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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Electronics and Electrical Engineering |
| **Job family** | Research |
| **Grade** | 7 |
| **Reporting to** | Principal Investigator (PI) or Co-Investigator (CI) |
| **Responsible for** | Day to day supervision of other staff e.g. technical staff or supervision of doctoral or undergraduate students may be required. |
| **Location** | University of Bath premises  |

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| **Background and context** |
| We recently demonstrated a new technique to change the magnetisation of ferromagnetic microresonators in a commercial MEMS process by applying external magnetic fields at locally elevated temperatures. In this research project we will build on this method to develop new micromagnetic models to optimise microfabrication processes for P-MEMS, and these will be then applied to realise structures targeting potential applications such as programmable microfluidic devices, etc. This project will be supervised by Dr Ali Mohammadi in the Department of Electronics and Electrical Engineering and Professor Simon Bending in the Department of Physics.Applicants should have micromagnetic modelling experience and familiarity with some of the available modelling tools such as OOMMF etc. A background in the temperature-dependant behaviour of ferromagnetic materials would also be an advantage. Hands-on experience with standard microfabrication techniques for patterning MEMS devices is a desired attribute, although full training with the tools in our David Bullet Nanofabrication Facility will be provided to the successful applicant.The University of Bath holds Bronze award in Athena SWAN scheme. We are committed to providing a supportive and inclusive working environment. We constantly improve the present gender balance within the Department, and particularly welcome applications from women, who are currently under-represented in research posts.This is a full-time (36.5 hours per week), fixed-term position for up to 18 months which is available from 1st May 2019. Informal enquiries about the role should be directed to Dr Ali Mohammadi (A.mohammadi@bath.ac.uk), Tel: +44 (0)1225 383325. |

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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. Take a lead in the experimental design and execution of the project. Collect and analyse existing data related to the project using qualitative and quantitative techniques. |
| **2** | Writing up results of research and contributing to publishing of results in high-quality peer-reviewed academic literature. |
| **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 groups. |
| **4** | Disseminating results of project as appropriate to the discipline e.g. by presentations at conferences.  |
| **5** | Participate regularly in group meetings and prepare and deliver presentations to project team, 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 funds for research. |
| **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** |   |  |
| 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 | √ |  |