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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Mechanical Engineering |
| **Job family** | Education and Research |
| **Grade** | 7 |
| **Reporting to** | Principal Investigator, Professors Keogh  |
| **Responsible for** | Day to day supervision of other staff e.g. technical staff or co-supervision of doctoral or undergraduate students may be required.  |
| **Location** | University of Bath premises  |

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| **Background and context** |
| Two research associates (RAs) are sought to work at the University of Bath in connection with a collaborative research project in the area of large volume metrology. Bath is a “spoke” in a larger metrology project whose “hub” is at the Huddersfield University and whose other “spokes” are the Universities of Loughborough and Sheffield. There are additional participants including NPL and industrial companies. The Bath part of the project aims to integrate a number of sub-areas including: * measurement systems based on non-contact principles (based for example on optics, eddy currents, capacitance)
* networks of measurement systems including their compensation for environment disturbances such as temperature, humidity, vibration
* manufacturing systems for subtractive and additive manufacture
* robotic systems to achieve automation of manufacturing processes
* geometric modelling
* dynamic system modelling
* closed loop control of manufacturing processes based on measurement results

There will be a number of PhD students associated with the project. Hence it would be useful for the RAs to support their activities in a positive manner.Applications are welcome from well qualified candidates with experience of some of the above aspects. Successful applicants will work as part of a team and so are not expected to cover all the aspects. However a willingness to learn new techniques is essential. |

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| **Job purpose** |
| To provide subject-specific research expertise and undertake specific research work to a Principal Investigator (PI) Professor Keogh and Co-Investigator (CI) Professor Mullineux 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** | Conducting individual and/or collaborative research projects as part of the main project. Taking a lead in the experimental design and execution of the project. Working in collaboration with other research and academic staff as appropriate. Collection and analysis of data (both existing and derived) related to the project using qualitative and quantitative techniques, and draw conclusions and recommendations.  |
| **2** | Writing up results of research and contributing to publishing of results in high-quality peer-reviewed academic literature (both journals and conferences). |
| **3** | Project management: e.g. timetabling and meeting project milestones; participating in regular discussions with collaborative partners. Liaise with key stakeholders/industrial partners and conduct focus group; attendance at the University of Bath during normal working hours (when not required elsewhere) .  |
| **4** | Disseminating results of project as appropriate to the discipline e.g. by presentations at conferences, overseas research visits, public engagement activities.  |
| **5** | Participate regularly in group meetings and prepare and deliver presentations to project team (both within Bath and within the wider project consortium), internal and external stakeholders or funders. |
| **6** | Assist with the supervision of graduate students and undergraduate project students and the assessment of student knowledge. |
| **7** | Continually update knowledge and understanding in field or specialism to inform research activity. |
| **8** | Identify sources of funding and provide assistance with preparing bids to funding bodies. Contribute to securing of own funding e.g. travel grants.  |
| **9** | Develop research objectives and proposals for own or joint research, with assistance of a mentor if required. |
| **10** | Disseminate knowledge of research advances to inform departmental teaching effort. |

**![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 an equivalent professional qualification and significant relevant experience where applicable. | √ |  |
| **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 | √ |  |
| Ability to write research reports and to effectively disseminate outcomes | √ |  |
| Excellent oral, interpersonal and written communication skills | √ |  |
| Proficiency in experimental 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  | √ |  |
| Enthusiasm and self-motivation. | √ |  |
| Organisation – able to plan and deliver work to meet required deadlines | √ |  |
| Tenacity – working to achieve own and team objectives and to overcome obstacles  | √ |  |
| Ability to be an effective team worker | √ |  |