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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Architecture and Civil Engineering |
| **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  |

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| **Background and context** |
| An exciting opportunity has arisen for an enthusiastic and qualified researcher to work on a new interdisciplinary project ‘Mobilising historical flood data for use in contemporary flood risk assessments’ funded by the Leverhulme Trust. The post is primarily based in the Department of Architecture and Civil Engineering’s Water Environment and Infrastructure Resilience (WEIR) group with links to Centre for Advanced Studies in Architecture (CASA) and in collaboration with School of Mathematics at the University of Edinburgh and The Department of Mathematical Sciences at University of Bath. The aim of the project is to understand how to use documentary evidence of past flood events within modern flood risk assessments, and to assess the utility of this information. Focussing on the River Avon and its interactions with the historical city of Bath over the past three centuries, the appointee will be responsible for (i) investigating and documenting historical changes in river hydraulics and management of the River Avon in Bath and translating this evidence into hydraulic river models representing past conditions, (ii) reconstruction of identified historical flood events in the city of Bath using hydraulic and hydrological modelling tools, and (iii) investigating new methods for flood frequency analysis using historical datasets, including uncertainty assessments. The successful candidate is also expected to engage in dissemination to local interest groups and stakeholders through outreach events.Candidates should ideally have a PhD with experience in the use of hydraulic modelling tools is a requirements as well as an interest in statistical modelling of extreme events and an interest in history and public engagement.The post is a 12-month fixed term contract.Informal enquiries may be made to Dr Thomas Kjeldsen (t.r.kjeldsen@bath.ac.uk) (01225386298)*This position is part of a team in the Water Environment and Infrastructure Resilience (WEIR) Group,. The project will develop and evaluate tracking algorithms and user interfaces, integrate them into a package suitable for use in the operating theatre, and conduct clinical and non-clinical investigations to quantify the effectiveness of the system in improving patient outcomes. The work forms part of an NIHR-funded project, working with surgeons at the Royal United Hospital and culminating in the validation of the suitability of the device as a new medical product for use across the NHS.**This role primarily involves the technical development and evaluation of the guidance system, including the tracking algorithms and hardware as well as the physical packaging to create a functional device which is certified to MHRA standards. As part of this process the job entails designing and testing within a regulatory framework established by external consultants for this purpose, and providing results and reports to the consultants to be incorporated into regulatory paperwork. The job involves overseeing third party use of the device in clinical and non-clinical testing, and the collection and collation of data from these tests. The role will also require dissemination of results at informal meetings, formal review meetings, progress reports, and in academic conferences and journal papers, as well as coordinating with university colleagues, hospital workers, and external consultants to conduct the activities outlined here.* |

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| **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.  |

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| **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* overseas research visits
* conference presentations
* public engagement activities
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| **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.  |

**![logo-uob-resize[1]]() Person Specification**

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| **Criteria** | **Essential** | **Desirable** |
| **Qualifications** |  |  |
| A PhD degree in subject area of direct relevance for the project, or equivalent significant relevant experience and professional qualification | √ |  |
| **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 | √ |  |