

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	Design School
Supervisors	Principal supervisor: Dr Likai Wang (XJTLU) Co-supervisor: Dr Zhelun Zhu (XJTLU) Co-supervisor: Mr Asterios Agkathidis (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Multi-Element Computational Design Optimization Method for Early-stage Architectural Design
Contact	Please email: Likai.wang@xjtlu.edu.cn The principal supervisor's profile is linked here: https://scholar.xjtlu.edu.cn/en/persons/LikaiWang

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in **Architecture**.

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.

Proficiency in **computational design, programming, and/or AI** is advantageous

A solid understanding of **architectural design principles and knowledge** is essential for the successful completion of this project.

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 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:

Computational design optimization (CDO) has been widely applied in research related to performance-based architectural design. However, existing studies and applications primarily focus on one single design element, such as building massing, façade, and spatial layouts, which overlooks the collective impact of synergizing multiple design elements on enhancing building performance. In response, this project aims to investigate methods leveraging CDO for the synergy of multiple design elements for early-stage building design optimization. The project primarily investigates the methods of extracting and abstracting generic design knowledge for developing an integrated generative design schema capable of producing design variants with sufficient diversity and variability while including various design elements. The generative design schema will be used to establish a CDO system aimed at facilitating architects' early-stage performance-based design optimization and exploration.

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 email Likai.wang.@xjtlu.edu.cn and please prepare the following documents for initial review and assessment.

- 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
- Portfolio showcasing your involvement in design projects (student projects and/or real-world projects).