UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in BioResource Systems, Faculty of Engineering

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

Reference: ENGCV1103

Closing date: Sunday 21 July 2019

Fixed-term for up to two years, available from 1 August 2019, to end by 31 June 2021

We will consider flexible working arrangements

Research Fellow in BioResource Systems
School of Civil Engineering

Are you an enthusiastic and experienced researcher in resource efficiency systems with an interest in transforming current organic waste management in developing countries? Are you looking for a new and exciting challenge as part of a world class environmental engineering team? Do you want to develop new approaches to organic waste management which will change the lives of millions of people?

As part of the £1.7m project "Bioenergy, Fertiliser and Clean Water From Invasive Aquatic Macrophytes **(**BEFWAM)", which is funded by BBSRC UKRI, you will develop new knowledge about the valorisation of invasive macrophytes such as water hyacinth (*Eichhornia crassipes*) to maximise the production of biogas, clean water and recovery of nutrients in low-income communities.

Holding a PhD (or close to completion) in Engineering or with equivalent field-research experience, you will join a multidisciplinary research team to develop new knowledge about wet biomass processing using dark fermentation, anaerobic digestion and innovative biological processes. Your role will involve extensive lab work and travel in Africa and South Asia, which is likely to involve up to four periods out of the UK in each year, each for between one to two weeks

The post will be jointly supervised between Dr Miller Alonso Camargo-Valero, Dr Louise Fletcher (Civil Engineering) and Dr Andrew Ross (Chemical and Process Engineering).

What does the role entail?

As a Research Fellow, your main duties will include:

- Conducting exprimental research on pre-treatment options for improving the biodegradability of wet lignocellulosic biomass;
- Optimising biological process operation and design for hydrogen and methane production from wet biomass and other organic wastes;
- Supporting analytical work conducted by other members of the team;

- 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 UK-Overseas 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 occasional research-led teaching activities and 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 close to completion) in Engineering, or with equivalent field-research experience, and a Masters degree in Environmental Engineering or related discipline;
- A strong background in anaerobic digestion and biological biogas upgrading;
- A proven ability to conduct the characterisation of solid, liquid and gas samples originated from anaerobic digestion;
- Research or academic experience in developing countries, preferably in African countries;
- Willingness to undertake travel in Africa and South Asia and to work with overseas partners;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;


- A proven track record of presenting research outcomes in reputable international conferences and peer-reviewed publications;
- Excellent written and verbal communication skills including presentation skills;
- 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.

You may also have:

- Evidence of working on anaerobic digestion of lignocellulosic material (e.g. water hyacinth);
- Evidence of securing funding to support research;
- Proven experience of the ability to interact with PhD students, Masters students and undergraduates in ways that will enhance the student experience in the School.

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 Director of water@leeds, School of Civil Engineering
Tel: +44 (0)113 3431580
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 and the School of Civil Engineering.

A diverse workforce
The Faculty of Engineering is 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
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.