UNIVERSITY OF LINCOLN
JOB DESCRIPTION

JOB TITLE	RA in Selective Harvesting for Delicate Produce				
DEPARTMENT	Lincoln Institute for Agri Food Technology (LIAT)				
LOCATION	Riseholme Campus				
JOB NUMBER	CHS141	GRADE	6	DATE	July 2024
REPORTS TO	Dr Marcello Calisti				

CONTEXT

The University of Lincoln is seeking to appoint a part-time in Selective Harvesting for Delicate Produce, which includes specialisations such as Agri-Robotics, Robotic grippers, System Design, and Engineering. This post sits within the Lincoln Institute for Agri-food Technology (LIAT), an interdisciplinary research centre in the university's College of Science. Applicants should hold an BSc - or equivalent - in Robotics, Engineering, Computer Science or a related field and should be able to demonstrate a good track record. Specific experience in sustainable agriculture or agri-food production is preferred but not required.

Candidates are expected to have strong mechanical design and system integration skills (e.g. mechatronic integrations, robotic deployment) and be able to work on the field in collaboration with other professionals (e.g. biologists, farmers). Experience in past research projects is a plus.

Successful candidates will be responsible for contributing to research on the assigned project, as directed by the Line Manager, and in collaboration with other project team members. For informal enquiries about the posts, please email Dr Marcello Calisti (mcalisti@lincoln.ac.uk).

The University of Lincoln is a leading centre in the UK for research into agri-food technology, particularly the application of AI and robotics to all areas of food production. Members of the College of Science participate in many collaborative research projects, funded by the UK Research Councils, Innovate UK and Horizon 2020. The University leads the £6m EPSRC Centre for Doctoral Training in Agri-Food Robotics, with the Universities of Cambridge and East Anglia, and runs the world first global centre of excellence in agricultural robotics, Lincoln Agri-Robotics, funded in 2019 with a £6.3m award from the UK Government's Expanding Excellence in England (E3) Fund. University facilities include an experimental farm and food factory, dedicated robotics research labs, and a fleet of state-of-the-art agricultural robots. The post will be based in LIAT at the Riseholme campus, about 5 miles from the Lincoln city centre.

JOB PURPOSE

The Research Assistant will be responsible for conducting research on the project, as directed by their Line Manager, and is expected to operate with a significant degree of autonomy. They are not expected to operate as an independent researcher.

The RA will contribute to system design and development of a robotic system for strawberry harvesting, to be co-design in collaboration with established growers. The RA will work within the context of the BBSRC project "Agri-Robotics Unleashed".

KEY RESPONSIBILITIES

Literature Surveys

Undertake literature surveys and other investigations of the state-of-the-art, and prepare reports as required.

Programme of Research

Undertake a programme of independent research, under the direction of their Line Manager, demonstrating a significant level of autonomy.

Lead in the production of high quality research outputs, including robotic hardware and/or software systems and documentation, experiment design and analysis, technical reports, papers and other publications of national/international standing.

Project Management

Perform self-management of project activities, including planning, scheduling, monitoring and regular reporting on progress.

Liaison and Networking

Identify and liaise with internal and external collaborators, and with colleagues in the College, maintaining positive and effective working relationships.

Internal Research Activities

Participate in and help to organise internal research activities, including seminars, research meetings and conferences.

Continuous Professional Development

Undertake continuous professional development activities.

Teaching Support

No formal teaching support is planned for this role, but the post-holder may interact informally with postgraduate project students.

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

Scope and dimensions of the role
This is a research focussed role.

Key working relationships/networks	
Internal	**External**
• Principal Investigator • Head of Research Centre (e.g. Research Director of LAR and Director of L-CAS) • Head of School (e.g. Director of LIAT) • Other research and academic staff within the school • Administrative and technical staff within the school	• Research collaborators, relevant academic and professional groups • Sponsors and clients, relevant national, regional and international networks in the robotic industry

UNIVERSITY OF LINCOLN
PERSON SPECIFICATION

JOB TITLE	Research Associate	JOB NUMBER	CHS141

Selection Criteria	Essential (E) or Desirable (D)	Where Evidenced Application (A) Interview (I) Presentation (P) References (R)
Qualifications:		
BSc, MEng or equivalent work experience	E	A
Knowledge specific to one or more of the following areas: **field robotics, robotic grippers, engineering, system integration**	E	A/I
Experience:		
Evidence of significant activity in one or more of the following areas: **field robotics, robotic grippers, engineering, system integration**	E	A/I
Experience of relevant research methods	E	A/I
Authorship of research outputs of national/international standing (academic conferences and journals)	D	A/I
Interest in the application of robotics to food production systems, agriculture and/or horticulture	E	A/I
Interdisciplinary work relevant to intelligent agri-tech systems	D	A/I
Working with industry partners to form long-term mutually beneficial partnerships	D	A/I
Skills and Knowledge:		
Advanced skills in at least one language commonly used for robotics research, e.g. C/C++, Python, Matlab	D	A/I
Significant experience in mechanical design, including the knowledge of CAD software (e.g. SolidWorks, Inventor)	E	A/I
Significant experience in robotics, either controlling or developing innovative robotic arms and/or grippers	E	A/I
Experience with system integration, under hardware or software point of view	E	A/I
Experience designing and implementing experiments with physical robotic systems and/or deployed software systems and/or human participants	D	A/I
Ability to design, conduct and project manage original research in the subject area	D	A/I
Excellent written communication, including the ability to write reports and research outputs	E	A/I
Ability to prioritise own workload and work to specified deadlines under pressure	E	A/I
Ability to communicate complex subjects orally	E	A/I
Skills specific to project/area	E	A/I
Competencies and Personal Attributes:		

Flexible approach to workload	**E**	**I**
Ability to work on own and as part of a team	**E**	**I**
Enthusiasm for and serious commitment to high-quality research	**E**	**I**
Good interpersonal skills	**E**	**I**
Strong attention to detail	**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	Marcello Calisti	**HRBA**	