



## RMetS Student & Early Career Scientists Conference 2022

4<sup>th</sup> & 5<sup>th</sup> July, University of Manchester

### Sunday 3<sup>rd</sup> July

18.00 Ice Breaker

### Monday 4<sup>th</sup> July

08.30 Registrations, Refreshments & Ice Breaker

#### 09.00 **Welcome and Opening Address**

Liz Bentley, CEO, Royal Meteorological Society

*Session 1: Tropics, Subtropics and Teleconnections*

Chair: Ned Williams, Student Conference Committee Member

#### 09.10 **Decadal Variability of the Extratropical Response to the Madden-Julian Oscillation**

Daniel Skinner, PhD Student, Centre for Ocean and Atmospheric Sciences, School of Mathematics, University of East Anglia

#### 09.25 ***Deep Learning for Tropical Cyclone Nowcasting: Experiments with Generative Adversarial and Recurrent Neural Networks***

Theo Xirouchaki, Foundation Scientist, Met Office

#### 09.40 **Non-linearity in the Extratropical Teleconnection to ENSO and the QBO**

Amber Walsh, PhD Researcher, University of Exeter

#### 09.55 **The Anomalous Charge Structure of Thunderstorms during Monsoon over India**

Rakesh Ghosh, Junior Research Fellow, Indian Institute of Tropical Meteorology

#### 10.10 ***Regional Climate Models: Assessing the representation of the ENSO cycle and its impacts on coffee production and climate in Colombia***

Katie Hodge, Foundation Applied Scientist, Met Office

#### 10.25 **TBC**

Speaker TBC

10.40 Refreshments and Networking

*Session 2: Observations*

Chair – Tim Banyard, Student Conference Committee Member

#### 11.10 **TBC**

Speaker TBC

#### 11.25 **Estimating the Impact of Historical Thermometer Exposures on Early Instrumental Temperature Data**

Emily Wallis, Postgraduate Research Student, Climatic Research Unit, University of East Anglia

- 11.40 **Comparing Gravity Waves in a High-Resolution Model to AIRS Satellite Observations**  
Emily Lear, PhD Student, University of Bath
- 11.55 ***How does a Volcanic Eruption Produce a Meteotsunami?***  
Clare Lewis, PhD Student, University of Reading & Plymouth Marine Laboratory
- 12.10 **Towards Homogenisation of Manual Snow Depth Series**  
Moritz Buchmann, PhD Student, WSL Institute for Snow and Avalanche Research SLF, Davos and Oeschger Centre for Climate Change Research, University of Bern, Switzerland
- 12.25 Launch of the Conference Photographic Competition
- 12.30 Lunch
- 13.30 **Keynote Session: Collaborations and Partnerships**
- 15.00 Refreshments and Networking
- Session 3: Convection and Modelling*  
Chair: Fran Morris, Student Conference Committee Member
- 15.30 **Improving Moist Thermodynamics in Weather and Climate Models**  
Paul Bowen, PhD Student, University of Exeter
- 15.45 **Analysis of Spectral Nudging Methods to Improve Skill in Convective-Scale Ensembles**  
Adam Gainford, PhD Student, University of Reading
- 16.00 **A Lagrangian View to the Evolution of Convective Updrafts**  
Thomas J. Hutton, PhD Student, University of Exeter
- 16.15 **TBC**  
Speaker TBC
- 16.30 ***Downscaling UK Rainfall Using Machine-Learning Emulation of a Convection-Permitting Model***  
Henry Addison, PhD Student, University of Bristol
- 16.45 Poster Presentations – Session 1
- 17.45 Close of Day 1
- 18.30 Conference Dinner

Tuesday 5<sup>th</sup> July 2022

09.00 Welcome back

09.05 **Keynote 2: Communications**

10.05 Panel Discussion

10.35 Refreshments and Networking

Session 4: Climate

Chair: Lisa Degenhardt, Student Conference Committee Member

11.05 **Far Flung Influences on North Atlantic Winter Climate Affect Predictability**

Ned Williams, PhD Researcher, University of Exeter

11.20 **The Atmospheric Response to the Weddell Sea Polynya**

Dr Holly Ayres, Postdoctoral Research Assistant, University of Reading

11.35 **Global Impacts of the Pacific Decadal Variability**

Melissa Seabrook, Climate Scientist, Met Office

11.50 **TBC**

Speaker TBC

12.05 Lunch

Session 5: Aerosols, Composition and Air Quality

Chair: Michael Baidu, Student Conference Committee Member

13.00 **Changes in Ambient Air Quality and Atmospheric Composition and Reactivity in the South East of the UK as a Result of the COVID-19 Lockdown**

Mark Nichols, Principal Air Quality Consultant, Hydrock / University of Brighton / IAQM

13.15 **Street Canyon NO<sub>2</sub> “Hotspots” and Regulatory “Wiggle Room”: The Interacting Effects of Free-Radical Chemistry, Canyon Geometry, Primary NO<sub>2</sub>, and Emissions**

Yuqing Dai, PhD Student, University of Birmingham

13.30 **Inter-Annual Variations in the Siberian Carbon Uptake and Carbon Release Periods**

Dieu Anh Tran, PhD Researcher, Max Planck Institute for Biogeochemistry

13.45 **Using Partial Radiative Perturbation Calculations to Isolate Aerosol Radiative Adjustments in UKESM1**

Max R. Coleman, PhD Student, Department of Meteorology, University of Reading

14.00 **Improving Understanding of Mineral Dust Transport and Deposition Using Aircraft Observations and Modelling**

Natalie Ratcliffe, PhD Student, University of Reading

14.15 Poster Session 2

15.15 Refreshment and Networking

Session 6: Communications, Industry and Applications

Chair: Megan Pearce, Student Conference Committee Member

15.45 **A New Post Processing Capability for Forecasting Surface Transport Hazards**

Joe Eyles, Scientist, Met Office

16.00 **The Role of Partnership in Global-Coupled Model Science Configuration Development**

Luke Roberts, UM Partnership Foundation Scientist, Met Office

16.15 **From Showers to Sheep Chill: Forecasting for the Met Office**

Sophie Bland, Senior Operational Meteorologist, Met Office

16.30 **From Black Boxes to Modifiable Codes: Improving Seasonal Forecasts in East Africa with Remote Technical Training**

Alexander Chamberlain-Clay, Foundation Scientific Software Engineer, Met Office

16.45 ***TBC***

Speaker TBC

17.00 Closing Remarks and Poster Prize Winners Announcement

17.15 Close of conference

\*Please note this programme is subject to change. All presentations in *italics* will be presented virtually