

Collaborative Robotics Research Engineer (KTP Associate)

Department	Design, Manufacture and Engineering Management (www.strath.ac.uk/engineering/designmanufactureengineeringmanagement/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Knowledge Transfer Partnership (KTP)	Reference No	556209
Reports To	Dr Erfu Yang (Knowledge Base Supervisor); Ms Ashley Wallace (Company Supervisor)	Grade:	RS79
Salary Range:	Up to £34,000 p.a. plus £4,000 training and development budget	Contract Type:	Fixed Term (24 months)
FTE	I (35 hours/week)	Closing Date	15/02/2024

Job Advert

The Department of Design, Manufacturing and Engineering Management (DMEM) (<https://www.strath.ac.uk/engineering/designmanufacturingengineeringmanagement/>) in partnership with Glenrath Farms. (<http://www.glenrathfarms.co.uk/>) is seeking to appoint a knowledge Transfer Partnership Associate in the area of collaborative robotics, with a focus on the development of an intelligent collaborative robot system for smart farm manufacturing (iCoBOTS) that will advance the manufacturing implementation of collaborative robots (Cobots) to provide a bespoke, innovative and high-quality robotics solution.

Glenrath Farms is a family owned business that was established in 1959. They are based in the beautiful Scottish Borders and are one of the UK's leading egg production and marketing companies, producing over a million eggs a day. They produce Free Range, Organic, Barn and Enriched Colony eggs of which are compliant with UK and EU assurance schemes including Lion Quality, British Retail Consortium (BRC) and RSPCA Assured. Glenrath Farms are the world's largest free-range egg producer.

The KTP Associate will be employed by the University of Strathclyde, **but will be based at the company premises in South of Penicuik - Leadburn**, working directly with senior company staff, as well as receiving additional mentoring support from expert staff at the University of Strathclyde.

The position also offers the KTP Associate the following benefits:

- An exciting and rewarding job opportunity where you can apply your knowledge to turn a key strategic innovation idea in to reality.
- Opportunity of registering study for PhD degree with the University of Strathclyde if the Associate has not obtained one. (no cost while in post).
- Opportunity of a permanent position with the company; 70% of host companies make a permanent job offer to their Associate at the end of the project.
- £2,000 per year to spend on personal training. You'll manage your own substantial training and development budget (you can also use this to attend conferences, cover membership of professional bodies etc.)
- Mentoring from experienced industrial and academic supervisors. You'll 'own' your own project, linked to both a university and a business whose experienced teams will provide you with full support.
- developing and proving expertise and skills in the prospering fields of collaborative robotics.

The project is part of the Knowledge Transfer Partnership (KTP) programme that aims to help businesses to innovate and grow by working with UK universities. Successful Knowledge Transfer Partnership projects are funded by UK Research and Innovation through Innovate UK and are part of the government's Industrial Strategy. To find out how KTP works and the vital role you will play if you successfully secure a KTP Associate position please visit: www.ktpws.org.uk

To be considered for the role you will be educated to a minimum of MSc Degree level in Robotics/Mechatronics and Automation Systems with relevant industry experience in this area. You will be skilled in analysing, designing and developing robotic automation systems within a dynamic business/academic environment, have experience in the design and development of key robotic system modules and their system integration, experience of technical writing, preparation and delivery of user training, and some experience of working in industry such as manufacturing automation. You will be self-directed and self-motivated, with the ability to project management with guidance, as required, and you will have excellent communication skills with the ability to interact with a range of stakeholders and excellent skills with the ability to engage with others from both academia and industry.

Whilst not essential for the role, applications are welcomed from candidates with a Master degree in other relevant disciplines such as computer science, electronic engineering with industry experience in robot control/programming.

Job Description

Brief Outline of Job:

Supported by the academic team at the University of Strathclyde and the industrial team at Glenrath Farms, the KTP Associate will focus on the development and implementation of the iCoBOTS: an intelligent collaborative robot system for smart farm manufacturing that will advance the manufacturing implementation of collaborative robots (Cobots), in order to deliver a strategic step change in its current operations and allow the company to continue growth with a bespoke, innovative and high-quality robotic solution. It aims to convert academic knowledge and theory into a commercially viable, state-of-the-art engineering cobot system that will improve both the manufacturing productivity and operational efficiency of Glenrath Farm, whilst minimally disrupting current production. The KTP Associate under the supervision and support from the academic team at the University of Strathclyde will be conducting the knowledge and expertise transfer in a number of key areas including robotics, mechatronics and automation techniques and their applications to this KTP project. The Associate will also contribute to the knowledge base through technical reports, publications in journals and conferences, presentations at workshops and seminars etc.

Main Activities/Responsibilities:

1.	Leading, designing, developing and implementing the iCoBOTS system.
2.	Developing a robot interface that is able to interact and work collaboratively with humans.
3.	Developing and integrating hardware/software modules of the iCoBOTS system that is capable of operating in a fast paced, dynamic manufacturing environment. (i.e. robot control, dynamic environment perception, and path planning).
4.	Testing the developed iCoBOTS system in both lab and field experiments (Glenrath Farms).
5.	Balancing technical skills with commercial awareness to deliver a commercially viable, state-of-the-art engineering cobot solution in order to improve both the manufacturing productivity and operational efficiency.
6.	Taking the appropriate steps to ensure that the iCoBOTS can ultimately be deployed in the factory for packing and handling eggs
7.	Preparing progress reports, attending and presenting at project meetings with KTP adviser and supervision team.
8.	Preparing conference and journal publications related to this KTP project.
9.	Engaging in continuous professional development within the University and Company as appropriate
10.	Completing the KTP Associate's Final Report by the required deadline.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 MSc in Robotics/Mechatronic Systems with relevant industry experience in this area

D1 PhD degree in Robotics, Mechatronics and Automation or Industrial Control Engineering.

D2 Professional qualifications

D3 Business qualification (either separate or as part of degree course)

Experience

E2 Experience of robot development/control programming

E3 Experience of system integration challenges and approaches

E4 Expertise in technical writing, preparation and delivery of user training

D4 Experience of developing human-robot techniques

D5 Relevant industry experience of working in cross disciplinary team

Job Related Skills and Achievements

E5 Ability to analyse, design and develop robotic systems within a dynamic business/academic environment.

D6 Excellent numerical and computational skills

E6 Excellent hardware system integration and software programming skills

D7 Ability to take initiative and project management

E8 Experience of cobots such UR10e control and programming

D8 Excellent organisational and communication skills

Personal Attributes

E9 Excellent communicator, with the ability to engage with a range of stakeholders

E10 Ability to work independently, self-motivated and with multi-skilled teams

E11 Strong interpersonal skills, including negotiating, influencing and network building

D9 Confident and self-reliant

E12 Awareness of commercial drivers

Other Relevant Factors

E13 Desire to lead

E14 Good attention to detail

D10 Willing to travel

D11 Holding a full and clean UK driving licence

D12 Willing to work flexibly

Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Dr Erfu Yang, Senior Lecturer (erfu.yang@strath.ac.uk / 0141 574 5279).

Conditions of Employment

Conditions of employment relating to the KTP Associate staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

PVG Check

This position involves regulated work, making it a legislative requirement that the successful candidate becomes a member of the Protection of Vulnerable Groups Scheme. If appointed, employment with the University will not be confirmed, until membership of the Scheme has been received. The successful applicant will be precluded from working with protected groups until that time.

Basic Disclosure

This role requires the satisfactory outcome of a Basic Disclosure Scotland Check. The successful applicant will be asked to carry out a Basic Disclosure Scotland Check. Whether an outcome is satisfactory will be determined by the University.

Pre-employment health screening

An offer of appointment will be subject to a medical assessment by Occupational Health. An individual who accepts an offer of employment must complete a confidential medical questionnaire and forward it to the Occupational Health Nurse within 5 days of receipt. If further information is required the individual may be contacted by the OHN or a Medical Advisor and a personal appointment with the individual may be arranged. An unconditional contract of employment will not be issued until Human Resources receives confirmation that applicant is fit to undertake the duties of the post.

Probation

Where applicable, the successful applicant will be required to serve a 6 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Formal interviews for this post will be held in March 2024.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

