

Research Associate

Department	Electronic and Electrical Engineering (www.strath.ac.uk/engineering/electroniclectricalengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	420937
Reports To	Head of Department through Professor Weijia Yuan	Grade:	7
Salary Range:	£33,309 - £40,927	Contract Type:	Fixed Term (24 months)
FTE:	I (35 hours/week)	Closing Date	Sunday, 20 March 2022

Job Advert

We are looking for a research associate to work on a leading research project to investigate the use of high temperature superconducting (HTS) magnets in clean energy conversion. The project aims to: 1) develop state-of-art characterisation tools to evaluate large-scale HTS coils in various applications and working conditions; 2) propose novel HTS windings to meet both DC/AC applications and perform experiments. It is mandatory requirement for the post holder to have a PhD degree on superconductivity. The post holder must demonstrate extensive experience on the simulation and experiments of high temperature superconductors through previous projects and publications. Knowledge on electrical machines or superconducting machines will be preferred, but it is not a mandatory requirement.

The research associate will be part of the Institute for Energy and Environment (InstEE) at the University of Strathclyde which has established an international reputation in electrical power engineering research (<https://www.strath.ac.uk/research/subjects/electroniclectricalengineering/instituteenergyenvironment/>) It operates within the Department of Electronic and Electrical Engineering, and hosts over 270 researchers in state-of-the-art facilities including the Technology and Innovation Centre and the Power Networks Demonstration Centre (PNDC) <https://www.strath.ac.uk/research/powernetworksdemonstrationcentre/> The latter offers an HV/LV MW-scale power networks test bed for industry-scale systems testing. These facilities are utilised by a significant number of industrial partnerships and programmes, including the Rolls-Royce University Technology Centre in Electrical Power Systems.

To be considered for the role, you will be educated to a minimum of PhD level in an appropriate discipline, or have significant relevant experience in addition to a relevant degree. You will have sufficient breadth and depth of knowledge of research relevant to inverters and a developing ability to conduct individual research work, to disseminate results and to prepare research proposals. You will have excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Whilst not essential for the role, applications are welcomed from candidates with: relevant work experience, membership of relevant Chartered/professional bodies (including the Higher Education Academy), experience of relevant student supervision and teaching activities, and/or experience of knowledge exchange related activities.

Job Description

Brief Outline of Job:

To assist in the delivery of research activities as part of a team, working on an established research programme/s under the general supervision of senior colleagues; to input as a team member to administrative activities; to assist where required with relevant teaching and knowledge exchange activities.

Main Activities/Responsibilities

1.	As part of a wider research group or programme, develop research objectives and proposals for own or joint research and play a lead role in relation to a specific project/s or part of a broader project, with guidance from senior colleagues as required.
2.	Plan and manage own workload, with guidance from colleagues as required.
3.	Conduct individual and/or collaborative research, including determining appropriate research methods and contributing to the development of new research methods.
4.	Identify sources of funding and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals.
5.	Write up research work for publication, individually or in collaboration with colleagues, and disseminate results as appropriate to the discipline by, for example, peer reviewed journal publications and presentation at conferences.
6.	Join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding.
7.	Collaborate with colleagues to ensure that research advances inform departmental teaching effort.
8.	Collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions.
9.	Supervise student projects, provide advice to students and contribute to teaching as required by, for example, running tutorials and supervising practical work.
10.	Contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees.
11.	Engage in continuous professional development.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 Good honours degree and PhD (or equivalent professional experience) in high temperature superconductors

D1 Membership of relevant Chartered/professional bodies (including Higher Education Academy).

D2 Membership/working towards membership of relevant Chartered/professional bodies (including Higher Education Academy).

Experience

E2 Sufficient breadth or depth of knowledge in the design and testing of high temperature superconducting devices to contribute to research programmes and to the development of research activities.

E3 Relevant research or work experience in development, construction and testing of inverter hardware

E4 Previous journal publication in construction and testing of HTS devices and coils.

D3 Experience of relevant student supervision and teaching activities.

Job Related Skills and Achievements

E5 Knowledge of appropriate research methods.

E6 Developing ability to conduct individual research work, to disseminate results and to prepare research proposals.

E7 Ability to plan and organise own workload effectively with general supervision from senior colleagues.

E8 Ability to work within a team environment.

D4 Experience of knowledge and skills in cryogenics and applied superconductivity.

Personal Attributes

E9 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Dr Min Zhang, (min.zhang@strath.ac.uk)

Conditions of Employment

Conditions of employment relating to the Research staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Formal interviews for this post will be held on a date to be confirmed.

Equality and Diversity

We value diversity and welcome applications from all sections of the community.

The University currently holds a Bronze Athena SWAN award, recognising our commitment to advancing gender equality in academia across all academic disciplines and professional and support functions.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

