

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
Supervisors	<i>Please list all the names in the supervisory team. It should be consistent with the information on your approved PGRS proposal.</i> Principal supervisor: Professor Qiufeng Wang (XJTLU) Co-supervisor: Dr. Xiaobo Jin (XJTLU) Co-supervisor: Dr. Meng Fang (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Mathematical Reasoning Based on Neural-Symbolic System
Contact	Please email Qiufeng.Wang@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title

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) and provides a monthly stipend of 5,000 RMB as a contribution to living expenses. It also provides up to RMB 16,500 to allow participation at international conferences during the period of the award. It is a condition of the award that holders of XJTLU PhD scholarships carry out 300-500 hours of teaching assistance work per year. 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:

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Mathematics plays a critical role in education and technological progress. Recent advancements in AI have significantly improved mathematical reasoning tasks. However, multimodal mathematical reasoning which integrates text, images, and theorem knowledge, remains challenging due to the complexity of information fusion and reliable reasoning. High-quality multimodal math reasoning data is essential for enhancing model performance, but manual annotation is time-consuming and costly. Automated synthetic data generation has emerged as a key solution, though it faces challenges in balancing math reasoning task diversity and data correctness. This project aims to address these challenges by (1) developing methods to generate diverse multimodal math data across various reasoning tasks and (2) improving correctness of generated data through validation framework. This research will contribute to the development of more robust and generalizable AI models for multimodal mathematical reasoning.

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...Qiufeng.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 reference letters with company/university letterhead
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of 6.5 or above)
- 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)
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available

Informal enquiries may be addressed to Professor Qiufeng wang (Qiufeng.Wang

@xjtlu.edu.cn), whose personal profile is linked below,
<https://scholar.xjtlu.edu.cn/en/persons/QiufengWang/>