



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Aviation Climate Impacts, Faculty of Environment



**Salary: Grade 7 (£41,064 – £48,822 p.a. depending on experience)**

**Reporting to: Dr Alex Rap**

**Reference: ENVEE1852**

**Fixed term for 18 months (due to external funding)**

**Location: University of Leeds**

**We are open to discussing flexible and part-time working arrangements**

# Research Fellow in Aviation Climate Impacts, Faculty of Environment

## Overview of the Role

You will join a team of climate and atmospheric scientists at the University of Leeds to work on the Natural Environment Research Council (NERC) funded project Modelling Aviation Global climate Impacts from Contrails and Aerosols (MAGICA). You will work with Dr Alex Rap, Professor Dan Marsh, Dr Wuhu Feng, and our collaborators from University College London to develop the Community Earth System Model (CESM) contrail cirrus scheme, perform climate simulations to quantify the aviation aerosol and contrail cirrus effective radiative forcings, and estimate aviation climate metrics using the Finite amplitude Impulse Response (FaIR) climate model emulator. You will also collaborate closely with the other researchers involved in the project, as well as with our project partners: Airbus, Aviation Environment Federation, British Airways, International Air Transport Association, Jet2.com, Met Office, and Rolls-Royce.

## Main duties and responsibilities

- Working with and in support of Dr Alex Rap to ensure the objectives and deliverables of the MAGICA project are successfully met;
- Developing the Community Earth System Model (CESM) to incorporate aviation aerosol emissions;
- Performing CESM climate model simulations to quantify aviation aerosol and contrail cirrus effective radiative forcings;
- Estimating various aviation climate metrics using the Finite amplitude Impulse Response (FaIR) climate model emulator;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Contributing to the training of both undergraduate and postgraduate students, where appropriate, including assisting with the supervision of projects in areas relevant to the project;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the research culture of the School of Earth and Environment, where appropriate.





These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

## Qualifications and skills

### Essential

- A PhD (or near completion) in Atmospheric Science or a closely related discipline;
- Excellent knowledge of atmospheric and climate modelling;
- Experience of using the Community Earth System Model;
- Experience of modelling aviation climate impacts;
- A strong background in scientific programming (e.g. Python, Fortran);
- A proven track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication skills, including presentation skills;
- A proven ability to work well both individually and in a team.

### Desirable

- Experience of developing parameterisations for global atmospheric models.

## How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

## Contact information

To explore the post further or for any queries you may have, please contact:  
[Dr Alex Rap](#), Associate Professor in Atmospheric Science, [a.rap@leeds.ac.uk](mailto:a.rap@leeds.ac.uk)

## Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are



an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Please note that due to Home Office visa requirements, this role may only be suitable for first-time Skilled Worker visa applicants if they are eligible for salary concessions. For more information please visit: [www.gov.uk/skilled-worker-visa](https://www.gov.uk/skilled-worker-visa)

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: <https://www.gov.uk/global-talent>

Find out more about the [Faculty of Environment](#).

Find out more about the [School of Earth and Environment](#).

Find out more about our [Research and associated facilities](#).

Find out more about Find out more about [Equality in the Faculty](#)

### **Working at Leeds**

We are a campus-based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.

### **Our University**

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian, people who belong to a minority ethnic community; people who identify as LGBT+; and disabled people. Candidates will always be selected based on merit and ability.



The Faculty of Environment has received a prestigious Athena SWAN silver award from [Advance HE](#), the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

### **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by [emailing HR via hr@leeds.ac.uk](mailto:hr@leeds.ac.uk).

## **Criminal Record Information**

### **Rehabilitation of Offenders Act 1974**

A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information page.

