



Lecturer / Senior Lecturer / Reader in Robotics

School of Engineering

Closing date: 5 January 2020
Interview date: To be confirmed
Reference number: ENG132A



Introduction

The School of Engineering at the University of Aberdeen is a research-intensive academic unit engaged in fundamental and applied research across five Engineering disciplines: Chemical, Civil, Electrical and Electronic, Mechanical, and Petroleum. 85% of the School's research output was ranked as world leading or internationally excellent in the 2014 UK Research Excellence Framework exercise (REF2014).

The School's research is organised under five research groupings with over 100 PhD students. We are making significant contributions to engineering science, development of new technologies and knowledge transfer to industry. At the same time, the fundamental nature of much of our research makes it applicable beyond traditional engineering. We are a General Engineering unit, with approximately 900 undergraduate students spread across 5 years of study and 350 postgraduate taught students. We offer accredited undergraduate Master of Engineering (MEng, 5 years) and Bachelor of Engineering (BEng, 4 year) degrees in Chemical, Civil, Mechanical, Petroleum and Electrical and Electronic Engineering, and a range of MSc programmes both in and outside the oil and gas area.

The Electrical & Electronic Engineering (EEE) Research Group has an established international reputation and profile for its activities. It seeks to advance fundamental knowledge and promote applications across the whole spectrum of activities in topics relating to electrical engineering and electronics. This spans the development of new laser components; applications of digital holography; design and control of mechatronic systems, algorithms for intelligent sensing in the natural and built environment; network and transport design for the future Internet; and techniques for High Voltage DC transmission.

Precise, high-throughput manufacturing systems are critical in enabling several societal and technological advancements. These include low-impact / non-invasive microsurgeries, self-driven vehicles, unmanned hazardous waste recovery and disposal systems, autonomous assembly lines and Lab-on-chip-type MEMS and NEMS devices, to name a few. Precision manufacturing has also emerged as a key area of focus for the EPSRC and other research funding bodies. The need for an aptly trained, highly-skilled workforce, capable of designing and operating these future production lines is apparent. To address this, the School of Engineering will deliver a first-of-its-kind postgraduate programme in Industrial Robotic Systems, while strengthening its research capability in the subject area.

The two posts are available: one at Lecturer and one at Senior Lecturer level. We seek individuals who will relish the opportunity to join our world-leading research team and will contribute to the development and delivery of the new MSc programme in Industrial Robotic Systems, and development of research in robotics and mechatronic. The appointees will benefit from research expertise across the School of Engineering in power engineering, control and mechatronics, electronics and computer systems, optical engineering and dynamics. Post appointees will be dynamic individuals with a clear ability for leading research in their fields, as evidenced by a track record of publications and funding commensurate with career stage. The appointees will have developed plans for future research with good prospects for external funding. They will have excellent communication skills and the desire and ability to teach across postgraduate and undergraduate programmes specifically in the Electrical and Electronic Engineering disciplines.

Introduction cont...

We particularly seek expertise in the following areas of teaching and research:

- Robotics and the related topics within electronics and systems engineering with preference for robotic manufacturing, reconfigurable robots, soft robotics and bio-inspired robotics
- Mechatronics with preference for design and control of precision mechatronic systems, MEMS and NEMS.
- Applied Control Engineering with preference for distributed control, industrial control, quantum control and sensor fusion.
- Research and development of EEE techniques to support industrial control, communications or measurement applications.

Job description

Main purpose of the role:

The School of Engineering is seeking the appointment a Lecturer/Senior Lecturer/Reader in Robotics to play leading roles in expanding the School's research portfolio in this exciting area as well as preparing for the launch of the new MSc programme in Industrial Robotic Systems. The successful candidates will also be expected to generate external research income and contribute to teaching across existing undergraduate and postgraduate programmes in the School.

Key responsibilities:

Lecturer/Senior Lecturer in Transport Studies

- To develop and lead on postgraduate and undergraduate courses in the School of Engineering, and contribute to other activities in preparation for the launch of the new MSc in Industrial Robotic Systems
- To contribute to the generation of new external grant income from Research Council, Government and industry sources
- Contribute to the School of Engineering REF submission
- To represent the School externally through participation in agreed professional activities (e.g. professional and institution committees, advisory bodies).
- Develop the School's capacity for research in EEE and lead research through supervision of PhD students and funded research staff.

At a glance

Salary:

Lecturer level £41,526
£49,552 per annum
Senior Lecturer level
£52,559 - £59,135 per
annum

Hours of work:

Full Time

Contract type:

Substantive

Candidate background

We are looking for outstanding candidates who could make a significant contribution to the development of our portfolio of undergraduate and postgraduate programmes.

Successful applicants will have a proven track record of research, valuable industrial experience, outstanding communication skills and the desire and ability to teach well at undergraduate and postgraduate levels. A willingness and ability to develop 2 new courses (during Year 1) and contribute to other activities in preparation for the launch of the new MSc in Industrial Robotic Systems is a core requirement.

The successful candidate will have a PhD in Robotics, Mechatronics, Applied Control or a cognate discipline.

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In order to further enhance its diversity, the School particularly welcomes applications from women who are currently under represented in the School.



Terms of appointment

For appointments made at Lecturer / Senior Lecturer Level, salary will be at the appropriate point on the Grade 7/8 salary scale (Lecturer Level £41,526 - £49,552 per annum; Senior Lecturer level £52,559 - £59,135 per annum) with placement according to qualifications and experience.

Any appointment will be made subject to satisfactory references and a period of probation.

For further information on various staff benefits and policies please visit <http://www.abdn.ac.uk/staffnet/working-here/>

Should you require a visa to undertake paid employment in the UK you will be required to fulfil the minimum points criteria to be granted a Certificate of Sponsorship and Tier 2 visa. As appropriate, at the time an offer of appointment is made you will be asked to demonstrate that you fulfil the criteria in respect of financial maintenance and competency in English. Please do not hesitate to contact Marian Elliott-Jones (m.elliott-jones@abdn.ac.uk) for further information.

Person Specification

	<i>Essential</i>	<i>Desirable</i>
Education/Qualifications Academic, technical and professional education and training	<ul style="list-style-type: none"> • <i>PhD in Electrical & Electronic Engineering or a subject relevant to Robotics</i> 	<ul style="list-style-type: none"> • <i>PhD in Robotics, Mechatronics or Applied Control.</i> • <i>Chartered Engineer (CEng)</i> • <i>Membership of a relevant professional institution (e.g. IET, IEEE)</i> • <i>Higher Education Academy (HEA) Diploma or equivalent</i>
Work and Other relevant experience (including training) eg Specialist knowledge, levels of experience, supervisory experience, research	<ul style="list-style-type: none"> • <i>Record of publications in peer-reviewed international journals (commensurate with career stage).</i> • <i>Strong independent research profile with ability to develop and lead research projects in their specialist area within EEE (commensurate with career stage).</i> • <i>Experience in teaching courses at undergraduate or postgraduate level, or equivalent experience in industry (commensurate with career stage).</i> • <i>Experience of applying for research funding and managing research (commensurate with career stage).</i> • <i>Experience of managing major research projects (for Senior Lecturer only)</i> 	<ul style="list-style-type: none"> • <i>Industrial experience relevant to design or automated manufacturing and unmanned production lines is beneficial.</i> • <i>Experience in the administration of academic affairs or similar experience in industry (commensurate with career stage).</i> • <i>Prior experience of developing on campus and online postgraduate taught courses</i> • <i>Awareness of system design and development.</i> • <i>Experience of working with industry and of applying research to industrial problems.</i> • <i>International recognition through invited lectures, nominated UK expert, research visits, honours, etc. (for Senior Lecturer only)</i>
Personal qualities and abilities e.g. initiative, leadership, ability to work on own or with others, communication skills	<ul style="list-style-type: none"> • <i>Excellent written, oral and presentation skills.</i> • <i>Flair for original thinking.</i> • <i>Excellent organisational skills.</i> • <i>Ability to bridge the boundaries between academic research and industry needs.</i> • <i>Excellent networking skills to develop strong relationships with industry partners and with academics and researchers from other institutions.</i> • <i>Ability and willingness to work in multidisciplinary environment.</i> • <i>Ability to contribute, professionally and otherwise, to the life of the</i> 	<ul style="list-style-type: none"> • <i>Enthusiasm to teach engineering systems design.</i>

Schools and the University, and to relate well to staff and students.

Other

e.g. special circumstances (if any) appropriate to the role such as unsocial hours, travelling, Gaelic language requirements etc.

- *Able to travel to national and international meetings and conferences and to deliver teaching at different locations including overseas.*

The University

Founded in 1495, Aberdeen is Scotland's third oldest University and the fifth oldest in the UK. Ranked within the world top 160 in the Times Higher Education Rankings 2019 and named Scottish University of the Year in the Times and Sunday Times Good University Guide 2019. Aberdeen is 'open to all and dedicated to the pursuit of truth in the service of others'.

Aberdeen is a broad based, research intensive University, which puts students at the head of everything it does. It has significant academic strengths and potential across a wide variety of disciplines. Outstanding in a wide range of discipline areas, Aberdeen has also been credited for its international reach and its commercialisation of research ideas into spin out companies.

The University has over 14,000 matriculated students and 3,600 staff representing 130 nationalities. We encourage bold thinking, creativity and innovation and we nurture ambition with many opportunities for professional and personal development in an inclusive learning environment which challenges, inspires and helps every individual to reach their full potential.

The University combines a distinguished heritage with a forward looking attitude. In the past few years, the University has encouraged creativity in its academic staff, broken new ground with an innovative curriculum, and developed state-of-the-art facilities including the new Sir Duncan Rice Library and the Aberdeen Sports Village and Aquatics Centre. In looking to the future, the University seeks to enhance its reputation as one of the world's leading Universities by moving forward with ever more ground breaking research; ensuring students have an intellectual and social experience second to none; and capitalising upon the dual role as one of the major institutions of the north and as a cornerstone of regional economic and cultural life.

The city and the region

Aberdeen and Aberdeenshire

With a population of approximately 230,000, the city stands between the Rivers Dee and Don. This historic city has many architectural splendours and the use of its sparkling local granite has earned Aberdeen the name of the Silver City. Recognised as the oil capital of Europe, Aberdeen nevertheless retains its old-fashioned charm and character making it an attractive place in which to live.

Aberdeen enjoys excellent communication services with other European cities - e.g. flying time to London is just over one hour with regular daily flights. There are direct air links to London, Manchester, Birmingham, Leeds, Southampton, Belfast and East Midlands within



the U.K. There are also flights to international hub airports: Amsterdam (Schiphol) and Paris (Charles De-Gaulle) as well as flights to other European destinations. <http://www.aberdeenairport.com> Road and rail links are also well developed.



The Grampian Region which took its name from the Grampian Mountains has a population of approximately 545,000. It is made up of five districts – Aberdeen, Banff & Buchan, Gordon, Kincardine & Deeside and Moray. The city and the surrounding countryside provide a variety of urban, sea-side and country pursuits. Aberdeen has first class amenities including His Majesty's Theatre, Music Hall, Art Gallery, the Aberdeen Exhibition Centre, Museums, and Beach Leisure centre. Within a short time, beach pursuits, equine activities, salmon, trout and sea fishing, hill-walking, mountaineering, golf, sailing, surfing and windsurfing can be reached. The city and the surrounding countryside are repeatedly given high ratings for quality of life in surveys.

Aberdeenshire is one of Scotland's most appealing regions. Royal Deeside and the Cairngorms National Park are within easy access of the city, and there are a variety of towns and villages scattered along the coastline.

Aberdeen and Aberdeenshire cater for a wide range of tastes in sporting and cultural activities.

To find out more about Aberdeen and Aberdeenshire go to www.visitabdn.com

How to apply

Online application forms are available at www.abdn.ac.uk/jobs

The closing date for receipt of applications is 5 January 2020

Should you wish to make an informal enquiry please contact
Professor Igor Guz, Head of School/Section
01224 272808
i.guz@abdn.ac.uk

Please do not send application forms or CVs to [Professor Guz](#)

Please quote reference number ENG132A on all correspondence

The University pursues a policy of equal opportunities in the appointment and promotion of staff.

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