



**UNIVERSITY OF LEEDS**

## **CANDIDATE BRIEF**

**Research Fellow in Particle and Droplet Characterization,  
Faculty of Engineering & Physical Sciences**



**Salary: Grade 7 (£33,797 – £40,322 p.a.)**

**Reference: EPSPE1008**

**Closing date: 25 February 2020**

**Fixed Term: 6 months**

**We will consider flexible working arrangements**

# **Research Fellow in Particle and Droplet Characterization, School of Chemical and Process Engineering, Faculty of Engineering and Physical Sciences.**

**Do you have expertise in the development and application of advanced characterisation techniques to particles and droplets? Do you want to further your career in one of the UK's leading research intensive Universities?**

We are seeking to appoint a talented and highly motivated Research Fellow to support activities in our group through the characterization of particles and droplets. Our interests span a wide number of areas from particle formation through spray drying, powder flow and additive manufacturing. In particular we are interested in how particle structure controls behaviour and how to manipulate particle structure. The role will support activities across all of these areas, using both customized and standard techniques.

Your research will develop characterization techniques and analysis that help us understand the behaviour of particles during processing or in use. From these we will develop new insights and models which can be used to predict behaviour and guide design in industrial applications.

## **What does the role entail?**

As a Research Fellow, your main duties will include:

- Designing, developing and conducting novel experiments, in consultation with Professor Andrew Bayly;
- Identifying appropriate, and developing new, analysis techniques to quantify the results. From these develop models of the behaviours;
- Application of X-ray, electron microscopy and image-based analysis techniques to powders and droplets;
- Making a significant contribution to the dissemination of research results by publication in leading peer-reviewed journals, and by presentation at consortium meetings and national and international conferences;
- Working independently on a day to day basis, with the support of supervisors as appropriate, setting own direction and goals and taking accountability and





responsibility for the successful, on time, delivery of the allocated project tasks and objectives;

- Contributing to overall project management and development of research objectives, suggesting revisions were necessary, to ensure that project objectives are met;
- Applying initiative, creativity and judgement to find solutions to meet the project aim and generate original research ideas;
- Actively collaborating with academic and industrial partners to maximise the success and impact of current and future research;
- Contributing to the administration, support and development of a world class research group in Leeds;
- Contributing to the support, training and management of Masters, Doctoral and Summer students;
- Building contacts and participating in networks to form relationships for future collaboration. Supporting the development of new and existing national and international collaborations and research proposals;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work.

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 relevant PhD (or close to completion), or equivalent experience, in Engineering, Physics, Mathematics or similar;
- Demonstrated excellence in physical particle characterization and application to spray dried materials and metals;
- Expertise in x-ray micro-tomography of particulate systems;
- Expertise in powder flow measurement;
- Expertise in electron microscopy applied to particulates;
- Proven ability to rapidly establish strong working relationships across an academic organisation;
- A sound theoretical understanding of particle technology;



- Excellent written and verbal communication skills including presentation skills and the ability to communicate effectively with a wide range of stakeholders;
- A proven ability to work well both individually and in a team;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure, and the demonstrated ability to plan and execute research tasks and manage projects;
- Demonstrated ability to set your own direction and goals without close supervision, showing initiative, and creativity;
- A strong commitment to your own continuous professional development.

You may also have:

- Experience working with metal powders;
- Experience with drying of crystalline systems and droplet drying;
- Experience with lab-based spray dryers and droplet drying techniques;
- Colloid and slurry practical and theoretical expertise.

## 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:

**[Professor Andrew Bayly](#), Chair of Chemical Engineering**

**Tel:** +44 (0)113 3430167

**Email:** [A.E.bayly@leeds.ac.uk](mailto:A.E.bayly@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 Chemical and Process Engineering](#)



## **A diverse workforce**

The Schools in the Faculty of Engineering & 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**

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](mailto: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.

