UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Bioprocess Modelling and Design,

Faculty of Engineering and Physical Sciences

Salary: Grade 7 (£38,205 – £45,585 p.a.)

Reference: EPSCV1152

Closing date: Thursday 26 September 2024

Fixed term until 31 March 2025

We are open to discussing flexible working arrangements

Research Fellow in Bioprocess Modelling and Design, School of Civil Engineering, BioResource Systems Research Group.

Are you an earlier career researcher looking for your next challenge in an academic career? Do you have a background in biological processes modelling and experimental design? Do you want to further your career in one of the UK's leading Universities and be part of a multidisciplinary team delivering real-world solutions?

As a Research Fellow in Bioprocess Modelling and Design at Leeds, you will be part of a world-leading Research Group focused on fundamental and applied research activities aimed at supporting the development of a circular bioeconomy approach for sustainable waste management, covering projects on nutrient control and recovery from wastewater, bioenergy generation from organic waste, bioprocesses for carbon capture, assessment and control of greenhouse gas (GHG) emissions from waste management facilities, and developing technologies for microalgal biomass cultivation and valorisation. In particular, you will be part of a multidisciplinary consortium working closely with industry partners and UK government funders on the delivery of bioprocesses for hydrogen production from organic waste, coupled with carbon capture and sequestration (CCS).

We are particularly looking for highly motivated applicants with ability to consolidate and further develop their technical, scientific, and transferable skills, working in a supportive environment to conduct fundamental and applied research on process modelling and design of biological processes for energy production from organic waste streams and biological carbon capture.

You will have a PhD in Engineering or a closely allied discipline. You will also have a strong lab-based background in research and development in biotechnology and waste management, including the use of analytical, modelling and microbiology techniques and expertise in biochemical process modelling.

What does the role entail?

As a Research Fellow, your main duties will include:

- Contributing to experimental design and operation of biological processes at lab and pilot scale for biohydrogen production, nutrient uptake from waste streams, and carbon capture;
- Process lab data to calculate kinetics and model biological processes to trace the fate of carbon, nitrogen and phosphorus in waste management systems;
- Collating and analysing data to inform the direction and progression of the research project;
- 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 Engineering or a closely allied discipline;
- A strong background in biological processes for waste management;
- Experience in designing and conducting experimental work in the lab;
- Ability to process data to calculate the kinetics of biological processes including dark fermentation, anaerobic digestion and microalgae cultivation;
- Expertise in developing numerical models to predict the performance of biological processes for wastewater treatment using lab data;
- 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;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- 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:

Dr Miller Alonso Camargo-Valero, Associate Professor of BioResource Systems
Tel: +44 (0)113 343 1580
Email: M.A.Camargo-Valero@leeds.ac.uk

Additional information

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 Civil Engineering.

A diverse workforce
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 on our Accessibility information page or by getting in touch with us at 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.

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: 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.