

Research Role Profile

Job Title:	Research Fellow (1A)
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Responsible to:	Head of research group, or principal investigator
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Responsible for:	Not applicable
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Job Summary and Purpose:
To undertake research in accordance with the specified research project(s) under the supervision of the principal investigator.

Main Responsibilities/Activities
<p>To undertake a range of research activities within a specified research area, assuming responsibility for specific areas of projects and making use of new research techniques and methods, in consultation with the research award holder or supervisor. This may include fieldwork, interviews, laboratory experimentation, critical evaluation and interpretation, computer-based data analysis and evaluation or library research.</p> <p>Using initiative and creativity to identify areas for research develop new research methods and extend the research portfolio. Analysing and interpreting results of own research. Write up results and prepare papers for submission to appropriate journals and conferences, and other outputs as required and/or appropriate. Attend appropriate conferences for the purpose of disseminating research results of personal development. The post holder may also contribute to writing bids for research grants and will contribute to collaborative decision making with colleagues in areas of research.</p> <p>Continually to update knowledge and develop skills, and translate knowledge of advances in the area into research activity.</p> <p>To plan and manage own research activity in collaboration with others. To carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control.</p> <p>To contribute to teaching in the Faculty by carrying out student supervision and/or demonstrating within the post holder's area of expertise and under the direct guidance of a member of departmental academic staff, as appropriate.</p> <p>The post holder may occasionally be required to supervise more junior research staff.</p>

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Person Specification

The post holder must have:

A doctoral degree in a relevant discipline (although individuals who have almost completed a doctoral degree may be appointed). Consideration may also be given to individuals who do not hold a doctoral degree but have required skills based on a number of years experience in specified / relevant fields

The post holder will have authority over some aspects of project work and must be capable of providing academic judgement, offering original and creative thoughts and be able to interpret and analyse results.

Relationships and Contacts

Direct responsibility to the principal investigator or academic supervisor. The post holder may be asked to serve on a relevant Faculty committee. There may be additional reporting and liaison responsibilities to external funding bodies or sponsors. The post holder may work on original research tasks with colleagues in other institutions.

Special Requirements

To be available to participate in fieldwork as required by the specified research project

All staff are expected to:

- Positively support equality of opportunity and equity of treatment to colleagues and students in accordance with the University of Surrey Equal Opportunities policy.
- Help maintain a safe working environment by:
 - Attending training in Health and Safety requirements as necessary, both on appointment and as changes in duties and techniques demand
 - Following local codes of safe working practices and the University of Surrey Health and Safety Policy
- Undertake such other duties within the scope of the post as may be requested by your Manager.

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Addendum to Role Profile

Job Title:

Research Fellow (1A)

Job Summary and Purpose:

This information sheet should be read in conjunction with the accompanying generic Research RA1A Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:

Undertake research on the structure of exotic nuclei and on the implication of modern realistic nuclear forces for the stability of dripline isotopes. The objective is to achieve an understanding how essential components of the nuclear interaction (such as three-nucleon forces) can affect the nuclear binding and correlations in general for isotopes at the extreme of stability. The post holder will then write up the results for publication in high profile journals, and present them at international conferences. It is expected that the post holder will be able to communicate these results to both theoretician and experimentalists in the field of nuclear structure and reactions.

Main Responsibilities/Activities

To extend the scope of pre existing quantum many-body techniques for finite nuclei, infinite matter and/or mean-field theories. To develop new methods aimed, for example, at ab-initio studies of nuclear excitations and investigation of nuclear interactions. Then performing numerical calculations of relevant isotopic and isotonic chains, or of specific isotopes as required by possible collaboration with experimentalists. To liaise with group's collaborators engaged in related activities if needed. This will require knowledge of nuclear structure as well as the use of scientific computational techniques, computing languages (e.g., Fortran and C++) and code parallelization.

In addition, the post holder will be required to familiarise themselves with the literature, write papers for peer review and publication, and present work at conferences.

Person Specification**The post holder must have:**

A PhD degree in physics, applied mathematics, computer science, or a related discipline, or be close to submitting a PhD thesis in one of these areas. Fundamental knowledge of nuclear structure and many-body physics. Some experience in the use of computer simulations or similar techniques.

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Relationships and Contacts

The post holder will be directly responsible to the academic supervisor and is expected to work well in a team. The post holder may work part-time on original research tasks with colleagues in other institutions. They should ensure that all research activities undertaken are in compliance with the 'Research Code of Conduct' operated by the University of Surrey and are compliant with health and safety requirements.