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| Last updated: | July 2020 |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Passive Source Seismology** |
| Academic Unit/Service: | Ocean and Earth Science |
| Faculty: | Natural and Environmental Sciences |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway |
| Posts responsible to: | Associate Professor  |
| Posts responsible for: |  |
| Post base: | Office-based and Non Office-based (see job hazard analysis) |

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| Job purpose |
| The fellow will play a vital role in a large international project to image and understand the lithosphere – asthenosphere system, mantle dynamics, seismicity, and tectonics either globally or at an oceanic and/or subduction zone setting. The fellow will work on the European Research Council-funded EURO-LAB project. They will do one or more of the following projects: global imaging of the tectonic plate, joint seismic inversions (receiver function and surface/body wave), joint seismic-MT inversions, seismicity, induced seismicity, episodic tremor and slip, synthetic receiver function modelling of geodynamic predictions, full wave-form inversion, tectonic studies, and/or geodynamic modelling of mid-ocean ridge/transform systems. There are possibilities to engage with in situ data collected from a large ocean bottom seismic experiment at the Mid-Atlantic Ridge, from the Ontong Java Plateau, and also data from the Lesser Antilles subduction zone. There are also several possibilities to expand with fibre optics, machine learning, hazard, oceanographic links, and climate change. In addition to supporting these projects the fellow will be encouraged to develop their own research interests in seismology and/or geophysics. Interaction and collaboration with our collaborators in the US, France, Japan and Germany is key. |

| Key accountabilities/primary responsibilities | % Time |
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|  | To develop and carry out research associated with seismic imaging geodynamic modelling of the lithosphere-asthenosphere system including but not exclusive to the named grants.  | 60 % |
|  | Regularly disseminate findings by taking the lead in preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events. | 15 % |
|  | Contribute to the writing of bids for research funding. | 2.5 % |
|  | Plan and undertake field campaigns  | 2.5 % |
|  | Collaborate/work on original research tasks with colleagues in other institutions. | 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 % |
|  | Carry out occasional undergraduate supervision, demonstrating or lecturing duties within own area of expertise, under the direct guidance of a member of departmental academic 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 associate professor on the EURO-LAB projects.
* May have additional reporting and liaison responsibilities to external funding bodies or sponsors.
* May be asked to serve on a relevant Academic Unit committee, for example research committee.
* Collaborators/colleagues in other work areas and institutions.
* May have opportunities to go to sea as part of the seismic deployment/recovery cruises.
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| Special Requirements |
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| To attend national and international conferences for the purpose of disseminating research results.Attend meetings with international collaborators to jointly interpret and/or invert 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 seismology, geophysics, or related field.Experience in computing and seismic data processing.  | Experience or interest in full waveform modelling, global seismology, or using ocean bottom seismic data. | CV, application & interview |
| Planning and organising | Able to organise own research activities to deadline and quality standards. |  | CV, application & interview |
| Problem solving and initiative | Able to develop understanding of complex problems and apply in-depth knowledge to address them. |  | Application & interview |
| Management and teamwork | Work effectively in a team, understanding the strengths and weaknesses of others to help teamwork development. |  | CV, application & interview |
| 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 conferencesAble 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. |  | CV, application & interview |
| Other skills and behaviours | Understanding of relevant Health & Safety issues.Positive attitude to colleagues and students. | Teaching at undergraduate level and contributing to teaching at postgraduate level. | CV, application & interview |
| Special requirements | Able to attend national and international conferences to present research results. |  | CV, application |

**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: High Voltage Sources | X |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation  |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** |
| ## Food handling  |  |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV)  | X |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers)  |  |  |  |
| **PHYSICAL ABILITIES** |
| Load manual handling | X |  |  |
| Repetitive crouching/kneeling/stooping | X |  |  |
| Repetitive pulling/pushing | X |  |  |
| Repetitive lifting | X |  |  |
| Standing for prolonged periods | X |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) | X |  |  |
| Fine motor grips (eg: pipetting) |  |  |  |
| Gross motor grips | X |  |  |
| 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  | X |  |  |