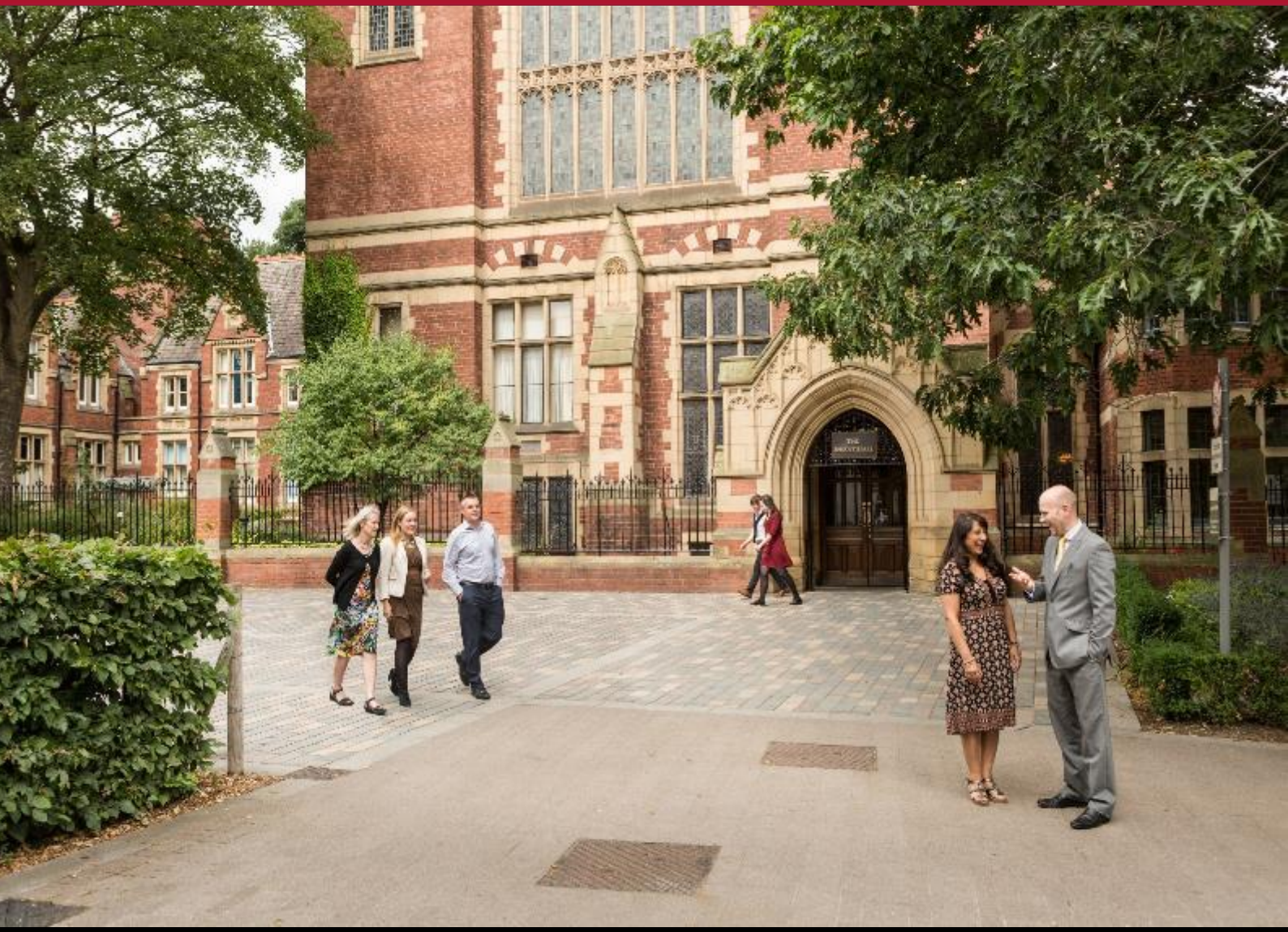
UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Radar Hydrometeorology, National Centre for Atmospheric Science



Salary: Grade 7 (£33,199 – £39,609 p.a. pro-rata)

Reference: ENVEE1281

Closing date: 23 October 2018

Fixed-term for 2 years, 80% FTE

We will consider job share and flexible working arrangements

Research Fellow in Radar Hydrometeorology, National Centre for Atmospheric Science

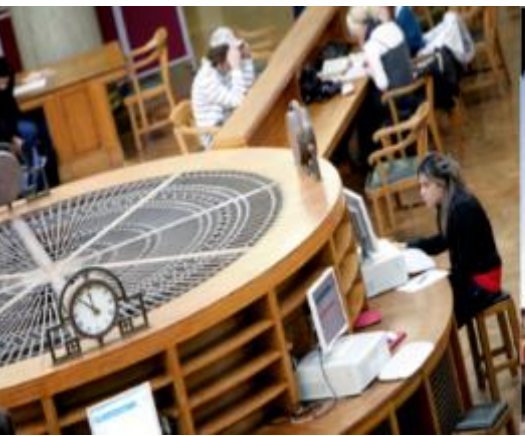
Are you an ambitious researcher looking for your next challenge? Do you have an established background in radar hydrometeorology? Do you want to further your career in one of the UKs leading research-intensive Universities?

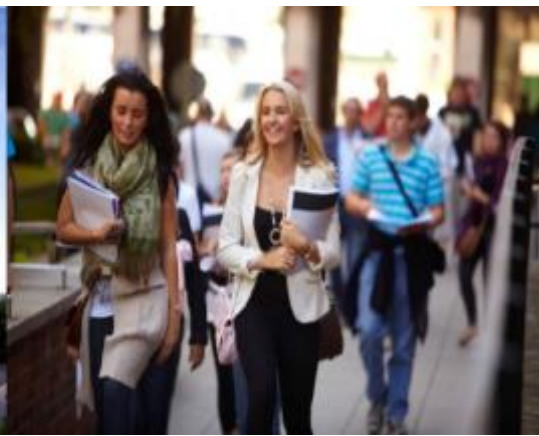
The National Centre for Atmospheric Science's (NCAS) Atmospheric Physics programme and the University of Leeds operate and investigate observations from several state-of-the-art polarimetric Doppler weather radars as part of NCAS's responsibility to provide National Capability in observing atmospheric phenomenon. We seek a motivated and ambitious atmospheric scientist to join the and NCAS's weather radar group at the University of Leeds as a Research Fellow in Radar Hydrometeorology to lead the cutting-edge analysis of polarimetric radar observations.

What does the role entail?

As a Research Fellow, your main duties will include:

- Developing and improving cutting-edge polarimetric algorithms used to derive quantitative precipitation estimates (QPEs) from UK-based radars so that the impact of precipitation events may be assessed more accurately using past and future observations;
- Leading the analysis of the radar observations collected as part of the Radar Applications in Northern-England (RAiN-E) campaign (Sept. 2018-Sept. 2019). RAiN-E is a collaborative project between the Environment Agency, University of Leeds and NCAS which aims to understand the benefits that a weather radar would have if placed with a gap in the Met Office network over Cumbria. This will also include the delivery of QPEs and other further derived hydrological products that will be retrieved from the radar observations;
- Leading the delivery and analysis of hydrometeorological data collected as part of the Terra Maris campaign that will take place in Indonesia from December 2019 to Feb 2020;
- Creating and implementing a software analysis development plan that will effectively evolve and sustain the NCAS Radar Analysis Software Toolkit and the use of JASMIN for weather radar data analysis (including Git repositories). This includes utilising software that takes advantage of data files that are CF





compliant and readily used by common analysis packages. As well as the creation and maintenance all necessary documentation to effectively facilitate the toolkit to the wider community;

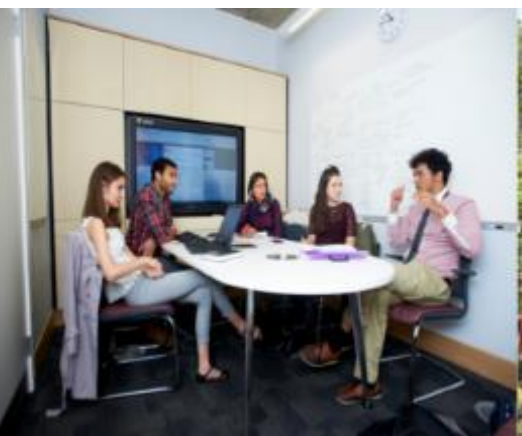
- Generating and pursuing independent and original research ideas in the appropriate subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- 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 training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the radar hydrometeorology;
- Active participation in regular NCAS meetings;
- Feedback of observational performance derived from analysis to Instrument Scientists in order to help improve instrument facilities;
- Utilize NCAS-wide administrative and business procedures and practices.

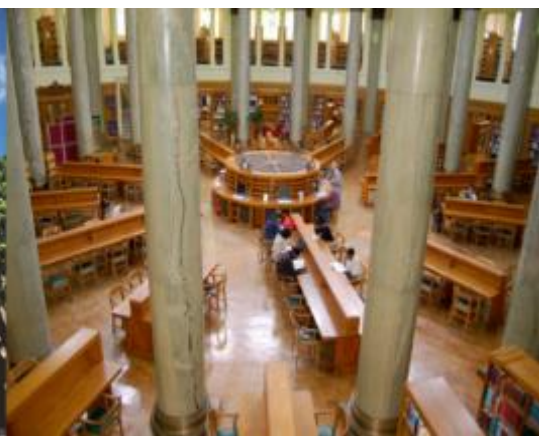
These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A PhD (or close to obtaining) in radar hydrometeorology, radar meteorology or a closely allied discipline;
- Track-record demonstrating a proficient knowledge of polarimetric and Doppler radar analysis;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;





- A proven track record of peer-reviewed publications discussing polarimetric radar data analysis;
- Excellent written and verbal communication skills including presentation skills (typified by presentations at international conferences related to the discipline of radar hydrometeorology);
- Proven ability to manage competing demands effectively, responsibly and without close support;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development;
- Ability and willingness to travel nationally (including between NCAS sites) and internationally as needed to fulfil the responsibilities of the post.

You may also have:

- Experience in deriving quantitative precipitation estimates;
- Proven ties with the wider weather radar community;
- Proven skills in the use of Python to analyse large datasets;
- Experience in the use of data manipulation and visualization packages widely used in the weather radar community;
- Proven ability to create, organise and maintain technical documentation;
- Experience with project management software (such as RedMine) and software development tools (such as Git or SVN).

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 Ryan Neely, Lecturer of Observational Atmospheric Science
Tel: +44 (0)113 343 6417
Email: ryan.neely@ncas.ac.uk

Additional information

Find out more about our MSc programmes.

Find out more about the Faculty of Environment.

Find out more about our School.

A diverse workforce
Find out more about Athena Swan in the Faculty.

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@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.