



UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Plant Fluidics,
Faculty of Engineering and Physical Sciences



Salary: Grade 7 (£39,105 – £46,485 p.a.)

Reference: EPSME1182

Location: Leeds campus

Closing date: Thursday 24 October 2024

Fixed-term for 5 months, to start on 01 November 2024

We are open to discussing flexible working arrangements

Research Fellow in Plant Fluidics, Institute of Thermofluids, School of Mechanical Engineering.

Do you have a background crossing the disciplines of mechanical engineering and plant science? Do you have strong design skills for creating surfaces and structures that can be applied to studying plant growth? Do you want to further your career in one of the UK's leading research-intensive universities?

This is a short-term position to evaluate potential designs to study the interaction of plant and mycorrhizal fungi. The symbiotic relationship between these is responsible for an asymmetric transfer of minerals from the soil to the plant and transfer of energy from the plant to the fungi. This is important in many crops including cultivated species.

The role will use your skills in designing and creating microfluidic devices to allow a detailed understanding of this interaction to be elucidated. You will have a background spanning engineering and plant science and be able to demonstrate innovative approaches to solving problems. You will have good experience in creating fluidic devices and evaluating their performance.

This post will see you working with partners who are expert in plant sciences at the University of Leeds, the University of Sheffield and University College London, together with industry. You will use your skills in interdisciplinary research to communicate your findings to researchers with a range of backgrounds.



What does the role entail?

As a Research Fellow, your main duties will include:

- Leading the design and construction of fluidic devices within a design cycle approach for elucidating the relationship between plant and mycorrhizal fungi;
- Collaborating closely with technicians in plant science to test and evaluate device performance;
- Collation of data and interpretation of findings, with a view to presenting these to scientific collaborators from different disciplines;
- Presenting work to industrial and academic partners, and reviewing the direction of the research following feedback;
- 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 research;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals and by presentation at national and international meetings;
- Working independently and as part of a larger team of researchers, both internally and externally, to develop new research links and collaborations and engage in knowledge transfer activities where appropriate;
- 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 project.

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 have submitted your thesis before taking up the role) in Mechanical Engineering or a closely allied discipline;
- A strong background in the design and manufacture of microfluidic and polymer based devices, using a range of techniques, for studying biological processes;
- Experience of handling and working with plants and mycorrhizal fungi in fluidic devices;
- Skills to collate orthogonal data sets and the ability to draw conclusions and elicit discussion from findings;
- An innovative mindset around your research demonstrating the ability to establish new approaches and techniques;
- The ability to work with scientists and researchers with a range of backgrounds and to be able to communicate effectively within interdisciplinary teams;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- Good time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- A developing track record of peer-reviewed publications in international journals;
- A proven ability to work well both independently and in a team;
- A strong commitment to your own continuous professional development.

You may also have:

- Experience of pursuing external funding to support research.

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:

[Nikil Kapur](#), Professor of Applied Fluid Mechanics

Tel: +44 (0)113 343 2152

Email: N.Kapur@leeds.ac.uk

Additional information

Please note: If you are not a British or Irish citizen, 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.

Salary Requirements of the Skilled Worker Visa Route

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 [the Government's Skilled Worker visa page](#).

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa](#).

Faculty and School Information

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

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 Engineering and Physical Sciences 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 and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.



The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [Silver](#) Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our [equality and inclusion webpage](#) provides more information.

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.

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.

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.

