



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Assistant in Orthopaedic Engineering, Faculty of Engineering



**Salary: Grade 6 (£26,495 – £31,604 p.a.)**

**Reference: ENGME1118**

**Closing date: 01 January 2018**

**Fixed-term for 12 months**

# Research Assistant in Orthopaedic Engineering

## School of Mechanical Engineering

**Do you have a strong technical background in engineering and experience of experimental testing? Would you like to work as part of a multidisciplinary team to address a clinically-driven challenges?**

You will support several projects that focus on orthopaedic engineering. The role will be split between supporting our orthopaedic implant retrieval bank and experimental testing on hip replacements, funded by industry and via the Leeds Biomedical Research Centre. The aim of both aspects is broadly to enhance pre-clinical testing of hip replacements and ultimately improve resulting patient outcomes.

Experimental testing will relate to undertaking hip simulator testing and associated analysis to assess wear and biomechanics of hip replacements under a range of conditions. You will also be part of a team that is responsible for the day to day running of our implant retrieval laboratory. This laboratory collects orthopaedic implants that have been removed from patients, which are processed and used to inform our research.

You will have a strong background in mechanical or medical engineering with experience of in vitro testing, and have a proactive approach to working in a multidisciplinary team with engineering, industry and clinical colleagues.

### What does the role entail?

As a Research Assistant your main duties will include:

- Undertaking hip joint simulator studies by following standard operating procedures, including overseeing the functionality of the testing equipment on a daily basis and performing gravimetric and geometric measurements of hip replacement bearings efficiently;
- Assisting with the day-to-day administration of the retrievals laboratory, including arranging for the collection of retrieved orthopaedic devices (explants) from collaborating hospitals, processing and decontaminating new explants, and maintenance of the retrievals database(s);
- Ensuring good day-to-day progress of work and maintain good records and laboratory notebooks;



- Preparing, collating and interpreting results and carrying out statistical analysis under supervision, and report appropriately;
- To co-ordinate day-to-day project work, ensure good progress is maintained and work is undertaken in a systematic way;
- Working within and applying standard operating procedures, health and safety regulations and quality assurance procedures of both the Institute and the School and being responsible for the health and safety management of research work;
- Attending research group and laboratory meetings as appropriate;
- Participating in the iMBE events, meetings and public engagement activities;
- Training of staff and students in the use of laboratory facilities and equipment once competency is achieved;
- Being committed to Good Laboratory Practice and continuous improvement;
- Attending regular meetings to discuss progress and intended plan of work;
- Communicating effectively and providing information to line manager/supervisor;
- Liaising effectively with staff at all levels, including external collaborators;
- Working effectively and positively as required as a team player on a broad range of activities and related projects within the Institute to help achieve the broader strategic development of the aims and objectives of the Institute.

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 Assistant you will have:

- A first or upper second class degree in Medical or Mechanical Engineering;
- Some experience of experimental work in an engineering environment;
- Experience in approaching an engineering problem in a systematic and rigorous manner;
- Experience in preparing solid models, sketches, detailed and layout drawings and developing proof-of-concept prototypes;
- Excellent interpersonal and communication and organisational skills;
- The ability to work independently with minimal supervision and willingness to propose initiatives and accept responsibility;



- Excellent PC skills, including being a routine user of Microsoft packages and good working experience in SolidWorks and Matlab;
- Willingness to work flexibly, when necessary, to fulfil the needs of the research projects;
- Evidence of the ability to document and organise work effectively;
- Knowledge of ethical approval processes with an understanding of how this is applied to explanted orthopaedic devices and tissue.

You may also have:

- Industrial experience;
- Research training in bioengineering;
- Project management experience;
- Experience of independent research working;
- Understand the processes and assumptions that underpin the definition and development of a FEM to answer a specific engineering question;
- Knowledge of the characteristic features of metals, ceramics, polymers and composites.

## 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 Sophie Williams](#), Associate Professor**

Tel: +44 (0)113 343 2214

Email: [s.d.williams@leeds.ac.uk](mailto:s.d.williams@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 Mechanical 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's 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.

