

**Job Description: Research Assistant**

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| **Faculty:** | ***Science & Engineering*** |
| **Department/Subject:** | ***Institute of Structural Materials (ISM)*** |
| **Salary:** | *Grade 7: £32,982 to £37,099 per annum* |
| **Hours of work:** | ***35***  |
| **Number of positions:** | ***1*** |
| **Contract:** | **This is a fixed term position for 38 months** |
| **Location:** | **This position will be based in the ISM Building at the Bay Campus** |

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| **Introduction** | As from 1st November 2024, a Research Assistant is required (for a period of 38 months) to conduct research as part of the NEURONE programme, in collaboration with UKAEA, the Materials Processing Institute, Sheffield Forgemasters and the Universities of Birmingham, Oxford, Manchester, Sheffield and Imperial. NEURONE is a £10m endeavour, funded by the UK Fusion Futures programme, to develop an industrial scale advanced steel over the next 5-years for use in the commercial fusion sector. The consortium represents considerable breadth across the entire technology readiness level (TRL) scale, from atomistic modelling and atom probe tomography at one end, through alloy prototyping and irradiation testing, all the way up to major producers of steel at the other. The diverse expertise within the consortium ensures a comprehensive approach to addressing the significant challenges associated with developing an industrial-scale advanced steel for fusion applications.  |
| **Background information** | The post holder will be based in the Institute of Structural Materials, Faculty of Science & Engineering, Bay Campus. The main research activities of the ISM is the mechanical characterisation of high performance, advanced materials.  |
| **Main Purpose of Post** | This project will address the following:1. Perform an extensive series of mechanical tests (room and high temperature tensile, fracture toughness, creep and fatigue).
2. Conduct an in depth microstructural analysis of a number of novel steel variants.
3. Understand the deformation and failure mechanisms of different alloys through detailed fractography using advanced imaging tools.
4. Conduct suitable analysis of mechanical data and derive correlations where necessary.
5. Report findings on a regular basis to academic and industrial collaborators.

Where possible, testing must be conducted according to the best practise described in relevant International standards.The successful applicant will collaborate with an existing team of academics, post-doctoral Research Officers/Assistants, PhD and EngD students based within the ISM and Engineering North on Swansea University’s Bay Campus. |
| **Main Duties** | 1. Pro-actively contribute to and conduct research, including gather, prepare and analyse data, generate original ideas and present results.
2. Prepare reports, draft patents and papers describing the results of the research, both confidential and for publication.
3. Be self-motivated, apply and use their initiative, aiming to determine suitable ways to tackle challenges and seeking guidance when needed.
4. Interact positively and professionally with other collaborators and partners within the Faculty and elsewhere in the University and beyond as appropriate, such as in industry.
5. Contribute to research group organisational matters in order to enable smooth running and raising external research profile of the ISM.
6. Keep informed of developments in the field in technical, specific and general terms and their wider implication for the discipline area, commercial applications and the knowledge economy.
7. When requested act as a representative or member of committees, using the opportunity to extend their own professional experience.
8. Demonstrate and evidence own professional development, identifying development needs with reference to the Vitae Researcher Development Framework, particularly with regard to probation, PDR and participation in training events.
9. Maintain and enhance links with the professional institutions and other related bodies.
10. Observe best-practice protocols in maintenance and retention of research records as indicated by HEI and Research Councils records management guidance.  This includes ensuring project log-book records are deposited with the University/Principal Investigator on completion of the work.
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| **General Duties** | 1. To promote equality and diversity in working practices and maintain positive working relationships.
2. To conduct the job role and all activities in accordance with safety, health and sustainability policies and management systems, in order to reduce risks and impacts arising from the work activity.
3. To ensure that risk management is an integral part of any decision making process, by ensuring compliance with the University’s Risk Management Policy.
4. Any other duties as agreed by the Faculty / Directorate / Service Area.
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| **Person Specification** | **Essential criteria:** 1. A Degree in Materials Science & Engineering or equivalent or a postgraduate qualification in Materials Science & Engineering or equivalent.
2. Evidence of the ability to actively engage in and contribute to writing and publishing research papers, particularly for refereed journals.
3. Evidence of presenting research findings to a skilled audience including industrial and academic collaborators.
4. Track record of attending national/international conferences to disseminate research.
5. A demonstrable ability to conduct research in line with the objectives of the project.
6. Evidence of planning skills to contribute to the research project.
7. Ability to demonstrate significant independence of focus and direction in research – determining ’what, why, when and with whom' to progress work.
8. Knowledge and ability to perform a variety of mechanical tests on metallic materials.
9. Understanding and demonstrable background of performing laboratory research under ISO17025 accreditation.
10. A commitment to continuous professional development.

**Desirable Criteria:**1. Experience of supervising undergraduate or postgraduate student projects.

**Welsh Language:** Level 1 – ‘a little’ (you do not need to be able to speak any Welsh to apply for this role)*e.g. pronounce Welsh words, place names, department names. Able to answer the phone in Welsh (good morning / afternoon). Able to use of learn very basic every-day words and phrases (thank you, please, excuse me). Level 1 can be reached by completing a one-hour training course.*For more information about the Welsh Language Levels please refer to the Welsh Language Skills Assessment web page, which is available [here](https://www.swansea.ac.uk/welsh-language-standards/compliance/recruitment/). |
| **Additional Information** | Informal enquiries: Please contact Professor Robert Lancaster, r.j.lancaster@swansea.ac.ukShortlisting Date: Wednesday 4th September 2024Interview Date: Wednesday 18th September 2024 |

  