RMetS Early Career & Student Conference Programme
4 & 5 July 2023

Monday 3 July 18.30pm – 21.00pm BST

Tour of the Meteorological Observatories at Reading University 18.00pm

Ice-Breaker Event, University of Reading at 18.30pm

Tuesday 4 July

08.30   Registrations, Refreshments & Ice Breaker

09.00   **Welcome and Opening Address in the Madejski Theatre**
Prof Liz Bentley, CEO, Royal Meteorological Society
Prof Lesley Gray, President, Royal Meteorological Society

09.10   **Malcolm Walker Presentation: Still Too Hot to Handle?**
Dr Chloe Brimicombe, Climate Science Post-Doc at the Wegener Center University of Graz, Austria

09.40   Move into Parallel Oral Sessions

Room	Madejski Theatre	Nike Theatre
	Session 1 – Climate Chair: Ned Williams, Student Conference Committee Member	**Session 2 – Forecasting & Nowcasting** Chair: Ashar Aslam, Student Conference Committee Member
09.45	**Multi-Decadal Variations in Seasonal Forecasts**	**Statistical Post-Processing of Cloud Base Height**
	Matthew Wright (he/him), DPhil Student, University of Oxford	Marcus Spelman (he/him), Scientist, Met Office
10.00	**Simple Modelling of Marine Biomass Regeneration**	**Evaluating Optical Flow Methods for Storm Prediction in the Maritime Continent**
	Elisavet Baltas (she/her), PhD Student, Centre for Climate Repair, University of Cambridge	Joey Smith (he/him), PhD Student, University of Leeds
10.15	**Investigating the Value added to Drought Projections by the CMIP5 Downscaled Models in the UKCP Convection-Permitting Ensemble**	**Operational Forecasting On-the-Fly**
	Matt Grant (he/him), Foundation Scientist, UK Met Office	Laurents Marker (he/him), Software Developer, National Centre for Atmospheric Science
10.30	**Response of Atmospheric Variability in the Northern Hemisphere Winter to Past Climate Conditions and Elevated CO2 Levels**	*** CoastSafe: Early Warning System for the Rush-Portrane Coastline**

Room	Madejski Theatre	Nike Theatre
	Arthur Oldeman (he/him), PhD Candidate, Utrecht University, the Netherlands	Daniel O'Brien, Student, Maynooth University
10.45	Introduction into Discord and Virtual Poster Session	

11.15   Refreshment Break

11.45   Parallel Oral Sessions

Room	Madejski Theatre	Nike Theatre
	Session 3 – Data Science Chair: Alex Chamberlain-Clay, Student Conference Committee Member	**Session 4 – Air Quality & Atmospheric Chemistry** Chair: Ned Williams, Student Conference Committee Member
11.45	**Improving Vertical Detail in Simulated Temperature and Humidity Data Using Machine Learning**	**Climate Modelling the Atmospheric and Environmental Effects of Hydrogen**
	Joana Rodrigues (she/her), AI Aided Hybrid Modelling Scientist, Met Office	Hannah Bryant (she/her), PhD Student, University of Edinburgh
12.00	**Reducing the Overhead of Coupled Machine Learning Models between Python and Fortran with an Application to Gravity Wave Parameterisations**	**3D Simulations of the Archean Earth including Photochemical Haze Profiles**
	Jack Atkinson (he/him), Research Software Engineer, Institute of Computing for Climate Science, University of Cambridge	Mei Ting Mak (Martha, she/her), PhD Student, University of Exeter
12.15	**A Machine Learning Approach to Study Coastal Flooding Caused by Extreme Sea Level Changes**	**New Pollen Forecasting System at the Met Office**
	Alice Re (she/her/they/them), PhD Student, Interuniversity Department of Regional and Urban Studies and Planning (DIST), Politecnico and Università di Torino	Katie Coward (she/her), Foundation Scientist, The Met Office
12.30	**A Flexible Data and Knowledge-driven Method for Identifying Climate Drivers to Predict Summer Conditions in Northeast China**	*Air Pollution in the United Kingdom**
	Nathan Creaser (he/him), Scientific Software Engineer, Met Office	Dimitra Gkouzouli (she/her), Research Lead, Six Degrees Edinburgh
12.45	**Investigating the Benefits of using Reforecasts for Statistical Post-Processing of Weather Forecasts**	**How well are Aerosol-Cloud Interactions Represented in Climate Models?**
	Ben Hooper (he/him), Foundation Scientist, Met Office	George Jordan (he/him), Foundation Scientist, Met Office Hadley Centre

13.00   Lunch Break

14.00   Launch Photographic Competition

14.05   **Keynote Speakers – Early Career Panel Session**
Chair: Prof Liz Bentley, CEO, Royal Meteorological Society

Panellists:
Hannah Findley (she/her), Service Delivery Manager, Met Office
Kaja Milczewska (she/her), Environmental Public Health Scientist, UK Health Security
Agency
*Craig Poku, Datasparq
Dr Matthew Priestley, Research Fellow, University of Exeter
Ayesha Tandon (she/her), Science Journalist, Climate Brief

15.35   Refreshment Break

16.05   Parallel Oral Sessions

Room	Madejski Theatre	Nike Theatre
	Session 5 – Tropics Chair: Fran Morris, Student Conference Committee Member	**Session 6 – Modelling** Chair: Dan Skinner, Student Conference Committee Members
16.05	**Understanding Climate Drivers of Drought and Fire Multi-Hazards in Indonesian Borneo using Climate Model and Seasonal Hindcast Ensembles**	**A Lagrangian View to the Evolution of Convective Updrafts**
	Timothy Lam (he/him), PhD Student, University of Exeter	Thomas J. Hutton, PhD Student, University of Exeter
16.20	**Exploring the Compound Nature of Extreme Meteorological Events in Brazil using an Events-Based Approach**	**On Alleviating Semi-annual Oscillation Wind Biases in Climate Models**
	Anna Bradley (she/her), Foundation Scientist – Climate Impacts Modelling, Met Office	Aleena M J (she/her), DPhil Student, University of Oxford
16.35	**Sub-Saharan African Precipitation Responses to Aerosol Forcing**	**Stochastic Data Adapted AMOC Box Models**
	Catherine Toolan (she/her), PhD Student, University of Reading	Ruth Chapman (she/her), Phd Researcher, University of Exeter and Met Office
16.50		**Dynamically Calculated Mixing Lengths in Shallow Cumulus Convection**
		Alanna Power (she/her), PhD Student, University of Reading

17.05   Poster Session 1

18.15   Close of day 1

19.30   Evening Social Starting at in Reading Town Centre

Wednesday 5 July

09.00 Welcome Back
(All presentations will take place in the Madejski Theatre)

Session 7: Applications
Chair: Alex Chamberlain-Clay, Student Conference Committee Member

09.05 **How will City Temperatures Respond to Changes in Climate?**
Sarah Berk (she/her), PhD Researcher, University of East Anglia

09.20 **Multivariate Compound Cold Events in the UK**
Kanzis Mattu (she/her), PhD Candidate, University of Strathclyde

09.35 **The Future of Surface Transport Forecasting at the Met Office**
Alice Lake (she/her), Scientist – Post-processing Applications, Met Office

09.50 **Using Expired Weather Forecasts to Supply up to 10 000 years of Weather Data**
Petr Dolezal (he/him), PhD Candidate, AI for the research of Environmental Risk
(AI4ER), University of Cambridge

10.05 Refreshments

Session 8: Observations
Chair: Emily Lear, Student Conference Committee Member

10.35 **Intercomparison of Observations from Citizen Weather Station Networks and Applications**
Chris Squires (he/him), Foundation Scientist, Met Office

10.50 **Characterising Ice Particle Size Distributions Using In Situ Observations**
Rosie May Mammatt (she/her), PhD Student, University of Reading

11.05 **Exploring Climate Conditions on Mount Everest's Upper Slopes Using In-Situ Observations and Model Outputs**
Lorenzo Minola (he/him), Postdoctoral Research Fellow, University of Gothenburg (Sweden)

11.20 **Weather Forecast Verification with Crowd-Sourced Data**
Matthew Spurrier (he/him), Verification Scientist (Professional Placement), Met Office

11.35 **Ray-Tracing Satellite Observations of Gravity Waves**
Phoebe Noble (she/her), PhD Student, University of Bath

11.50 Poster Session 2

13.00 Lunch

14.00 **Communicating Your Science Workshop**

15.30 Refreshments

Session 9: Applications
Chair: Fran Morris, Student Conference Committee Member

16.00 **How the Met Office took TikTok by Storm**
Emma Lawrence (she/her), Content Production Co-ordinator, Met Office

16.15 **Projections of the Future Heat Health Burden Under Climate, Socioeconomic and Demographic Change**
Rebecca Cole (she/her), PhD Student, London School of Hygiene and Tropical Medicine

16.30 **Characterization of Heat Waves and Human Health on the North coast of Peru**
Wil Laura (he/him), Meteorologist and Graduate Student, University of Liverpool

16.45 *_*How Public Sector Organisations are Adapting to Climate Change: A Scottish case study*_
Emma L Yule (she/her), PhD Researcher & Tutor, University of Edinburgh

17.00 Closing Remarks and Prize Winners Announcements

17.15 Close of Conference

Virtual Presenter