PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Robotics
Supervisors	Principal supervisor: Dr Fan Zhang (XJTLU) Co-supervisor: Dr Muhammad Ateeq (XJTLU) Co-supervisor: Professor Charles Leek (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	AI and Cognitive Robotics towards Visual-tactile Perception of Materials and Human-Robot Interaction
Contact	Please email fan.zhang@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title. The principal supervisor's profile is linked here: https://scholar.xjtlu.edu.cn/en/persons/FanZhang

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in Robotics or Computer Science, with a demonstrable interest in AI and Human-Robot Interaction studies. Other relevant master's degrees will also be considered, for instance in Industrial Design Engineering, (Computational) Psychology or Neuroscience, if you have demonstrable programming skills and expertise in solving technical problems. Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 or above, if the first language is not English. This position is open to all qualified candidates irrespective of nationality.

Degree:

The student will be awarded a PhD degree from the University of Liverpool (UK) upon successful completion of the program.

Funding:

The PhD studentship is available for three years subject to satisfactory progress by the student. The award covers 50% tuition fee reduction for three years (RMB 148,500 total value). It also provides up to RMB 16,500 to allow participation at international conferences during the period of the award. The scholarship holder is expected to carry out the major part of his or her research at XJTLU in Suzhou, China. However, he or she is eligible for a research study visit to the University of Liverpool up to six months, if this is required by the project.

Project Description:

Industrial robots are programmed to perform operational tasks efficiently. In cognitive robotics, we expect the robots to be "truly intelligent", such that they understand the surrounding world as we do. Moreover, they should have the capability of performing correct interactions with the world. Here we aim to develop humanoid robots with novel sensing systems, that perceive and recognize material categories and qualities, and further interact with it in a humanly manner. This will involve interdisciplinary research that integrates state-of-the-art AI developments in Machine Vision, Natural Language Processing, Explainable AI, and Cognitive Robotics, with the incorporation of Human-centred Visual-tactile Perception studies. Furthermore, unlike deep-learning that essentially is a black-box with limited explainability, the proposed work could provide interpretable mechanistic insights on how human brains represent the 3D world by mimicking human behaviours in perception-action tasks.

For more information about doctoral scholarship and PhD programme at Xi'an Jiaotong-Liverpool University (XJTLU), please visit

https://www.xjtlu.edu.cn/en/admissions/global/entry-requirements/

https://www.xjtlu.edu.cn/en/admissions/global/fees-and-scholarship

How to Apply:

Interested applicants are advised to email fan.zhang@xjtlu.edu.cn (XJTLU principal supervisor's email address) the following documents for initial review and assessment (please put the project title in the subject line).

- CV
- Two formal reference letters
- Personal statement outlining your interest in the position
- Certificates of English language qualifications (IELTS or equivalent)
- Full academic transcripts in both Chinese and English (for international students, only the English version is required)
- Verified certificates of education qualifications in both Chinese and English (for international students, only the English version is required)
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available