Early-stage researcher (ESR) position -- Volcano Geophysics -- School of Earth Sciences, University of Bristol, UK

An early-stage researcher (ESR) position is available in the School of Earth Sciences at the University of Bristol to work on volcano geophysics.

The ESR is expected to register as a full-time PhD student and study for the degree. However, individuals who are under 4 years of registration of an existing PhD program but are before completion and have not been awarded a PhD degree are also eligible to apply.

The ESR will join a Marie Sklodowska-Curie funded European Training Network, IMPROVE - Innovative Multi-disciplinary European Research training netwOrk on VolcanoEs (http://www.improve-etn.eu/). IMPROVE is a highly-cooperative multi-disciplinary network of academic and industry partners focussed on innovative research in volcano science.

IMPROVE adopts a multi-disciplinary approach whereby geophysics, geochemistry, lab analysis and experiments, numerical modelling, massive data analysis and automatic signal processing, are exploited in a collaborative, coordinated effort with common objectives. Central elements are two multi-disciplinary, multi-parametric field experiments, at Krafla and Etna, exposing ESRs to professional volcanology engaging them in major research, monitoring and field training.

Applications will be accepted from candidates of any nationality, but please be aware that the funding guidelines specify that candidates must not have resided or carried out their main activity in the UK for more than 12 months in the three years before recruitment. They must also be in the early stage of their research career; the degree making them eligible to start a PhD programme in their home country (Bsc or MSc) must be obtained no earlier than 4 years prior to the starting date. They must not hold a PhD degree.

Project overview

The work will involve investigating the shallow crustal density distribution and its evolution at the Krafla volcanic system in Iceland. The objectives include i) the construction of 3D models of the shallow crustal (<5 km depth) density distribution by analysing, processing and modelling existing and new gravity data in combination with auxiliary multi-parametric geophysical data and ii) the quantification of the short and mid-term spatio-temporal evolution of the sub-volcanic system from continuous and time-lapse gravimetric observations.

The training aspects of the ITN offer the ESR with opportunities to engage in large-scale field experiments and to partake in secondments to partner institutions in Iceland, Ireland, France and Germany.
Skills/Qualifications

Essential requirements: Candidates should have a 2.1 or 1st class or equivalent degree in geophysics, geology, geomatics, geodesy, geotechnical engineering or a closely related discipline. The candidates must have fundamental knowledge of processes underpinning the dynamics of the Earth's crust. Candidates must have a valid English language certificate consistent with an IELTS test score of 6.5 overall with 6.0 in all skills.

Desirable skills: It is desirable that the candidate has relevant field experience. Expertise in data processing, analysis and interpretation as well as programming and the development of mathematical models is also of advantage. Applicants with a track record of publications should include a link to Google Scholar or ORCID in the application pack.

Application process

Informal enquiries about the project should be direct to j.gottsmann@bristol.ac.uk

Formal applications must be submitted via the Earth Sciences Postgraduate study page (www.bristol.ac.uk/study/postgraduate/2022/sci/phd-earth-sciences/) which contains all the relevant information on the application process. Please ensure you choose programme: Geology PhD -- Start Date Sept 2022.

The actual start date for the post must be BEFORE Sep. 1, 2022.
For practical questions about the submission process please contact earth-postgrad@bristol.ac.uk

This position is open until filled.