

XJTLU-XJTU-UoL Joint Doctoral Supervision Project (Full-time)

Reference No.	SFXJTU2614
XJTLU School	Academy of AI and Advanced Technology
PhD Programme	PhD in Computer Science and Software Engineering
Supervisors	XJTLU supervisor: Dr Yue Li, Dr Lingyun Yu XJTU supervisor: Professor Weizhan Zhang UoL supervisor: Dr Heba Lakany
Project Title	A Multimodal Framework for Human-Agent Collaborative Content Creation in Extended Reality 混合现实人-智能体协同内容创作方法研究
Application Deadline	Open until the position is filled

Requirements:

A UK first-class or upper second-class honours Bachelor's degree and a UK Master's degree with Merit (or their equivalent) are required for PhD admissions. Exceptional candidates holding only a Bachelor's degree may be considered on an individual basis.

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.

For more information about entry requirements and admission procedures of PhD programme at XJTLU, please visit:

[Entry Requirement - Xi'an Jiaotong-Liverpool University](#)

[How to Apply - Xi'an Jiaotong-Liverpool University](#)

Other Requirements (if any):

Candidates should have a background in computer science or a related discipline, strong programming skills, and a keen interest in human-computer interaction, virtual/augmented reality, artificial intelligence, or related areas. They should demonstrate strong motivation, self-learning ability, research initiative, and high standards of work. Candidates with relevant research experience and publications in leading venues such as IEEE VR, IEEE ISMAR, and ACM CHI are preferred.

Programme Structure and Fees:

Doctoral students in the joint programme are registered with both XJTLU and the UoL. Upon successful completion of the programme, the students will be awarded a PhD degree from University of Liverpool. During their doctoral studies at XJTLU, students are expected to

conduct research at XJTU as visiting students. Additionally, students have the opportunity to apply for a short-term research visit to the UoL if the project requires it.

The joint doctoral programme is offered on a full-time basis, with a typical duration of three to four years. The tuition fee is RMB 99,000 per year.

Project Description:

To cultivate research talents with global leadership, interdisciplinary innovation capabilities, and international research collaboration capabilities, Xi'an Jiaotong-Liverpool University (XJTLU) fully leverages its characteristics of international education and builds upon the long-established strategic cooperation among XJTLU, Xi'an Jiaotong University (XJTU), and the University of Liverpool (UoL). This initiative integrates top-tier research resources to launch a Joint Doctoral Supervision Programme across the three institutions.

This research proposes a novel Human-Agent Collaborative Content Creation framework to address the technical barriers currently hindering high-quality production in Extended Reality (XR). While XR offers immersive 3D environments, novice users often struggle with complex content workflows, script design, and camera orchestration. This project aims to bridge this gap by developing a multimodal system driven by Large Language Models (LLMs) and data-driven algorithms to autonomously generate context-aware, demand-oriented content scripts. Central to the approach is the design of a specialized Embodied Intelligent Agent capable of both implicit and explicit interaction; this agent functions as a collaborative partner that manages shot framing and capture control within the XR space. By exploring novel interaction techniques and workflows, the study will evaluate how visualized guidance improves creation efficiency and content quality, offering robust tool prototypes for collaboration.

Joint Supervisory Team:

XJTLU supervisor: Dr Yue Li, Dr Lingyun Yu

XJTU supervisor: Professor Weizhan Zhang

UoL supervisor: Dr Heba Lakany

How to Apply:

Interested applicants are advised to email yue.li@xjtlu.edu.cn the following documents for initial review and assessment (Please include 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