RMetS Virtual Student & Early Career Scientists Conference

29th & 30th June 2020

Monday 29th June

Session 1: Observations
Chair: Shaun Dempsey

09:30 **2016 Indian Monsoon Cloud Development Observed using Doppler Weather Radar**
Alex Doyle, PhD Student, University of Reading

09:45 **Investigating air-sea interaction in the Tropical North Atlantic using a novel combination of autonomous vehicles.**
Elizabeth Siddle, PhD Student, University of East Anglia

10:00 **Goldmine or Bust? Crowdsourced Meteorological Data for Atmospheric Science**
Jonathan Coney, MRes Student, University of Leeds

10:15 **Uncertainty Assessment of Open Source Gridded Precipitation Datasets: A Case Study at Bole Synoptic Station** (Pre-recorded presentation)
Gertrude Gyamfi, Teaching Assistant, Kwame Nkrumanh University & Grace Esenam Affram, Research and Teaching Assistant, Kwame Nkrumanh University

10.30 **Stay at Home, Be a Citizen Scientist, Save Lives** (Pre-recorded presentation)
Tessa Gough, PhD Research Student, University of Newcastle

Session 2: Air Quality and Modelling - Joint session
Chair: Joshua Hampton and Tom Faherty

Air Quality
Chair: Tom Faherty

09.30 **A new Met Office kilometre-scale national air quality forecast model**
Benjamin Drummond, Scientist, Met Office

09.45 **DOMestic Energy Systems and Technologies InCubator (DOMESTIC) and indoor air quality of the built environment**
Jinghua Li, Researcher, University of Chester

Modelling
Chair: Joshua Hampton

10.00 **Statistical methods to quantify and visualise the complex behaviour of clouds in the climate system**
Rachel Sansom, 2nd year PGR, University of Leeds

10.15 **Mechanisms of internal Atlantic Multidecadal Variability in HadGEM3-GC3.1**
Wah Kin Michael Lai, PhD Student, University of Reading

10.30 **The Influence of Anthropogenic Aerosols on the Aleutian Low**
William Dow, PhD Student, University of Leeds

10.45 – 11.15 Social refreshments & photography competition

Session 3: Poster session A
Chair: Kris Boykin

11.15 **Mars' Annular Polar Vortex**
Emily Ball, PhD student, University of Bristol

11.20 **What are the fine-scale features of the precipitation response to El Niño and what are the meteorological drivers behind this response?**
Emma Sanig, Student (Undergraduate dissertation) now completing MSc, University of Birmingham

11.25 **Marine Forecast Accuracy Improvement Techniques**
Katie Hodge, Graduate trainee scientist, Met Office

11.30 **Study of Propagation of Diurnal Cycle of Precipitation from Western Coast to Eastern Coast over Indian Peninsula during Indian Summer Monsoon**
Lakshmi Kalavappilly Sajan, Master of research (MRes) student, University of Leeds

11.35 **Calculating LTO Emissions of aircraft through different emission factors and the effect of meteorology on it, Ahmedabad Airport**
Rudradutt Thaker, Student, Global centre for Environment and Energy (GCEE), Ahmedabad University

On- demand, pre-recorded poster session
Chair: Paloma Trascasa Castro & Jinghua Li

11.15 **How important are Post-Tropical Cyclones to European Windstorm Risk?**
Elliott Sainsbury, PhD student, University of Reading

11.20 **The role of increasing vertical resolution on the detection and attribution of North Atlantic storms**
Erin Walker, PhD student, University of Bristol

11.25 **hedInvestigating Surface Concentrations of Aerosols and the Aerosol-Cloud-Climate Interactions at Summit, Greenland.**
Holly Moore, Masters student, University of Leeds

11.30 **Effects of cumulus physics, nudging and air-sea flux parameterizations using ERA5 as initial and boundary conditions on the intensity and trajectory of Typhoon Haiyan (2013)**
Rafaela Jane Delfino, Dual PhD Student, University of Reading and University of the Philippines-Diliman

11.35 **Evaluation of a prediction for road surface conditions by METRo model with ASOS**
Taeyoon Eom, Student, Integrated Circuit Design Lab., Department of Electronics Engineering, Chungnam National University, 99 Daehak-ro, Yuseong-gu, Daejeon 34134, Republic of Korea

11.40 **How is human-induced climate change altering extreme wildfire events?**
Zhongwei Liu, PhD researcher, Centre for Agroecology, Water and Resilience, Coventry University, Coventry, UK

12.00 – 13.00 Lunch break

Session 4: Poster session B
Chair: Paloma Trascasa Castro

13.00 **Inferring London's Methane Emissions from Atmospheric Measurements**
Daniel Hoarer, PhD student, University of Bristol

13.05 **Extracting likely scenarios from high resolution forecasts in real-time**
Kris Boykin, Master of research (MRes) student, University of Leeds

13.10 **Which Dynamical Factors Influence the Seasonal Predictability of Winter Windstorms over the North Atlantic/European Region?**
Lisa Degenhardt, PhD student, School of Geography, Earth and Environmental Science, University of Birmingham UK

13.15 **Using model nudging to constrain rapid adjustment radiative forcing from short-lived anthropogenic pollutants**
Max Coleman, First year PhD student, University of Reading

13.20 **Future drought risk in East Anglia: from the meteorological to the impact perspective**
Nele Reyniers, PhD student, University of East Anglia

13.45 Session 5: Keynote speakers - Climate Change
Chair: Joanna Raymond & Kris Boykin

Carla Denyer, *Green Party Parliamentary Candidate for Bristol West & Councillor for Clifton Down*

Tamsin Edwards, *Senior Lecturer in Physical Geography*

Julieanna Powell- Turner, *Centre for Research into Environmental Science and Technology, University of Chester*

Joseph Howe, *Thornton Energy Research Institute*

Tuesday 30th June

Session 6: Climate & Environmental Change
Chair: Joanna Raymond

09.30 **Quantifying methane fluxes and their source using a Bayesian inverse model and observations of co-emitted tracers**
Alice Ramsden, PhD Student, University of Bristol

09.45 **What is the cause of a spontaneous rapid climate change in transient simulations of the last ice age to the present?**
Brooke Snoll, MRes Student, University of Leeds

10.00 **Using remote sensing to assess the climate mitigation potential of secondary forests in the Brazilian Amazon**
Viola Heinrich, PhD Student, University of Bristol

10.15 **Mountain forest change and the impact on the water cycle of large river basins (**Pre-recorded presentation**)**
Xinyue He, PhD Student, University of Leeds

10.30 **Climate change and the extreme heat related impacts on the London Underground infrastructure** (Pre-recorded presentation)
Sarah Greenham, PhD Student, University of Birmingham

Session 7: Dynamics and Meteorological Applications | Joint session
Chair: Amethyst Johnson and Ben Pickering

Dynamics
Chair Amethyst Johnson
09.30 **Comparison of the prediction of Indian monsoon low-pressure systems by Subseasonal-to-Seasonal prediction models**
Akshay Deoras, PhD Student, University of Reading

09.45 **Climatology and Structure of Mesoscale Convective Systems in Southern West Africa**
Michael Baidu, PhD Researcher, University of Leeds

10.00 **Tides of the Polar Mesosphere-Lower-Thermosphere: Observations and model comparisons.**
Shaun Dempsey, PhD Student, University of Bath

10.15 **Can we wave goodbye to parameterisations?**
Timothy Banyard, PhD Student, University of Bath

Meteorological Applications
Chair: Ben Pickering

10.30 **Using aircraft accidents and incidents to evaluate the skill of clear-air turbulence diagnostics**
Mark Prosser, PhD Researcher, University of Reading

10.45 **User-defined regimes: improving forecasts of good drying weather for farmers in Oxfordshire**
Alicia Gleeson

11.00 – 11.20 Social refreshment break & Photography competition

Session 8: Poster session C
Chair: Jinghua Li

11.30 **On the linearity of the stratospheric and Euro-Atlantic sector response to ENSO**
Paloma Trascasa Castro,

11.35 **Estimating charges on aerosols near the surface of Venus**
Amethyst Johnson, student, University of Manchester

11.40 **Study of the meteorological profile of Ahmedabad City and its relation to air pollutant dispersion in the city.**
Dhyey Solanki, Research intern, Global Centre of Environment and Energy (GCEE), Ahmedabad University (AU)

11.45 **Investigating how the U.S. insurance industry could be impacted by the use of comprehensive flood maps: Hurricane Harvey Case Study**
Steph Hodsman, GIS and Hazard Mapping Specialist, JBA Risk Management Ltd

11.50 **A model study of tropospheric ozone in a continental outflow region and sensitivities to uncertainties in atmospheric chemistry**
Thea Elvin, MRes student, University of Leeds

12.15 – 13.15 Lunch break

Session 9: Poster session D
Chair: Ben Pickering

13.30   **Meteorological Influences on Lightning Strength in a Changing Climate**
Isabel Smith, Final year undergraduate on an integrated Masters, University of
Reading

13.35   **Weatherproofing for a smarter, resilient, and more sustainable agri-sector**
Joanna Raymond, PhD student, University of East Anglia

13.40   **Study of the air quality and effect of temperature and relative humidity on the
air pollution for Ahmedabad city**
Mihir Prajapati, Student, Global centre for Environment and Energy, Ahmedabad
University

14.00   Session 10: Keynote Speaker Session – Science communications
Chairs: Hannah Brown & Shaun Dempsey

Clare Nasir, *Met Office*

Dan Jones, *British Antarctic Survey*

Becky Hemmingway, *ECMWF*

15.15   Closing Remarks and Prize Winners Announcement

16.00   Close of conference