RMetS Early Career & Student Conference Programme
1 & 3 July 2024

Monday 1 July

12.00   Registrations, Refreshments & Ice Breaker

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

13.15   **Malcolm Walker Presentation**

Session 1: Weather and Climate Predictions

13.45   **Decadal Predictability of Surface Variables over Europe and Relevance for the Energy Sector**
Ben Hutchins (he/him), PhD Student, Department of Meteorology, University of Reading

14.00   **Exploring Physics-Dynamics Coupling with Moist Shallow Water Models**
Nell Hartney (she/her), PhD Student, University of Exeter

14.15   **Seasonal Forecasting of the European North-West Shelf Seas: Limits of winter and summer sea surface temperature predictability**
Jamie Atkins (he/him), PhD Student, University of Exeter

14.30   **Wave and Wind Ensemble Forecasting with a Regional Coupled System**
Vivian Fraser-Leonhardt, Industrial Placement - Regional Coupled Modelling, Met Office

14.45   Refreshment and Networking Break

Session 2: Applications

15.30   **How does the Met Office Knowledge Integration Team get Climate Science into Government?**
Rebecca Sawyer (she/her), Applied Scientist (Foundation Scientist), Met Office

15.45   **Modelling the Carbon Sequestration of the UK Afforestation under Future Climate using JULES-RED**
Dr Hsi-Kai Chou, Research Associate, University of Exeter

16.00   **Global Distribution of "Dark Doldrums"**
Tabea Rahm (she/her), Doctoral Researcher, GEOMAR Helmholtz Centre for Ocean Research Kiel

16.15   **An Examination of Climate Sensitive Diseases - A Case of Malaria In Ghana**
Ekuwa Adade (she/her), Doctoral Researcher, Brunel University London

16.30   **How Will Changes in Global Climate Impact on British Lifestyles?**
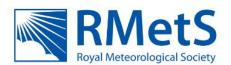Lottie Woods (she/her), Foundation Climate Scientist, Met Office

16.45 **Influence of Weather Regimes on European Winter Energy Demand and Renewable Generation**
Emmanuel Rouges (he/him), Postdoctoral Research Assistant, Department of Meteorology, University of Reading

17.00 Launch of Photographic Competition

17.10 Opportunity to view the Posters

18.00 Close of Day 1

18.45 Coaches to the Evening Activities

19.15 Evening Dinner and Quiz

22.00 Close of Evening Event

Tuesday 2 July

09.00 Welcome Day 2

09.10 **Keynote Session: Miscommunication**
Met Office and Royal Meteorological Society

10.40 Refreshment and Networking Break

Session 3: Atmospheric Dynamics

11.15 **Clouds and Seasonality on Terrestrial Planets with Varying Rotation Rates**
Daniel A. Williams (he/him), PhD Student, University of Exeter

11.30 **Exploring the Dynamics of UK Summertime Convective Storms: Insights from the Wessex Convection Experiment (WesCon) 2023**
Aoife McQuaid (she/her), Convective Storm Research Industrial Placement, Met Office, University of Edinburgh

11.45 **Stalling Storms in The Southwest Indian Ocean Basin and its Implications on Rainfall**
Dan Green (he/him), Post Graduate Teacher & PhD Student, University of Bristol

12.00 **Tracking Mesoscale Convective Systems Over South America in Convective-Permitting Model Simulations**
Harriet Gilmour (she/her), PhD Student, University of Exeter

12.15 **ENSO Teleconnections to the NAE Sector during Boreal Early-Winter in CMIP5/CMIP6 Models: Impacts of models' systematic errors**
Davide Sabatani (he/him), PhD Student, University of Bologna and Centro euro-Mediterraneo sui Cambiamenti Climatici (CMCC)

12.30 **The AMV Teleconnection to the Pacific**
Arundhati Kalyan (she/her), Postgraduate Researcher/PhD Student, School of Earth and Environment, University of Leeds

12.45 Lunch

Session 4: Atmospheric Chemistry

14.00 **Evaluating Disparities in Air Pollution as a Function of Ethnicity, Deprivation and Sectoral Emissions in England**
Nathan Gray (he/him), PhD Student, University of York

14.15 **Gas Ash-Particle Separation and the Role of Aggregation in Volcanic Plumes**
Jack Campbell (he/him), PhD Student, University of Cambridge

14.30 **COSMO-MUSCAT Simulated Dust Outbreak of March 2010 over West Africa and its Impact on Climatic Parameter**
Michael Chukwuemeka Ochei, Lecturing, Federal University of Technology, Akure

14.45 **Title TBC**
Speaker tbc

15.00 Refreshments

15.40 **LF Richardson Award Lecture**

16.20 **Keynote Talk**
Olga Buskin (she/her), Head of People, Culture and Sustainability, OpenWeather

16.50 OpenWeather Challenge Winner Announcement

17.10 Poster Session 1

18.30 Networking event at The Met Office

20.00 Close of Day 2

Wednesday 3 July

09.00 Welcome Back

Session 5: AI and Statistics

09.05 **Using Unsupervised Machine Learning to Understand Drought Severity in Urban Vegetation**
Naya Desai (she/her), PhD Student, University of Birmingham

09.20 **Emulation of Sub-Grid-Scale Atmospheric Turbulence in a Large Eddy Simulation using Deep Learning**
Sambit Kumar Panda (he/him), PhD Student, Department of Computer Science, University of Reading

09.35 **Physics-Informed Diffusion Model and Sampling for Global Weather Forecasting**
Sanghoon Choi, MSc Student, The University of Manchester

09.50 **A Graph Neural Network Emulator for Greenhouse Gas Emissions Inference**
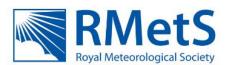Elena Fillola Mayoral, PhD Student, University of Bristol

10.05 Correlation of Wind and Precipitation Annual Aggregate Severity of European Cyclones
Toby P. Jones (he/him), PhD Student, University of Exeter

10.20 Refreshments

Session 6: Observations

10.55 The Permanent Service for Mean Sea Level's (PSMSL) Global Mean Sea Level Dataset
Chanmi Kim, Data Manager, National Oceanography Centre

11.10 Improving Hydrological Forecasts Along the Nile: An in-depth analysis of the different satellite precipitation products over Uganda for the period 2018-2022
Douglas Mulangwa (he/him), PhD Researcher; Hydrologist, University of Reading, UK and Assessment, Directorate of Water Resources Management, Ministry of Water and Environment, Uganda

11.25 Automated Weather Impact Data Collection
Lucy Seabourne (she/her), Weather Impacts Industrial Placement, Met Office

11.40 Indonesia's Extreme Rainfall: A sub-daily, observational analysis of spatio-temporal patterns
Imaduddin S. Faalih (he/him), PhD Student, Newcastle University

11.55 Poster Session 2

13.15 Lunch

Session 7: Hazards

14.30 Emerging River Flow and Hydrological Drought Trends in Great Britain
Wilson Chan (he/him), Hydroclimatologist, UK Centre for Ecology & Hydrology

14.45 Transitions in UK Hydrological Extremes
Rachael Armitage (she/her), Hydrological Analyst, UK Centre for Ecology & Hydrology (UKCEH)

15.00 Impacts of the Urban Heat Island Effect in Paris Over Recent Decades
Beatriz Fernández-Duque, Postdoctoral Researcher, Consejo Superior de Investigaciones Científicas (Instituto Pirenaico de Ecología, IPE-CSIC)

15.15 Characterising Cold-Wet and Cold-Dry Compound Events in the United Kingdom
Kanzis Mattu (she/her), PhD Researcher, University of Strathclyde

15.30 Convective Environment of Severe Hail and Tornado Producing Storms in the United Kingdom
Henry Wells (he/him), Doctoral Researcher, Department of Geography and Environment, Loughborough University

15.45 Closing Remarks and Prize Winners Announcements

16.00 Close of Conference