

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of ...Advanced Technology.....
Supervisors	<p><i>Please list all the names in the supervisory team. It should be consistent with the information on your approved PGRS proposal.</i></p> Principal supervisor: Professor ...Xinheng Wang... (XJTLU) Co-supervisor: Dr...Limin Yu.....(XJTLU) Co-supervisor: Dr...Junqing Zhang.....(UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	... Deep SLAM and Navigation: A Deep Reinforcement Learning - driven integrated SLAM and navigation framework for intelligent and connected vehicles
Contact	<p>Please email...xinheng.wang@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title.</p> <p>The principal supervisor's profile is linked here: https://www.xjtlu.edu.cn/en/departments/academic-departments/electrical-and-electronic-engineering/staff/xinheng-wang</p>

Requirements:

The candidate should have a first class degree, or a master's degree (or equivalent qualification), in either Computer Science, Artificial Intelligence, Robotics, or Control. Strong track record in ROS, SLAM, Navigation and C++ programming is expected.....

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 tuition fees for three years (currently equivalent to RMB 99,000 per annum). 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:

... Intelligent and Connected Vehicles (ICVs), such as driverless cars, robots and drones, are emerging into our society. Owing to high speed of these vehicles, they need precious localisation, path planning, and motion control technologies to ensure safe and reliable operations. Recent research work in developing path planning and navigation technology by applying Deep Reinforcement Learning (DRL) has demonstrated that response time to new request could be significantly reduced to millisecond level from dozens of seconds, which makes real-time operation possible. This is particularly useful to ICVs. Other research work in optimising vehicular edge computing by applying DRL also proves the value of applying DRL in reducing decision making process. Realising the benefits of DRL, a new framework is proposed in this project to develop an integrated Simultaneous Localisation And Mapping (SLAM) and navigation system, where SLAM and navigation are two main issues to be addressed for ICVs.

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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...xinheng.wang@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