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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Electronic and Electrical Engineering |
| **Job family** | Education and Research |
| **Grade** | 7 |
| **Reporting to** | Corwin Wright (Principal Investigator) |
| **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** |
| *Applications are invited for a Research Associateship to study the role of atmospheric gravity waves (GWs) in the Earth's atmospheric-dynamical system.**GWs are small-scale waves with big climate-system impacts. Generated by wind flowing over mountains, storms and tropical convection, and internal atmospheric processes such as the jet streams, these waves travel upwards through the atmosphere and are one of the few dynamical processes capable of directly travelling through the full depth of the atmosphere. They are a key cause of aircraft turbulence at flight altitudes, act as a major control on the dynamical structure of the middle and upper atmosphere, and can disrupt and redirect GPS and radio signals in the upper atmosphere.**Our team at Bath has spent the last several years developing novel observational tools to measure and characterise GWs in satellite observations. For this role, we are looking for someone to take these advanced measurements and work with us using statistical techniques to understand the sources and propagation pathways in the troposphere and stratosphere of the GWs we have measured. Specifically, you will exploit a novel multi-decadal climatology of GWs (Hindley et al 2020, Geophysical Research Letters, doi:10.1029/2020GL089557) to identify and statistically characterise large-scale climate-system drivers of GWs, including but not limited to the solar cycle, El Nino, the quasi-biennial oscillation and climate change.* |

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| **Job purpose** |
| To provide subject-specific research expertise and undertake specific research work to a Principal Investigator /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** |  |  |
| Postdoctoral 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 atmospheric dynamics and in research design | √ |  |
| Demonstrated potential to publish in high quality, peer reviewed journals | √ |  |
| Knowledge and experience of atmospheric physics and/or satellite data analysis |  | √ |
| Experience of version control for software development |  | √ |
| **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, including at multi-institution project meetings and national/international conferences | √ |  |
| Excellent oral, interpersonal and written communication skills | √ |  |
| Demonstrated scientific programming capabilities | √ |  |
| Demonstrated ability to programme effectively in a scripting language such as Matlab, Python or IDL. |  | √ |
| **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 | √ |  |