



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

University Academic Fellow in Bioaerosol Science, Faculties of Environment and Engineering & Physical Sciences



**Salary: Grade 8 (£47,874 – £56,921 p.a. depending on experience)**

**Reporting to: Professor Ben Murray**

**Reference: ENVEE1795**

**Location: University of Leeds (with scope for hybrid working)**

**We are open to discussing flexible working arrangements.**

# University Academic Fellow in Bioaerosol Science, Faculties of Environment and Engineering & Physical Sciences

## Overview of the Role

**Are you an academic with proven abilities to carry out research and teaching in bioaerosol science? Do you have an excellent research record and proven success obtaining funding? Are you passionate about delivering an exceptional student experience in a research-intensive Russell Group University? Do you aspire to become an academic leader in your field?**

You will develop an independent research programme in an aspect of bioaerosol science aligned to the interests of the schools of Earth and Environment and Civil Engineering. You will play a key role in engaging with a new cross-institution centre 'Future Biodetection Technologies Hub' funded by Research England in collaboration with Hertfordshire, Cranfield, and Manchester Universities.

With a vision and drive to develop a prestigious internationally competitive research portfolio as well as a passion for undertaking research-led teaching you will make a significant impact on the performance, stature and profile of research and student education at The University of Leeds.

This University Academic Fellowship (UAF) is for future academic leaders providing an excellent opportunity to establish an academic career at a research-intensive university. You will embark on a structured five-year development programme, successful completion of which will lead to your appointment as a grade 9 Associate Professor.

With a PhD (or equivalent experience) in a relevant field, you will have significant proven research experience within bioaerosol science, with a developing record of internationally excellent publications. You will have the potential and commitment to undertake high quality and innovative teaching, the ability to obtain competitive research funding and a clear and compelling academic plan that will deliver academic and more general impact at an international level.





Bioaerosols are airborne particles of biological origin, comprising bacteria, viruses, fungi, pollen, toxins and macromolecules. They are among the atmosphere's most ubiquitous and complex components, but the extent and nature of their impacts are poorly understood. They can spread disease to crops, plants, trees and animals. Many are inhalable to humans, with the smallest particles able to penetrate deep into the respiratory system, making them a primary health concern in terms of infectious disease and allergens, and a security threat in relation to biowarfare agents. They can change the composition of clouds, influencing the hydrological cycle and climate. And they are present in indoor environments with the microbiome of buildings determined by a complex combination of outdoor air, building design, physical conditions and human activities. Technology to detect, in real time, the presence and identity of bioaerosols has yet to reach maturity, and there is no widespread use of monitoring systems to manage transmission. Knowledge gaps in the characterisation of bioaerosols in outdoor and indoor environments limit our understanding of their impact on public health (allergenicity, toxicity, infectivity), climate (absorbing/scattering light and as nuclei for ice crystals and cloud droplets) and ecosystems (nutrient transport and dispersal of reproductive units from plants and microbes).

Our vision: The Future Biodetection Technologies Research Hub – will address the technological leaps required to build safer, healthier, more resilient environments and deepen our understanding of our changing climate. It is built around the expansion of the sector-leading capabilities in bioaerosol detection systems, instrumentation, measuring and monitoring in outdoor and indoor environments.

At Leeds this includes an Environmental Bioaerosol Research Group focusing on dispersion and exposure in indoor and outdoor air, bridging the School of Civil Engineering and the School of Earth and Environment, and underpinned by a new EPSRC Chamber for Environmental Control of Airborne Microorganisms (CECAM) facility.

As part of the Research England bid there is a budget for experiments, travel, and two PhD students that the UAF will be partly responsible for.



## Main duties and responsibilities

- Building a research programme in an area of Bioaerosol Science that bridges the Schools of Earth and Environment and Civil Engineering;
- Capitalising on recent investments in bioaerosol Science in Leeds, including the new CECAM bioaerosol chamber in Civil Engineering, a Rapid-e bioaerosol detector; an aerosol chamber and ice nucleation instrumentation in Earth and Environment;
- Pursuing a programme of individual and collaborative research, resulting in high quality publications and a national and international profile and engaging with industry as appropriate to attract and co-ordinate major initiatives;
- Promoting the integration of your own research area with other research interests, in the Schools, Faculties and University;
- Attracting research income on an individual and collaborative basis according to an agreed plan, as appropriate to the field or discipline, to support high quality research activity and research programmes/projects;
- Developing a strategy to ensure that your research has the potential for impact beyond the immediate subject area and/or beyond academia;
- Undertaking research-led teaching at different levels, with engagement in continual improvement in response to student and other feedback;
- Contributing to the design, development and planning of modules and policy within the subject area as required;
- Working in line with the University's Partnership Agreement and with our students as members of a learning community to provide outstanding education and an excellent student experience;
- Contributing to the management of the schools by taking on appropriate leadership, management and administrative responsibility;
- Leading academic initiatives and projects in research and student education which facilitate Schools, Faculties and/or University development;
- Participating in the recruitment, management and development of staff as well as acting as a mentor to less experienced colleagues;
- Contributing to the development of the discipline or research area, e.g. through organisation of conferences or membership of key bodies setting the strategic direction of the area;
- Contributing to the development and achievement of University, faculty and school strategy within the context of an international, research-led university;



- Becoming a specialist in the field, developing and maintaining an external profile as appropriate to the discipline;
- Maintaining your own continuing professional development.

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 equivalent experience) in a field relevant to Bioaerosol Science;
- Evidence of a clear and compelling academic plan that is consistent with the ethos of the Future Bioaerosol Detection Hub and will deliver academic and more general impact at an international level, in order to meet the criteria for progression to Associate Professor within the five-year probationary period (please attach a statement of no more than 2 sides of A4 to your application);
- Significant proven research experience within the bioaerosol science with a developing record of internationally excellent publications;
- A track record of contributing to securing competitive research funding;
- Experience of presenting at national and international conferences and/or symposia;
- Evidence of building strong working relationships within and, as appropriate, beyond your own discipline and to contribute to successful projects and collaborations;
- Experience of engaging with external collaborators in research, innovation or impact;
- The potential and commitment to undertake high quality and innovative teaching and gain a higher education teaching qualification or award;
- Experience of delivering and engaging with student education where opportunities have existed;
- A high level of interpersonal and communication skills, and a strong ability to communicate effectively in writing and verbally with students, academic and external audiences;
- The ability to lead projects and organise, balance and prioritise work commitments.





## Desirable

- Success in gaining significant independent research funding;
- Experience of leading on projects and initiatives, including managing resources and conflicting priorities within challenging circumstances;
- A growing track record of successful and innovative teaching at both undergraduate and/or postgraduate level;
- Experience of involvement in postgraduate research supervision;
- Experience of working collaboratively with external partner organisations;
- Experience of mentoring less experienced colleagues.

## **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.

Please attach the following documents to your application in Word or PDF format:

- A CV;
- A list of publications;
- A statement detailing your research and academic plan (no more than 2 sides of A4, as requested in the person specification). As part of the selection process, account will be taken in relation to your research and academic plan, in particular the impact of this and the strategic fit to the University.

## **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 this post may be suitable for sponsorship under the Skilled Worker visa route, but first-time applicants might need to qualify for salary concessions. For more information please visit: [www.gov.uk/skilled-worker-visa](http://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](#)

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#)

Find out more about [Equality and Inclusion](#) 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.

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 on our [Accessibility](#) information page or by getting in touch with us at [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.

