

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: Dr. Lingyun Yu (XJTLU) Co-supervisor: Dr. Yue Li (XJTLU) Co-supervisor: Dr. Baoru Huang (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Hybrid Visualization for Scientific Data
Contact	Please email Lingyun.Yu@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://scholar.xjtlu.edu.cn/en/persons/LingyunYu/

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:

Scientific data are increasingly large, complex, and heterogeneous, creating significant challenges for exploration, analysis, and interpretation. Conventional visualization techniques provide important analytical support, but they often struggle to balance global context, local detail, spatial structure, and flexible interaction when users investigate complex scientific phenomena. Recent advances in virtual, augmented, and mixed reality offer new opportunities to support scientific visualization across multiple display spaces and levels of immersion.

This PhD project will investigate hybrid VR/AR visualization methods for scientific data. It will explore how multiple display environments, visual representations, and interaction modalities can be integrated to support scientific analysis. In particular, the project will examine how users can move flexibly between overview and detail, abstraction and spatial representation, and different modes of interaction across physical, augmented, and virtual spaces.

The research will involve the design and development of interactive visualization prototypes, the creation of novel visual representations and interaction techniques, and empirical studies with users to evaluate their effectiveness. The expected outcome is a set of design principles, interaction methods, and prototype systems for hybrid scientific visualization, contributing to the broader fields of data visualization, human-computer interaction, and immersive analytics.

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.....@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