PhD Studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, Suzhou, China
School	Academy of AI and Advanced Technology
Supervisors	Principal Supervisor: Dr. Wanxin Li (XJTLU) Co-Supervisor: Dr. Jie Zhang (XJTLU) Co-Supervisor: Dr. Xiaohui Zhu (XJTLU) Co-Supervisor: Dr. Huynh Nguyen (UoL)
Application Deadline	Open until the position is filled.
Funding Availability	Funded PhD project (world-wide students)
Project Title	**Adaptive Federated Learning in Heterogeneous Environments**
Contact	Please email wanxin.li@xjtlu.edu.cn with a subject line of the PhD project title. The principal supervisor's profile is linked here: https://scholar.xjtlu.edu.cn/en/persons/WanxinLi

Requirements:

A Master's degree with Merit and a Bachelor's degree with first-class or upper second-class honors are required for PhD admissions. Exceptional candidates holding only a Bachelor's degree may be considered on an individual basis in certain disciplines.

Evidence of good spoken and written English is essential. The candidate should have an IELTS (or equivalent) 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 holders are expected to conduct the majority of their research at XJTLU in Suzhou, China. However, they may apply for a short-term research visit to the University of Liverpool if the project requires it.

Project Description:

This PhD project focuses on developing a novel trust-adaptive federated learning framework tailored for heterogeneous environments. Current AI systems suffer from rigid, pre-defined trust models that limit their adaptability to varied security requirements. This research aims to break such rigid coupling by designing a modular, pluggable architecture that decouples trust mechanisms from federated learning algorithms. The PhD candidate will conduct theoretical derivation, system prototyping, comprehensive benchmark evaluation under heterogeneous simulation scenarios, and analyze the trade-offs among flexibility, security and efficiency of the proposed framework. Aligned with cutting-edge advances in artificial intelligence and privacy-preserving computation, this project delivers secure solutions for constructing trusted data spaces for real-world use cases such as AI-driven healthcare and intelligent transportation, with significant academic value and broad application prospects.

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/doctoral/entry-requirement-phd
https://www.xjtlu.edu.cn/en/admissions/doctoral/postgraduate-research-scholarships

How to Apply:

Interested applicants are advised to email wanxin.li@xjtlu.edu.cn 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