

## Job Description

Please complete all accessible boxes and refer to the guidance on writing Job Descriptions

Position Details		
Faculty/Professional Support Service	Science and Engineering	
School/Department	Natural Sciences	
Division/Section/Unit	Geography and Environmental Management	
Job Title	Research Associate	
Grade	Grade 7	
Hours of Work	Full Time	
Contract Duration (Perm/Fixed Term)	Fixed Term – 17 months	
Reports To (Job Title)	Dr Iestyn Barr	
Responsible For (Job Title)	None	

Principal Accountabilities
<p>The main purpose of this role is to undertake research in the field of satellite remote sensing of glacier-volcano interactions (as part of a Leverhulme Trust Funded Project “Using glaciers to identify, monitor, and predict volcanic activity”).</p> <p>The post holder will be expected to:</p> <ul style="list-style-type: none"> <li>• Develop remote sensing methods for the automated detection of volcanic activity at glacier occupied volcanoes globally, based on glacier response to volcanic unrest (as demonstrated, for example, by the development of anomalous features on glacier surfaces).</li> <li>• Analyse and disseminate research findings through relevant journals, conferences, and seminars, in order to further the institution’s standing in the Higher Education and research community and contribute to the development of new areas in the discipline.</li> <li>• Take responsibility for leading part of the project, under the overall direction by the project co-ordinator.</li> </ul>

## Key Tasks

HR Only

## ***Research Activities***

[The project aim is to generate tools for identifying past, ongoing, and imminent eruptions at glacier-occupied volcanoes.

Applicants should possess (or be very close to obtaining) a doctorate in earth/geo sciences, remote sensing, physics, computer science, mathematics, or a related discipline.

A background in any of the following will be of advantage: satellite remote sensing, image analysis, GIS, programming, artificial intelligence or big data analysis. An interest in glaciology and/or volcanology would also be useful – though not essential.

The post holder will be expected to:

- Plan and prioritise own day to day work and resources to achieve agreed research objectives.
- Undertake quality research and detailed analysis, and present findings to appropriate internal and external groups, such as conferences, or seminars, as required.
- Write up results of own research and prepare for presentation to research team and relevant stakeholders.
- Use initiative and judgement to develop appropriate techniques in order to facilitate research work and resolve problems affecting the achievement of objectives and deadlines.
- Contribute to the dissemination of research findings through journals, conferences and seminars, in order to further the institution's standing in the HE and research community.
- Participate in the development of internal and external partnerships and networks in order to disseminate information, share best practice, generate income, establish opportunities for collaborative work, and to enhance the reputation of the University.
- Work with partners and external agencies on collaborative projects that benefit both the department and the Faculty.

## ***Teaching Support***

Supervise the work/projects of taught postgraduate and/or research students as required and provide training on techniques appropriate to the role.

Contribute to teaching support via demonstration of practical methods or operation equipment to undergraduate, masters and/or research students as appropriate.

## ***Service Provision***

Collaborate with senior academic staff to organise, manage and carry out appropriate research.

Respond to enquiries and requests for information from potential students, academic staff from other HE institutions, and relevant stakeholders, when required.

Proactively and effectively engage with quality assurance procedures to ensure that University standards are upheld.

### ***Teamworking***

Actively participate as a member of the research team, providing mutual support to colleagues to achieve successful completion of projects.

Attend Faculty, Department and Programme meetings/boards as appropriate and proactively contribute to decision making.

Introduce new starters to the area, giving training on basic skills and activities to assist their induction to the team.

Guide and support research assistants and other members of staff within the department in areas of expertise e.g. in undertaking research and writing up papers for publication. |

## **Special Features**

### **Miscellaneous**

You have a legal duty, so far as is reasonably practicable, to ensure that you do not endanger yourself or anyone else by your acts or omissions. In addition you must cooperate with the University on health and safety matters and must not interfere or misuse anything provided for health, safety and welfare purposes.

You are responsible for applying the University's Equal Opportunities Policy in your own area of responsibility and in your general conduct.

You have a responsibility to promote high levels of customer care within your own areas of work.

You are expected to co-operate with the PDR process, engaging in the setting of objectives in order to assist in the monitoring of performance and the development of the individual.

Such other relevant duties commensurate with the grade of the post as may be assigned by the Manager in agreement with you. Such agreement should not be unreasonably withheld.

You may be required to undertake a specific Health & Safety role, commensurate with your grade, to support the University in meeting its statutory Health & Safety obligations. This could include acting as a DSE Assessor,

First Aider, Fire Marshall or Departmental Safety Co-ordinator. The allocation of such roles will be subject to the provision of appropriate training and assessment of competence.

You may, with reasonable notice, be required to work at any of the Manchester Metropolitan University sites.

You have the responsibility to engage with the University's commitment to Environmental Sustainability in order to reduce its waste, energy consumption and carbon footprint.

You have the responsibility to engage with the University's commitment to delivering value for money services that optimise the use of resources and therefore should consider this when undertaking all duties and aspects of your role.

## Review

This is a description of the job at the time of issue. It is the University's practice periodically to review and update job descriptions to ensure that they accurately reflect the current nature of the job and requirements of the University and to incorporate reasonable changes where required, in consultation with the job holder.

## Person Specification

In order to be shortlisted you must demonstrate that you meet all the essential criteria and as many of the desirable criteria as possible. Where we have a large number of applications that meet all of the essential criteria, we will then use the desirable criteria to produce the shortlist.



All disabled candidates who meet the minimum essential criteria will be included on the shortlist.

Selection Criteria				
Attributes		Item	Relevant Criteria	Rank
1	Skills & Abilities	1.1	Ability to synthesise complex data from different sources and communicate findings orally and via written reports and articles for a range of diverse audiences.	E
		1.2	Ability to use initiative, creativity and judgement to develop appropriate approaches in order to further research.	E
		1.3	Ability to lead the work of a research team, co-ordinating effort and resources.	D
2	General & Specialist Knowledge	2.1	Proficiency in the application of equipment, software and techniques relevant to satellite remote sensing.	E
3	Education & Training	3.1	Hold, or be undertaking and working towards a doctoral level qualification; evidence of continuous professional development	E
4	Relevant Experience	4.1	Research experience in the fields of satellite remote sensing, image analysis, GIS, programming, artificial intelligence or big data analysis, which should include: <ul style="list-style-type: none"> <li>making a demonstrable, independent contribution to projects</li> </ul>	E

		4.2	<ul style="list-style-type: none"> <li>• preparing written reports of results</li> </ul> <p>Additional research experience, including:</p> <ul style="list-style-type: none"> <li>• building relationships, networks and partnerships with internal and external contacts</li> <li>• presenting at national and/or international research meetings</li> <li>• preparing funding proposals and applications to external bodies</li> <li>• supervising student work and providing appropriate support and feedback</li> </ul>	D
<b>Date of Revision</b>			July 2020	
<b>Key</b>			<b>Rank</b>	<b>E</b> Essential
				<b>D</b> Desirable