

Researcher Job Details

Research Assistant/Associate (Statistical Modeller) – ACHILLES

School of Mathematics, Statistics and Physics

Faculty of Science, Agriculture and Engineering

Research Role Profile

.....

As part of our commitment to career development for research staff, the University has developed 3 levels of [research role profiles](#). These profiles set out firstly the generic competences and responsibilities expected of role holders at each level and secondly the general qualifications and experiences needed for entry at a particular level.

Specific Responsibilities of Position

.....

1. Use Bayesian hierarchical modelling to develop network scale performance models by integrating geotechnical numerical models of asset condition and deterioration with available network data.
2. Use spatio-temporal modelling techniques to properly quantify and propagate uncertainty associated with missing data and future weather/climate.
3. Collaborate with geotechnical engineers and others to support the development of data-centric engineering approaches to the management of long linear assets.
4. Disseminate research through publication in world-class peer-reviewed journals and through presentation at international conferences.

Project Introduction

Achilles (Assessment, Costing and Enhancement of Long - Life, Long-Linear Assets) is an EPSRC Funded Programme Grant, which started on 1st July 2018 and will run for 54 months. It forms a unique opportunity uniting 6 academic institutions and the BGS, coalescing their field, laboratory and computing facilities. Combined with a large cohort of PhD students and an experienced stakeholder community in close collaboration as project partners, we undertake world-leading science and create long-term legacy.

It aims to address the deterioration of long-linear infrastructure assets in order to create a more reliable future by developing knowledge and tools for predicable and improved long-term asset performance at an affordable cost.

Researcher Job Details

Person Specification

.....

		Essential or Desirable
	Qualifications	
1	PhD in Statistics or a closely related discipline (awarded or nearing completion), preferably involving spatio-temporal modelling and/or emulation and calibration of complex computer models	E
	Knowledge, Skills and Experience	
1	Expertise in Bayesian inference	E
2	Expertise in computationally intensive inferential methodology	E
3	Excellent statistical computing skills, including familiarity with modern statistical tools and libraries	E
4	Strong programming skills in both R and an efficient compiled language such as C/C++ or Java/Scala	E
5	Track record of research in computational, Bayesian statistics	E
6	Excellent written and oral communication skills	E
7	Effective time management skills	E
8	Knowledge and experience of spatio-temporal or spatial modelling	D
9	Knowledge and experience of model emulation and calibration	D
10	Knowledge and experience of data assimilation	D
11	Knowledge of Bayesian hierarchical modelling	D
12	Knowledge of engineering applications.	D
13	Skills in the management, processing and analysis of large, heterogeneous data sets	D
14	Unix/Linux skills, including shell programming	D
15	Version control systems, such as Git or Subversion	D
16	Track record of research publication in internationally recognised journals	D
11	Track record of conducting cross-disciplinary research	D

Researcher Job Details

	Attributes/Behaviours	
1	Ability to interact with researchers with different backgrounds, at all levels, from across the University	E
2	Comfortable working both individually and as part of a team	E

HR Office Use Only	
SAP Position Number:	
Grade:	F
Effective Date:	20/02/2019