Chair in Applied Statistics
Department of Mathematics

Closing date: 23/10/2022
Interview date: 23/11/2022
Vacancy reference: 11129
INTRODUCTION

The Department of Mathematics is seeking a talented new colleague to join our vibrant Statistics and Probability group to take a leading role to expand research projects in Applied Statistics/Data Science at York. You will have an outstanding research record in this area and the capacity to attract funding, form interdisciplinary collaborations and engage with industry. You will have a passion for teaching statistics and will seek to inspire our students with innovative teaching methods. You will have the opportunity to lead in the development and teaching of a new MSc programme in Mathematical Data Science.

We are a research-led department. We have high-calibre staff who produce innovative and technically demanding research on a world stage with a healthy span of research areas in pure and applied mathematics and statistics.

All of our research was rated world-leading (4*) or internationally excellent (3*) in REF2021 in all three categories: outputs, impact and environment. Only three other Departments in the UK achieved this. Furthermore, we are 1st for "learning resources" and 2nd for "assessment and feedback" and "academic support" in Mathematics in the Russell Group universities included in the 2022 National Student Survey.

Professor Martin Bees
Head of Department
Main purpose of the role

Chairs at York are expected to advance their subject nationally and internationally and to contribute to maintaining the University as an international centre of excellence for the relevant subject area through research and publication, teaching, networking and consultancy.

Chairs are required to undertake the duties outlined below:

Key responsibilities
(Role holders will be required to undertake some or all of the duties below)

To support the research activities of the Department
- To carry out internationally outstanding research and scholarship
- To disseminate this research through monographs, articles in journals of international standing, and other appropriate forms of dissemination, including national and international conference presentations
- To play a leading role in the Department in identifying and securing external funding through research grants and contracts, and in developing collaborative research income-generating activities
- To attract and supervise research students, and, as appropriate, post-doctoral researchers and other support staff
- To support, comply with, and contribute fully to research plans and policies of the Department and the University
- To support and mentor junior academic colleagues in order to promote quality of teaching and research and their career development
- To promote interdisciplinary research and engage in impact-generating research and industrial collaboration

To support the teaching objectives of the Department
- To design and be responsible for delivery of modules and teaching programmes for undergraduate and graduate students
- To play a leading role in departmental and interdepartmental curriculum development and quality enhancement
- To coordinate team teaching, as required, including liaison with other staff and with postgraduates who teach
- To design and mark assessments, and give feedback
- To supervise undergraduate and graduate projects and dissertations
- To carry out teaching in Continuing Professional Development
- To undertake pastoral support of students, as a personal supervisor or in another designated role
- To support and promote fully the University and Department teaching quality assurance standards and procedures

To contribute to the efficient management and administration of the Department
- To make an important contribution to the leadership and management of the Department, including supporting early career staff and developing new collaborative initiatives
- To attend Departmental meetings, meetings of the Board of Studies, and other committees and working groups within the Department and University
- To carry out relevant professional duties, commensurate with the Professorial grade
- To undertake specific departmental roles and management functions as may be reasonably required by the Head of Department

JOB DESCRIPTION

At a glance

Salary: Commensurate with experience on the Professorial scale (minimum £67,940)
Hours of work: 37 per week (flexibility available)
Contract type: Open
Based at: University of York

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## PERSON SPECIFICATION

<table>
<thead>
<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tbody>
<tr>
<td>PhD or equivalent experience in Statistics or related quantitative discipline</td>
<td>Essential</td>
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<td>Membership of professional societies</td>
<td>Essential</td>
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### Knowledge

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<tr>
<th>Knowledge</th>
<th>Essential / Desirable</th>
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<tr>
<td>Outstanding and internationally recognised knowledge in Applied Statistics</td>
<td>Essential</td>
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<tr>
<td>Knowledge of a range of research techniques and methodologies</td>
<td>Essential</td>
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<td>Knowledge of a range of teaching techniques to enthuse and engage students</td>
<td>Essential</td>
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<td>Advanced and specialist IT knowledge</td>
<td>Essential</td>
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<tr>
<td>Has research expertise in an area that will complement and enhance the department’s research strategy and goals</td>
<td>Essential</td>
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### Skills, abilities and competencies

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<thead>
<tr>
<th>Skills, abilities and competencies</th>
<th>Essential / Desirable</th>
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<tbody>
<tr>
<td>Ability to define, lead, manage and attract funds for internationally excellent research, operating across disciplinary boundaries</td>
<td>Essential</td>
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<td>Proven leadership and managerial skills</td>
<td>Essential</td>
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<td>Ability to manage and interact with staff and students at all levels and to contribute to broadening the strategic development of the Department</td>
<td>Essential</td>
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<tr>
<td>Proven abilities to initiate and develop interdisciplinary research projects and engage in impactful research</td>
<td>Essential</td>
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<td>Ability to design teaching material and deliver either across a range of modules or within a subject area</td>
<td>Essential</td>
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<td>Evidence of international collaboration</td>
<td>Desirable</td>
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<td>Evidence of peer review activities</td>
<td>Desirable</td>
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## PERSON SPECIFICATION

<table>
<thead>
<tr>
<th>Experience</th>
<th>Essential/Desirable</th>
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<tbody>
<tr>
<td>International leader in a major research field, leadership of research group/theme</td>
<td>Essential</td>
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<tr>
<td>Substantial publication record in leading peer-reviewed journals</td>
<td>Essential</td>
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<td>Attraction and effective supervision of postgraduate students</td>
<td>Essential</td>
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<td>Significant and sustained success in accessing research grants and other external funding</td>
<td>Essential</td>
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<tr>
<td>Exceptional achievement in curriculum development, course design and teaching, learning and assessment methods at UG and PG levels and in encouraging student access and engagement</td>
<td>Essential</td>
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<tr>
<td>Invited presentations at major international conferences</td>
<td>Essential</td>
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<tr>
<td>Effective and sustained involvement in major administrative tasks or positions of responsibility within a department or research unit</td>
<td>Essential</td>
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<tr>
<td>Authorship of books</td>
<td>Desirable</td>
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<td>Editorial duties with journals</td>
<td>Desirable</td>
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<tr>
<td>Activity as an invited examiner at other institutions</td>
<td>Desirable</td>
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<td>Participation in national teaching initiatives or international equivalents</td>
<td>Desirable</td>
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### Personal attributes

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<th>Essential/Desirable</th>
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<tr>
<td>Demonstrable capacity for strategic thinking and planning</td>
<td>Essential</td>
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<td>Ability to take a lead in key administration functions within the department</td>
<td>Essential</td>
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<tr>
<td>Self-motivated, pro-active and innovative</td>
<td>Essential</td>
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<tr>
<td>Positive attitude to colleagues and students and a strong personal commitment to equality, and diversity and inclusion</td>
<td>Essential</td>
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The Department of Mathematics at the University of York - one of the 24 members of the Russell Group - employs around 55 academics, 15-20 research and 12 professional support staff, and combines mathematical and interdisciplinary research excellence with high-quality undergraduate and postgraduate teaching. In the most recent Research Excellence Framework (REF 2021) all of our research was rated world-leading (4*) or internationally excellent (3*) in all three categories: outputs, impact and environment. Only three other Departments in the UK achieved this. Furthermore, we are 1st for "learning resources" and 2nd for "assessment and feedback" and "academic support" in Mathematics in the Russell Group universities included in the 2022 National Student Survey.

On average, academics spend about 40% of their time on research and 60% on teaching and administration. Academic members of staff are actively encouraged to take up opportunities for promotion and professional development including sabbatical leave.

The Department supports the goals of the Good Practice Scheme set up by the London Mathematical Society. It aims to provide an inspiring environment in which all staff and students can reach their full potential. The Department received an Athena SWAN Bronze Award which acknowledges its efforts to support the careers of women and other groups underrepresented in mathematics.

Our goal is to build a departmental culture of collegiality, support and encouragement, which values individual perspectives and enables people to do their best possible work.

Our Research

The Department creates mathematics of distinction that will achieve longevity: proving theorems, creating new structures, and solving problems, in results of intrinsic and longstanding mathematical worth, and creating new applications and techniques of great scientific and human value.

Most researchers in the Department belong to one of seven research groups defining coherent subject areas which promote interaction and develop research strength. These groups are:

- Algebra
- Geometry and Analysis
- Mathematical Biology & Chemistry
- Mathematical Finance & Stochastic Analysis
- Mathematical Physics & Quantum Information
- Number Theory
- Statistics and Probability
THE DEPARTMENT OF MATHEMATICS

The University prides itself on the low boundaries between disciplines, facilitating cross-fertilization of ideas between, for example, mathematics, physics and biology. The Department is also involved in interdisciplinary research networks and centres across the University, such as the York Centre for Quantum Technologies (YCQT), feeding into the national Quantum Communications Hub, the York Centre for Complex Systems Analysis (YCCSA) and the Biological Physical Sciences Institute (BPSI). Each group is a thriving community of staff, research fellows, research associates and graduate students, and runs weekly seminars hosting talks by external speakers from the UK and overseas.

The Department has a comprehensive and responsive system of Departmental funding for research. At its core is an ample general fund to support conference travel and research visits, supplemented by funding options designed for specific purposes and to mirror external funding streams: for collaborative exchanges, impact and external engagement, the hosting of research meetings, and to seed grant applications. We also have a generous sabbatical scheme. There is a dedicated research facilitator and a research administrator who can provide expert help with grant applications at all stages. We have an Early Career Researcher Forum, which also has access to its own funds, to support the development of academics close to the start of their careers.

Our Teaching

The Department has about 700 undergraduates across single subject and combined-honours programmes. Each student is assigned a supervisor overseeing the student’s academic progress and general welfare. The Department participates in the Natural Sciences programme with various other science departments. We also jointly deliver the Actuarial Science programme with the York Management School and a taught MSc in Financial Engineering with the Department of Economics. There are about 130 graduate students across five MSc programmes and nearly 50 students studying towards PhDs.

Teaching is mainly by means of lectures, with small-group tutorials, seminars or problems classes supporting each module. A typical teaching load includes two to three modules of 18 lecture hours each, as well as tutorials and seminars over a 30-week year, and supervision of BSc, MMath and/or MSc projects. Administrative responsibilities are shared across all members of the Department.
OUR COMMITMENT TO EQUALITY, DIVERSITY AND INCLUSION

Founded on the principles of excellence, equality and opportunity for all, the University is proud to create an environment that attracts staff and students from all over the world. What we gain from diversity is immeasurable. Our Equality, Diversity and Inclusion Strategy, which was developed in partnership with our staff and student communities, describes our commitment to create a culture where everyone can contribute to university life, knowledge and growth.

We want to create a working, learning, social and living environment that will enable all staff and students to achieve their full potential. Our strategy sets out an ambitious set of objectives to succeed in our commitment, but we have a challenging journey ahead. We recognise that we are not truly representative of our communities locally, nationally and internationally. We would like to pay particular focus to gender parity across all levels, particularly in senior roles; the recruitment, retention and success of a more ethnically diverse staff and student community; an accessible and inclusive campus and ensuring that the values and behaviours we expect from everyone embrace inclusive responsibility and leadership.

Opportunity for all
Our outreach programmes and widening participation work have made us one of the most socially diverse universities among our peers. The York Students in Schools (YSIS) programme has been providing a helping hand in the city’s classrooms for 25 years, placing around 700 students with local schools every year. It recently introduced a new English and Mathematics tutoring scheme.

A report by The Reform Research Trust in September 2017 ranked York second out of 29 high-tariff institutions for our track record in increasing access for disadvantaged students from 2011/12 to 2015/16.

Wellbeing and support
Students are encouraged to balance their studies with activities and interests to give them a healthier and more rounded student experience. We have invested heavily in support of physical health with new and improved sports facilities, and in mental health through our Open Door counselling and crisis team which now opens in the evenings during term time. We have also developed a support network of staff trained in Mental Health First Aid. University staff have access to wellbeing help and support, and can access advice through our site. Further information on our health and wellbeing support can be found at https://www.york.ac.uk/staff/support/.
THE UNIVERSITY

We are a world-class institution, focused on creating an environment of excellence in which all our students, staff and researchers can thrive. Our Research Strategy encompasses our vision that York should provide a home for some of the best research in the world. (https://www.york.ac.uk/research/)

We are a high-performing member of the Russell Group, ranked joint 18th in the Guardian Good University Guide 2022, 19th in the Times Good University Guide 2022 and 19th in the Complete University Guide 2023.

In the recent Research Excellence Framework (REF) exercise, York was ranked in the top 10 of UK universities for research quality, with all of our subject areas ranked in the top 30 (with four Departments positioned in the top five). Over 50 per cent of our research was judged to be four star or “world-leading” and 40 per cent to be three star or “internationally excellent”.

We have been awarded TEF Gold for our research-led teaching which provides "consistently outstanding outcomes for students from all backgrounds".

Our Equality, Diversity and Inclusion Strategy speaks to the core of our values. We hold 23 awards from Athena SWAN, recognising the advancement of gender equality: representation, progression and success for all.

At the heart of the region

The University is deeply embedded in the local community of North Yorkshire. Our values and commitment to the public good have never been more important. We are a hub for sharing knowledge, inspiring collaboration and enriching lives.

In 2021 we were shortlisted for Times Higher Education's University of the Year Award in recognition to the University’s response to the Covid pandemic The Year We Came Together - Our Covid-19 response.

Across the University, we are mobilising our knowledge, our people and our resources to tackle the immediate and long-term challenges. The new University Strategy 2030, (A University for Public Good) was launched at the end of 2021, outlining our vision and strategy for the next decade.

Further information on the new strategy can be found on the following webpages; https://www.york.ac.uk/about/mission-strategies/vision-for-york/.
THE UNIVERSITY

Centred around the picturesque village of Heslington on the edge of the city of York, our colleges are set in an attractive landscaped campus. York enjoys a safe, friendly atmosphere with facilities including bars, shops, theatres and concert halls all within easy walking distance.

The University has undergone an unprecedented period of expansion and renewal since 2000. We have invested in twenty new buildings on the original campus and have completed the first and second phases of a £750m campus expansion. Our investment in new colleges, teaching and learning spaces, laboratories, research facilities and a new sports village mean there has never been a better time to join us.

During this period of change we’ve worked hard to retain our friendly, informal and collegiate atmosphere, which is important to our core values of inclusivity and interdisciplinarity.

We have a thriving international community and are committed to providing staff moving to York with as much support as possible through our Relocation Package and Welcome Officers.

The University is committed to promoting a diverse and inclusive community - a place where we can all be ourselves and succeed on merit. We offer a range of family friendly, inclusive employment policies, flexible working arrangements, staff engagement forums, campus facilities and services to support staff from different backgrounds.

For further information please visit our employee benefit pages.
THE CITY AND THE REGION

The City of York

Internationally acclaimed for its rich heritage and historic architecture, York's bustling streets are filled with visitors from all over the world. Within its medieval walls you will find the iconic gothic Minster, Clifford’s Tower and the Shambles - just a few of the many attractions.

But York isn’t just a great place to visit - it’s also a great place to live and work. While nourishing a vibrant cosmopolitan atmosphere, York still maintains the friendly sense of community unique to a small city.

Visit www.visityork.org for more information on the city of York

Shopping, culture and entertainment

York boasts specialist and unique boutiques but also all the high street stores on its busy shopping streets. Alongside them you will find cinemas, theatres, an opera house, art galleries, a vast range of restaurants, live music venues and clubs. York is particularly renowned for its multitude of pubs and bars, from the modern to the medieval.

Housing and schools

Whether you choose to live close to the city, in one of the surrounding villages or further afield, you will find a wide range of housing within comfortable distance of York and the University. For families, the area has a range of excellent schools both in the state and independent sector.

Great location

York is one of Britain’s best-connected cities. Halfway between London and Edinburgh on the East Coast mainline, on intercity trains you can reach London King’s Cross in less than two hours and Edinburgh in two and a half hours. York is also well served by road links, and it is easily accessible from the A1, M1 and the M62.

For those travelling from overseas, Manchester Airport is two hours away and Heathrow Airport just three and a half. Flights from nearby Leeds Bradford Airport provide easy access to mainland Europe. By Eurostar from London St Pancras, Paris is just over six hours away.

Yorkshire

The Lonely Planet guide recently declared Yorkshire the third best region in the world to visit. There is something to cater to every taste, whether it be the rugged landscapes of the Moors or the Dales, the picturesque seaside towns of Scarborough and Robin Hoods Bay, the gothic architecture of Whitby or the vibrancy of cosmopolitan Leeds.
Apply online

- Go to https://jobs.york.ac.uk
- Find this job using reference 11129
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 23 October 2022.

What will I need?

We will ask you for details of:

- Your CV
- A letter describing how you meet the requirements of the job
- A statement of your research and teaching intentions

You will also need details of three academic referees (one International) and one Employment referee.

Help and assistance

For an informal discussion regarding this post, please contact the Head of Department, Prof Martin Bees (martin.bees@york.ac.uk)

If you have any questions about your application, contact the HR Services team:

recruitment@york.ac.uk
+44 (0)1904 324835