Associate Lecturer (fixed term)
Mathematics

Closing date: 25 May 2019
Interview date: to be confirmed
Vacancy reference: 7575
INTRODUCTION

We are seeking to appoint a fixed term associate lecturer to join our well-established Mathematical Physics Group. The role holder will teach undergraduate mathematical physics and related modules, supervise undergraduate projects and contribute to the group’s research. Preference may be given to candidates who specialise in Quantum Information.
Main purpose of the role

- To lecture, lead seminars, tutorials and other forms of undergraduate and postgraduate teaching
- To develop and apply innovative and appropriate teaching techniques and material which create interest, understanding and enthusiasm amongst students
- To carry out on-going curriculum review, including module content and materials and contribute to the development of teaching and learning strategies
- To undertake effectively a range of administrative responsibilities

Key responsibilities

(Role holders will normally be required to undertake the duties below)

Teaching and Promotion of Learning

- To support the teaching objectives of the department by delivering teaching through allocated lectures, tutorials and other forms of undergraduate and postgraduate teaching. Set and mark coursework and exams, providing constructive feedback to students.
- To develop where appropriate revisions to existing modules or courses in terms of design, content, structure, forms of delivery, method of assessment
- To develop own teaching materials, methods and approaches, with guidance. Obtain and analyse feedback on own teaching design and delivery to facilitate this.
- To contribute to the development of new teaching approaches and course proposals and to the design of curricula which are academically excellent, coherent and intellectually challenging.
- To ensure that course design and delivery comply with the quality standards and regulations of the University and department

Administrative and support responsibilities

- To provide - with mentoring - supervision to students, giving advice on study skills and helping with learning problems.
- To identify the learning needs of students and define learning objectives.
- To supervise student projects
- To undertake various administrative responsibilities as requested by the Head of Department.

Involvement in scholarship and development

- To investigate innovative teaching, learning and assessment methods and techniques in the sector, bringing new insights to the department.
- To maintain your own scholarship and develop your expertise at the forefront of a suitable area of Mathematical Physics
# PERSON SPECIFICATION

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<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tr>
<td>PhD in Mathematical Physics or equivalent experience</td>
<td>Essential</td>
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<td>Appropriate academic professional and teaching qualification or a willingness to complete the Postgraduate Certificate in Academic Practice</td>
<td>Essential</td>
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<th>Knowledge</th>
<th>Essential / Desirable</th>
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<td>Detailed knowledge in subject area sufficient to develop teaching and provide relevant learning support to students across different levels of academic ability</td>
<td>Essential</td>
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<th>Skills, abilities and competencies</th>
<th>Essential / Desirable</th>
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<td>Highly developed communication skills to engage effectively with a wide ranging audience, both orally and in writing, using a range of media</td>
<td>Essential</td>
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<td>Ability to design and deliver teaching material either across a range of modules or within a subject area</td>
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<td>Ability to supervise the work of students, provide advice on study skills and assist with learning problems</td>
<td>Essential</td>
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<td>Ability to contribute to the design of course material, content and new teaching approaches in the department</td>
<td>Essential</td>
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<td>Ability to manage and deliver own teaching</td>
<td>Essential</td>
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<td>Ability to plan, manage, organise and assess own teaching contributions</td>
<td>Essential</td>
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<th>Experience</th>
<th>Essential / Desirable</th>
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<td>Experience in teaching and learning in HE at undergraduate and/ or postgraduate level or in an evidenced similar context</td>
<td>Essential</td>
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<td>Experience of using different delivery techniques to enthuse and engage students</td>
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<td>Evidence of successful planning and design of teaching material</td>
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<th>Personal attributes</th>
<th>Essential / Desirable</th>
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<tr>
<td>Attention to detail and commitment to high quality</td>
<td>Essential</td>
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<td>Creativity, initiative and judgement in applying appropriate approaches to teaching and learning support</td>
<td>Essential</td>
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<td>Collaborative ethos</td>
<td>Essential</td>
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<td>Positive attitude to colleagues and students</td>
<td>Essential</td>
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<td>Willingness to work proactively with colleagues in other work areas/institutions</td>
<td>Essential</td>
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<td>Ability to plan and prioritise own work in order to meet deadlines</td>
<td>Essential</td>
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<td>Commitment to personal development and updating of knowledge and skills</td>
<td>Essential</td>
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THE DEPARTMENT

About the Department of Mathematics

The Department of Mathematics at the University of York - one of the 24 members of the Russell group - employs around 50 academics, 10-15 research and 10 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 2014) 80% of our profile was judged as 4* or 3*. In the 2017 National Student Survey (NSS), the department came first among all Russell Group Universities for student satisfaction.

On average, academics spend about 40% 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 actively supports the goals of the Good Practice Scheme set up by the London Mathematical Society, and aims to provide an inspiring environment in which all staff and students can reach their full potential. In 2015, the department received an Athena SWAN Bronze Award which acknowledges its efforts to support the careers of women and other groups underrepresented in mathematics.

The department has an exemplary record of making special arrangements to accommodate such matters. 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.

Mathematics Research at York

The department seeks to create 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 continuing scientific and human value.

Research activities in the department are structured through seven research groups, amalgamating research interests into coherent subject areas, to promote interaction and develop research strength. These groups are:

- Algebra
- Geometry and Analysis
- Mathematical Finance and Stochastic Analysis
- Mathematical Biology and Chemistry
- Mathematical Physics
- Number Theory
- Statistics and Probability
THE DEPARTMENT

We pride ourselves on the low boundaries between subject areas, facilitating cross-fertilization of ideas (for example, between abstract algebra and mathematical physics). As well as these intradisciplinary links within the department, we are actively 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/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, with an ample general fund at its core to support conference travel and research visits, supplemented by a suite of 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 at the start of their careers.

Mathematics Teaching at York

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 jointly with various science departments and the Actuarial Science programme jointly with the York Management School, as well as a taught MSc in Financial Engineering jointly with the Department of Economics. There are about 130 graduate students across five MSc programmes and nearly 90 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 2-3 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. The 2018 National Student Survey placed us top of the Russell Group for ‘Assessment and Feedback’ and ‘Organisation and Management’. Administrative responsibilities are shared across all members of the department.
THE UNIVERSITY

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2019 it is the home of more than 18,000 students across more than 30 academic departments and research centres. Since opening over fifty years ago, we have become one of the world's leading universities and a member of the prestigious Russell Group.

We are consistently recognised as one of the leading Higher Education Institutes and one of just six post-war universities to have appeared in the world top 100. We were rated 22nd in the 2019 Times & Sunday Times league table. The University of York has won six Times Higher Education (THE) Awards and five Queen’s Anniversary Prizes.

The University is proud of its association with Athena SWAN, holding multiple awards in support of gender equality, representation and success for all, with gold awards for Chemistry and Biology and a University-wide bronze award.

Of 154 universities that took part in the Research Excellence Framework (REF) in 2014, The University of York ranked 14th overall and 10th for the impact of our research. The University is consistently in the top ten UK research universities and attracts over £60m a year of funding from research alone.

Our vision is to make the University of York a world leader in the creation of knowledge through fundamental and applied research, the sharing of knowledge by teaching students from varied backgrounds and the application of knowledge for the health, prosperity and well-being of people and society.
Attractive workplace

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 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](http://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 7575
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 25 May 2019

What will I need?

You will need to upload:

- your CV
- a letter describing how you meet the requirements of the job

You will also need details of 2 referees.

Help and assistance

Direct any informal queries to Prof Niall MacKay (+44) 1904 32 3493, niall.mackay@york.ac.uk, Prof Chris Fewster (+44) 1904 32 3091, chris.fewster@york.ac.uk for a confidential and informal pre-application discussion.

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

recruitment@york.ac.uk

+44 (0)1904 324835