



## Abstracts and Biographies

### **Prof Massimo Bollasna, School of GeoSciences, University of Edinburgh**

**Biography:** I am Associate Professor in Atmospheric Sciences at the School of GeoSciences, University of Edinburgh. I received a PhD in Atmospheric Science from the Department of Atmospheric and Oceanic Sciences, University of Maryland College Park, USA. The overarching goal of my research is to shed light on mechanisms and physical processes controlling changes in regional hydroclimate at seasonal to interdecadal time scales (and beyond). While one objective is to reduce the current uncertainty related to anthropogenic aerosol forcing, I aim at comprehensively investigating the relationships with other anthropogenic forcing agents and with the underlying natural climate variability. I have conducted research on the role of anthropogenic aerosols, monsoon mechanisms, teleconnections, climate extremes, as well on more applied topics, such as the impact of climate hazards on health. To achieve these goals, I use a variety of tools, from observations to a range of models of various complexities, supported by a solid physically-based mechanistic analysis.

**Title:** Climate Change in the Mountains

**Abstract:** Mountain environments are particularly sensitive to the impacts of climate change and are being affected at a faster rate than other terrestrial habitats. Forty percent of the world's population rely indirectly on mountain resources for drinking water, agriculture, biodiversity, and hydroelectricity, which could be lost as a result of global warming. Climate change is also likely to increase exposure to hazards, with extreme events such as avalanches and landslides becoming more common. The implications of climate change in mountains will reach far beyond mountain areas: Climate change in mountains is a global concern. I will provide a comprehensive overview of observed changes in mountain areas and describe what to expect for the coming decades.

### **Mr John Mitchell, Met Office Aberdeen**

**Biography:** I was brought up on the remote westerly point of the Isle of Skye, just off the west coast of Scotland. There I experienced my fair share of exciting weather whilst also working as a weather observer for the Met Office. After graduating from St Andrews University I did various jobs but my interest in weather led to me to join the Met Office again in 2008 as a rainfall data quality controller. I qualified as a forecaster in 2010 and have since worked in Aberdeen preparing forecasts for the public, aviation industry and marine customers. In recent years I have mainly worked in the Public Weather Service team: writing mountain forecasts, working with the Scottish Avalanche Information Service, SEPA and also writing warnings for the public through the National Severe Weather Warnings Service. The thing I like most about the job is helping people to plan ahead and stay safe during severe weather. In my spare time I enjoy pub food then trying to work it off by walking and running, mainly in my local hills of Aberdeenshire but occasionally the more rugged Highlands and Lake District. I also enjoy taking part in hill races and mountain marathons.

**Title:** Mountain Forecasting in the UK: An Overview

**Abstract:** The weather in the UK is notoriously fickle - changing from one day to the next or even one minute to the next. These sudden changes are even more extreme up in the hills and mountains and forecasting for those environments presents a unique and difficult challenge. In this talk I will give some insights into those challenges; from hurricane force winds accelerating over the Cairngorms to stratus cloud seemingly appearing from thin air on the Cuillin Ridge. At the Met Office we use the latest global and high resolution models along with personal knowledge and experience of mountain conditions to deliver tailored forecasts to help people stay safe and have an enjoyable day in the hills. I will take you through how we create our forecasts giving some personal insights along the way. I will also explain how far ahead we can reliably predict, and glimpse ahead to potential future developments in mountain forecasting.

### **Dr Michael Reading, Met Office Aberdeen**

**Biography:** I joined the Met Office and underwent forecaster training in 2011 before being posted to the Aberdeen Met Office, where I have been based as a weather forecaster ever since. I began my forecasting career providing aviation and commercial forecasts. However, my main role for the last eight years has been public weather service forecasting, including national severe weather warnings and my own passion, mountain forecasting. In the winter I help the Scottish Avalanche Information Service produce their avalanche forecasts, and have even accompanied them on a few field trips. Overseas, I have completed two forecasting detachments to RAF Mount Pleasant in the Falkland Islands, and a forecasting detachment with the British Antarctic Survey to the Rothera Antarctic research base. Since 2020 I have also worked as a trainer for the Met Office College, training new generations of forecasters, external companies, and working with the Mountain Training Association to provide mountain weather workshops. Outside of my professional life, I am a keen climber and mountaineer, with over 25 years of experiencing most of the weather that the UK's mountains can throw at us. While I have climbed in ranges all over the world, the Scottish mountains are still amongst my favourite.

**Title:** Experiencing Mountain Weather: A Forecaster's Perspective

**Abstract:** As a weather forecaster and a mountaineer I often get to experience the weather I forecast first hand. This up close and personal verification is a big asset when writing mountain forecasts. Experiencing the weather helps me to not only describe it in a way that other hill goers can understand, but also to know what aspects of the weather are most impactful and what to really focus on. In this talk I share some of my own and my colleagues' personal experiences of being out in all different varieties of mountain weather, passing on some of the lessons I have learnt along the way. I also share some best practise tips for planning days out in the hills around the weather, and talk about how far ahead you can realistically look.

### **Mr Geoff Monk, Weather Information Service**

**Biography:** Following graduation in Physics and Meteorology at Reading, I worked in the Met Office for 25 years, forecasting at various UK locations and worldwide. I developed specific interest in local weather, and with the advent of remote sensing, was able to contribute in the advancing understanding of weather distribution within intense cyclonic storms, split fronts and in local convection variability due for example to 'Lake effect' convection. In 1999, I was asked to lead a small team in the private sector, enabling me use my skills, for example mountain weather, in developing the Mountain Weather Information Service, which for almost 20 years has provided impact based forecasts for UK mountain areas. I am very much an outdoor person, still running on hills when I can; and enjoy teaching on weather and climate change.

**Title:** Challenges in Forecasting Mountain Weather - Case Studies

**Abstract:** The complex coastline and mountain topography of the British Isles has major impact on UK weather, often causing significant local variations - sometimes within a few kilometres. Forecasts for mountain areas, where conditions are often well outside those normally experienced in 'City life', requires information to be presented, both to experienced mountaineers, and casual visitors to the more popular mountain slopes, in a manner that can be readily comprehended and thus hopefully acted on as appropriate. This talk will focus on recent case studies, including some very difficult forecasts, and focus on how the information available can best be presented.