UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	Lecturer in Agri-Robotics				
DEPARTMENT	Lincoln Institute for Agri Food Technology (LIAT)				
LOCATION	Riseholme Campus				
JOB NUMBER		**GRADE**	7	**DATE**	June 2020
REPORTS TO	Research Director of Lincoln Agri-Robotics				

CONTEXT

The University of Lincoln is seeking to appoint a **Lecturer** within **Lincoln Agri-Robotics (LAR)**, the world's first global centre of excellence in agricultural robotics. Applicants should hold a PhD and should be able to demonstrate an excellent track record in **Robotics and Autonomous Systems** or a related field such as (but not limited to): manipulation, grasping, soft robotics, mobility, sensing, perception, communication, intelligent control or autonomy. The ideal candidate for this post will have hands-on experience with field/deployed robotics or robots "in the wild", cloud/edge platforms, system integration and/or experimental evaluation. Specific experience in the agriculture domain is useful but not required.

Lincoln Agri-Robotics (LAR) expands the successful interdisciplinary collaboration between two of the University's leading research groups: the Lincoln Institute of Agri-Food Technology (LIAT) and the Lincoln Centre for Autonomous Systems (L-CAS). The new centre offers the perfect opportunity to make an impactful difference by developing robotics to address the global challenges facing crop-based agriculture, such as climate change, food security, population growth, political pressures affecting migration, and the demographics of an ageing population.

Once in post, the successful candidate will develop their own research portfolio within the context of LAR and in collaboration with this unique academic team. Expectations include acquiring external funding, publishing in the highest quality journals and conferences, supervising postdoctoral researchers and PhD students, contributing to real-world applications with positive impacts on the wider society and economy, as well as conducting, directing and supervising research in line with the targets set by the University. In addition, the successful candidate will contribute to teaching activities relevant to their area of expertise, such as the MSc Robotics &d Autonomous Systems or the MSc Agri-Food Technology.

The post-holder will benefit from excellent facilities, equipment and ready-made links to the university's extensive network of industry partners across the agri-food chain. The new centre is based at the University's 200-hectare Riseholme Campus, where researchers enjoy access to a working farm, woodlands, grasslands and watercourses, as well as our robotic fruit farm, including polytunnels and cold storage facilities. The University is also the lead institution for the new EPSRC Centre for Doctoral Training (CDT) in Agri-Food Robotics (AgriFoRwArdS), together with partners at the Universities of Cambridge and East Anglia. State-of-the-art equipment available for our research includes advanced robotic manipulators and mobile robots, such as Franka arms and our fleet of Thorvald robots; advanced sensing, imaging and camera technologies; and excellent links to industrial facilities and test environments.

JOB PURPOSE

General
To work with colleagues on curriculum development and the advancement of relevant discipline areas within the university.

To deliver teaching over a range of modules within an established programme.

To undertake student tutoring and support.

To contribute to the research profile of the Department.

To carry out a limited number of additional activities in support of the academic work of the department.

Specific to this post upon appointment:
The Lecturer will develop their own research portfolio within one or more of the three grand challenges addressed by Lincoln Agri-Robotics: (1) **selective harvesting**, e.g. picking a strawberry using novel soft or non-contact grippers; (2) **crop care**, e.g. identifying and removing weeds that attack individual plants while scaling to cover whole farms; and/or (3) **robotic phenotyping**, e.g. gathering data on plant traits, weeds, pests and disease using multi-scale approaches with novel and traditional sensor devices. The key technologies targeted for research contributions lie in one (or more) of the five specialties essential to LAR: mobile autonomy, manipulation & soft robotics, sensing & perception, fleet management, and human-robot collaboration.

The Lecturer will undertake activities which include acquiring external funding, supervising postdoctoral researchers and PhD students, publishing in the highest quality journals and conferences, contributing to real-world applications with positive impacts on the wider society and economy, and conducting, directing and supervising research in line with the targets set by the University. The Lecturer will also contribute to relevant teaching activities, initially on a reduced teaching workload. Coordinating with the Lincoln Agri-Robotics directors, the post holder will be expected operate with a significant degree of autonomy within the LAR team. At the Senior Lecturer level, candidates are expected to be able to demonstrate a proven track record including research funding obtained from external sources (e.g. UKRI), strong international publication profile and teaching experience.

Further responsibilities of the post include:

- To contribute to the research profile of the Lincoln Agri-Robotics (LAR) team, including the Lincoln Institute for Agri-food Technology (LIAT) and the Lincoln Centre for Autonomous Systems (L-CAS).

- To work with colleagues on curriculum development and the advancement of relevant discipline areas within the university.

- To deliver teaching over a range of modules within an established or emerging programme. To undertake student tutoring and support.

- To carry out a limited number of additional activities in support of the academic work of the centre (LAR) and institute (LIAT).

The post holder may be required to help supervise the work of more junior researchers and assist in the delivery of the MSc Robotics and Autonomous Systems, MSc Agri-Food Technology and/or related degree programmes within the University.

KEY RESPONSIBILITIES

The responsibilities of a Lecturer are wide ranging and may change over time according to the development needs of the department and the individual. In general a Lecturer can expect to undertake any of the following:

Teaching and Learning Support

- To engage in teaching on undergraduate and/or postgraduate level programmes as determined by the Head of Department. The range of teaching duties may change from time to time.

- Contribute to the design, content and delivery of specific areas of teaching and learning and to the quality of teaching delivered.

- Ensure that teaching content is appropriately informed by current research and advanced scholarly activity.

- Collaborate with colleagues in the continuous review and development of the Department's programmes.

- Take responsibility for the co-ordination of modules when appropriate to do so and after gaining sufficient relevant experience.

- Work in accordance with University policies and procedures to undertake assessment of students' work and give feedback.

Research and Scholarly Activity

- This is primarily a research focussed role.
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- Make a contribution to the research profile of the Department, School or College and pursue a personal research programme consistent with the Department's research priorities.

- Collaborate in research activities and initiatives with colleagues in and beyond the department if appropriate.

- Engage in subject professional and pedagogy research as required to support teaching activities.

- Ensure that outcomes of research and scholarly activity are appropriately disseminated in peer reviewed outlets.

- Have sufficient outputs to be returned in the REF at agreed minimum standards inclusive of complex circumstances, or at least demonstrate a clear and achievable plan to secure a return if an early career researcher.

- Apply for grant funding and manage, as appropriate, any grants which are secured.

- Supervise and manage research projects if required.
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Liaison and Networking

- Establish contacts within the wider community where possible and begin to form relationships for future collaboration.
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- Disseminate knowledge through public engagement activities which enhance the reputation of Lincoln Agri-Robotics and the wider university.

- Develop links with relevant professional bodies and academic groups.

- Develop involvement in academic activities with industry and other external partners.

- Take part in relevant internal committees and working groups.

- Liaise with subject librarians, central timetabling and other services to ensure resources available are appropriately deployed.

- Represent the Department or College on appropriate external bodies.
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Team Working

- Work as a member of a team, collaborating on curriculum development and contributing to departmental meetings.

- Begin to co-ordinate the work of others when appropriate through taking responsibility for module co-ordination.

Student Support

- Act as academic tutor to students as allocated by the Head of Department and act as first line contact for them for advice and support on academic matters, ensuring that students are directed to relevant support services when necessary.

- Take part in the supervision of research degree students as appropriate.

- Supervise student projects and placements as appropriate.

Citizenship

- Contribute to the wider mission and reputation of the University with active involvement in activities contributing to general university life e.g. open days, student activities, alumni events, mentoring, personal tutoring and engagement with student support and delivery of outreach activities e.g. school visits, local community activities

- Active participation in committees/groups contributing to university life e.g. health and safety, equality diversity and inclusivity, sustainability and working groups

- Engage in appropriate training programmes in the University, actively follow and promote University policies and participation in the staff appraisal scheme and yearly Individual Research Plan (IRP)

- Contribution to the future development of the University and support the University's wider social, cultural and economic development of our region, our 'civic' mission with engagement and/or leadership of external partnerships contributing to the civic mission of the University. Participation in external activities such as volunteering, school

governor, cultural activities, community activities

Other
- Help drive innovation and collaboration throughout the food chain.   - Carry out specific departmental roles and functions as may reasonably be required – these being equitably distributed across the academic staff.   - Assist in student recruitment activities, including interviews, open days and external recruitment events.   - Engage in appropriate training programmes in the University.   - Actively follow and promote University policies.   - Participate in the staff appraisal scheme.

In addition to the above, undertake such duties as may reasonably be requested and that are commensurate with the nature and grade of the post.

ADDITIONAL INFORMATION

Key working relationships/networks	
Internal	**External**
- Head of Department (Director of LIAT) - Director of LAR - Director of L-CAS - Other members of Lincoln Agri-Robotics - and linked research delivery teams - College Senior Academic Managers - Departmental academic, administrative and technical staff - Support Services Staff	- Relevant academic and professional groups - Relevant national, regional and international networks - External examiners - Agri-food industry

UNIVERSITY OF LINCOLN
PERSON SPECIFICATION

JOB TITLE	Lecturer in Agri-Robotics	JOB NUMBER	

Selection Criteria	Essential (E) or Desirable (D)	Where Evidenced Application (A) Interview (I) Presentation (P) References (R)
Qualifications:		
Relevant honours degree or equivalent	E	A
Working to or having completed a PhD in relevant discipline or equivalent demonstrated research record (normally by publication but where appropriate through professional achievement)	E	A
HE teaching qualification (HE PGCE or HEA fellowship) OR a commitment to complete one	E	A
Experience:		
Teaching in Higher Education	D	A/I
Curriculum development	D	A/I
Development and innovation of teaching and learning methods	D	A/I
Interdisciplinary work relevant to the Department	D	A/I
Proven record of outputs that would be returnable in the REF	E	A/I
Skills and Knowledge:		
Evidence of continuing professional development	D	A/I
Developing depth and breadth of subject understanding	E	I
Knowledge of Higher Education	D	A/I
Ability to develop excellent teaching and assessment skills across the range of taught levels offered	E	A/I
Ability to contribute to curriculum development	E	A/I
Ability to support students in their study through academic counselling	E	A/I
Ability to work on own initiative	E	A/I
Competencies and Personal Attributes:		
Enthusiasm	E	I
Commitment	E	I
Team working	E	I
Good interpersonal skills	E	I
Flexibility and adaptability	E	I
Business Requirements		
N/A		

Essential Requirements are those, without which, a candidate would not be able to do the job. **Desirable Requirements** are those which would be useful for the post holder to possess and will be considered when more than one applicant meets the essential requirements.

Author	ES	**HRBA**	