



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

Monday 3 July 6.30pm – 9pm BST

Ice-Breaker Event, University of Reading

Tuesday 4 July

08.30 Registrations, Refreshments & Ice Breaker

09.00 **Welcome and Opening Address**
Prof Liz Bentley, CEO, Royal Meteorological Society

09.10 **Malcolm Walker Presentation**

09.40 Move into Parallel Oral Sessions

	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
	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

	Session 3 – Data Science Chair: Alex Chamberlain-Clay, Student Conference Committee Member	Session 4 – Air Quality and 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	<i>Air Pollution in the United Kingdom*</i>
	Nathan Creaser (he/him), Scientific Software Engineer, Met Office	Dimitra Gkouzouli (she/her), Research Lead, Six Degrees Edinburgh & Fenja Kroos (she/her), Researcher, 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:

Ayesha Tandom, Climate Brief

Craig Poku, Datasparq

Hannah Findley, Met Office

15.35 Refreshment Break

16.05 Parallel Oral Sessions

	Session 5 – Tropics Chair: Fran Morris, Student Conference Committee Member	Session 6 – Modelling Chair: Dan Skinner, Student Conference Committee Members
16.00	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
16.15	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
16.30	Evaluation of Extreme Weather Events in the Tropics Using ECMWF Forecast-Model Outputs	Stochastic Data Adapted AMOC Box Models
	Olivia Vashti Ayim (she/her), PhD Candidate, University of Oxford	Ruth Chapman (she/her), Phd Researcher, University of Exeter and Met Office
16.45	Sub-Saharan African Precipitation Responses to Aerosol Forcing	Dynamically Calculated Mixing Lengths in Shallow Cumulus Convection
	Catherine Toolan (she/her), PhD Student, University of Reading	Alanna Power (she/her), PhD Student, University of Reading

17.00 Poster Session 1

18.15 Close of day 1

19.30 Evening Social in Central Reading



Wednesday 5 July

09.00 Welcome Back

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 **Title TBC**

Speaker TBC

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*