



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Research Fellow in Oral Tribology, School of Food Science and Nutrition**



**Salary: Grade 7 (£32,548 – £38,833 p.a.)**

Due to funding limitations it is unlikely that an appointment will be made above £34,520

**Reference: MAPFS1065**

**Closing date: 12 December 2017**

**Fixed-term for three years**

**We will consider job share/flexible working arrangements**

# Research Fellow in Oral Tribology

## School of Food Science and Nutrition, Faculty of Mathematics and Physical Sciences

**Are you an ambitious researcher looking for your next challenge? Do you have an established background in tribology, surfaces and interfaces? Do you want to further your career in one of the UK's leading research intensive universities?**

We are looking for a European Research Council (ERC) Starting Grant funded Postdoctoral Research Fellow to join a highly dynamic, interdisciplinary team focusing on understanding the mechanisms of lubrication in oral mucosa by designing new bio-relevant surfaces. You will actively collaborate with experts in the School of Mechanical Engineering, and working alongside another postdoctoral Research Fellow, you will be part of a project engineering new elastomeric and/or biocompatible surfaces with variations in surface roughness and surface chemistry for oral tribology experiments.

You will work on designing new approaches to measure friction generated by biopolymeric hydrogels in soft contacts that replicate oral surfaces. This will involve integrating tribology measurements, surface science knowledge, oral physiology, rheology, and material science techniques to establish aqueous lubrication mechanisms in complex human oral mucosa.

You will have a PhD in Engineering, Material Science or a closely allied discipline together with a strong background in bio-tribology and experience in development of advanced original experimental techniques. You will also have a positive approach to collaborative research and the drive to make a significant contribution to make this ground-breaking project a success.

### What does the role entail?

As Research Fellow your main duties will include:

- Designing, planning and conducting a programme of investigation, in consultation with Dr Anwesh Sarkar;
- Generating independent and original research ideas and methods in tribology with an aim to extend the oral tribology research portfolio;



- 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;
- Contributing to the supervision of junior researchers and PhD students and acting as a mentor to less experienced colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and relating such evaluations to your own research;
- Contributing to, and encouraging, a safe working environment.

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 Research Fellow you will have:

- A PhD in Engineering, Material Science or a closely allied discipline;
- Experience in friction measurements using tribometers (e.g. ball-disc, pin-disc);
- Experience in scattering techniques (light, X-ray), small deformation rheology, surface adsorption and imaging techniques;
- Theoretical knowledge of bio-tribology research;
- Experience of software use for fitting data, statistics and data management;
- Experience of combining the results of multiple approaches across different disciplines to develop new insights into a field of study;
- The ability to design, executive and write up research independently;
- 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;
- Good time management and planning skills, with the ability to meet tight deadlines;
- A proven ability to work well both independently and as part of a team;
- The ability to work accurately and carefully;





- A strong commitment to your own continuous professional development.

You may also have:

- Experience in 3D printing, substrate moulding;
- Experience in working with silicones and other elastomers;
- Experience with developing new mechanical measurements;
- Knowledge of contact mechanics;
- Evidence 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 Anwesa Sarkar, Associate Professor of Food Colloids**

Tel: +44 (0)113 343 2748

Email: [A.Sarkar@leeds.ac.uk](mailto:A.Sarkar@leeds.ac.uk)

## Additional 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.

### A diverse workforce

The Faculty of Mathematics and Physical Sciences is proud to have been awarded the [Athena SWAN Bronze 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.



### **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.

