

Post-Doctoral Research Fellow position

Application deadline: 22 November 2020

Duration: 2 years

Applications are invited for a full-time Post-Doctoral Researcher position in the area of applied geomechanics, based in the School of Engineering at the University of Warwick. The successful applicant will join the Ground Engineering Research Group as a member of research staff and will conduct research on a large multi-disciplinary research project entitled “From Mining Waste to Valuable Resource: New Concepts for a Circular Economy” (MINRESCUE). The project is funded by the European Commission Research Fund for Coal and Steel (RFCS) and includes a wider consortium team from several institutions across Europe. The work will be conducted under the supervision of the project coordinator Dr Mohammad Rezanian.

About the project:

Extensive coal mining in Europe, particularly since the Industrial Revolution, has underpinned its societal and economic development, but it has also resulted in the release of enormous quantities of coal mining waste geomaterials (CMWGs) into the natural environment. For example, in the UK alone there could be as much as 2000 Mt of mine wastes currently lying in coalfield dumps, and similar scenarios are replicated across Europe. Reclamation of such repositories through reuse and recycling of the CMWGs is therefore increasingly being sought as part of mine closure and post-mining planning in Europe. The core objective of the project is to develop and validate new protocols and technology to upgrade CMWGs as effective constituents in sustainable construction materials and products. The project will run until the end of August 2023.

Skills and experience:

You must hold a first degree in Civil Engineering (or a related field, e.g. geological engineering, materials engineering, mining engineering) and have been awarded a PhD degree in geotechnical engineering or a related field, with a strong background in experimental research particularly advanced element level testing of hydro-chemo-mechanical processes in geomaterials. Experience with imaging techniques to visualise hydrodynamics processes in porous media is desirable. Additional background in numerical research and constitutive modelling will be appreciated. You will have excellent presentation and report writing skills and will be able to work both independently and as part of a collaborative team. A strong publication record in high quality peer-reviewed journals is highly desirable. For questions, please contact Mohammad Rezanian m.rezanian@warwick.ac.uk.

Application is online through the vacancy advert on the University of Warwick's jobs pages (link below), where full details of the duties and selection criteria for this role can also be found.

https://atsv7.wcn.co.uk/search_engine/jobs.cgi?owner=5062452&ownertype=fair&jcode=1873024