



## Professor in Statistics

Department	Mathematical Sciences
Grade	Grade 10
Salary Range	Competitive salary based on our professorial pay scales (starting at £61,179 and going considerably higher based on experience)
Closing Date	6 November 2017 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 is one of the UK's best Departments of Mathematical Sciences with an outstanding reputation in teaching, research and employability of our students. Ranked 7th in terms of grade point average intensity in the Research Excellence Framework 2014, it has an active programme of internationally recognized research in Pure Mathematics, Applied Mathematics (including Applied and Computational Mathematics, Theoretical Particle Physics and Mathematical Biology) and Statistics and Probability. The research culture is vibrant, with many visitors, seminars, international conferences and workshops. We aim to provide a supportive and friendly environment with a strong sense of community. The

Department, which currently has 63 members of staff, is set to grow significantly over the next ten years.

The Department of Mathematical Sciences has a proud tradition of delivering excellence in its undergraduate programmes through research-led and small group teaching. Attracting some of the best students in the country (third best average UCAS entry tariff), the department was ranked 2nd (GUG Ranking) out of all Russell Group Universities in the recent National Student Survey 2016, and was ranked 5th in the Complete University Guide 2017.

The Department embraces excellence in all its forms and invites all qualified candidates to apply. We particularly welcome applications from women and black and minority ethnic candidates, who are under-represented in the University. We also encourage applications from holders of personal fellowships and from researchers who are interested in taking the position part-time. We offer a generous reduction in teaching in the first two years of appointment in order to facilitate the establishment of a sound research base within the Department.

The Department holds an Athena SWAN Bronze award. Athena SWAN is a national initiative that recognises the advancement of gender equality, representation, progression and success for all in academia. The Department also supports the London Mathematical Society Good Practice Scheme, whose aim is to support mathematics departments to embed equal opportunities for women within their working practices.

## The Group

The Statistics and Probability Group currently has 17 academic staff, 3 Postdoctoral researchers and 27 PhD students. Areas of particular research interest in Statistics include:

- Bayesian statistics, with specific expertise in Bayes linear methods and uncertainty quantification for computer models;
- Nonparametric statistics, including smoothing and predictive inference;
- Statistical modelling of structure, geometry, and shape;
- Foundations of statistics and decision theory, with specific attention to generalized uncertainty quantification including imprecise probability;
- Applied statistics, with specific attention to large-scale applications, in a wide range of contexts which include banking, cosmology, digital commerce, energy, ecotoxicology, food safety, image and biomolecular data, petroleum and other engineering, reliability, risk assessment and systems biology.

There are many active collaborations with other Durham University departments and research institutes. The Department operates a Statistics and Mathematics Consultancy Unit, which provides a focus for external liaison with outside and commercial organisations and which has clients ranging from local companies to multi-nationals, as well as governmental organisations. The group provided 6 impact case studies for REF 2014. Both the Department and the University run High Performance Computing services.

As part of the expansion of the Department, we are preparing new degrees in statistics and finance that will require and allow research-led teaching in areas at the forefront of modern statistical practice. By 2020, the Department will also have a new building, which will be shared with Computer Science and will foster constructive interdisciplinary exchanges. An Assistant Professorship in Statistics is also being advertised in parallel with this position.

## The Role

The Department of Mathematical Sciences seeks to appoint an outstanding candidate at Professor level. We welcome applications from exceptional candidates with research and teaching interests in the broad field of Statistics.

This post offers an exciting opportunity to make a major contribution to the development of the Department and to help shape the future of Statistics and Probability group research and teaching. Preference may be given to candidates with research interests that fit in with existing ones in the Statistics and Probability group. The candidate will be expected to lead, undertake and publish original research of the highest level, to contribute to the research activities of the Statistics and Probability group and of the department as a whole, and to undertake teaching and administrative duties as assigned by the Head of Department of Mathematical Sciences.

The successful candidate will be expected:

### 1. In Research:

- to pursue individual and collaborative research of internationally high quality
- to publish research outcomes in appropriate journals of international standing
- to contribute to the external visibility of the Department by attending and presenting research findings at conferences and workshops
- to secure external funding through research grants or contracts
- to work with senior colleagues in statistics to reinforce the research community in statistics and to mentor and encourage junior colleagues in their research.
- to help shape the research plans developed by the Department and to support the Department fully in the preparation of material required for research assessments.

### 2. In Teaching:

- to give lectures, seminars, tutorials and other classes, and to supervise project work by undergraduate and postgraduate students as appropriate
- to respond constructively and in a timely manner to student feedback on teaching
- to maintain a broad knowledge of research and scholarship in relevant fields to ensure that teaching meets the standards expected within a research-led University
- to undertake academic duties (setting and vetting examination papers, marking and assuming an advisory role by providing support and guidance to a small group of students throughout their studies) as required to sustain the delivery of high quality teaching.
- to work with senior colleagues in statistics to reinforce the quality of teaching in statistics and to mentor and encourage junior colleagues in their teaching.
- to help shape the statistics and probability curriculum offered by the Department.

### 3. In Administration:

- to undertake specific departmental roles as may be reasonably required by the Head of Department.
- to attend Department meetings and to participate in other committees and working groups within the Department, the Faculty and the University; to engage in continuing professional development.
- to participate in Department activities such as Open Days and Graduation ceremonies, as required.
- to share with senior colleagues in statistics and probability the role of representing the group on Departmental committees.

- to undertake external commitments which reflect well on and enhance the reputation of the University.

Successful applicants will, ideally, be in post by 1<sup>st</sup> September 2018.

## **The Requirements**

Applicants must demonstrate research excellence in the field of Statistics; they must also demonstrate 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. Candidates will be expected to demonstrate these key principles as part of the assessment process.

Applicants must have a good first degree and a PhD in Statistics or a related subject.

## **Research**

Candidates will demonstrate world-leading and world-changing research, and leadership in a research field within and / or beyond their institution(s), with research outputs consistently recognised as internationally excellent.

The essential research criteria for this post are:

### **1. Outputs**

Evidence of research outputs which are consistently recognised as internationally excellent with some output being evaluated as world class.

Candidates are asked to submit web links to two research papers with their application (see further details below). Candidates may additionally choose to submit evidence such as external peer review of their outputs.

### **2. Personal Research Plan**

Evidence of a personal research plan which supports and enhances the Department's research strategy.

### **3. Research Leadership**

Leadership of national / international research groups and networks, with an internationally recognised contribution to the development of research fields, as well as leadership of research groups and / or mentoring of early career researchers.

Candidates may choose to include information about research group leadership, mentoring of research colleagues, invitations to and engagement with significant external events, engagement with international networks or projects.

### **4. PhD supervision**

A significant contribution to the development of PhD programmes and / or groups, including successful recruitment and excellent supervision of PhD students.

## **5. Research impact**

Leadership of research that has demonstrable impact beyond the Candidate's institution(s).

## **6. Income generation**

Evidence of leadership of successful research projects and / or fellowship proposals.

## Teaching

Candidates will be able to evidence excellence in the development and delivery of teaching. They will demonstrate leadership, distinction and innovation in the design and delivery of high quality learning environments and curricula that enables student to achieve their potential.

The essential teaching criteria for this post are:

## **7. Qualification**

Candidates will have achieved Higher Education Academy (or equivalent) status.

## **8. Quality**

Evidence of excellence in the development and delivery of high-quality and distinctive teaching, at least at a nationally competitive level.

Candidates may choose to provide module evaluation questionnaire scores and/or peer reviews of teaching.

## **9. Innovation**

Leadership in the development of innovative teaching and the design of learning environments / curricula that provide high quality teaching and student experience at an internationally competitive level including lectures, small group learning and/or using technology or other techniques to enhance learning and/or assessment.

## **10. Strategic**

Demonstrating leadership in the design and delivery of internationally-excellent teaching programmes and the creation of learning environments that enable students to achieve their potential.

## Services, Citizenship and Values

Candidates will demonstrate sustained excellence of leadership in the provision of the administrative and collegial requirements of their Department, Faculty, institution or discipline as well as demonstrating their commitment to equality, diversity and inclusion.

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

## **11. Collegial Contribution**

Evidence of a significant contribution to the collegial work and environment of the Candidate's Department, Faculty, institution and / or discipline.

Candidates may choose to evidence involvement in equality and diversity initiatives, Faculty or University roles, mentoring activity, engagement with widening participation or membership or engagement with external bodies.

## **12. Leadership**

Evidence of sustained excellence in leadership activities that support the administrative functioning of the candidate's Department, Faculty or University and/or which support the development of their discipline.

## **13. Communication**

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**

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 and black and minority ethnic candidates, 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 the documents below in support of their application. Wherever possible please upload a PDF. If this is not possible, please upload in the format of a widely used file type from Microsoft Office (but not Powerpoint) or Microsoft Open.

Please limit the file size as much as possible, aiming for a 3Mb file size limit. If you require assistance with the submission of your application, please do not hesitate to contact TMP (UK) Limited using the contact details below.

- A CV and covering letter which details your experience, strengths and potential in the requirements set out above;
- Web links to PDFs of two of your most significant pieces of work, at least one of which should be published after 2013. Please note that your work may be read by colleagues from across the Department and evaluated against the current REF criteria; and
- An ambitious personal research plan of at most 5 pages.

### **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 Cherith Smith Recruitment and Resourcing Team Leader	For general queries	<a href="mailto:Cherith.j.smith@durham.ac.uk">Cherith.j.smith@durham.ac.uk</a> +44 (0) 191 334 6801
Department contact for academic-related enquiries		
Professor Peter Craig	For academic or department related queries	<a href="mailto:p.s.craig@durham.ac.uk">p.s.craig@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. The assessment for the post will include a formal interview and a presentation of your research accessible to a general audience of statisticians. We anticipate that the interviews and presentations will take place on or around 31 January 2018.

In the event that you are unable to attend in person on the date offered, it may not be possible to offer you an interview on an alternative date.