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| **Job Title:** | Research Fellow in Quantum Computing and Nuclear Physics |

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| **Responsible to:** | Prof Paul Stevenson |

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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. |

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| Main Responsibilities/Activities |
| **This information sheet should be read in conjunction with the accompanying generic Research Fellow (1A) Role Profile and will be used for shortlisting processes. More specifically the post holder will be expected to:**  The post holder will join research activity in the joint areas of theoretical nuclear physics and quantum computing. The role will involve developing quantum computing algorithms to solve quantum-many body problems and to implement them on real and simulated quantum computers. Related methods concentrating on either nuclear physics or quantum computing alone may also be developed as appropriate, and generic methods applicable to many-body systems in general may be studied, though the principal goal of the project is in targeting nuclear systems.  The results of the research will be turned into suitable outputs by the post-holder in collaboration with other project investigators; such outputs can include scientific publications, presentations at academic conference, reports to funders, and material aimed at a general audience.  The post-holder will join a research group in which they are expected to contribute to group discussions with other staff members and PhD students on general research problems, sharing awareness of recent literature and enabling a positive work environment for all staff and students in the group.  The role will include the ability to continue existing project, including with external collaborators and to instigate such collaboration in a well-managed manner together with the main project goals. |

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| **Person Specification** |
| **In addition to the criteria outlined in the accompanying generic Research Fellow (1A) Role Profile, the post holder should have (E = Essential; D = Desirable):**  A doctoral degree in physics, mathematics, computer science, or a closely-related discipline, or be soon to obtain such a degree (E)  Experience in computer programming for solving scientific or mathematical problems (E)  The ability to communicate in the form of scientific writing and in oral presentation (E)  Experience in and knowledge of areas of nuclear physics of current research interest (D)  Experience in and knowledge of areas of quantum computing of current research interest (D)  Good organisational skills and a demonstrable ability to work in a team (D) |

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| **Relationships and Contacts** |
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| **Special Requirements** |
| Willingness to undertake occasional travel for conferences or collaboration meetings |

### 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.