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**Job Description**

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| **Job title** | Research Associate |
| **Department/School** | Architecture & Civil Engineering |
| **Job family** | Education and 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** |
| This exciting new position is for a post-doctoral research associate to on a large project that has just been awarded funding, with the potential to make a lasting impact on the lives of millions of people. The project’s vision is to decouple building energy use from economic growth in developing countries through a new science of Zero Peak Energy Building Design for warm climates, with India as a case study. The key objective, therefore, is to provide ‘thermal stress free' living conditions whilst minimising mean and peak demand. This post is to construct and run simulation models of the interaction of building energy systems and occupants at district level to simulate the effect of these interactions on the overall energy demand. These models will have to capture a representation of a range of novel fabric, cooling and heating technologies and how they can be made to interact in the district energy network. Demand profiles at building level are susceptible to the complex interaction of climate, buildings and people such that small building level “bumps” can synchronise to form sharp network level peaks. The aim will be to model modes of interaction that can instead have a smoothing effect on these peaks and quantify how this smoothing effect scales depending on both the strength of the interaction and the number of buildings in the connected system. The post holder will be required to work closely with and contribute to other work streams, as well as with the experimental researchers in India. The Indian team will provide data and expertise on the technologies to be used in the field, as well as validation of the simulation modelling resultsThe Research Associate will join the EDEn (Energy and Design of Environments) research group within the Department of Architecture and Civil Engineering, but work closely with other co-investigators, including those in the developing country. For more information on EDEn, see http://www.bath.ac.uk/ace/eden. |

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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 | √ |  |