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| Job Description and Person Specification (HR5) |  |
| **Job Description** |
| Faculty: | Engineering and the Environment |
| Post Title: | Senior Research Assistant/Research Fellow in Numerical Modelling of Landslides |
| Please enter Level under appropriate Career Pathway | ERE | TAE | MSA | CAO | R. Nurse | Clinical |
| Level 4 |  |  |  |  |  |
| ERE Category | Academic Posts | Non-Academic Posts |
| Academic(mixed) | Researchonly | Teachingonly | Enterprise | Education Development |
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| Posts Responsible to (and Level): | Investigators: Dr A. Zervos & Prof. C. Clayton |
| Posts Responsible for (and Level): | N/A |
| Job Purpose: To undertake research into the stability of continental slopes by developing and using appropriate numerical models, as part of the NERC funded project ‘Will climate change increase the landslide-tsunami risk to the UK?’ under the guidance of Dr Antonis Zervos and Prof. Chris Clayton. |
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| Key Accountabilities/Primary Responsibilities:1. Develop finite element models for the transient, coupled pore pressure-deformation analysis of slopes asymmetrically loaded due to sediment deposition.2. Develop and programme algorithms for introducing excess pore pressures due to gas hydrate dissociation and seismic shaking into transient, coupled pore pressure-deformation finite element analyses.3. Systematically investigate the stability of continental slopes for different patterns of sediment deposition and hydrate dissociation, and different levels of seismic activity. 4. The post holder will be expected to take a leading role in the preparation of publication materials for leading international peer-reviewed journals, for preparing conference presentations and updating of project website.5. To assist the award holders in carrying out technical, management and administrative tasks including risk assessment of project activities, organisation of project meetings and related documentation. Implementation of procedures required to ensure accurate and timely formal reporting. | % Time15%15%60%5%5% |
| Internal & External Relationships:Perform collaborative research with other university departments, external universities involved with the project and with industrial partners.Present reports to project funders (NERC) and industrial partners. |

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| Criteria | Essential | Desirable |
| **Qualifications, Knowledge and Experience:**Has, or is about to obtain, a PhD, or equivalent qualifications and experience in Geomechanics, Geotechnical Engineering, Engineering Geology or Earth SciencesPractical experience in geomechanical/geotechnical numerical modelling and the ability to programme bespoke numerical analysis tools.Knowledge and experience of critically evaluating and interpreting research outputs, surveys, analysis and evaluation in consultationTeaching at undergraduate level and contributing to teaching at postgraduate level | YesYesYes | Yes |
| **Planning and Organising:**Excellent organisational and time management skills Able to organise own research activities to deadline and quality standards | YesYes |  |
| **Problem Solving and Initiative:**Good research–based analytical skillsAbility to conduct independent researchAble to develop understanding of complex problems and apply in-depth knowledge to address themAble to develop original techniques/methods | YesYesYesYes |  |
| **Management and Teamwork:** Good people skills working with the general public Able to supervise work of junior research staff, delegating effectivelyAble to contribute to Academic Unit management and administrative processesWork effectively in a team, understanding the strengths and weaknesses of others to help teamwork development | Yes YesYesYes |  |
| **Communicating and Influencing:**Evidence of the ability to produce published reports/papers.Ability to present technical material at conferences and workshopsCommunicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audienceWork proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes | YesYesYes | Yes |
| **Other Skills and Behaviours:** Understanding of relevant Health & Safety issuesPositive attitude to colleagues and students | YesYes |  |
| **Special Requirements:**Able to attend national and international conferences to present research results | Yes |  |

**Job Hazard Analysis Form - Appendix to Job and Person Specification**

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| This post has **some hazards other than routine office** e.g. more than use of VDU | x |

Please tick all those that apply, and put N/A if not applicable

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| **Environmental Exposures** | **O\*** | **F** | **C** |
|  |  |  |  |
| 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 ……………………………………………………….         ## |  |  |  |
| Frequent hand washing |  |  |  |
| Ionising radiation.                    |  |  |  |
| **Equipment/Tools/Machines used** |  |  |  |
| Food Handling                                                                                         ## |  |  |  |
| Driving university vehicles(e.g. car/van/LGV/PCV)                                    ## |  |  |  |
| Use of latex gloves (note: prohibited unless specific clinical necessity)     ##                                                                       | x |  |  |
| Vibrating tools ( e.g. strimmers, hammer drill, lawnmowers)                    ## |  |  |  |
| **Physical Abilities** |  |  |  |
| Load manual handling.  | x |  |  |
| Repetitive Crouching/Kneeling/Stooping |  |  |  |
| Repetitive Pulling/Pushing |  |  |  |
| Repetitive Lifting |  |  |  |
| Standing for prolonged periods |  |  |  |
| Repetitive Climbing i.e. steps, stools, ladders |  |  |  |
| Fine motor grips (e.g. 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 | x |  |  |
| Shift work/night work/on call duties                                                        ## |  |  |  |

**O – Occasionally** (up to 1/3 of time)**; F – Frequently** (up to 2/3 of time)**; C – Constantly** (more than 2/3 of time) ## denotes to HR the need for a full PEHQ to be sent to all applicants for this position.

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| **FOR SCHOOL/SERVICE USE ONLY** | Resource Link Post Number |
| Which post does this job report to | Dr A Zervos and Prof. C. Clayton |
| Is this post a Line Manager? | Yes |  | No |    X |
| If yes, which posts directly report into it? | Resource Link Post Number |
| Post 1 |  |
| Post 2 |  |
| Post 3 |  |
| Post 4 |  |
| Post 5 |  |
| Post 6 |  |
| Post 7 |  |
| Post 8 |  |
| Please add additional rows as required |