Information on Postgraduate Research Scholarship
Ref: FS-ES-04-2027-7

Faculty:	Engineering & Science	**School:**	Engineering
Lead Supervisor:	Dr Jingqiong Zhang		
Project Title:	**Advanced Sensing and AI-Driven Robotic Learning for Trustworthy Human–Robot Collaboration**		
Project Description:	How can robots adapt to changing environments and work reliably with people without extensive reprogramming? This PhD offers an opportunity to explore cutting-edge Artificial Intelligence (AI), advanced sensing and robotic learning. Flexible industrial robotics can help manufacturers improve productivity, respond to changing production needs and support people in demanding or repetitive tasks. Achieving this requires robots that understand their surroundings, learn from experience and respond appropriately to human collaborators. Visual sensing alone may provide insufficient information about physical interactions, motivating its integration with complementary sensors, such as tactile, force and proximity sensors. Importantly, robots are increasingly expected to learn and adapt as conditions and objects change. This project aims to advance robotic perception and adaptive learning through sensor fusion, AI and online learning algorithms, supporting reliable operation and trustworthy human–robot interaction. Research areas will include, but are not limited to: • Advanced sensing and multimodal perception to improve robotic perception. • Uncertainty quantification and uncertainty-aware AI to support decision making. • Online and continual robotic learning to develop new capabilities learning from new experiences and human feedback • Trustworthy human–robot interaction. You will combine methodological development with experimental investigation using the Universal Robots robot platform at University of Greenwich. Manufacturing will provide a practical context, with potential scenarios including manipulation, assembly and collaborative tasks. **Candidate profile** We welcome self-motivated applicants with a strong background in robotic engineering, computer science, AI or a related engineering discipline. Programming experience, preferably in Python, strong analytical and problem-solving skills, and a foundation in AI and engineering, are essential. Experience in deep learning, online and continual learning, sensing, signal processing, embedded systems, robotics or robot programming such as ROS is desirable. You should be enthusiastic about developing new methods, conducting practical experiments and working both independently and collaboratively.		

	This scholarship is awarded competitively, and all applications are carefully reviewed. While we cannot guarantee an offer, we encourage strong candidates to apply.
Duration:	3 years, full-time study 6 years, part-time study

Support available (subject to satisfactory performance):

For Home students

- A full tuition fee waiver at the Home student rate for the duration of the scholarship.

For International students

- 50% tuition fee waiver against the International student rate for the duration of the scholarship.

Important information

- Tuition fees are subject to annual review and may increase during the course of study.
- This scholarship covers tuition fees only and does not include funding for living, accommodation, or maintenance costs.

Person Specification of Essential (E) or Desirable (D) requirements:

Criteria:	**E or D**
Education and Training:	
• 1st Class or 2nd class, First Division (Upper Second Class) honours degree or a taught master's degree with a minimum average of 60% in all areas of assessment (UK or UK equivalent) in a relevant area to the proposed research project	**E**
• For those whose first language is not English and/or if from a country where English is not the majority spoken language (as recognised by the UKBA), a language proficiency score of at least IELTS 6.5 (in all elements of the test) or an equivalent UK VISA and Immigration secure English Language Test is required, if your programme falls within the faculty of Engineering and Science a language proficiency score of at least IELTS 6.5 overall with a minimum of 6.0 in all elements of the test or an equivalent UK VISA and Immigration secure English Language Test is required. Unless the degree above was taught in English **and** obtained in a majority English speaking country, e.g. UK, USA, Australia, New Zealand, etc, as recognised by the UKBA.	**E**
Experience & Skills:	
• Previous experience of undertaking research (e.g. undergraduate or taught master's dissertation)	**E**
• Programming experience, preferably in Python, and strong analytical and problem-solving skills.	**E**
• A sound understanding of at least one relevant area, such as AI and deep learning, robotics, sensing or human-robot interaction.	**E**
• Ability to work independently and collaboratively, with a self-motivated approach to research.	**E**
• Practical experience with robotic platforms, ROS/ROS 2, sensor integration, embedded systems or experimental data collection.	**D**

• Familiarity with developing and implementing algorithms for sensor fusion, robotic perception, or online and continual learning.	**D**
• Experience in developing, training and evaluating deep learning models, and uncertainty quantification.	**D**
Personal Attributes:	
• Understands the fundamental differences between a taught degree and a research degree in terms of approach and personal discipline/motivation	**E**
• Able to, under guidance, complete independent work successfully	**E**
Other Requirements:	
• This scholarship may require Academic Technology Approval Scheme approval for the successful candidate if from outside of the EU/EEA	**E**
• The scholarship must commence before 5th April 2027	**E**
Closing date for applications:	**Midnight UTC on 30th November 2026**
For further information contact:	**[Lead supervisor]** Dr Jingqiong Zhang Jingqiong.Zhang@greenwich.ac.uk

Making an application:

Please read this information before making an application. Information on the application process is available at: https://www.gre.ac.uk/research/study/apply/application-process. Applications need to be made online via this link. **No other form of application will be considered**.

All applications **must include** the following information. **Applications not containing these documents will not be considered.**

- **Scholarship Reference Number (FS-ES-04-2027-7)**– included in the personal statement section together with your personal statement as to why you are applying
- **a CV including 2 referees** *
- **academic qualification certificates/transcripts and IELTs/English Language certificate if you are an international applicant, if English is not your first language or you are from a country where English is not the majority spoken language as defined by the UK Border Agency** *

**upload to the qualification section of the application form. Attachments must be a PDF format.*

Before submitting your application, you are encouraged to liaise with the Lead Supervisor on the details above.