THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE & ENGINEERING

SCHOOL OF NATURAL SCIENCES

DEPARTMENT OF MATHEMATICS

LECTURER, SENIOR LECTURER OR READER IN STATISTICS

LECTURER, SENIOR LECTURER OR READER IN FINANCIAL MATHEMATICS

LECTURER, SENIOR LECTURER OR READER IN MATHEMATICS OF DATA SCIENCE

VACANCY REF: S&E-15336

Salary:	Lecturer £41,526 per annum, Senior Lecturer or Reader £52,559 to £62,727 per annum according to relevant experience
Hours:	Full time
Duration:	Permanent
Location:	Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:

Name**:** Dr Ian Hall, Head of Probability & Statistics

Email: Ian.Hall@manchester.ac.uk

Prof. Andrew Hazel, Head of Applied Mathematics

Andrew.Hazel@manchester.ac.uk

Dr Charles Eaton, Head of Pure Mathematics

Charles.Eaton@manchester.ac.uk

BACKGROUND

Applications are invited for the above posts, to start in September 2020 or at a mutually agreed alternative date. We are looking for three mathematical scientists of outstanding ability or potential, who are seeking a friendly, supportive and collegial environment in which to develop as world-class researchers and teachers, and to support our undergraduate and MSc programmes in Mathematics, Statistics, Mathematical Finance and Data Science.

This appointments are part of an initiative that is specifically aimed at statistics, financial mathematics, data science and their interfaces with pure and applied mathematics. Applicants with an appetite for interdisciplinary research will be especially welcome, as will applicants with experience in teaching topics in statistics, financial mathematics, data science and related areas of pure and applied mathematics.

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.

Key Responsibilities, Accountabilities or Duties:

Research

Successful applicants will be expected to enhance the international reputation of the Department 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 Department of Mathematics by participating in and organising research events and activities;
- undertaking knowledge transfer and industrial engagement activities that enhance the impact of research.

Candidates for Senior Lecturer or Reader will, in addition:

- provide research leadership to colleagues and students, and attract distinguished visitors to the Department.

Teaching

Successful applicants 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 in statistics, financial mathematics or mathematics underpinning data science;
- setting and marking assignments and examination papers in accordance with the Department'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 Department and Faculty committees;
- acting as an academic advisor to undergraduate students in accordance with the Department's current practice;
- supervising postgraduate students in their research and in their preparation of dissertations and theses.

Candidates for Senior Lecturer or Reader will, in addition:

- provide leadership in the development and delivery of teaching to students in the Department.

Administration

The successful applicants will undertake managerial and administrative tasks attached to their responsibilities in teaching and research, and any others as requested by the Head of the Department of Mathematics.

Other Requirements

- Depending on previous experience, successful applicants 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.
- Candidates will be expected to contribute to outreach activities or other forms of external engagement.

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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 statistics, financial mathematics, data science, or in a relevant area of pure or applied mathematics;
- a strong record (commensurate with career stage) of original research in either statistics, financial mathematics, or mathematics underpinning data science, evidenced by high quality 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 and independent contribution to the Department's research activities;
- the potential to obtain external funding to support their research, or (for candidates for Senior Lecturer or Reader), a track record of securing external research funding commensurate with their career stage and background;
- (for candidates for Reader) evidence of recognition as an internationally leading researcher in either statistics, financial mathematics, or mathematics underpinning data science;
- a genuine enthusiasm for, and commitment to, excellent teaching at both undergraduate and postgraduate levels;
- a willingness and ability to supervise postgraduate research students and taught postgraduate dissertations, or (for candidates for Senior Lecturer or Reader), experience of successful supervision of 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, or (for candidates for Senior Lecturer or Reader), experience of successful service and leadership;
- the skills to communicate effectively with staff, students and external collaborators.

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

- the ability to serve as a role model to students and staff from a broad range of backgrounds;
- a track record of excellent teaching at undergraduate or postgraduate level, or (for candidates for Senior Lecturer or Reader), evidence of a sustained track record of this kind;
- a track record of obtaining funding to support their research, or (for candidates for Senior Lecturer or Reader), evidence of a sustained track record of this kind;
- (for candidates for Senior Lecturer or Reader) evidence of ability to lead a successful research group;
- experience of knowledge transfer via interaction with industry or public engagement.

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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 £1 billion, over 12,000 staff and over 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 Academic Ranking of World Universities currently rates Manchester as the 33rd best university in the world and 8th best in Europe. The University has more than half a million alumni in 190 countries. 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 Department and University are committed to the well-being and work-life balance of all staff and are keen to accommodate staff with family or caring responsibilities. We have a package of family-friendly policies covering flexible working, career breaks and entitlement to paid maternity, paternity and adoption leave. For more details on these and other benefits see http://www.manchester.ac.uk/connect/jobs/benefits-working-here/. The positions are usually full time, but applications from individuals seeking part-time, job-share or flexible working arrangements are welcome.

The Department of Mathematics is fully committed to Athena SWAN principles to promote women in science, and is a supporter of the LMS Good Practice Scheme. The Department is also committed to social responsibilty in its research, teaching and staffing practices: see https://www.maths.manchester.ac.uk/connect/social-responsibility/.

The **Department 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 Department's research was rated as internationally excellent or world-leading. The Department 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 Department. 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).

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Research in the Department is organised into the following themes: Probability, Financial Mathematics and Actuarial Science; Statistics, Inverse Problems, Uncertainty Quantification and Data Science; Analysis, Geometry & Dynamical Systems; Numerical Analysis and Scientific Computing; Mathematics in the Life Sciences; Algebra, Logic and Number Theory; and Continuum Mechanics. Interfaces between these areas are porous and the University offers numerous opportunities for interactions with other disciplines. The Department offers a suite of MSc courses and a vibrant programme of research seminars. The dedicated research space in the Alan Turing Building also allows the Department to host numerous visitors, conferences and workshops.