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| Last updated: | 30/11/2017 |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Lower-Middle Income Country Prosthetics** | | |
| Academic Unit/Service: | Mechanical Engineering | | |
| Faculty: | FEE | | |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway | | |
| Posts responsible to: | Award Holder | | |
| Posts responsible for: |  | | |
| Post base: | Office-based | | |

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| Job purpose |
| To undertake biomedical engineering research on EPSRC Global Challenges Research Fund project “A Step Change in Lower and Middle Income Country Prosthetics Provision through Computer Aided Design, Actimetry and Database Technologies” under the joint supervision of academics from the University of Southampton and the University of Salford. To undertake leadership, management and engagement activities. |

| Key accountabilities/primary responsibilities | | % Time |
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|  | Investigate digital clinical data collection tools to evaluate prosthetic limb design, performance and health assessment. Evaluate a range of candidate technologies to collect these data (e.g. actimetry, video gait assessment, 3D shape scanning, outcome measures), specific for use in in remote or isolated communities in lower/middle income countries (LMICs). Work closely with computer scientists for practical implementation. | 55 % |
|  | Collaborate the above-mentioned testing research tasks with colleagues in other institutions (National Institute for Social Affairs (NISA), Cambodia), including collection of proof-of-concept datasets in field tests. | 20 % |
|  | Contribute to disseminating findings by preparing publication materials for refereed journals, presenting results at conferences, or exhibiting work at other appropriate events. | 5 % |
|  | Contribute to the writing of bids for subsequent research funding. | 5 % |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment and obtaining ethical approval for research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control. | 5 % |
|  | Supervise the work of junior research staff. | 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 holder of the research award (A Dickinson).  Direct work with academics at University of Southampton (A Dickinson, P Worsley, M Donovan-Hall, C Metcalf, G Wills, and others) and at University of Salford (M Granat, L Kenney) including a 6-month secondment.  Collaborative research with National Institute for Social Affairs (NISA), Cambodia including visits for field work, and partners Exceed Worldwide (NGO) and BluPoint Ltd.  Periodic additional reporting and liaison responsibilities to external funding bodies or sponsors (EPSRC), 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, and to be available for trips to Cambodia and potentially other countries as needed.  To attend national and international conferences for the purpose of disseminating research results.  *Applications for Research Fellow positions will be considered from candidates who are working towards or nearing completion of a relevant PhD qualification. The title of Research Fellow will be applied upon successful completion of the PhD. Prior to the qualification being awarded the title of* ***Senior Research Assistant*** *will be given.* |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | PhD or equivalent professional qualifications and experience in **Biomedical or Biomechanical Engineering, or a related Allied Healthcare Profession (e.g. Physiotherapy, Rehabilitation).**  Detailed understanding and knowledge of **movement analysis (e.g. actimetry, gait analysis), quantitative data analysis, and/or clinical outcome measures.** | Programming languages for data analysis, e.g. **MATLAB and/or Python**, etc.  Knowledge of **biomechanics of prosthetic limbs,** especially in lower limb amputation, and/or orthotics; **statistics**; **data collection** in clinics or the community. | 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 them  Able 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 |  | Interview; References |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audience  Able to present research results at group meetings and conferences  Able to write up research results for publication in leading peer-viewed journals  Work proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  | Interview  CV, Interview  CV, Interview  CV, Interview |
| Other skills and behaviours | Understanding of relevant Health & Safety issues  Positive attitude to colleagues and students |  | Interview |
| Special requirements | Able to attend national and international conferences to present research results  Able to travel to Cambodia and other countries as required.  All travel for fieldwork will be risk assessed as required. |  |  |

**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. |
| 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 |  |  |  |