



**UNIVERSITY OF LEEDS**

## **CANDIDATE BRIEF**

**Research Fellow in Microfluidics for Deformation Cytometry Based Cell Sorting, Faculty of Engineering and Physical Sciences**



**Salary: Grade 7 (£38,205 – £45,585 p.a.)**

**Reference: EPSPA1116**

**Location: University of Leeds Campus**

**Closing date: Sunday 01 September 2024**

**Fixed-term for 2 years**

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

## Research Fellow in Microfluidics for Deformation Cytometry Based Cell Sorting, School of Physics and Astronomy.

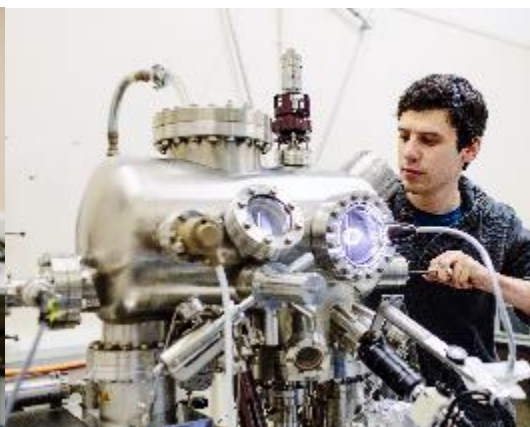
Do you hold a PhD in experimental Physics, Materials Science or a closely related discipline? Do you have expertise in microfluidics, cell sorting and deformation cytometry characterisation? Do you want to further your career in one of the UKs leading research-intensive Universities?

We are looking for a self-motivated, enthusiastic and ambitious postdoctoral research fellow to join the multidisciplinary and highly collaborative [Molecular and Nanoscale Physics group](#) in the [School of Physics and Astronomy](#). You will build on our current expertise in Deformability Cytometry to develop a Deformation Cytometry Based Cell Sorter. Working closely with colleagues from the Faculties of Biological Sciences and Medicine and Health, you will be involved in developing a new approach for identifying and separating cells based on their mechanical deformability.

Our ambition is to create a platform that can be used to sort and classify cell types based on their mechanical deformability to: i) help diagnose disease states, ii) to aid therapeutic testing and iii) to deepen our understanding of the link between genetics and biophysical phenotypes – in particular with reference to cancer.

You will work collaboratively with people from other disciplines using cutting-edge rapid prototyping and microfluidics techniques. The ideal candidate will have a strong track record of critical problem-solving and innovation, and a commitment to a career in science. You will share our values of inclusivity, innovation, and collaboration, and strive to be an academic role model and mentor.

We are based in Leeds, situated on the edge of the beautiful Yorkshire dales national park. The University of Leeds and the School of Physics and Astronomy are committed to providing equal opportunities for all and offer a range of family friendly policies. The University is a charter member of Athena SWAN (the national body that promotes gender equality in higher education), and the School of Physics was awarded a Silver award in 2021. Our lab cares about our impact in the environment and we currently hold the Bronze Leaf accreditation. We are proud to be an inclusive Faculty that values all staff and are happy to consider job share applications and requests for flexible working arrangements from our employees.

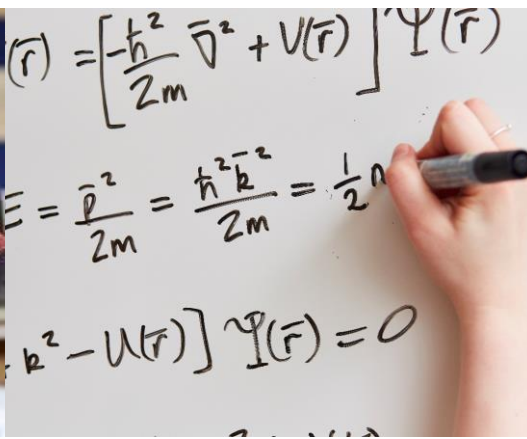


## What does the role entail?

As a Research Fellow, your main duties will include:

- Planning and delivering a programme of research investigating the mechanical properties of cells and their relationship to cancer;
- Generating and pursuing independent and original research ideas in the appropriate subject area under the guidance of the project lead (Prof Steve Evans) and co-lead (Dr Gala de Pablo);
- 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 relating such evaluations appropriately to your own research;
- Making a significant contribution to the dissemination of research results by preparing papers for publication in leading international journals and through other recognised forms of output;
- 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.
- Contributing to, and encouraging, a safe and inclusive 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.



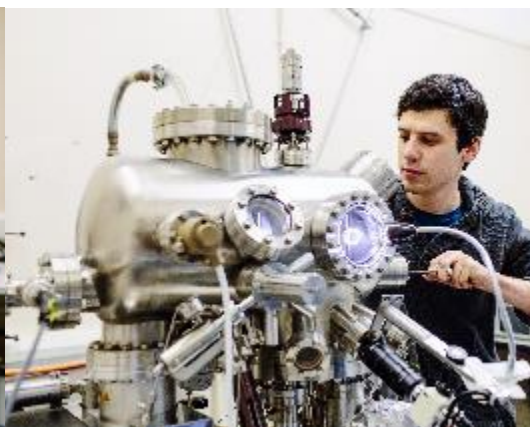
## What will you bring to the role?

As a Research Fellow, you will have:

- A PhD (or will have submitted your thesis before taking up the role) in experimental Physics, Chemistry or a closely allied discipline;
- Experience in the fabrication, testing and optimization of microfluidics devices for the manipulation and characterization of single cells;
- Experience in the innovation and technique development in the field of microfluidics, cell analysis, cell cytometry, and/or cell sorting;
- Experience with the real-time data acquisition and analysis necessary to implement high-throughput cell sorting;
- An in-depth understanding of method development, including the integration of electronics with microfluidics;
- Strong analytical skills, with the ability to work accurately and carefully, designing, executing and writing up research independently;
- Strong research ethics and a commitment to the values of reproducibility, integrity, and open access;
- A proven and developing track record of peer-reviewed publications in high-impact factor journals;
- Excellent time management and planning skills, with the ability to meet tight deadlines and manage competing demands effectively without close support;
- Excellent communication skills both written and verbal, and the ability to communicate your research at national and international conferences;
- A disposition towards collaborative work as part of a multidisciplinary team and a proven ability to work successfully both individually and in a team;
- A passion to learn new techniques and reinvent yourself as a scientist, with a commitment to your career in science and continuous professional development.

You may also have:

- Experience in biophysical characterisation of single cells and/or other single-cell analysis techniques;
- Experience in biophotonics and high-speed imaging;
- Experience with fluorescence and/ or Raman spectroscopy analysis of cells;
- An understanding of the biomechanical properties of single-cell from a biophysical and/or molecular biology perspective;
- Training in mammalian tissue culture techniques and cell transfection;



- Experience in contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

## 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:

**[Stephen Evans](#), Professor of Physics**

Tel: +44 113 343 3852

Email: [S.D.Evans@leeds.ac.uk](mailto:S.D.Evans@leeds.ac.uk)

OR

**[Julia Gala de Pablo](#), Assistant Professor of Physics**

Email: [J.GalaDePablo@leeds.ac.uk](mailto:J.GalaDePablo@leeds.ac.uk)

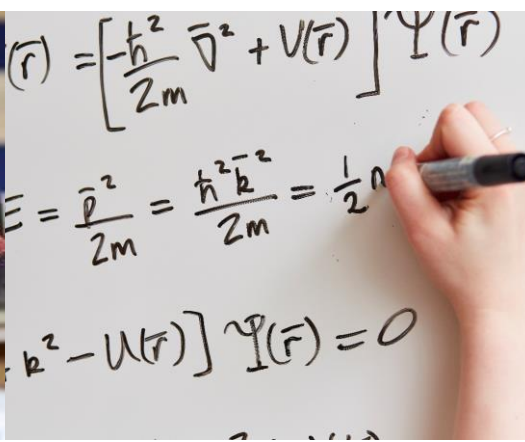
## Additional information

### Faculty and School Information

Further information is available on the research and teaching activities of the [Faculty of Engineering & Physical Sciences](#), and of the [School of Physics and Astronomy](#).

### 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.

### **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.

### **Information for disabled candidates**

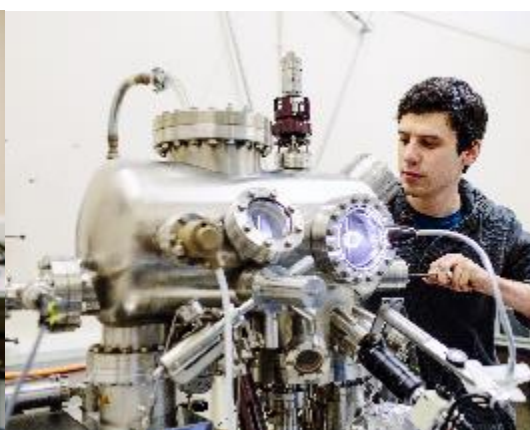
Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at [hr@leeds.ac.uk](mailto:hr@leeds.ac.uk)

## **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: [www.gov.uk/skilled-worker-visa](http://www.gov.uk/skilled-worker-visa).

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information, please visit: <https://www.gov.uk/global-talent>.

