1. Advertisement

**Post Title:** 2 x Research Fellows in Experimental Physics  
**School/ department:** School of Mathematical & Physical Sciences – Department of Physics and Astronomy  
**Hours:** full time or part time hours considered up to a maximum of 1.0 FTE. Requests for flexible working options will be considered (subject to business need).  
**Contract:** fixed term until 30 September 2021  
**Reference:** 1911  
**Salary range:** starting at £33,797 and rising to £40,322 per annum  
**Closing date:** 13 September 2019. Applications must be received by midnight of the closing date  
**Expected interview date:** 27 September 2019 TBC  
**Expected start date:** 01 October 2019 TBC

We are recruiting for 2 x Research Fellows in Experimental Physics.

The Sussex Programme for Quantum Research (SPQR) is the newest of four strategic research centres at the University of Sussex, founded to explore and realise the potential of quantum science and technology in end-user applications.

SPQR defines a multi-disciplinary platform, involving research teams operational in the Schools of Mathematical & Physical Sciences, Engineering & Informatics, Life Sciences Brighton & Sussex Medical School and the Sackler Centre for Consciousness Science.

The Quantum Systems and Devices team, based in new laboratory space in the Accelerator Building, is a core member of SPQR and is now seeking to appoint a Postdoctoral Research Fellow in Experimental Physics. Targeted research areas include quantum physics and technologies with a focus on ultracold atoms and applicants to this role should ideally be:

- Educated to doctoral level;
- Experienced in relevant areas of experimental physics;
- Have a research track record in atomic, molecular and optical physics and related fields.

The successful candidate will spend a majority of his/her time on research.

You can find out more about the Sussex Programme for Quantum Research at:  
[https://www.sussex.ac.uk/research/centres/quantum/](https://www.sussex.ac.uk/research/centres/quantum/)

You can find out more about the Quantum Systems and Devices research group at:  
[http://www.sussex.ac.uk/amo/research/qsd](http://www.sussex.ac.uk/amo/research/qsd)

Or please email Dr Fedja Orucevic for more information at:  
F.Orucevic@sussex.ac.uk

*The University of Sussex values the diversity of its staff and students and we welcome applicants from all backgrounds.*
2. The School / Division

Please find further information regarding the school/division at http://www.sussex.ac.uk/physics/

3. Job Description

Job Description for the post of Postdoctoral Research Fellow in Experimental Physics

Department: Physics and Astronomy
School: Mathematical and Physical Sciences
Location: Accelerator building, Falmer Campus, Brighton, UK
Grade: Research Fellow, Grade 7
Responsible to: Principal Investigator through to Head of School
Responsible for: n/a
Role description: Research Fellow is an early career-grade research position. Post-holders will be expected to contribute to the work of the research team and also to develop their research skills with support from more experienced members of staff.

PRINCIPAL ACCOUNTABILITIES

1. To engage in individual and/or collaborative research activity resulting in high-quality publications; and to develop research funding and knowledge exchange income individually or in collaboration with others, as appropriate, depending on the size and scope of the bid.

2. To contribute to School teaching activities.

KEY RESPONSIBILITIES

1. Research, Scholarship & Enterprise

1.1 Develop research objectives and proposals for own or joint research, at acceptable levels, with assistance if required.

1.2 Conduct research projects individually and in collaboration with others.

1.3 Analyse and interpret research findings and draw conclusions on the outcomes.
1.4 Produce high-quality research outputs for publication in monographs or recognised high-quality journals, or performance/exhibition, as appropriate, and contribute to the School’s REF submission at acceptable levels of volume and academic excellence.

1.5 Contribute to the preparation of proposals and applications to external bodies, for example for funding purposes.

1.6 Individually or with colleagues, explore opportunities for enterprise activity, knowledge exchange income and/or consultancy, where permissible.

1.7 Build internal contacts and participate in internal networks and relevant external networks in order to form relationships and collaborations.

1.8 Continually update knowledge and understanding in field or specialism, and engage in continuous professional development.

2. Teaching & Student Support

2.1 Undertake teaching duties, if required.

2.2 Assist in the assessment of student knowledge and supervision of student projects if required.

2.3 Assist in the development of student research skills, for example as part of a postgraduate supervision team.

3. Contribution to School & University

3.1 Attend and contribute to relevant School and project meetings.

3.2 Undertake additional duties, as required by the Principal Investigator and/or Head of School.

4. Role-specific duties

4.1 In conjunction with the Quantum Systems and Devices group, apply quantum magnetometers to the diagnosis of Li-ion cells and modules.

4.2 Supervise PhD and undergraduate students.

4.3 Publish and present research in high-quality international journals and conferences.

4.4 Pro-actively organise and manage own time and research-related activities.

4.5 Report orally and prepare papers reporting progress and delivery of project outcomes, and be able to communicate at both technical and high-level for example with collaborators from industry and other universities.

4.6 Perform any other duties associated with the project, as deemed appropriate to the grade by the supervisor.

This Job Description sets out current duties of the post that may vary from time to time without changing the general character of the post or level of responsibility entailed.
INDICATIVE PERFORMANCE CRITERIA

- A PhD or equivalent scholarly or relevant professional activity
- Pursuing a line of independent research within a research group.
- Publishing research (either from a recently completed PhD or new original research).
- Other forms of externally recognised professional practice of creative output of a standing equivalent to regular publication of original research.
- Initiating, developing or participating in links between the University and external bodies such as business and industry, the professions, community organisations and policy-makers.
- Evidence of successful engagement in teaching or supervision.

4. Person Specification

ESSENTIAL CRITERIA

1. PhD or equivalent in experimental physics
2. Demonstrated experience in cold atoms experimental physics, ideally in the areas of degenerate quantum gases
3. Evidence of engagement in high-quality research activity
4. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.
5. Ability to work individually on own initiative and without close supervision, and as part of a team.
6. Ability to exercise a degree of innovation and creative problem-solving.
7. Excellent organisational and administrative skills.
8. Ability to prioritise and meet deadlines.
9. Excellent IT skills.

DESIRABLE CRITERIA

1. Experience of numerical analysis in Matlab or similar numerical computing environment.
2. Emerging track record of high-quality publications in reputable journals and other appropriate media of similar standing.
3. Experience of generating research or knowledge exchange income.
The University is committed to equality and valuing diversity, and applications are particularly welcomed from women and black and minority ethnic candidates, who are under-represented in academic posts in Science, Technology, Engineering, Medicine and Mathematics (STEMM) at Sussex.