



Candidate Information

Position:	Lectureships in Astrophysics
School/Department:	School of Mathematics and Physics
Reference:	18/106922
Closing Date:	Tuesday 27 November 2018
Salary:	£40,792 - £50,132 per annum (potential to progress to £53,175 per annum through sustained exceptional contribution)

JOB PURPOSE:

To contribute to the advancement of Astrophysics by research, teaching and administration by undertaking research in line with the School's research strategy, teaching at undergraduate and postgraduate level, and contributing to School administration/outreach activity.

MAJOR DUTIES:

1. Contribute to the School's outreach strategy, for example by giving public and schools lectures, developing public understanding of science projects.
2. Provide pastoral care for students within own area to ensure, as far as practicable, that all relevant issues are dealt with in a timely, sympathetic and effective manner.
3. Carry out designated School functions including, for example, participation in committee work, assisting in the process of admissions, and preparation of submissions for teaching quality assessment or the REF.
4. Be responsible for the record-keeping associated with teaching and the preparation of teaching materials.

Teaching:

1. Participate in all aspects of teaching and examining as designated by, or on behalf of, the Head of School/Director of Education, including such duties as lecturing, setting/marking coursework and examinations, supervising postgraduate students, tutorials, undergraduate project and laboratory supervision, and course evaluation.
2. Develop approaches to teaching and learning that are appropriate to the subject area and that reflect developing practice.
3. Act as internal examiner for undergraduate and postgraduate students.
4. Contribute to the enhancement of quality teaching within the subject, School and Faculty.
5. Develop, and to advise others on, learning and teaching tasks and methods.
6. Keep abreast of developments in the subject area and seek ways of improving performance e.g. by reflecting on teaching design and delivery, and obtaining and analysing feedback.
7. Participate in the development of courses within the School.

Research:

1. Manage and undertake research activities which strengthen the main areas of scientific interest in the Astrophysics Research Centre (ARC), specifically: supernovae and transients (Area A); identification and characterisation of extrasolar planets (Area B); studies of solar system minor bodies (Area C), or studies of the solar atmosphere from the photosphere to the corona (Area D) (Research can be either in theoretical or observational astrophysics).
2. Develop collaborative research programmes both internally and externally.
3. Play a significant role in at least one of our STFC-funded Consolidated Grants, and apply for funding from other sources (especially non-RCUK schemes).
4. Sustain a high-quality publication record by publishing in leading international refereed journals, and presenting at conferences to advance individual research and to enhance the School's research profile.
5. Act as referee/reviewer and contribute to peer assessment of research.
6. Undertake supervision of postgraduate research students.
7. Direct, coach and develop research staff, where appropriate.

8. Ensure that research projects are completed on time and within budget.

Planning and Organising:

1. Liaise with others (such as support staff or academic colleagues) to ensure that student needs and expectations are met.
2. Design/update modules in line with the School's teaching strategy.
3. Plan for the use of teaching and research resources.
4. Prepare research proposals for submission for external funding.

Resource Management Responsibilities:

1. Assist in the development of skills and competence in others (for example, through the supervision of research students).
2. Manage use of resources for research and teaching.
3. Participate in judgements regarding the use of resources within their research project/school.
4. Mentor colleagues with less experience and advise on personal development, as appropriate.
5. Manage own teaching, research and administrative demands under the general supervision of Head of School/Director of Research/Director of Education.

Internal and External Relationships:

1. Communicate complex and conceptual ideas to students as well as to peers using high-level skills and a range of media.
2. Hold membership of the School Board, Examination Boards and other committees relevant to the administrative duties, as appropriate.
3. Collaborate with other academics within the School.
4. Participate in and develop networks, for example: to identify sources of funding, contribute to student recruitment, act as website editor, secure student placements, market the institution, facilitate outreach work, generate income, obtain consultancy projects, build relationships for future activities.
5. Contribute to the School's outreach programme, for example by establishing links with local community groups, industries etc.
6. Where appropriate, serve on external research committees. These would include UK and international grants, facilities and advisory committees.
7. Where appropriate, act as external examiner for undergraduate and postgraduate programmes.

ESSENTIAL CRITERIA:

1. PhD in Astrophysics or a related discipline.
2. A minimum of 3 years research experience in a relevant field to include:
 - An excellent record of high quality research, commensurate with stage of career, that impacts in a research area covered by Areas A, B, C or D specified above.
 - Research interests must be in an area of theoretical or observational astrophysics that complement and strengthens the existing research activities in ARC. The high quality research record should be illustrated by publications, grant/facility/fellowship applications, measures of esteem, leadership roles.
3. Excellent oral communication and presentation skills, with sufficiently developed English to deliver Undergraduate and Postgraduate education in the field of Physics.
4. Evidence of scholarly activity eg conference papers, external funding, book reviews.
5. Ability to communicate effectively in English, both verbally and in writing to classes at all levels.
6. Ability to deliver high quality research-level seminars to an expert audience with an Ability to communicate complex information effectively.
7. Logical mind and reasoning ability. Ability to grasp concepts and ideas quickly.
8. Ability to participate and interact in a team for teaching, research and administrative purposes.
9. Enthusiasm for research and teaching and willingness to carry out administrative tasks.
10. Ability to assess and organise resources.
11. Willingness to undertake supervision of postgraduate students.
12. Willingness to undertake field work and overseas travels, including at unsociable times.

DESIRABLE CRITERIA:

1. At least an upper second class honours degree in Physics or related discipline.
2. PGCHET and/or membership of an appropriate professional and/or teaching body eg. HEA.
3. A record of successful grant applications.
4. Current holder of personal research fellowship, from for example STFC or the Royal Society.

5. A high academic standing with a reputation in research and/or teaching within subject specialism. (For Senior Lecturer grading only).
6. A sustained publication record in peer reviewed/referred journals or invited presentations that are REF returnable. Evidence of developing research methodologies, models, approaches and techniques. (For Senior Lecturer grading only).
7. Experience of teaching, tutoring or supervision of undergraduate students at University level.
8. Experience designing modules and assessment methods.
9. Evidence of good teaching evaluations.
10. Contribution to a wider range of administrative tasks.
11. Contribution to a wider range of community/outreach activities.
12. Experience in supervising undergraduate or postgraduate research student projects.