



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Research Fellow in Spine Biomechanics,  
Faculty of Engineering and Physical Sciences



**Salary: Grade 7 (£41,064 – £48,822 p.a.)** Due to funding restrictions, an appointment will not be made higher than £43,482 p.a.

**Reporting to: Dr Marlène Mengoni**

**Closing date: Monday 06 April 2026**

**Reference: EPSME1204**

**Fixed term (until 31 December 2026 - to complete specific time limited work)**

**Location: Leeds main campus**

**We are open to discussing flexible working arrangements**

# Research Fellow in Spine Biomechanics, Institute of Medical and Biological Engineering, School of Mechanical Engineering.

Do you have a strong technical background in experimental biomechanics with an interest in spine? Would you like to work as part of a multidisciplinary institute to address a clinically driven challenge?

## Overview of the Role

We are looking for a proactive individual to join our team of researchers at [the institute of Medical and Biological Engineering](#), leading research on longer lasting joint replacements, tissue sparing interventions and biological scaffolds for tissue regeneration.

This role is created part of a project aiming to characterise interventional damage propagation in the intervertebral disc across scales. In the UK, four out of five adults suffer from back pain at some point in their life, with few successful surgical options when necessary. This project will develop testing methods combining experimental analysis and imaging to gain a better understanding of how damage created by a surgical intervention to the tissue propagates across scales.

You will join a wider group developing in vitro and in silico preclinical models of musculoskeletal joints. You will have a strong background in experimental tissue biomechanics or spine biomechanics and have a proactive approach to working in an experimental and computational environment. You will join an institute that includes different expertise and substantial experience in supporting early-stage researchers in a key phase of their career. We encourage an environment of collaboration, trust and wellbeing, which values difference of ideas and embraces diversity.

## Main duties and responsibilities

- Develop experimental and imaging models for intervertebral disc biomechanics that enable quantifying or visualising fluid motion or damage propagation;
- Lead image and data analysis from the experimental models;



- Generating and pursuing independent and original research ideas in the appropriate subject area including, if relevant, 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.

## Qualifications and skills

### Essential

- A PhD (or have submitted your thesis before taking up the role) in experimental biomechanics of musculoskeletal joints or a closely allied discipline;
- A strong background in natural joints testing and imaging;
- Experience in using a micro-CT scanner in a research environment, including using contrast media for natural tissues;
- Experience of contributing to combined experimental and computational research projects;
- 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.

### **Desirable**

- Experience in spine biomechanics;
- 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 Marlène Mengoni](#), Associate Professor

Email: [M.Mengoni@leeds.ac.uk](mailto:M.Mengoni@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 Mechanical Engineering](#) and the [Institute of Medical & Biological Engineering](#).

### **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.



## **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.

## **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found under the 'Accessibility' heading on our [How to Apply](#) information page or by getting in touch by emailing HR via [hr@leeds.ac.uk](mailto: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 [the Government's Skilled Worker visa page](#).



For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit [the Government's page, Apply for the Global Talent visa.](#)

