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| Last updated: | 30/11/2017 |

**JOB DESCRIPTION**

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| Post title: | **Senior Research Fellow / Senior Research Software Engineer in Lower-Middle Income Country Prosthetics Databases** |
| Academic Unit/Service: | Mechanical Engineering |
| Faculty: | Faculty of Engineering and the Environment |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway |
| Posts responsible to: | Award Holders |
| Posts responsible for: |  |
| Post base: | Office-based: Pro rata:* 4 days/wk at Uni. Southampton Science Park, Chilworth
* 1 day/wk at Uni. Southampton, Highfield Campus
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| Job purpose |
| To undertake software development engineering in accordance with research project “A Step Change in LMIC\* Prosthetics Provision through Computer Aided Design, Actimetry and Database Technologies” under the joint supervision of the award holder and BluPoint Ltd. To undertake leadership, management and engagement activities.\* Lower/Middle Income Country |

| Key accountabilities/primary responsibilities | % Time |
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|  | Investigate models and approaches to test and develop them, specific to the development of an asynchronously connected distributed database architecture, with associated data security measures, to enable digital patient casenotes to be collected in remote or isolated communities. | 65 % |
|  | Collaborate on the above-mentioned testing research tasks with colleagues in other institutions (National Institute for Social Affairs (NISA), Cambodia). | 10 % |
|  | Contribute to disseminating findings by preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events. | 10 % |
|  | Contribute to the writing of bids for subsequent research funding. | 5 % |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control. | 5 % |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | 5 % |

| Internal and external relationships |
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| Direct responsibility to the external development lead at BluPoint in conjunction with the holder of research award, and collaborative research with National Institute for Social Affairs (NISA), Cambodia. Periodic additional reporting and liaison responsibilities to external funding bodies or sponsors, in support of holder of research award. |

| Special Requirements |
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| To be available to participate in fieldwork as required by the specified research project. To attend national and international conferences for the purpose of disseminating research results.To be available for trips to Cambodia and any other related countries as needed.*Candidates with equivalent Professional Experience instead of PhD qualification will be given the title of* ***Senior Research Software Engineer****.* |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Skill level equivalent to a PhD in **Software engineering and/or Databases,** or professional experience in **Computer Science, and commercial experience of web development.**Detailed understanding and knowledge of **software engineering, databases, distributed systems, and web application development.**Experience of **Python, OO-programming, data modelling, contemporary RDBMSs** | Industry experience is preferable.PhD in Computer Science (e.g. **Software Engineering, Web Technologies and/or Databases.**Knowledge of some NoSQL / less usual database software e.g. GraphQL, Mongo DB, CouchDB etc.Some knowledge of **distributed database management systems.**Some knowledge of relevant theory, i.e. **eventually consistent databases, transactional systems, distributed versioning, domain specific languages etc.** | CV; Interview |
| Planning and organising | Able to organise own research activities to deadline and quality standards |  | Interview;References |
| Problem solving and initiative | Able to develop understanding of complex problems and apply in-depth knowledge to address themAble to develop original techniques/methods |  | Interview:References |
| Management and teamwork | Work effectively in a team, understanding the strengths and weaknesses of others to help teamwork development and delegating where appropriate |  | Interview; References |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audienceAble to present research results at group meetings and conferencesAble to write up research results for publication in leading peer-viewed journalsWork proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  | InterviewCV, InterviewCV, InverviewCV, Inverview |
| Other skills and behaviours | Understanding of relevant Health & Safety issuesPositive attitude to colleagues and students |  | Interview |
| Special requirements | Able to attend national and international conferences to present research resultsAble to travel to Cambodia and other countries as required. Current passport enabling world travel.All travel for fieldwork will be risk assessed as required.All visits shorter than 30 days, and fewer than 90 days per year. |  |  |

**JOB HAZARD ANALYSIS**

**Is this an office-based post?**

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| [ ]  Yes | If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below. |
| [x]  No | If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the analysis below.Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder. |

## - HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.

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| **ENVIRONMENTAL EXPOSURES** | **Occasionally** (<30% of time) | **Frequently**(30-60% of time) | **Constantly**(> 60% of time) |
| Outside work  | X |  |  |
| Extremes of temperature (eg: fridge/ furnace) |  |  |  |
| ## Potential for exposure to body fluids |  |  |  |
| ## Noise (greater than 80 dba - 8 hrs twa) |  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: |  |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation  |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** |
| ## Food handling  |  |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV)  |  |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers)  |  |  |  |
| **PHYSICAL ABILITIES** |
| Load manual handling |  |  |  |
| Repetitive crouching/kneeling/stooping |  |  |  |
| Repetitive pulling/pushing |  |  |  |
| Repetitive lifting |  |  |  |
| Standing for prolonged periods |  |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) |  |  |  |
| Fine motor grips (eg: pipetting) |  |  |  |
| Gross motor grips |  |  |  |
| Repetitive reaching below shoulder height |  |  |  |
| Repetitive reaching at shoulder height |  |  |  |
| Repetitive reaching above shoulder height |  |  |  |
| **PSYCHOSOCIAL ISSUES** |
| Face to face contact with public | X |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties  |  |  |  |