

**JOB DESCRIPTION**

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| **Job Title:** (Senior) Post-Doctoral Researcher in Volcanology and Granular Flows | **Present Grade:** 6 or 7 |
| **Department/College:** Lancaster Environment Centre (LEC) |
| **Directly responsible to:** Dr Thomas Jones (LEC)  |
| **Supervisory responsibility for:** n/a |
| **Other contacts**  |
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| **Major Duties:**The post-doctoral role will directly contribute to the NERC funded project entitled “Fragmentation and flow of gas-particle mixtures in volcanic systems”. The research team includes Dr Thomas Jones from Lancaster University, Professor Josef Dufek from the University of Oregon, and Dr Ben Bernard from the Instituto Geofísico, Escuela Politécnica Nacional (IGEPN). You will be working and based within Dr Jones’ research group at Lancaster University, with visits to the project partners when needed.For appointment at Grade 6 Post-Doctoral Researcher:* Contributing to the project by performing analogue experiments to better understand the flow properties of pyroclastic density currents (PDCs) and integrating these experimental results into numerical models.
* Performing attrition experiments to quantify the rates at which pyroclasts change shape and size during transport.
* Performing granular rheology experiments to measure and understand the rheological properties of fluidized pyroclasts.
* Leading the analysis, interpretation, and integration of these new experimental datasets into multiphase PDC flow models.
* Engagement of all project partners and the wider research team.
* Making model results accessible and ultimately targeted to the needs of IGEPN.
* Preparation and submission of journal papers for publication of project findings.
* Participation in writing new research proposals that build on the expertise developed in this project.
* To be an active and enthusiastic member of the (GFD) research group and contribute regularly to relevant research seminars, lab management, and collaborative research activities.
* To attend and present research and represent the interests of the research group and Lancaster University at major national and international conferences.

For appointment at Grade 7 Senior Post-Doctoral Researcher:* All above in Grade 6 list.
* Take a leading role in identifying funding opportunities and developing project proposals for future funding based on the research area and results of this project.
* Any other duties appropriate to the grade, as directed by the Principal Investigator.
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