



## **Assistant Professor in Physical Geography: Earth surface dynamics and geohazards**

Department	Geography
Grade	Grade 7/8
Salary Range	£32,044 - £46,924
Closing Date	2 January 2018 at midday
Working Arrangements	This role is full time but we will consider requests for flexible working arrangements including potential job shares

### **Overview**

#### **Durham University**

Durham University is one of the world's top universities with strengths across the Arts and Humanities, Sciences and Social Sciences. We are home to some of the most talented scholars and researchers from around the world who are tackling global issues and making a difference to people's lives.

The University sits in a beautiful historic city where it shares ownership of a UNESCO World Heritage Site with Durham Cathedral, the greatest Romanesque building in Western Europe. A collegiate University, Durham recruits outstanding students from across the world and offers an unmatched wider student experience.

Less than 3 hours north of London, and an hour and a half south of Edinburgh, County Durham is a region steeped in history and natural beauty. The Durham Dales, including the North Pennines Area of Outstanding Natural Beauty, are home to breathtaking scenery and attractions. Durham offers an excellent choice of city, suburban and rural residential locations. The University provides a range of benefits including pension and childcare benefits and the University's Relocation Manager can assist with potential schooling requirements.

Durham University seeks to promote and maintain an inclusive and supportive environment for work and study that assists all members of our University community to reach their full potential. Diversity brings strength and we welcome applications from across the international, national and regional communities that we work with and serve.

#### **The Department**

The Department of Geography at Durham comprises 68 academic staff (approximately equally divided between physical and human geography), a graduate school of around 100 research students, around 40 taught postgraduate students and more than 650 undergraduates. The Department is well supported with technical staff, including a cartography unit, and administrative staff.

The most recent QS rankings for Geography placed Durham 7<sup>th</sup> overall in the world, its 5<sup>th</sup> year in the top ten, and 1<sup>st</sup> for citations in the discipline. The department is recurrently ranked in the top handful of programmes in the UK by various league tables; in 2016, we were ranked 2<sup>nd</sup> in the Times Good University Guide and 3<sup>rd</sup> in both the Complete University Guide and the Guardian University Guide. The Department was graded top for research power (quality weighted by volume) in UK geography in REF 2014 and 3<sup>rd</sup> for iGPA (average

score scaled by proportion of staff submitted). With 43% of work assessed as being in the highest category, it produced the largest number of world-leading (4\*) publications in the country.

### Research environment

Research is organized through seven research clusters all of which develop world leading work in their respective areas and create a world class research environment. Physical Geography research is focused in three clusters which run active seminar and workshop programmes, inviting contributors from home and overseas, and supporting developments of research and writing projects. The boundaries are permeable and they often collaborate on jointly developed themes and ideas. They are spaces where we support the growth and development of new plans and research. We regularly review their focus and shape, and will likely do so again in light of staff recruitment

**Hazards and Surface Change:** the cluster aims to advance holistic approaches to understanding hazards as the outcome of recurrent or chronic physical processes that occur within specific societal settings, rather than as one-off events. In particular, we are focused on three interrelated challenges: (1) understanding the physical mechanisms of mass movements, coupling novel laboratory and field-based approaches with numerical modelling, to allow assessment of slope stability at societally-relevant scales; (2) quantitative estimation of the long-term and large-scale effects of mass movements on the sediment and terrestrial carbon cycles, including systematic assessment of how debris flows and earthquake-triggered landslides mobilise and transport sediment and organic carbon in montane environments; and (3) investigation of how scientific understanding of hazards - particularly around earthquakes, mass movements, and sea-level change - is used in decision-making and management processes - in particular, how 'expert' and local knowledge of hazards and surface change can coexist and inform both policy and practice.

**Catchments and Rivers:** the cluster focuses upon monitoring and modelling the interactions and feedbacks between geomorphology, hydrology, vegetation, and water chemistry in hillslope and river systems. There is a particular emphasis on three critical areas: (1) building on our numerical and analogue modelling expertise to investigate the interactions of vegetation with water flow and sediment transport, including the effects of vegetation on hillslope stability and dryland erosion, and the role of plants in modulating flow in river channels; (2) developing an improved process-based understanding of how water, nutrients, and sediment move through catchments, with an emphasis on how the relevant physical processes can be deduced from a wide range of novel observational data at high spatial and temporal resolution; and (3) moving beyond a rigid distinction between bedrock and alluvial rivers to quantify flow and sediment transport processes in the mixed bedrock-alluvial channels that typify montane environments.

**Ice Sheets and Sea Level:** the cluster aims to explain and quantify the dynamic response of ice sheets to external and internal forcing and their contribution to sea-level rise. A particular focus is on integrating our strengths in field and remote sensing with new expertise in numerical modelling to: (1) understand the decadal to millennial trajectory of the polar ice sheets to constrain how they respond to climatic and oceanic forcing; (2) advance understanding of how subglacial processes affect ice sheet dynamics, exploiting expertise in process-form relationships at the ice-bed interface; (3) develop understanding of sea-level change, especially during past transitions and interglacials, as an analogue for how sea level and ice sheets may interact and affect society in the future; (4) apply expertise in sea-level indicators of seismic activity to reconstruct earthquake recurrence and impacts in a range of settings; and (5) explain how oceans interact with ice sheets and other

environments over major climate transitions (palaeoceanography), including the teleconnections between low and high latitudes, to understand better the fundamental processes that govern the role of the oceans in climate change.

We have exceptional facilities to physical geography– ranging from cartography to laboratory support. The laboratories are equipped to deal with wet and dry sediment analyses, with fully climate controlled laboratories for high precision chemical and geotechnical testing, a sediment biomarker and geochemical laboratory, radionuclide dating laboratory, a microfossil preparation laboratory and microscope rooms. This includes some very advanced equipment such as the MSCL Xray and XRF scanning facility, QEMSCAN, a GC-IRMS for compound-specific isotope analysis, back pressure shear boxes and stress path cells. Our field equipment includes advanced laser scanning equipment and vehicles, a boat and several UAVs, alongside an extensive suite of GIS and remote sensing software available. Outwith the department, we work closely with numerous interdisciplinary initiatives in the University. Many staff contribute to the pan-University Institute for Hazard, Risk and Resilience.

### Educational Environment

The department has buoyant undergraduate numbers and a high offer tariff (typically A\*AA/AAA or equivalents). The department has an intake of around 240 students per year divided equally between BA and BSc (Human and Physical geography) streams. Our students report satisfaction levels of 95% in the National Student Survey. About 10% of our undergraduate students opt into a Level 4 Integrated Masters programme. We largely deliver a MA/MSc in Risk that attracts 25-40 students per year (with half to a third being international), as well as a MA (Research Methods) as part of the Graduate School for research students and MA/MSc by Research.

We encourage innovative teaching methods and forms of assessment within broad parameters laid out for equity and work load monitoring. In physical geography we currently deliver fieldwork teaching in the UK at level 2, 3 and 4, and overseas field classes at levels 1 and 3. Undergraduate teaching incorporates many of the field and laboratory facilities to support student projects (within modules) and/or dissertation work. All staff in the department are currently either members of the Higher Education Academy (formerly the ILTHE) or are pursuing accredited qualifications in teaching in higher education. All modules are supported through a virtual learning environment (hosted on a 'Blackboard' platform) in which the university has been a lead adopter.

Teaching loads in the department are monitored by a workload model, where all teaching and administrative duties receive a weighted time allocation. We use the workload model to ensure that teaching loads in the department are sustainable and that staff have the time and opportunity to undertake internationally excellent research and deliver high quality teaching that connects with their current research.

### **The Role**

The Department of Geography seeks to appoint an outstanding individual as Assistant Professor to complement and extend our world-leading research in the field of Earth surface dynamics and geohazards. Our research crosses spatial and temporal scales and involves innovative combinations of field-based approaches, alongside laboratory experiments and numerical modelling. Existing strengths include our research into the rates, patterns and drivers of environmental processes, in which we seek to understand and predict how they control sediment transfers, biogeochemical reactions and carbon fluxes across landscapes. We also research geohazards as the outcome of recurrent or chronic physical processes that occur within specific societal settings, and aim to understand how this knowledge is used in decision-making and management processes which seek to build resilience. Research in the Hazards and Surface Change group involves strong collaborative links with the interdisciplinary Institute of Hazard, Risk and Resilience.

The successful candidates will have a PhD in a relevant field, demonstrate a track record of, or potential for, internationally excellent and world class agenda setting publications and securing external funding. They will show a commitment to delivering excellent teaching at undergraduate and postgraduate levels, the highest quality supervision of research postgraduates, and will be expected to contribute to undergraduate and master's-level teaching. In addition to their research, the successful candidates will perform departmental administrative tasks commensurate with their grade and contribute to our wider physical geography teaching programme. The post will

1. Provide high quality teaching and associated examining as required across the range of modules and levels, from undergraduate to masters programmes;
2. Contribute to the geography teaching programme through small group teaching, lectures, practicals and research-based field-trips as required;
3. Undertake research and to publish research outputs that will be internationally excellent or world leading in terms of their originality, significance and rigour;
4. Apply for appropriate research funding to support their research;
5. Contribute to the recruitment and supervision of postgraduate research students;
6. Engage with external organisations to promote the cultural, social, environmental and/or economic benefit of their research;
7. Contribute to the administration and management of the Department.

The successful candidate will join our active and inclusive research culture that ensured we returned all eligible staff in REF2014, and was awarded the Gender Equality Charter Mark Bronze status. They will benefit from a supportive work management system that allocates workloads to currently provide 1 year in 5 teaching free to focus upon research. Our research committee holds funds a Research Development Fund for pump priming work, and we support assistant professors with a travel allowance of up to £3000 over two years. Their work will have the support of a departmental research office, cartographic and photographic support as well as departmental vehicles. We are fortunate to have an allocation from the University Library for geography facing journals and books amounting to £160,000 per year. We regularly host visiting academics and research students from around the world. The department is able to benefit from the ESRC NINEDTP, the AHRC Northern Bridge, the IAPETUS NERC Doctoral Training Partnership and the new Doctoral Training Initiative in Durham 'Action on Natural Disasters'.

Successful applicants will, ideally, be in post by 1 Sep 2018.

## **The Requirements**

Applicants must demonstrate research excellence in the field of physical geography with the ability to teach our students to an exceptional standard and to fully engage in the services, citizenship and values of the University.

The University provides a working and teaching environment which is inclusive and welcoming and where everyone is treated fairly with dignity and respect. The department was proud to be one of the first in the country to be awarded the Gender Equality Mark, and seeks to continue to make progress on issues of equality and diversity. Candidates will be expected to demonstrate these key principles as part of the assessment process.

Candidates applying for a grade 7 post will have recently completed or be concluding their PhD and, while they may have limited direct experience of the requirements for the post, they must outline their experience, skills and achievements to date which demonstrate that they meet or that they have the potential to achieve the essential criteria.

Candidates applying for a grade 8 post must meet each of the essential criteria.

All applicants must have a good first degree and a PhD in geography or a related subject (which for grade 7 candidates may be completed or under examination).

### Research

Candidates must have capacity for and be progressing towards the independent development of internationally excellent research that produces high quality outcomes, including some work that is recognised as world class.

The essential research criteria for this post are:

Essential Research Criteria	Grade 7	Grade 8
<b>1. Outputs</b> Candidates are asked to submit 3 research publications with their application (as outlined below). Candidates may additionally choose to submit evidence such as external peer review of their outputs.	Experience, skills and/or achievements which demonstrate (experience of or) the potential to produce high quality outputs, some of which is recognised as world-class Grade 7 candidates may submit two pieces of research focused work.	Evidence of high quality outputs, some of which is recognised as world-class.
<b>2. Personal Research Plan</b>	Evidence of a personal research plan which supports and enhances the Geography Department's research strategy.	Evidence of a personal research plan which supports and enhances the Geography Department's research strategy.
<b>3. Research Leadership</b> Candidates may choose to include information about research group leadership, mentoring of research colleagues, invitations to external events, engagement with international networks or projects.	Experience, skills and/or achievements that demonstrate (experience of or) the potential to contribute to the leadership of research groups and the mentoring of early career researchers	Contribution to the leadership of research groups and the mentoring of early career researchers
<b>4. PhD Supervision</b>	Experience, skills and/or achievements that demonstrate (experience of or) the potential to provide excellent supervision for PhD students	Involvement in the provision of excellent supervision for PhD students
<b>5. Income Generation</b>	Experience, skills and/or achievements that demonstrate (experience of or) the potential to develop successful research project proposals	Evidence of engagement in the development of successful research project proposals

The desirable research criteria for this post (for which candidates should provide evidence of some if not all criteria) are:

Desirable Research Criteria	Grade 7	Grade 8
<b>A. Research Impact</b>	Experiences, skills and/or achievements that demonstrate (experience of or) the potential to evidence research impact beyond their institution	Demonstrable evidence of the impact of the Candidate's research beyond their institution

### Teaching

Candidates must demonstrate the development and delivery of high quality teaching that contributes to providing a high quality learning environment and curricula which enables students to achieve their potential.

The essential teaching criteria for this role are:

Essential Teaching Criteria	Grade 7	Grade 8
<b>6. Qualification</b>	Candidates must be or have the ability to attain the rank of Fellow of HEA	Candidates must be or have the ability to attain the rank of Fellow of HEA
<b>7. Quality</b>	Experience, skills and/or achievements that demonstrate (experience of or) the potential to deliver high quality teaching	Evidence of the development and delivery of high quality teaching
<b>8. Innovation</b>	Experience, skills and/or achievements that demonstrate (experience of or) the potential to innovate in the design and delivery of high quality teaching or assessment of learning including lectures, small group learning, field or lab teaching and/or using technology or other techniques to enhance learning and/or assessment	Evidence of innovation in the design and delivery of high quality teaching or assessment of learning including lectures, small group learning and/or using technology or other techniques to enhance learning and/or assessment
<b>9. Strategic</b>	Experience, skills and/or achievements that demonstrate (experience of or) the potential to engage in the design of excellent teaching programmes which are research informed and led	Evidence of strategic teaching development - engagement in the design of excellent teaching programmes which are research informed and led



## Services, Citizenship and Values

Candidates must actively engage in the administrative requirements of the Department and positively contribute to fostering a collegial environment; as well as demonstrating their commitment to equality, diversity and inclusion.

The essential services, citizenship and values criteria for this role are:

Essential Services, Citizenship and Values criteria	Grade 7	Grade 8
<b>10. Collegial Contribution</b> Candidates may choose to evidence departmental or University roles, mentoring activity, engagement with widening participation, involvement in equality and diversity initiatives and membership or engagement with external bodies.	Experience, skills and/or achievements that demonstrate (experience of or) the potential to participate in the collegial/administrative activities or an academic Department, Faculty or University	Evidence of participation in the collegial/administrative activities of an academic Department, Faculty or University
<b>11. Leadership</b> Candidates may choose to detail any leadership roles which they have undertaken in an academic context.	Experience, skills and/or achievements that demonstrate (experience of or) the potential to engage in activities that contribute to the administrative functioning of an academic Department, Faculty, University and/or discipline including leadership or responsibilities in an academic context	Engagement in activities that contribute to the administrative functioning of an academic Department, Faculty, University and/or discipline including leadership or responsibilities in an academic context
<b>12. Communication</b>	Candidates must have excellent oral and written communication skills with the ability to engage with a range of students and colleagues across a variety of forums.	Candidates must have excellent oral and written communication skills with the ability to engage with a range of students and colleagues across a variety of forums.

## How to Apply

Please be clear within your application whether you are applying for the post at a grade 7 or grade 8 level.

We prefer to receive applications online. For this role we are working with our partner organisation TMP (UK) Limited and your application will initially be submitted to TMP (UK) Limited via our website.

Applications are particularly welcome from women, BME candidates, and other groups under-represented in the historical profession and who are under-represented in academic posts in the University.

Please note that in submitting your application, both Durham University and TMP (UK) Limited (working on behalf of the University) will be processing your data.

### What to Submit

All applicants are asked to submit:

- A CV and covering letter which details your experience, strengths and potential in the requirements set out above;
- PDFs of 3 of your most significant pieces of work, at least two of which should be published after 2013 (grade 7 candidates may submit 2 pieces of research focused work) which may include submitted drafts or proofs. Please note that your work may be read by colleagues from across the Department and evaluated against the current REF criteria; and
- A personal research plan.

### Referees

You should provide details of 3 academic referees and the details of your current line manager so that we may seek an employment reference (if they are not listed as an academic referee). Please note:

- We shall (via our colleagues at TMP (UK) Limited) seek the academic references during the application process. Academic referees should not (if possible) include your PhD supervisor(s) and a majority should be from a University other than your own (save for early career applicants applying for their first post). We would ask that you alert your academic referees to this application as soon as possible so that we can quickly obtain references should you be progressed to the long list stage. Please note that it is our usual practice to provide a copy of your CV to your referee. If you do not consent to us sending your CV to your referees or if you do not wish (some or all) of your referees to be approached during the recruitment process; you must clearly indicate this to us at the time of your application.
- Academic references sought for long-listed candidates may be made available to the panel during the shortlisting process.
- We will seek a reference from your current line-manager if we make you an offer of employment (albeit you may have also nominated your line manager as an academic referee). Please clearly indicate which referee is your current line-manager and please let us know if we should only approach them once an offer has been made.

For informal enquiries please see the contact information below. All enquiries will be treated in the strictest confidence.

Contact Information
Contact information for technical difficulties when submitting your application
If you encounter technical difficulties when using the online application form, please send your name along with a brief description of the problem you're experiencing to <a href="mailto:academic.talent@durham.ac.uk">academic.talent@durham.ac.uk</a>
You could also ring on 0117 923 4454 from the UK, or +44 117 923 4454 if overseas. This number operates during the hours of 8am and 8pm UK time. We advise that you send enquiries by email.
We will aim to follow up within one working day (Monday to Friday, excluding UK public holidays). This service is being provided by our partner, TMP (UK) Limited who will respond to your technical enquiry.



University contact for general queries about the recruitment process		
Miss Natalie McNeil Recruitment and Resourcing Administrator Faculty of Social Science and Health	For general queries	<a href="mailto:natalie.r.mcneil@durham.ac.uk">natalie.r.mcneil@durham.ac.uk</a> +44 (0) 191 334 6415
Department contact for academic-related enquiries		
Professor Mike Bentley or Professor Cheryl McEwan	For academic or department related queries	<a href="mailto:m.j.bentley@durham.ac.uk">m.j.bentley@durham.ac.uk</a> or <a href="mailto:cheryl.mcewan@durham.ac.uk">cheryl.mcewan@durham.ac.uk</a>

### Next Steps

All applications will be considered; our usual practice is for colleagues across the Department to read the submitted work of long-listed candidates.

Short-listed candidates will be invited to the University and will have the opportunity to meet with key members of the Department. All candidates will be given an opportunity to speak informally to staff and to see the department and its facilities. The assessments for the post will take place over two days and will include a research focused presentation to staff, a teaching demonstration with students and an interview. Assessments are scheduled on 25 – 26 April 2018.