



## Candidate Information

<b>Position:</b>	Research Fellow in Laser-Plasma Physics - Nano-Rad
<b>School/Department:</b>	Ctre for Plasma Physics
<b>Reference:</b>	20/108151
<b>Closing Date:</b>	Monday 16 March 2020
<b>Salary:</b>	£33,797 to £39,152 per annum.
<b>Anticipated Interview Date:</b>	Friday 24 April 2020
<b>Duration:</b>	9 months

### JOB PURPOSE:

As part of an Engineering and Physical Science Research Council funded programme, the successful candidate is expected to undertake experimental research in the field of ultra-high intensity laser-matter interactions with particular emphasis to the plasma-based acceleration of electrons and their applications.

### MAJOR DUTIES:

1. To plan and undertake experimental research activities in major laser facilities both within and outside the UK, in the field of laser-driven electron acceleration and applications.
2. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
3. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
4. Prepare, in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
5. Assist the supervisor in the preparation of funding proposals and applications to external bodies.
6. To visit relevant collaborators and laser laboratories to discuss the work and future directions of research.
7. To liaise with internal/external collaborators in order to design experiments devoted to exploring possible practical applications, e.g. in the fields of medicine, biology, and material science.
8. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.
9. Contribute towards the training and professional development of master and PhD students within the Centre for Plasma Physics.
10. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.

### Planning and Organising:

1. Plan the specific aspects and intermediate milestones of the research programme.
2. Contribute to the preparation of proposal for access to major laser facilities within and outside of the UK.
3. Contribute to the preparation of grant proposal for the continuation of the research programme.
4. Plan own day-to-day activity within framework of the agreed research programme.
5. Coordinate and liaise with other members of the research group and external collaborators.

### Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. Assist the supervisor in management of finance, purchasing of equipment and consumables.
3. Provide guidance as required to support staff and any students who may be assisting with research.

### Internal and External Relationships:

1. Liaise on a regular basis with colleagues and students.
2. Liaise with an established network of international collaborators.
3. Build internal and external contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
4. Join external networks to share information and ideas.
5. Contribute to the School's outreach programme by establishing links with local community groups, industries and any other relevant organisation.

**ESSENTIAL CRITERIA:**

1. Have or be about to obtain PhD in physics or related subjects.
2. At least 3 years relevant research experience, including:
  - Experience in experimental research in the field of laser-plasma interactions.
  - Experience in laser-driven electron acceleration and applications.
  - Experience with high-power laser facilities, such as the Central Laser Facility at the Rutherford Appleton Laboratory.
3. Publication record commensurate with stage of career.
4. Demonstrable ability to undertake independent scientific work to a high professional level.
5. Ability to communicate effectively in English, both verbally and in writing.
6. Ability to deliver high quality seminars or presentations to an expert audience.
7. Logical mind and reasoning ability.
8. Able to work effectively both individually and as part of a team.
9. Interested in pursuing a career in scientific research and committed to developing their skills and experience in professional research.
10. Ability to meet the mobility requirements of the post.

**DESIRABLE CRITERIA:**

1. At least three years of post-doctoral experience in areas of relevance to the project.
2. Experience in numerical modelling and data analysis of relevance to the post.
3. Experience with high-energy particle detection systems and beam transport.
4. Record of publications as a lead author, as commensurate with stage of career.
5. Experience in collaborating with accelerator and particle physicists.
6. Leadership roles in national and international committees and/or in the management of research laboratories.
7. Willingness to be involved in Undergraduate and Postgraduate project supervision.
8. Demonstratable track record of being involved in Undergraduate and Postgraduate project supervision.
9. Willingness to participate in outreach activities intended for the general public and experience in doing so.