THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE & ENGINEERING

SCHOOL OF MATHEMATICS

PROBABILITY

LECTURER IN PROBABILITY AND ACTUARIAL SCIENCE

VACANCY REF: S&E-14046

Salary:	£40,792 to £50,132 per annum (according to relevant experience)
Hours:	Full Time
Duration:	Permanent
Location:	Oxford Rd, Manchester

Enquiries about the vacancy, shortlisting and interviews:
Contact: Dr Neil Walton, Head of Probability & Statistics
Email: neil.walton@manchester.ac.uk

Overall Purpose of the Job:

Applications are invited for the above post, to start in January 2020 or at a mutually agreed alternative date. We are looking for a mathematical scientist of outstanding ability or potential, who is seeking a friendly, supportive and collegial environment in which to develop as a world-class researcher and teacher, and to support our Actuarial Science BSc and MSc programmes accredited by the UK's Institute and Faculty of Actuaries.

This appointment is part of an initiative that is specifically aimed at probability, financial mathematics and actuarial sciences. Within the University, there is significant activity employing statistical, financial and optimization tools. Applicants with an appetite for interdisciplinary research will be especially welcome, as will applicants with experience in teaching actuarial science or financial mathematics.

Key Responsibilities, Accountabilities or Duties:

Applicants should have research experience commensurate with their career stage (with allowance made for career breaks) and a genuine commitment to, and enthusiasm for, teaching and knowledge transfer.

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The University of Manchester

Research

The successful applicant will be expected to enhance the international reputation of the School and University by:

- undertaking high quality research, in collaboration with colleagues in the University and other institutions as appropriate, and publishing the results in world-leading journals, books or other appropriate outlets;
- attending relevant conferences and workshops, presenting papers, and disseminating recent research results;
- seeking grants and funding to support their research from relevant bodies;
- seeking to attract and supervise postgraduate research students and research assistants, associates and fellows;
- contributing to the research life of the School of Mathematics by participating in and organising research events and activites;
- undertaking knowledge transfer activities that enhance the impact of research

Teaching

The successful applicant will be expected to contribute to the delivery of a world-class educational programme by:

- working independently and with colleagues to teach undergraduate and postgraduate students by means of lectures, seminars, tutorials and examples classes, assuming responsibility for courses where appropriate;
- supervising undergraduate and postgraduate projects;
- setting and marking assignments and examination papers in accordance with the School's agreed procedures;
- developing teaching material and learning experiences for students in the light of current educational practice;
- participating in the planning and development of courses within the framework of School and Faculty committees;
- acting as an academic advisor to undergraduate students in accordance with the School's current practice;
- supervising postgraduate students in their research and in their preparation of dissertations and theses.

Administration

- The successful applicant will undertake managerial and administrative tasks attached to their responsibilities in teaching and research, and any others as requested by the Head of Group or the Head of the School of Mathematics.

Other Requirements

- Depending on previous experience, the successful applicant may be required to attend the University's training programme for new academic staff.
- All staff are expected to adhere to all policies and procedures of the University including those relating to Equal Opportunities, Harassment, Health and Safety, and Smoking at Work.

PERSON SPECIFICATION

Essential Knowledge, Skills and Experience*:*

It is **essential** that the individual appointed has:

- (or, if appropriate, expect soon to be awarded) a PhD or equivalent research experience in a relevant branch of probability, actuarial science or a closely related area;
- a strong record of original research in probability, actuarial science, or a closely related area, evidenced by publications in internationally leading journals and appropriate esteem indicators or, if at an earlier career stage, evidence of exceptional potential;
- the ability to make a strong contribution to the School's research activities;
- the potential to obtain external funding to support their research;
- a genuine enthusiasm for, and commitment to, excellent teaching at both undergraduate and postgraduate levels;
- specialist knowledge enabling the candidate to teach topics in probability and actuarial science on the School's BSc and MSc courses;
- a willingness and ability to supervise postgraduate research students and taught postgraduate dissertations,
- a willingness and ability to contribute to the life of the School through appropriate service and leadership activities;
- the skills to communicate effectively with staff, students and external collaborators.

Desirable Knowledge, Skills, Experience and Qualifications:

It is **desirable** that the individual has:

- a track record of excellent teaching at undergraduate and/or postgraduate level;
- a track record of obtaining funding to support their research;
- experience of knowledge transfer via interaction with industry or public engagement.

Background

Manchester is the largest city in Northern England, with a metropolitan area population of over 2.5 million. Traditionally a commercial and industrial powerhouse, and birthplace of the industrial revolution, today it is also a cosmopolitan centre of education, media, arts and sport.

Internationally famed for spectator sport and nightlife, it also has world-class facilities for music, participation in sport, arts and shopping. Direct rail links connect to cities across the UK, and the international airport provides direct flights across Europe and to major hubs worldwide. Just outside the city, the Peak District National Park provides some of the country's best-loved terrain for outdoor activities, while the Yorkshire Dales, Snowdonia and Lake District National Parks are also easily accessible.

The **University of Manchester** (www.manchester.ac.uk) was formed in 2004 by combining the Victoria University of Manchester and UMIST. It is the largest non-federal university in the UK, with an annual income of over £800m, over 11,000 staff and almost 40,000 students. It and its predecessor institutions have a distinguished history of research and teaching, tracing back to 1824 and having produced 25 Nobel laureates. Research highlights include Rutherford's work on splitting the atom (leading to the 1908 Nobel prize for physics), the world's first stored-program computer (the Manchester University Mark I), the world's first steerable radio telescope (at Jodrell Bank), the birth of chemical engineering, and most recently the discovery of graphene (leading to the 2010 Nobel prize for physics). The Shanghai Jiao Tong Academic Ranking of World Universities currently rates Manchester as the 34th best university in the world and 8th best in Europe. The University is a partner of the Alan Turing Institute, the UK's national institute for data science and artificial intelligence.

Families and Work-life Balance. The School of Mathematics and University are committed to the well-being and work-life balance of all staff. In addition to our attractive rewards and benefits we have a suite of family-friendly policies covering flexible working, career breaks and entitlement to enhanced maternity, paternity and adoption leave which are applicable to all employees. For more details on these and other benefits see: http://www.manchester.ac.uk/connect/jobs/benefits-working-here/. The School is fully committed to Athena SWAN principles including the promotion of gender equality in science and is a supporter of the LMS Good Practice Scheme; for more details of our activities in this area see www.maths.manchester.ac.uk/about-us/women-in-maths/. This is a full time post but applications from individuals seeking part time, job share or flexible working arrangements are also welcome.

The **School of Mathematics** (www.maths.manchester.ac.uk) is one of the larger integrated mathematics schools/departments in the UK, with approximately 80 permanent academic staff, 30 research assistants and fellows, 1,100 undergraduate students and 250 postgraduate students. Based in the purpose-built Alan Turing Building, we pride ourselves on providing a friendly, supportive and collegial environment to foster world-class research and teaching. In the 2014 Research Excellence Framework, 90% of the School's research was rated as internationally excellent or world-leading. The School is divided for management purposes into three groups, with focus respectively on Pure Mathematics, Applied Mathematics, and Probability & Statistics. The Manchester Institute for Mathematical Sciences (MIMS) provides a focus for research activities in the School. It has dedicated space for research activities, including two seminar rooms, a hot-desking area, an AccessGrid room, and offices for research visitors, and it runs the MIMS EPrints archive (http://www.manchester.ac.uk/mims/eprints).

The **Probability & Statistics Group** has research interests that include Mathematical Finance, Actuarial Science, Probability and Stochastic Analysis, Statistics and its Applications, and Uncertainty Quantification & Data Science. Interfaces between this and other Groups in the School are porous and the University offers numerous opportunities for interactions with other

disciplines. The Group offers three MSc courses and organise a vibrant programme of research seminars. The dedicated research space in the Alan Turing Building also allows us to host numerous visitors, conferences and workshops.