UNIVERSITY OF LEEDS

CANDIDATE BRIEF

Research Fellow in Geosolutions Leeds: Sub-critical Stress Corrosion Cracking for the Energy Transition, Faculty of Environment

Salary: Grade 7 (£39,355 – £46,735 p.a. depending on experience)

Reporting to: Professor Dave Healy, Professor Sandra Piazolo

Reference: ENVEE1820

Fixed term for up to 24 months to complete specific time limited work

Location: University of Leeds (with scope for hybrid working)

We are open to discussing flexible working arrangements

Research Fellow in Geosolutions Leeds: Sub-critical Stress Corrosion Cracking for the Energy Transition, Faculty of Environment

Overview of the Role

Are you an ambitious researcher looking for your next challenge? Do you have a background in fluid-rock reaction (diagenesis), rock mechanics and/or structural geology? Do you want to further your career in one of the UK's leading research-intensive Universities, and conduct fundamental research to accelerate the Energy Transition?

The role is based at Geosolutions Leeds, an exciting new strategic investment by the University of Leeds as part of its Climate Plan, supporting the refocusing of research. Geosolutions Leeds brings together world-leading expertise in geology, engineering and social science to deliver an integrated systems approach to energy geoscience that will meet Net Zero goals.

You will work with Professors Dave Healy and Sandra Piazolo at Leeds and collaborate with Professor Cathy Hollis (University of Manchester), to couple understanding of the diagenetic evolution of sedimentary rocks with opening-mode fracture development. This project is funded by the Natural Environment Research Council (NERC) and this role is one of two PDRA positions funded through the project.

In this role, you will sample fractured limestones and sandstones from the Pennines, UK. You will conduct laboratory experiments to propagate sub-critical fractures in a newly commissioned double torsion apparatus under controlled conditions and build new models of stress corrosion cracking under diagenetic conditions, quantified by the other team member.

You will have a PhD in Geology or Geophysics and have experience of geological field work in deformed rocks, laboratory rock deformation experiments, and a strong commitment to publishing scientific results.



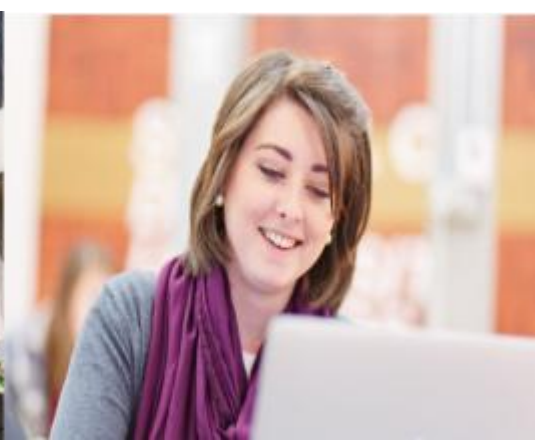
If you are looking for a role that will combine quantitative geoscience with finding solutions to the challenges of the Energy Transition, apply today.

Main duties and responsibilities

- Systematic field sampling of fractured carbonate and sandstone from outcrops at selected localities in the UK;
- Conducting laboratory experiments to produce and measure sub-critical fractures at a range of conditions;
- Quantitative analysis of experimental results and numerical modelling of fracture pattern development;
- Generating and pursuing independent and original research ideas in the appropriate subject area;
- Developing research objectives and proposals and contributing to setting the direction of the research project and team including preparing proposals for funding in collaboration with colleagues;
- Evaluating methods and techniques used and results obtained by other researchers and to relate such evaluations appropriately to your own work;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output;
- Working both independently and also as part of a larger team of researchers, engaging in knowledge-transfer activities where appropriate and feasible;
- Maintaining your own continuing professional development, including acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.





Qualifications and skills

Essential

- A PhD (completed and awarded at the time of application) in Earth Science (Geology or Geophysics);
- A strong background in laboratory rock mechanics or rock physics;
- Experience of modelling using experimental results;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- Excellent written and verbal communication skills including presentation skills;
- A proven ability to work well both individually and in a team;
- A developing track record of peer reviewed publications in international journals;
- A strong commitment to your own continuous professional development.

Desirable

- A strong interest in accelerating the Energy Transition through fundamental research.

Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Please note that this post may be suitable for sponsorship under the Skilled Worker visa route but first-time applicants might need to qualify for salary concessions. For more information please visit: www.gov.uk/skilled-worker-visa

For research and academic posts, we will consider eligibility under the Global Talent visa. For more information please visit: https://www.gov.uk/global-talent

Find out more about the Faculty of Environment.



Find out more about our School.

Find out more about our Research and associated facilities.

Find out more about Equality in the Faculty.

Our University

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Environment has received a prestigious Athena SWAN silver award from Advance HE, the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

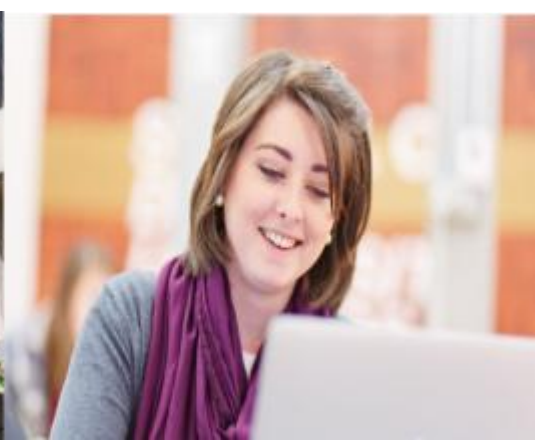
Working at Leeds

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our Working at Leeds information page.

Information for disabled candidates

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at hr@leeds.ac.uk





Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position, however, all applicants will be required to declare if they have any ‘unspent’ criminal offences, including those pending.

Any offer of appointment will be, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information.