1 Advertisement

Post Title: Research Fellow in Quantum Physics and Technologies
School/department: Mathematical and Physical/Physics & 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 for 2 years
Reference: 6278
Salary: starting at £33,797 to £40,322 per annum, pro rata if part time
Placed on: 06 July 2021
Closing date: 17 August 2021. Applications must be received by midnight of the closing date.
Expected interview date: Beginning of September
Expected start date: September 2021 or ASAP

As part of an ongoing collaboration with academic and industrial partners, the Department of Physics at the University of Sussex is seeking to appoint a Postdoctoral Research Fellow in Experimental Physics. Targeted research areas include quantum physics and technologies with a focus on the development of modular optically-pumped magnetometers for quantum sensing applications.

Candidates should be educated to doctoral level and thoroughly experienced in relevant areas of experimental physics and have a research track record in atomic, molecular and optical physics and related fields. The successful candidate is expected to spend a majority of their time on research.

The appointment will be made at grade 7 (Research Fellow I), salary point depending on demonstrated experience and skills.

Please contact Fedja Orucevic, F.Orucevic@sussex.ac.uk for informal enquiries.

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.

Please note that this position may be subject to ATAS clearance if you require visa sponsorship.

For full details and how to apply see our vacancies page

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 School of Mathematical and Physical Sciences.

3. **Job Description**

**Job Description for the post of:** Research Fellow in Quantum Physics and Technologies

**Department:** Physics and Astronomy

**Section/Unit/School:** School of Mathematical and Physical Sciences

**Location:** Accelerator Building

**Grade:** 7

**Responsible to:** Principal Investigator through to Head of School

**Responsible for:** N/A

Research Fellow I 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, develop new modular optically-pumped magnetometers for quantum sensing applications and help their deployment in collaboration with our academic and industrial partners.

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. Normally educated to doctoral level, or other equivalent qualification, or appropriate level of experience, as appropriate to the discipline (see role-specific criteria below).

2. Evidence of engagement in high-quality research activity.

3. Excellent presentation skills, with the ability to communicate effectively, both orally and in writing, with students, colleagues and external audiences.

4. Ability to work individually on own initiative and without close supervision, and as part of a team.

5. Ability to exercise a degree of innovation and creative problem-solving.

6. Excellent organisational and administrative skills.

7. Ability to prioritise and meet deadlines.

8. Excellent IT skills.
ESSENTIAL ROLE-SPECIFIC CRITERIA

1. PhD or equivalent in physics.
2. Demonstrated experience in experimental physics in relevant areas, such as in atomic physics and/or precision magnetometry.

DESIRABLE CRITERIA

2. Experience of analogue and/or digital signal processing.
3. Track record of high-quality publications in reputable journals and other appropriate media of similar standing.
4. Experience of generating research or knowledge exchange income.