

**Prof Chris Folland** obtained a BSc (Hons) in Physics at Reading University in 1966. He joined the then National Institute of Oceanography working on deep ocean currents, including two spells at sea. Joining the Met Office in 1968, after training he went to the Operational Instrumentation Branch in 1969. He became the manager of its Sensor Development group in 1970 developing surface instruments including the earliest usable humidity measurements on ocean buoys. Subsequently, Chris spent a number of years leading teams in climate variability and change, hydrometeorology and monthly forecasting. After an exchange visit to the Climate Analysis Centre in Washington DC, USA in 1988-1989, he joined the Met Office Hadley Centre in 1990 as an Individual Merit scientist (Met Office Fellow) and Head of Climate Variability, later Climate Variability and Forecasting. He now works part time as a Met Office Fellow. His main activities, many collaborative, are in climate change and variability, seasonal forecasting, data set development and applied climate modelling. He served four times as a Lead Author for the IPCC and founded and co-chairs the CLIVAR International Climate of the Twentieth Century modelling project.

Chris has been a Fellow of the AMS since 2003, Fellow of the Institute of Physics since 1996, Fellow of the RMetS since 1967 and Fellow of the Link Foundation of New Zealand since 1993. He is a Chartered Scientist and Chartered Physicist through the Institute of Physics. In 2011, Chris became a Fellow of the American Geophysical Union; only 1 in 1000 AGU members are elected to Fellow in a given year.

Chris has been an Honorary Professor at the School of Environmental Sciences, University of East Anglia since 2003, and an Adjunct Professor at the Australian Centre for Sustainable Catchments, University of Southern Queensland since 2009. In 2011 he also became a Guest Professor at the Department of Earth Sciences at the University of Gothenburg, Sweden, who now employ him part time. Chris has won a number of awards, e.g. the 1985 RMS Hugh Robert Mill Medal and Prize for Rainfall and the 1996 WMO Norbert Gerbier-MUMM International Award for tropical seasonal forecasting.

**Prof John Mitchell** gained a BSc Honours degree in Applied Mathematics from The Queen's University Belfast in 1970, and in 1973 he gained a PhD in Theoretical Physics from the same institution. In 1978, he took charge of the Climate Change group in what is now the Met Office's Hadley Centre for Climate Prediction and Research. He was Chief Scientist from 2002 to 2008 and Director of Climate Science from 2008 to 2010. He now works part time as Principal Research Fellow.

John was awarded an OBE in 2002. He is a Fellow of the Royal Society, a Fellow of the Institute for Mathematics and its Applications, and a Member of the Academia Europaea. He is a Visiting Professor at the University of Reading, and an Honorary Professor at the Universities of East Anglia and Exeter. He has been a lead author in three IPCC Assessments, and been chair and co-chair of the WCRP Working Group on Coupled Models (2001-2008).

John has won numerous awards, including the WMO Norbert Gerbier MUMM International Award (1997 and 1998), the European Geophysical Union Hans Oeschger Medal (2004), and the Royal Meteorological Society Symons Gold Medal (2011).

**Prof Tim Palmer's** DPhil was in general relativity theory from Oxford in the mid-1970s, after which he moved into the field of weather and climate dynamics and prediction, first at the UK Meteorological Office and then at the European Centre for Medium Range Weather Forecasts. Tim has been a visiting scientist at the University of Washington and more recently was the Rothschild Distinguished Visiting Professor at the University of Cambridge.

His research spans a wide variety of areas, from the theoretical to the practical, in issues related to the predictability and dynamics of weather and climate. On the theoretical side, Tim is especially interested in aspects of the climate system which exhibit nonlinear behaviour, for example where atmospheric processes on different space and time scales interact. This has led him to try to recast the basic equations for climate prediction as stochastic rather than deterministic. On the practical side, he has worked on the application of weather and climate forecasts for malaria prediction, flood forecasting, and crop yield estimation.

Tim has been a lead author of the IPCC third assessment report, have coordinated two European Union climate projects, and was co-chair of the international scientific steering group of a World Climate Research Programme project on climate variability and predictability. He was elected a Fellow of the Royal Society in 2003, and served on the Royal Society Council in 2008-9. He was President of the Royal Meteorological Society, and is serving on a Government Office of Science Expert Panel looking at how science can help mitigate the humanitarian impact of natural disasters. Tim has won prizes from a number of learned societies and academies, in the UK and overseas.

**Dr Ian Strangeways** was head of Applied Physics at the Institute of Hydrology (now the Centre for Ecology and Hydrology) for 25 years, since when he has been Director of TerraData Ltd, a consultancy in environmental monitoring. All of this work has concerned the development and use of instruments for measuring the main climatic variables and has involved travel to many remote parts of the world where he has witnessed first-hand how the climate is measured under a great variety of conditions. He is currently working on better snowfall measurements in Antarctica, improved methods of measuring air temperature and investigating how climate model projections of temperature compare with the instrument record. He is a Fellow of the Royal Meteorological Society and has written several books and many articles and papers, as well as giving talks and university lectures, on these interrelated topics.

**Dr Simon Buckle** has been the Policy Director at the Grantham Institute for Climate Change at Imperial College London since September 2007. He was a member of the scientific team of Met Office-led and DECC-funded AVOID programme (2009-2013). In 2009, he played a leading role in helping to create the Climate Knowledge and Innovation Community ("Climate KIC"), funded by the EIT to accelerate and stimulate innovation in climate change mitigation and adaptation. Simon is a member of the Governing Board of the Climate KIC, which now operates across Europe with a budget of €45m in 2013 and partners from the private, public and academic sectors. Between October 2011 and July 2013, Simon also took on the role of Pro Rector for International Affairs for Imperial College and was a member of its Management Board. Before joining the Institute, Simon was a senior British diplomat and has also worked in the Bank of England and the Ministry of Defence. He was awarded a CMG in the 2007 New Year's Honours and is a Fellow of the Institute of Physics. He has a doctorate in theoretical low-temperature physics and subsequently also worked as a researcher on quantum optics. Simon is a member of the IoP's International Committee and was elected as a committee member on the IoP's Environmental Physics Group.

**Shanti Majithia** is a Fellow of the Royal Statistical Society with extensive experience in the Energy Industry. His present role at the National Grid is as Forecasting Strategy Manager, which includes tackling Climate change, volatility of Wind Energy and managing all the weather information requirements for NG. Shanti's knowledge and experience extends from delivering forecasting systems for Gas and Electricity Forecasting to managing weather related risk on the Transmission systems.

Some of the projects include working with Business partners and Universities on subjects such as Heating and cooling Demand, volatility of Wind Energy and the scoping study into 'The Impact of Climate Change on the Energy Industry'. Shanti was also part of a team delivering a warning alert system due to Geomagnetically Induced Currents (Solar Flare activities) and Storm Project 'Storm Threat to overhead lines and Recovery Management' to assess strategy for risk mitigation on Transmission assets. He was a leading stakeholder in the recent completed EPSRC project - BKCC on Climate Change. His current work extends to develop a more up-to-date Flood Watch warning system for Utilities with EA and Met Office.