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| Last updated: | 20 Dec 2017 |

**JOB DESCRIPTION**

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| Post title: | **Scientific Director, GRID3 project (Principal Research Fellow)** |
| Academic Unit/Service: | Geography and Environment |
| Faculty: | Social Human and Mathematical Sciences  |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 6 |
| \*ERE category: | Research pathway |
| Posts responsible to: | Principal Investigator |
| Posts responsible for: | GRID3 senior research fellows |
| Post base: | Office-based |

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| Job purpose |
| To provide scientific direction and leadership in accordance with the Gates Foundation award that funds analyses and mapping of population numbers and demographics in low income countries. |

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| Key accountabilities/primary responsibilities | % Time |
|  | Oversee and lead the research team tasked with development of spatial statistical approaches for the production of high resolution gridded estimates of population counts and demographic characteristics in the absence of national census data across countries, through the integration of geospatial covariate layers and survey data. Contribute to the design of methods, reproducible code, strategies for data inclusion, processing pipeline, internal training and data dissemination. | 40 % |
|  | Lead engagement on technical matters with project partners (UNFPA, DFID, Gates Foundation, CIESIN) and national governments in low income countries. | 20 % |
|  | Manage technical staff allocations and needs between different country engagements. | 10 % |
|  | Contribute to the design of training of National Statistical Office/other government/international agency staff in the methods developed, and the running of workshops. | 5 % |
|  | Regularly disseminate findings by contributing to the preparation of publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events | 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 % |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | 5 % |
|  | To develop and carry out an area of personal research, and/or contribute to activities with the department of Geography and Environment. | 10 % |

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| Internal and external relationships |
| The role-holder will work under the supervision of Prof Andy Tatem within the WorldPop program. They will provide direction and guidance for the research work to be undertaken. |

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| Special Requirements |
| The role-holder is likely to be expected to travel internationally occasionally during the period of employment to attend research meetings, undertake secondary data gathering, contribute to running workshops/training and attend national and international conferences for the purpose of disseminating research results. |

**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 demography, GIS, geostatistics, remote sensing or a related subject. Alternatively, industry experience will be considered.Well-established national and international reputation in demography, GIS, geostatistics, remote sensing or a related subject.Experience of engaging with governments/international agencies in low income settingsStrong academic publication record in the field of demography, GIS, spatial statistical methods, or related fieldsKnowledge and familiarity of census, household survey and other demographic datasets | Knowledge and experience of spatial statistical methods, Bayesian methodsExperience at working with large gridded 'raster' datasetsExpertise in household survey sample design and implementationExperience of working in low income settingsExperience of designing and running training in demographic methods, GIS, spatial statistical analysis or related fields, in particular for national statistical officesFamiliarity with spatial population distribution dataset production methodsComputer programming skills | Application documents, interview |
| Planning and organising | Proven ability to plan and shape the direction of an area of research activity with substantial impact on finance and/or reputation of the UniversityProven ability to lead major funding bids, developing funding sources and attracting significant fundsProven ability to build research teamsAble to organise own research activities to deadline and quality standardsAble to plan and organise own workload in the absence of supervision |  | Application documents, interview |
| Problem solving and initiative | Proven ability to manage research projects, meeting defined milestones on timeAble to develop significant new concepts and original ideas within own field in response to intractable issues of importance to the research area |  | Application documents, interview |
| Management and teamwork | Experience of leading research teamsA strong track record of leading and managing research projects relating to demography, GIS, Geostatistics or related subjectsExperience in managing technical research teamsWork effectively in a team, understanding the strengths and weaknesses of others to help teamwork development |  | Application documents, interview |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audienceProven ability to present research results at group meetings and conferencesExperience of presenting and documenting research results for non-technical audiencesProven ability to lead in writing up research results for publication in leading peer-viewed journalsEvidence of working proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  | Application documents, interview |
| Other skills and behaviours | Understanding of relevant Health & Safety issuesPositive attitude to colleagues and students |  | Application documents, interview |
| Special requirements | Able to attend national and international conferences to present research resultsAble to travel to visit national statistical offices and UN agencies in low income countries |  | Application documents, 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. |
| ☐ 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  |  |  |  |