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| Last updated: | 11th April 2024 |

**JOB DESCRIPTION**

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| Post title: | **Research Technician** |
| School/Department: | ZIPN/ORC |
| Faculty: | Faculty of Physical Sciences and Engineering |
| Career Pathway: | Technical and Experimental (TAE) | Level: | 4 |
| Posts responsible to: | Lv4 ERE |
| Posts responsible for: | N/A |
| Post base: | Office-based/Non Office-based (see job hazard analysis) |

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| Job purpose |
| Use specialist knowledge to manage and provide characterisation support for project activities within the Silicon Photonics Group, developing and characterising processes that can be used for several photonics platforms. To provide specialist technical support and advice to all users of Silicon Photonics Laboratory groups and its external customers. To provide additional support to technical staff. |

| Key accountabilities/primary responsibilities | % Time |
| --- | --- |
|  | Provide specialist technical and characterisation support for the project activities; manage own time to develop and improve processes on specialist laboratory equipment that can be used for all Silicon Photonics platforms. This will include the day to day development of processes such as optical characterisation, thermos-optic, wafer scale characterisation and modulator characterisation. Responsibilities also include laboratory experimentation, literature review, critical evaluation and interpretation, fault finding and design of experiments for developing new processes identified as critical to the success of research activities. | 45 % |
|  | Plan, define and monitor process flows and progress of projects. Plan and disseminate key equipment calibration changes. Identify bottle-necks in process flows and establish new working methods to resolve delays. Carry out administrative tasks associated with the projects, for example, risk assessment of research activities, participation in project meetings and documentation. | 20 % |
|  | Perform the characterisation required for the projects. This will include optical characterisation, thermos-optic, wafer scale characterisation and modulator characterisation. | 10 % |
|  | Train and assist staff, students and external visitors in the safe use of a range of laboratory equipment. | 5 % |
|  | Liaise with project partners to ensure compatibility of processes between partners. | 5 % |
|  | Attend internal and external meetings to ensure the work unit issues are represented. | 5 % |
|  | Any other duties as allocated by the line manager.  | 10 % |

| Internal and external relationships |
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| Other members of the department/University staffExternal customers and partnersRelevant suppliers and external contacts |

| Special Requirements |
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| Strong process development and characterisation skillsGood awareness of health and safety procedures |

**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Degree in science related subject or equivalent industry experienceExperience in a laboratory environment, with proven experience of successfully planning and progressing work activities | PhD in science related subjectExperience performing optical characterisation of photonic integrated circuitsKnowledge of silicon photonics characterisation techniques  | Application, interview and references |
| Planning and organising | Proven ability to plan and deliver research or engineering activities to deadline and quality standardsOrganisation and time management skills. Able to set and plan short/medium term priorities in line with team and execute accordinglyAble to progress a broad range of activities within professional guidelines and in support of University policy |  | Interview and references |
| Problem solving and initiative | Ability to apply specialist technical knowledge to analyse complex problems and recommend solutions/plans of action. | Familiarity with general diagnostic test equipment, able to conduct routine maintenance and repair | Interview and references |
| Management and teamwork | Able to proactively work with colleagues in other work areas to achieve outcomes |  | Interview and references |
| Communicating and influencing | Able to provide accurate and timely specialist guidance on complex issuesAble to use influencing and negotiating skills to develop understanding and gain co-operation  |  | Interview and references |
| Special requirements | Willingness to undertake Health and Safety training specific to roleWilling to work out-of-hours occasionally |  | 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. |
| [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  | n/a |  |  |
| Extremes of temperature (eg: fridge/ furnace) | n/a |  |  |
| ## Potential for exposure to body fluids | n/a |  |  |
| ## Noise (greater than 80 dba - 8 hrs twa) | n/a  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: | ü |  |  |
| Frequent hand washing | n/a |  |  |
| Ionising radiation  | n/a |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** |
| ## Food handling  | n/a |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV)  | n/a |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) | n/a |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers)  | n/a |  |  |
| **PHYSICAL ABILITIES** |
| Load manual handling | n/a |  |  |
| Repetitive crouching/kneeling/stooping | n/a  |  |  |
| Repetitive pulling/pushing | n/a  |  |  |
| Repetitive lifting | n/a  |  |  |
| Standing for prolonged periods |  | ü |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) | n/a |  |  |
| Fine motor grips (eg: pipetting) | ü |  |  |
| Gross motor grips | ü |  |  |
| Repetitive reaching below shoulder height | n/a |  |  |
| Repetitive reaching at shoulder height | ü |  |  |
| Repetitive reaching above shoulder height | n/a |  |  |
| **PSYCHOSOCIAL ISSUES** |
| Face to face contact with public | ü |  |  |
| Lone working |  | ü |  |
| ## Shift work/night work/on call duties  | n/a |  |  |