PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of AI and Advanced Computing & School of Internet of Things
Supervisors	Principal supervisor: Professor Jasmine Seng Kah Phooi 成嘉佩 (XJTLU) Co-supervisor: Dr Yuji Dong (XJTLU) Co-supervisor: Professor Jeremy Smith (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	AI-Empowered Multimedia Analytic with Embedded AI and Multimodal Data Fusion for Application Specific IoT
Contact	Please email Jasmine.Seng@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://www.xjtlu.edu.cn/en/departments/academic-departments/school-of-ai-and-advanced-computing/staff/jasmine-seng

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in a relevant field such as computer engineering, electrical & electronics engineering, software engineering, or any relevant engineering domain and be able to demonstrate equivalent relevant research experience. A person with prior knowledge and/or working experience in IoT or embedded system will be preferred. 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 80,000 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:

This research project aims to develop new AI innovative technologies for multimedia analytics and edge computing devices for deployment on Application Specific AI Internet of Things (AS-AIoT). The research aims to address some critical challenges on Edge AI and embedded systems for AI-ASIoT. The lack of computational capabilities (e.g., on satellites) to support AI and machine learning algorithms is a major hurdle towards embedded or on-board data analytics. While there exists edge computing hardware (e.g., Nvidia Jetson series) targeted at the AI industry, the computational resources on such hardware are still significantly smaller than that on standard hardware. The lack of sufficient on-board computational resources also precludes intelligent sensing capabilities for high volume and fast speed applications; in particular, in situ fusion of multimodal sensors. There is an urgent need to: (1) Develop new models/techniques to reduce the computational requirements for training AI edge computing and embedded devices; (2) Develop new models/ techniques to handle multimodal data fusion; and (3) Develop architectures and testbeds for AI EDGE Ecosystem for validation and benchmarking. The research will result in the development of the AI-EDGE Ecosystem with a focus on real-time or on-board data processing and novel AI techniques to enable edge AI for industry applications, to be integrated to the AS-AIoT.

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 contact Jasmine.Seng@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