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| Last updated: | <date> |

**JOB DESCRIPTION**

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| Post title: | **Research Fellow in Offshore Renewable Energy (Computational Geosciences): Intelligent & Resilient Ocean Engineering** | | |
| School/Department: | Engineering | | |
| Faculty: | Engineering and Physical Sciences | | |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway | | |
| Posts responsible to: | RAEng Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering | | |
| Posts responsible for: |  | | |
| Post base: | Office-based | | |

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| Job purpose |
| To undertake research associated with the Royal Academy of Engineering (RAEng) Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering. To undertake leadership, management and engagement activities, consistent with the broader industry and community outreach role of the RAEng Chair in Emerging Technologies.  Your research work will include the development of methods to better understand the fundamental relationships between geophysical and geotechnical properties of geomaterials, and development of methods to integrate geophysical and geotechnical site investigation data to derive synthetic geotechnical parameters and inform on requirements for geophysical investigation. You will also be involved in co-supervising associated PhD projects and UG/MSc student projects.  Your research will include theoretical, numerical and AI aspects. You will be based at the new National Infrastructure Laboratory on the University’s Boldrewood Innovation Campus, working within the Centre of Excellence for Intelligent & Resilient Ocean Engineering.  This project forms part of the activities of and is funded by a Royal Academy of Engineering Chair of Emerging Technologies in Intelligent & Resilient Ocean Engineering. |

| Key accountabilities/primary responsibilities | | % Time |
| --- | --- | --- |
|  | To develop and carry out an area of research, linked to geotechnical characterisation for offshore facilities, within the RAEng Intelligent & Resilient Ocean Engineering Hub at the University of Southampton. | 80 % |
|  | 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 % |
|  | Carry out any other activities, including administrative tasks associated with the RAEng Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering, for example organisation of meetings, events and documentation. | 5 % |

| Internal and external relationships |
| --- |
| Direct responsibility to holder of research award/academic supervisor – RAEng Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering, Professor Susan Gourvenec.    Network and relationships related to RAEng Chair in Emerging Technologies in Intelligent & Resilient Ocean Engineering at other research institutions, industry partners and community partners, nationally and internationally. |

| Special Requirements |
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| 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 geotechnics and/or geophysics | PhD in integration of geotechnics and geophysics  Machine learning experience  Knowledge and experience of offshore renewable energy systems, or offshore facilities  Experience gathering or interpreting field measurements  Experience sharing research outcomes through non-traditional means, e.g. webapps and websites | Application, interview and references |
| Planning and organising | Demonstrate explicitly the ability to organise own research activities to deadline and quality standards |  | Application, interview and 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 and methods |  | Application, interview and references |
| Management and teamwork | Able to supervise work of junior research staff or PhD students  Able to work effectively in a team, sharing responsibilities and workload to achieve agreed outcomes  Able to interact across disciplinary boundaries |  | Application, interview and references |
| Communicating and influencing | Able to work proactively and constructively with colleagues in other disciplines and in other institutions  Able to communicate across disciplinary boundaries  Able to communicate effectively, both verbally and in writing, engaging target audiences in your own and related disciplines  Able to present research at meetings and conferences to a range of audience types  Able to write up research for publication in leading peer-viewed journals |  | Application, interview and references |
| Other skills and behaviours | Understanding of Health & Safety issues  Positive and inclusive attitude to colleagues and students |  | Application, interview and references |
| Special requirements | Able to attend national and international conferences to collaborate and present research results |  | Application, interview and references |

**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 |  |  |  |