



RMetsS 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 and Met Office
- 13.15 **Malcolm Walker Award Winning Lecture:
How do MJO Teleconnections Vary in Time?**
Daniel Skinner (he/him), Senior Research Associate, Climate Research Unit,
University of East Anglia
- Session 1: Weather and Climate Predictions
Chair: Daniel Williams, University of Exeter and Conference Committee Member
- 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
Chair: Kanzis Mattu, University of Strathclyde and Conference Committee Co-Chair
- 15.30 **How does the Met Office Knowledge Integration Team get Climate Science into
Government?**
Rebecca Sawyer (she/her), Foundation Climate Scientist, The 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 **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

16.45 Launch of Photographic Competition

17.00 Opportunity to view the Posters or Free time

17.45 Close of Day 1

18.30 Coaches to the Evening Activities

19.00 Evening Dinner and Quiz at the Rougemont Hotel, Exeter

22.30 Close of Evening Event

Tuesday 2 July

09.00 **Welcome Day 2**

Simon Brown, Services Director, Met Office

Session 3: Atmospheric Dynamics

Chair: Regan Mudhar, University of Exeter and Conference Committee Member

09.10 **Clouds and Seasonality on Terrestrial Planets with Varying Rotation Rates**

Daniel A. Williams (he/him), PhD Student, University of Exeter

09.25 **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

09.40 **Quantifying Risk of a Noise-Induced AMOC Collapse**

Ruth Chapman (she/her), PhD Researcher, University of Exeter and Met Office

09.55 **Tracking Mesoscale Convective Systems Over South America in Convective-Permitting Model Simulations**

Harriet Gilmour (she/her), PhD Student, University of Exeter

10.10 **Idealised Modelling of Vertical Transport by Convective overshoots in the Tropical Tropopause Layer**

Charles Powell (he/him), PhD Student, Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge

10.25 Refreshment and Networking Break

11.20 **Panel Discussion: Opportunities and Challenges of Science Communication Panel Session**

Prof Liz Bentley (she/her), Chief Executive, Royal Meteorological Society
Tristan Cann, Postdoctoral Research Fellow, University of Exeter
Kanzis Mattu (she/her), PhD Researcher, University of Strathclyde



Charlie Powell, Weather Presenter, ITV West Country
Kit Marie Rackley (she/they), Climate Ambassadors and Schools Climate Hub
Regional Coordinator (East of England), Tyndall Centre for Climate Change
Research, University of East Anglia

12.20 Lunch

Session 4: Atmospheric Chemistry

Chair: Eve Grant, University of York and Conference Committee Member

13.40 **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

13.55 **Gas Ash-Particle Separation and the Role of Aggregation in Volcanic Plumes**

Jack Campbell (he/him), PhD Student, University of Cambridge

14.10 **Novel Approaches to Observationally Constrain Aerosol Effects in Climate Models**

Léa Prévost (she/her), Postgraduate Researcher, University of Leeds

14.25 **Has Imposing Stricter Limits on Marine Fuels Inadvertently Boosted Global Warming?**

George Jordan (he/him), Foundation Scientist, Met Office

14.40 Refreshments

15.20 **L F Richardson Award Winner 2023 Lecture**

**Indian Summer Monsoon and East African October to December Rainy Season-
Major Drivers and Improved Predictability**

Dr Indrani Roy (she/her), Honorary Associate Professor, Earth Science Department,
University College London

15.55 **Keynote Talk: How OpenWeather Inspire Talents to Create Innovative and Sustainable Projects**

Olga Buskin (she/her), Head of People, Culture and Sustainability, OpenWeather
Dannil Mintc, Science Community Lead, OpenWeather

16.25 OpenWeather Challenge Winner Announcement

16.45 Poster Session 1 and Early Careers of Colour Network Launch

18.15 Networking event at The Met Office

20.00 Close of Day 2



Wednesday 3 July

09.00 Welcome Back

Session 5: AI and Statistics

Chair: Nathan Creaser, Met Office and Conference Committee Member

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 **Machine Learning Sub-Grid Variability to Perturb Parameterisations**

Helena Reid (she/her), Modelling Scientist in Machine Learning, Stochastic Physics & Ensembles, Met Office

09.50 **A Graph Neural Network Emulator for Greenhouse Gas Emissions Inference**

Elena Mayoral (she/her), 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

Chair: Ashar Aslam, University of Leeds and Conference Committee Co-Chair

10.55 **Towards a Blended Satellite-Station Sunshine Duration Dataset for the UK**

Josh Blannin (he/him), Foundation Climate Observation Scientist, Met Office

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

Chair: Toby Jones, University of Exeter and Conference Committee Member

- 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 **Statistical and Deep Learning Approaches to Identifying Dry Intrusion Outflows**
Owain Harris (he/him), PhD Student, University of Exeter
- 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