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| Last updated: | 20 July 2017 |

**JOB DESCRIPTION**

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| Post title: | **Research Engineer** | | |
| Academic Unit/Service: | IT Innovation Centre, Electronics and Computer Science | | |
| Faculty: | FPSE | | |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research | | |
| Posts responsible to: | Principal Research Engineer, IT Innovation Centre | | |
| Posts responsible for: | Co-ordination of some activities of other Research Engineers | | |
| Post base: | Office-based | | |

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| Job purpose |
| To undertake applied research and development involving the innovative application of IT. |

| Key accountabilities/primary responsibilities | | % Time |
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|  | To develop software in an agile team environment, and become involved in all aspects of the project lifecycle, including requirements analysis, architecture, documentation, and demonstrating proofs of concept. | Percentage of time spent on each responsibility varies significantly depending on project assignment |
|  | To prepare technical notes, deliverable reports, publications for conferences and journals, and publicity material for dissemination. |
|  | To prepare and give technical presentations at internal project meetings, meetings with project partners and reviews with external funding bodies or clients, workshops, and international conferences. |
|  | To participate in internal project meetings, meetings with project partners and reviews with external funding bodies or clients |
|  | To assist in winning funding for new projects by providing technical input to proposals managed by others. |

| Internal and external relationships |
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| Internal to IT Innovation: as a member of project teams, the post holder will be responsible for defined tasks and may co-ordinate the day-to-day activities of any other Research Engineers working on these tasks in a team-based environment.  External to the University: the post holder will undertake technical liaison with research staff working for project partners in collaborative projects |

| Special Requirements |
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| Occasional short-term travel to project meetings within the UK and internationally (normally within the EU). Attending national and international conferences to disseminate our research results and to learn of others' results. |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Good degree in a relevant area  PhD or an equivalent combination of qualifications and experience in computer science or a related discipline.  Keen interest in new and emerging technologies, and the desire to identify and develop compelling software-based applications of those technologies  Strong analytical and applied research skills  Demonstrable commercial and/or academic experience of applying IT-based research to real-world problems.  Experience of relevant computer science methods and tools.  Hands-on experience of designing and implementing software  Expertise in some or all of Java, Python, C++ and R | Skills and experience in distributed systems, and in one or more of: data analysis, data modelling and SQL/NoSQL databases semantic languages for knowledge representation and reasoning (e.g. OWL, SPARQL and RDF); natural language processing; information security or risk management; big data systems (e.g. Storm, Spark, Hadoop, Hive and HBase); web applications and RESTful service development..  Experience of UML at business or system levels | CV  CV, Interview  CV, Interview  CV, Interview  CV, Interview  CV, Interview    CV, Interview  CV, Interview  CV, Interview      CV, Interview |
| Planning and organising | Able to plan and manage work effectively to meet required deadlines  Able to prioritise tasks |  | Interview  Interview |
| Problem solving and initiative | Able to understand complex problems and apply specialist knowledge to solve them |  | CV, Interview |
| Management and teamwork | Able to collaborate professionally and effectively with colleagues at all levels inside and outside IT Innovation | Able to co-ordinate the day-to-day activities of other research staff working on the same or related tasks | CV, Interview  CV, Interview |
| Communicating and influencing | Excellent interpersonal and communication skills  Able to present complex ideas clearly and effectively verbally and in writing  Fluent spoken and written English | Good presentation skills | Interview  CV, Interview  CV, Interview  Interview |
| Other skills and behaviours | Keen and flexible attitude and able to work under pressure  Understanding of, and empathy with, the mission and values of the IT Innovation Centre |  | Interview  Interview |
| Special requirements | Able to travel within the EU at short notice |  | CV, Interview |

**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 |  |  |  |
| 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 |  |  |  |
| Lone working |  |  |  |
| ## Shift work/night work/on call duties |  |  |  |