Speaker Abstracts and Biographies

Celebrating 170 Years of the Royal Meteorology Society
Prof Liz Bentley, CEO, RMetS

Biography: As Chief Executive of the Society, Liz works with the Council of Trustees to give vision, direction and leadership to its programmes of work. She first joined the Royal Meteorological Society in 2008 as Head of Communications and became Chief Executive in 2013. Liz has had a successful career in Meteorology working with the Met Office, BBC Weather Centre and the Ministry of Defence after studying a PhD in mathematics at the University of Manchester.

"I was born in Yorkshire and I'm sure my upbringing on top of the Pennines, where the weather can be a little more extreme, is one the main reasons why I became so fascinated by the weather. A career in meteorology was inevitable even before I had left school. After studying a PhD in mathematics at the University of Manchester, I applied for a job with the Met Office. First as a research scientist, and then training to be a weather forecaster at the Met Office College in Reading. After forecasting at RAF Brize Norton, I headed off to Shoeburyness to become Senior Met Officer at the Army range based on Foulness Island. The job including weather forecasting as well as acoustic prediction, something I had specialised in during my PhD.

"I then went to work at the Met Office College, first as a forecasting instructor becoming Chief Instructor in 1999. I project managed the move of the Met Office College from Reading down to Devon. In 2002, I jumped at the opportunity to manage the BBC Weather Centre at TV Centre in London, managing a team of over 30 Broadcast Meteorologists and the contract between the BBC and the Met Office. In 2006, I started work at the Ministry of Defence looking after their environmental research programme - covering everything from the seabed out into space.

"I joined the Royal Meteorological Society as Head of Communications in 2008 and in 2010 I took on a new role as Head of theWeather Club – which is the public outreach arm of the Royal Meteorological Society. In 2013, I became Chief Executive at the Society and in July 2014 was granted the title 'Professor' from the University of Reading."

Changing Climate: Scientific Understanding and Human Impact
Dr Chris Brierley, Associate Professor of Climate Science, University College London

Abstract: The climate is never static and has changed throughout human history. The first part of this talk will describe how humans responded to these changes. The birth of meteorology as a science led to a fundamental shift in the relationship between humans and climate events; predominantly through understanding, but latterly through prediction. I will chart some key developments in climate science,

whilst highlighting the contribution of the Royal Meteorological Society. With the advances in meteorology, came a growing appreciation of the unintended consequences of humanity's industrial development. These consequences, along with our scientific understanding of them, have become political and economic issues of such importance, that they will define Human civilisations future trajectory at a global level. I will conclude by looking ahead to the future of climate, its science, and the role of the Royal Meteorological Society in enabling that scientific development.

Biography: Dr Brierley is an Associate Professor in the Department of Geography at University College London (UCL). He first joined the RMetS during his PhD at the University of Reading. After a sojourn in the USA, he returned to the UK to initiate UCL's Climate Change MSc programme. His research revolves around climate modelling; at first looking at uncertainty in future projections, then at the geologic past. He has since focused in on the time of human-climate interactions. He is heavily involved with the Palaeoclimate Model Intercomparison Project (PMIP), which coordinates simulation of past climates using state-of-the-art models. Their recent paper summarising the results of the experiment looking at 6,000 years ago was coordinated by Dr Brierley. He has undertaken research with collaborators across many disciplines: archaeology, economics, statistics, anthropology, and ecology.

The Evolution of Communicating the Modern Forecast
Tyler Roys, Meteorologist, AccuWeather

Abstract: How the advancement of weather data and technology over the last 3 centuries have shaped the communication of weather forecasts

Biography: Tyler Roys is a meteorologist with nearly a decade of experience, starting his career at AccuWeather the week before Hurricane Sandy struck the U.S. Tyler has been the Lead European Forecaster since 2015 and has shared his extensive knowledge of forecasting for Europe internally, as well as at the 2019 European Conference on Severe Storms in Krakow, Poland. Recently he has been expanding his knowledge on Long Range Forecasting, as a member of the team that creates AccuWeather seasonal outlooks. Outside of work, he is involved with 4-H, Penn State sports, and his church in various leadership capacities.

Understanding the links between Extreme Weather and Climate Change

Prof Ted Shepherd, Grantham Professor of Climate Science, University of Reading

Abstract: Climate change can be measured in changes in weather statistics, but is experienced as changes in extreme weather events, with the increasing intensity of heat waves and wildfires being perhaps the most prominent examples. Understanding the connection between climate change and changes in extreme weather is important for risk assessment, but also for communication, because people relate much better to events than to statistics. Events tell a story, invoke emotions, and leave a memory. Neuroscience has shown that these elements are necessary for human decision-making. The scientific challenge is that every extreme event has unique characteristics, which are invariably important for its impacts, and are part of the story of the event. How, then, can we talk about climate change, which is inherently a statistical concept, in terms of changes in extreme weather events? This is the question I will address in this talk.

Biography: Professor Ted Shepherd is a specialist in large-scale atmospheric dynamics and circulation and its role in climate change, including extreme events. Recently he has been pioneering a storyline approach to representing the uncertainty in physical aspects of climate change, and is increasingly interested in interdisciplinary aspects of climate change. He has published over 200 peer-reviewed articles on atmospheric science, and is a Fellow of the American Geophysical Union and the Royal Society. He has held leadership roles in the World Climate Research Programme, the WMO/UNEP Ozone Assessment, and the IPCC. He co-authored the US National Academy of Sciences report on Extreme Weather Events and Climate Change Attribution (2016), served on the Peer Review Panel for UKCP18, and currently chairs the Science Review Group of the Met Office Hadley Centre.