

**JOB DESCRIPTION**

**Vacancy Ref: Click here to enter text.**

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| **Job Title:** Senior Research Associate in Machine Learning for Geodesy | **Present Grade:** 7 |
| **Department/College:** LEC |
| **Directly responsible to:** Malcolm McMillan |
| **Supervisory responsibility for:** Some supervision of postgraduate students |
| **Other contacts**  |
| **Internal:**Academic and teaching staff, post-doctoral researchers and postgraduate students within LEC, CEEDS and DSI; university central administration. |
| **External:**  UK Centre for Polar Observation & Modelling (CPOM) staff, UK Centre for Ecology and Hydrology (UKCEH) staff. |
| **Major Duties:**This position will focus on the development and implementation of machine learning processing chains applied to satellite radar altimetry, optical imagery and digital elevation model datasets, as part of the GLOBE project. Specific duties will include:1. Developing scalable deep learning workflows capable of running on High Performance compute.
2. Researching, designing and implementing novel deep learning methods for specific application to digital elevation model and radar altimetry datasets.
3. Developing and evaluating deep learning approaches for next frame prediction and anomaly detection in satellite imagery.
4. Implementing machine learning approaches for classifying subglacial lake features in historical satellite datasets.
5. Assessment of the possible trade-offs associated with running the developed workflows on local or cloud-based infrastructure.
6. Undertaking scientific analysis of new datasets, and publishing the results in leading international journals.
7. Presenting at international conferences.
8. Supervising less experienced colleagues and postgraduate students.
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