Lecturer in Robotics and Autonomous Systems

Electronic Engineering

Closing date: 6 March 2019

Interview date: To be confirmed

Vacancy reference: 7347
INTRODUCTION

The Department of Electronic Engineering at the University of York is seeking to appoint a lecturer to build upon existing strengths in autonomous systems and intelligent robotics, and to support further growth in Engineering teaching and research.

It is expected that the postholder will have evidence of an international research record in autonomous systems and robotics, with their research expertise making a significant contribution to the Department’s plans to expand research and wider impact in this area. Candidates should possess a clear research vision across the autonomous systems and robotics areas with particular emphasis on practical robotics design and application.
Main purpose of the role

- To establish research objectives, write proposals and undertake individual and collaborative research projects.
- To lead and contribute to the production of research outputs, outcomes and impact.
- To design, develop and deliver teaching across a wide range of modules and within the area of autonomous systems and/or robotics.
- To undertake, effectively, a range of administrative and managerial responsibilities.

Key responsibilities

Research and Scholarship

- To contribute towards, and promote, the research activities of the Department by developing a personal research portfolio, both independently and in collaboration with others as part of a larger research team.
- To realise the impact of own and others’ research activities through academic recognition, commercial translation and other appropriate means.
- To manage and guide the work of staff and research students in their own specialist subject, and wider areas.
- To identify external sources of funding and submit successful, innovative research proposals.
- To publish original research articles in leading journals, present work at leading international conferences, and disseminate research by other appropriate means.

Teaching and Promotion of Learning

- To develop innovative teaching materials, techniques and module design, and take responsibility for the quality of the provision, delivery and assessment.
- To plan, deliver and critically review a range of teaching and assessment activities.
- To undertake academic supervision of students (including research students) and act as a research supervisor within own specialist subject area.
- To set and mark practical sessions, supervisions, coursework and examination questions and provide constructive feedback to students.
- To reflect on and identify areas where current teaching provision is in need of revision or improvement and propose and implement such revisions and improvements.

Management and Administration

- To undertake the duties of a Module Co-ordinator and/or Programme Director and be responsible for the design, development and management of departmental teaching modules.
- To contribute to the recruitment and selection of research and teaching staff.
- To contribute to the administration and management of the Department.
- To advise, supervise and give guidance to other departmental staff as appropriate.
- To develop and build internal and external contacts.
### PERSON SPECIFICATION

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<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tr>
<td>PhD in electrical, electronic, mechanical engineering or computer science or equivalent experience</td>
<td>Essential</td>
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<td>Appropriate academic professional and teaching qualifications</td>
<td>Desirable</td>
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<td>Membership of professional body (e.g. IET, IEEE, InstMC, CEng)</td>
<td>Desirable</td>
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<td>Undergraduate degree in engineering, including electrical, mechanical and computer engineering, or equivalent</td>
<td>Desirable</td>
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**Knowledge**

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<tr>
<td>Specialist knowledge in autonomous systems and/or robotics, particularly in areas related to medical robotics and/or intelligent mechatronic systems</td>
<td>Essential</td>
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<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>Desirable</td>
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<td>Research expertise that complements the Department’s Research Strategy</td>
<td>Essential</td>
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**Skills, abilities and competencies**

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<tr>
<td>Ability to develop research objectives, projects and proposals</td>
<td>Essential</td>
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<td>Highly developed oral and written communication skills, including ability to write and contribute to publications and to disseminate research findings using other appropriate media</td>
<td>Essential</td>
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<td>Ability to deliver presentations at conferences and exhibit work at other appropriate events internally and externally</td>
<td>Essential</td>
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<td>Ability to extend, transform, and apply knowledge from scholarship</td>
<td>Essential</td>
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<td>Ability to design teaching materials and deliver across a range of modules and within a subject area</td>
<td>Desirable</td>
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<td>Ability to supervise the work of others, in research teams, projects and as an MSc, PhD and postdoctoral supervisor</td>
<td>Desirable</td>
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<td>Excellent organisational and administrative skills</td>
<td>Essential</td>
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<th>Experience</th>
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<tr>
<td>Proven ability to contribute to high quality research which is publicly evidenced through high impact journal publications</td>
<td>Essential</td>
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<td>Experience of taking responsibility for teaching and learning at undergraduate and postgraduate level</td>
<td>Desirable</td>
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<td>Evidence of successful course planning, design and delivery across a range of modules, with exemplification of teaching materials</td>
<td>Desirable</td>
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<td>Evidence of dissemination of research findings including journal publications, presentation of papers at conferences and workshops, and participation in public engagement events</td>
<td>Essential</td>
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<tr>
<td>Postdoctoral experience in autonomous systems or robotics</td>
<td>Essential</td>
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<td>Experience of practical work in robotics or mechatronics</td>
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<th>Personal attributes</th>
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<tr>
<td>Demonstrate attention to detail and commitment to high quality work</td>
<td>Essential</td>
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<td>Show creativity, initiative and judgement in applying appropriate approaches to teaching, learning support and scholarly activities</td>
<td>Desirable</td>
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<td>A 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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<td>Collaborative ethos</td>
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<td>Demonstrate a commitment to the Department and University beyond own specialist field by undertaking management and administrative duties, as appropriate</td>
<td>Essential</td>
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THE DEPARTMENT

The Department of Electronic Engineering at York undertakes world-leading research with groups working in multidisciplinary areas including: electronic and computer engineering, specifically, bio-inspired adaptive architectures and systems; applied electromagnetics, signal processing and coding for communications; nano-scale device fabrication and analysis; autonomous and robotic systems and electronics for healthcare: https://www.york.ac.uk/electronic-engineering/

Our key research areas fit into three overarching groups:

Communication Technologies
Intelligent Systems and Nano-science
Engineering Education and Management

In the 2014 REF 87% of our research outputs were judged world-leading or internationally excellent. Our research groups work with industry and universities across the world while providing a friendly and supportive environment for staff and students.

Our department has a long-standing reputation for high-quality teaching and learning and highly employable graduates. Our MEng and BEng undergraduate programmes in a number of subject areas are fully accredited by the IET (Institution of Engineering and Technology) at CEng (Chartered Engineer) level: http://www.york.ac.uk/electronics/undergraduate/. The Department is consistently highly ranked for Electronic Engineering in the annual National Student Survey and we are ranked 1st in the UK for graduate employment within one year of leaving the university (Longitudinal Education Outcomes (LEO) 2017).

Within Electronic Engineering our student body consists of approximately 400 undergraduate students and 200 postgraduate students. Our taught postgraduate students undertake one of our suite of MSc programmes, covering the latest technologies and skills in important industry sectors. We have a vibrant community of postgraduate research students enrolled on our PhD programme bringing our total student cohort to around 600 students.

The Department has 40 academic staff (including part-time and job share), research staff and a team of support staff, providing administrative and technical assistance. It continues to hold the Bronze Award from Athena SWAN for promoting women in science, which was won in 2013. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science, engineering and technology (SET) in higher education and research.

The Department of Electronic Engineering operates a family friendly policy and is committed to gender equality and
THE DEPARTMENT

diversity. The Department recognises that a flexible approach to working is vitally important in the recruitment and retention of staff who have family commitments. The Department offers flexible working hours to all staff and will actively support job sharing and career break requests where it is reasonable and practical to do so and where operational needs will not be adversely affected.

The Department provides support for all categories of staff in their applications for promotion, role reviews, awards and prizes and rewarding excellence nominations. It strives to address gender inequalities and ensure that there is a culture that supports equality and encourages better representation throughout the department. Support for women at all stages of their career is recognised as being extremely important.

Further details regarding the Department can be found on its website: https://www.york.ac.uk/electronic-engineering/
THE UNIVERSITY

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2018 it is the home of more than 17,000 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 are ranked 16th in the Times & Sunday Times league table (2017). 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 12 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 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 then 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 7347
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 6 March 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 3 referees.

Help and assistance

Direct any informal queries to Head of Department, Prof Andy Tyrrell at andy.tyrrell@york.ac.uk, or if you would like to talk to someone about working in the Department please contact Dr Jude Brereton, jude.brereton@york.ac.uk.

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

recruitment@york.ac.uk

+44 (0)1904 324835