Job Description

Job title	Research Associate
Department/School	Mathematical Sciences
Job family	Education and Research
Grade	7
Reporting to	Principal Investigator (PI): Dr Haiyan Zheng
Responsible for	Developing innovative statistical methods and statistical software packages
Location	University of Bath premises

Background and context

We are seeking a highly motivated and talented post-doctoral researcher, with academic training in Statistics, Statistical Programming, Mathematics, or a strongly quantitative discipline, to develop innovative approaches that improve the efficiency of data collection and decision making in cancer clinical trials. Such trials often enrol patients in small subgroups that may receive different benefits from an anti-cancer treatment. Simultaneous estimation of the subgroup-specific treatment effects, and timely decisions (such as dropping or adding subgroups for investigation) following the estimation, are key questions of interest. The post-holder will work on topics including (1) design and analysis of modern clinical trials, (2) controlling error rates in Bayesian clinical trials.

The successful candidate will have a PhD in a strongly quantitative discipline, ideally (bio)statistics, and have excellent programming skills. Knowledge and experience in Bayesian inference, clinical trials, and multiplicity correction will be an advantage.

A tailored development programme will be provided for the post-holder to develop their knowledge, research and career skills, under the supervision and general leadership of Dr Haiyan Zheng at the Department of Mathematical Sciences, University of Bath.

The research group has a long-lasting relationship with the UK clinical trials units and pharmaceutical companies around the world that will benefit the post-holder to build their own collaboration network.

Fixed-term: This post is part of a 6-year research programme funded by Cancer Research UK. This appointment is for 3 years in the first instance.

Job purpose
• To develop statistical methods for clinical trials in the era of precision medicine • To create easy-to-use statistical software such as R packages and Shiny Apps • To present the scientific work at seminars, workshops and conferences • To write scientific papers for submission to high-impact peer-reviewed journals • To support the implementation of adaptive designs in clinical studies Provisional start date: 18th January 2027 or as soon as possible thereafter.

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	Write-up results of research and contribute to the publication of results in high-quality peer-reviewed academic literature.
3	Disseminate results of research project as appropriate to the discipline through activities such as • 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.
10	As a member of Research Staff at the University, you will be encouraged to take up a minimum of 10 days' professional development pro rata per year. You should use this time to spend on activities that will benefit your career

	development and your personal growth. Examples include: attending workshops, career development coaching, mentoring, training courses, participation in networks, attending conferences, writing fellowship or funding applications, and representing the research staff community on committees or working groups. The University, as a signatory to the Concordat for the Career Development of Researchers, is committed to its principles. We aim to provide a supportive and inclusive environment, where researchers' contributions are recognised and valued, and we provide opportunities to enable research staff to develop their full potential.
	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 **or** Professional qualification (e.g. Chartership) and relevant research experience equivalent to that of a PhD; **or** Applied Research experience in relevant discipline gained in a professional or industrial setting 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	√	

*If you have not yet been awarded your PhD, you will need to have at least submitted your thesis in order to be offered this role (if successful). This offer would be subject to you passing your viva with or without minor corrections and your PhD being awarded within your six-month probation period. Please note that an offer may be withdrawn, or probation failed, if a PhD viva is not passed or passed with major corrections. The University's normal probationary requirements apply in all other respects.