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| Last updated: | November 2023 |

**JOB DESCRIPTION**

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| Post title: | **Research Technician in Remote Sensing** | | |
| Academic Unit/Service: | Geography and Environmental Science | | |
| Faculty: | FELS | | |
| Career Pathway: | Technical and Experimental (TAE) | Level: | 3 |
| \*ERE category: | n/a | | |
| Posts responsible to: | Principal Investigator (PI) | | |
| Posts responsible for: |  | | |
| Post base: | Office-based | | |

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| Job purpose |
| To provide technical support in: (i) remote sensing data processing and analysis and (ii) undertake fieldwork to generate ground validation datasets to support externally funded projects in the Geography and Environmental Science department led by the PI. |

| Key accountabilities/primary responsibilities | | % Time |
| --- | --- | --- |
|  | Analyse different type of remotely sensed datasets, including pre-processing, retrieval of vegetation monitoring variables such as Leaf Area Index, Canopy Chlorophyll content across a range of spatial and temporal scale | 30 % |
|  | Develop image analysis methods, preferably in a cloud-processing environment, to utilise these products in various applications such as estimating primary productivity, identification of crop stress and mapping crop types. | 30 % |
|  | Participate in field data collection campaigns organised within the project and manage the database of ground data collected through various campaigns to ensure they are standardised and up to date | 15 % |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation | 10 % |
|  | Contribute towards academic publications in the area of remote sensing and those, which arise from projects. Presenting results at conferences, or exhibiting work at other appropriate event | 10 % |
|  | 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% |

| Internal and external relationships |
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| The role-holder will work under the supervision of the PI, Geography and Environment, who will provide direction and guidance for the research work to be undertaken. The role holder will frequently liaise with various national and international project partners and collaborators. |

| Special Requirements |
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**PERSON SPECIFICATION**

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| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | Skill level equivalent to achievement of HND, Degree, NVQ4 or basic professional qualification in data analysis.  Experience using remote sensing software to process satellite imagery (e.g. ENVI, SNAP).  Experience of use of standard and specialist computer systems for storage and processing of large volume of data including cloud based solution.  Experience of conducting fieldwork for collecting vegetation biophysical variables (e.g. leaf area index, leaf/canopy chlorophyll content).  Familiarity with visualization tools and methods. | Master’s degree in Geography, Remote Sensing, or related fields.  Knowledge and experience of statistical methods.  Good scientific programming skills (e.g. Python, Matlab, IDL, or R). | CV, cover letter, publications, interview |
| Planning and organising | Able to plan and prioritise a range of one’s own, and the team’s, standard and non-standard work activities.  Ability to successfully plan and deliver technical support of projects over a period of several months.  Ability to work under a tight schedule.  Flexibility in managing different tasks at the same time. |  |  |
| Problem solving and initiative | Experience of contributing innovative ideas in order to solve technical problems.  Experience of using judgement to find solutions to problems for which no standard procedure exist. |  |  |
| Management and teamwork | Experience of providing training/coaching to colleagues and students in relation to technical tasks  Able to solicit ideas and opinions to help form specific work plans.  Able to positively influence the way a team works together. |  |  |
| Communicating and influencing | Able to elicit information to identify specific customer needs.  Able to offer proactive advice and guidance on technical processes and procedures.  Able to communicate and liaise with users of the technical services, both internal and external to the department. |  |  |
| Other skills and behaviours |  |  |  |
| Special requirements | Willingness to undertake Health and Safety training specific to role.  Willingness to participate in field data collection campaigns both within the UK and overseas. |  |  |

**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 |  |  |  |