Research Associate
Department of Electronic Engineering

Closing date: 22 October 2017
Interview date: To be confirmed
Vacancy reference: 6056
INTRODUCTION

The Department of Electronic Engineering has been awarded a research contract from the Engineering and Physical Sciences Research Council (EPSRC) on the subject of ‘Full duplex for underwater acoustic communications’. This is a collaborative project with Newcastle University.

We are seeking a post-doctoral Research Associate to undertake a 3-year research project on signal processing and wireless communication systems for underwater acoustic channels.

This full-time post is available for 36 months from the 1st January 2018. The appointment will be made at Grade 6 and salary will be in the range £31,604 - £38,832 a year.
Main purpose of the role

- To conduct research under the supervision of senior colleagues and to contribute to the production of research.
- To assist in the identification and development of potential areas of research and the development of proposals for independent or collaborative research projects.

Key responsibilities

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

- To conduct individual and collaborative research projects, duties to include: analysis and interpretation of research data; use of appropriate research techniques and methods; writing up of research results and dissemination through publications, seminar and conference presentations and public engagement and outreach activities; contributing to the identification of possible new areas of research.
- To contribute to the preparation of research proposals and applications to external bodies.
- To undertake appropriate organisational and administrative activities connected to the research project, including conference organisation, and the development of promotional or educational material including website maintenance and development.
- To develop and initiate collaborative working internally and externally, duties to include: the building of internal contacts and participation in internal networks; collaboration with colleagues on joint projects as required; participation in and identification of external networks in order to share information and identify potential opportunities for collaboration and possible sources of funding; attendance at and contribution to relevant meetings.
- To provide guidance to other staff and students, as required, as well as coordinating the work of small research teams.
- To assist with undergraduate/postgraduate teaching in own area of expertise.
# PERSON SPECIFICATION

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<tr>
<th>Qualifications</th>
<th>Essential / Desirable</th>
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<tr>
<td>First degree in Electronic Engineering or related subject</td>
<td>Essential</td>
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<td>PhD in Electronic Engineering or equivalent experience</td>
<td>Essential</td>
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**Knowledge**

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<th>Essential / Desirable</th>
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<tr>
<td>Knowledge of signal processing and wireless networks</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 adaptive signal processing algorithms</td>
<td>Desirable</td>
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<td>Knowledge of acoustics, especially underwater acoustics</td>
<td>Desirable</td>
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<td>Knowledge of MAC (Medium Access Control) protocols</td>
<td>Desirable</td>
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**Skills, abilities and competencies**

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<th>Essential / Desirable</th>
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<tr>
<td>Competency in implementation of analogue and digital signal processing algorithms, in hardware and software</td>
<td>Essential</td>
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<td>Proven and maintained ability to publish research work in high profile journals</td>
<td>Essential</td>
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<td>Competency to make presentations at conferences or exhibit work in other appropriate events</td>
<td>Essential</td>
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<td>Ability to plan and carry out underwater acoustic experiments</td>
<td>Desirable</td>
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**Experience**

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<tr>
<td>Experience of carrying out both independent and collaborative research</td>
<td>Essential</td>
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<td>Experience of MATLAB</td>
<td>Essential</td>
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<td>Experience in developing research objectives, projects and proposals for own and joint research, with the assistance of a mentor if required</td>
<td>Desirable</td>
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**Personal attributes**

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<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>Collaborative ethos</td>
<td>Essential</td>
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<td>Interest in and enthusiasm for the subject matter of the project(s)</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 work in order to meet deadlines, including initiative to plan research programmes</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 of Electronic Engineering is dedicated to world-leading research and teaching in Electronic Engineering. Our research groups play significant roles on the national and international stage, collaborating with major industries and securing funding from research councils. In the latest REF assessment, 87% of our work was assessed as world leading or internationally excellent. With respect to our teaching, in the most recent NSS survey in 2016 we were rated in the top 10 nationally for teaching quality (for the third year running) and in the top 5 for academic support.

You will join the Communication Technologies research group which addresses the complementary areas of communication systems, wireless transmission, acoustic and audio signal processing and applied electromagnetics and devices. We apply our research to a number of high impact areas including underwater networks, as well as 5G ultra-high capacity density systems, high altitude platforms, virtual acoustic environments and electromagnetic compatibility.

More specifically, you will make a significant contribution to the rapidly developing research into underwater acoustic communications and networking, which builds upon strong track records in underwater acoustics, signal processing, wireless networking and protocols. You will be line-managed by Dr Yuriy Zakharov and work closely with Dr Paul Mitchell throughout this research programme. You will not be responsible for managing other people, but will be expected to offer support to other researchers (notably PhD students) working in the field. It is also anticipated that you will proactively engage with other activities in both the research group and Department, which will in turn provide a wealth of opportunity for our personal and professional development.

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

Founded on principles of excellence, equality and opportunity for all, the University of York opened in 1963 with just 230 students. In 2017 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 one of just six post-war universities which appear in the world top 100 (2013-14) and 15th in the Times & Sunday Times league table (2016). 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 aims to offer a nurturing and supportive environment as an employer. Flexible working hours, nursery facilities, childcare vouchers, cycle to work scheme, generous holidays and an attractive pension scheme all make the University of York one of the region's leading employers.

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 6056
- Complete the online application form

You will need to submit your completed application by midnight (local UK time) on 22 October 2017.

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 yury.zakharov@york.ac.uk

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

recruitment@york.ac.uk

+44 (0)1904 324835