

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	Design School
Supervisors	Principal supervisor: Dr. Lei Fan (XJTLU) Co-supervisor: Professor Minzhou Luo (JITRI) Co-supervisor: Dr. Anh Nguyen (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project
Project Title	Information Fusion Navigation Algorithm based on Lidar-Vision Integration
Contact	Please email Dr. Lei Fan (Lei.Fan@xjtlu.edu.cn) with a subject line of the PhD project title

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree in Computer Vision, Robotics or project-related. 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. As the PhD student for this industry supported project will carry out a large part of the research at the partner organization in China, basic spoken mandarin is beneficial.

Degree:

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

Funding:

This PhD project is a collaborative research project between XJTLU (<http://www.xjtlu.edu.cn>) in Suzhou and JITRI (Jiangsu Industrial Technology Research Institute) Intelligent Manufacturing Technology Research Institute. The student will be registered as an XJTLU PhD student but is expected to carry out the major part of his or her research at the Institute in Nanjing.

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). In addition, during the period of undertaking main research at the

institute, the PhD candidate will be provided with monthly living allowance at a standard 4000 RMB per month by Intelligent Manufacturing Technology Research Institute of JITRI, with other additional supports such as free accommodation.

Project Description:

At present, indoor unmanned vehicles are becoming more and more popular, but there are still many problems in their navigation and positioning algorithms, especially blind spots, edge-to-edge sweeping and spinning problems. The solution to these problems requires the development of more advanced algorithms. The fusion of vision and point cloud data enable unmanned vehicles to more clearly understand the entire working environment. At multiple levels, including, etc., reconstruction and data fusion of are used This project aims to investigate algorithms for fusing lidar and 3D vision at multiple levels (e.g. data layers, decision-making layers) and to develop a high-speed, high-precision, three-dimensional scene reconstruction sensor, which can improve the accuracy and efficiency of 3D perception of unmanned vehicles, solve key problems encountered by unmanned vehicles in new scenes, and increase the stability and robustness of unmanned vehicles.

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

<http://www.xjtlu.edu.cn/en/study-with-us/admissions/entry-requirements>

<http://www.xjtlu.edu.cn/en/admissions/phd/feescholarships.html>

Supervisor Profile:

Principal Supervisor: Dr Lei Fan is Assistant Professor within Department of Civil Engineering at Xi'an Jiaotong Liverpool University. His main research interests include point cloud and remotely sensed imagery, machine & deep learning, semantic segmentations, monitoring of structures and geohazards..

How to Apply:

Interested applicants are advised to email Lei.Fan@xjtlu.edu.cn with the following documents for initial review and assessment (please put the project title in the subject line).

- CV
- Personal statement outlining your interest in the position
- Verified school 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)
- Two reference letters with company/university letterhead
- Proof of English language proficiency (an IELTS score of 6.5 or above)

- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available