



Job Description

Job title	Research Associate
Department/School	
Job family	Education and Research
Grade	7
Reporting to	Principal Investigator (PI) or Co-Investigator (CI)
Responsible for	There may be a requirement for: day to day supervision of other staff e.g. technical staff or, co-supervision of doctoral or undergraduate students
Location	University of Bath premises

Background and context

We are seeking an exceptional Research Associate to work on superconducting power devices for net-zero aviation. You will be a central member of the team and the objective is to lead the design of superconducting power devices for electric aircraft including superconducting fault current limiters, superconducting cables and rotating machines.

We are looking for a motivated Research Associates looking for a challenging opportunity in the electrification of aviation and who can communicate and work collaboratively with the academic and industrial partners. You will have a PhD (or equivalent) in Electrical Engineering or relevant areas. The successful candidates will be expected to assist in the delivery of the project work packages, undertaking the research activity under the guidance of the principal investigator.

You will focus on superconducting power devices and cryogenic cooling system for electric aircraft applications. You will have prior expertise in design of large-scale superconducting power devices, including skills for the finite element modelling and experimental characterization of superconducting power devices. Knowledge of cryogenic cooling system and thermal design is a plus.

Job purpose

To provide subject-specific research expertise and undertake specific research work to a Principal Investigator (PI)/Co-Investigator (CI) and their research team for a specified grant/project.

Main duties and responsibilities	
	Responsible to the PI/CI for (as appropriate to discipline):
1	Conduct individual and/or collaborative research projects. Contribute to the design and execution of the project e.g. timetabling and meeting project milestones; participating in regular discussions with collaborative partners. Generate, collect and analyse existing data related to the project using qualitative and/or quantitative techniques.
2	Writing up results of research and contributing to the publication of results in high-quality peer-reviewed academic literature.
3	Disseminating results of research project as appropriate to the discipline through activities such as <ul style="list-style-type: none"> • overseas research visits • conference presentations • public engagement activities
4	Participate in departmental/group meetings and prepare and deliver presentations/seminars to project team, internal and external stakeholders or funders.
5	Assist with the supervision of postgraduate students and undergraduate project students and the assessment of student knowledge.
6	Continually update knowledge and understanding in field or specialism to inform research activity.
7	Identify sources of funding and provide assistance with preparing bids to funding bodies. Develop ability to secure own funding e.g. travel grants.
8	Contribute to the development of research objectives and proposals for own or joint research projects, with assistance of a mentor, if required.
9	Disseminate knowledge of research advances to inform departmental teaching.
	You will from time to time be required to undertake other duties of a similar nature as reasonably required by your line manager. You are required to follow all University policies and procedures at all times and take account of University guidance.

Person Specification

Criteria	Essential	Desirable
Qualifications		
Undergraduate degree (e.g. BA, BSc, BEng) PhD degree in subject area of direct relevance for the project; or	√	
Professional/Industrial/Creative Doctorate in subject area of direct relevance for the project (e.g. DBA, MD, EdD, PsyD, EngD, DA); or	√	
Professional qualification (e.g. Chartership) and relevant experience equivalent to that of a PhD; or		
Professional experience in relevant discipline equivalent to that of a PhD		
Experience/Knowledge		
Post doctoral experience		√
Demonstrated significant depth and breadth of specialist knowledge of subject matter to contribute to research programmes and to the development of departmental research activities	√	
Demonstrated awareness of latest developments in the field of research and in research design	√	
Demonstrated potential to publish in high quality, peer reviewed journals	√	
Skills		
Ability to prepare research proposals, to conduct individual research work and to disseminate results		√
Ability to organise and prioritise own workload to meet required deadlines	√	
Ability to write research reports and to effectively disseminate outcomes	√	
Excellent oral, interpersonal and written communication skills	√	
Proficiency in appropriate techniques (as appropriate to discipline)	√	
Proficiency in IT skills (as appropriate to discipline)	√	

Attributes		
Commitment to working within professional and ethical codes of conduct	√	
Innovation and developing creative solutions	√	
Commitment to excellence in research	√	
Enthusiasm and self-motivation	√	
Tenacity – working to achieve own and team objectives and to overcome obstacles	√	
Ability to be an effective team worker	√	
Commitment to safe working practices	√	