



# RMetsS Virtual Student & Early Career Scientists Conference

**29th & 30th June 2020**

*\*Programme subject to change*

*Last updated: 25/06/2020*

## Monday 29<sup>th</sup> 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 Nkrumah University & Grace Esenam Affram, Research and Teaching Assistant, Kwame Nkrumah University

### *Session 2: Air Quality and Modelling - Joint session*

*Chair: Joshua Hampton and Thomas 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, 2<sup>nd</sup> 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

Chair: Amethyst Johnson

*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

*Pre-recorded poster session*

*Chair: Paloma Trascasa Castro & Jinghua Li*

11.15 **How important are Post-Tropical Cyclones to European Windstorm Risk?**

(Pre-recorded)

Elliott Sainsbury, PhD student, University of Reading

11.20 **The role of increasing vertical resolution on the detection and attribution of North Atlantic storms** (Pre-recorded)

Erin Walker, PhD student, University of Bristol

11.25 **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)** (Pre-recorded presentation)

Rafaela Jane Delfino, Dual PhD Student, University of Reading and University of the Philippines-Diliman



- 11.30 **Evaluation of a prediction for road surface conditions by METRo model with ASOS** (Pre -recorded presentation)  
Taeyoon Eom, Student, Integrated Circuit Design Lab., Department of Electronics Engineering, Chungnam National University, 99 Daehak-ro, Yuseong-gu, Daejeon 34134, Republic of Korea
- 11.35 **How is human-induced climate change altering extreme wildfire events?** (Live presentation)  
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 Hoare, PhD student, University of Bristol
- 13.05 **Extracting likely scenarios from high resolution forecasts in real-time**  
Kris Boykin, PhD student, University of Reading
- 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*

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*



15.15 – 16.00 *Icebreaker weather quiz*

*Chair: Thomas Faherty*

Tuesday 30<sup>th</sup> 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**

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, Meteorologist, Lake Street Consulting Ltd

11.00 – 11.30 Social refreshments & Photography competition

*Session 8: Poster session C*  
Chair: Jinghua Li and Ben Pickering

- 11.30 **On the linearity of the stratospheric and Euro-Atlantic sector response to ENSO**  
Paloma Trascasa Castro, PhD student, University of Leeds
- 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)  
Rudradutt Thaker, Student, Global centre for Environment and Energy (GCEE), Ahmedabad University  
Mihir Prajapati, Student, Global centre for Environment and Energy, Ahmedabad University
- 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 **Meteorological Influences on Lightning Strength in a Changing Climate**  
Isabel Smith, Final year undergraduate on an integrated Masters, University of Reading
- 11.55 **Weatherproofing for a smarter, resilient, and more sustainable agri-sector**  
Joanna Raymond, PhD student, University of East Anglia

12.15 – 14.00 Lunch break



14.00 *Session 9: Keynote Speaker Session – Science communications*  
*Chairs: Hannah Brown & Shaun Dempsey*

Clare Nasir, *Met Office*

**Podcasting for climate science- Motivation, benefits, and outreach**

Dan Jones, *British Antarctic Survey*

**The world of journals**

Becky Hemingway, *ECMWF*

15.15 Closing Remarks and Prize Winners Announcement

16.00 Close of conference