

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	Design School Department of Architecture
Supervisors	Principal supervisor: Dr Mia Tedjosaputro (XJTLU- Architecture) Co-supervisor: Asterios Agkathidis (UoL- School of Architecture) Co-supervisor: Dr Jian Liu (XJTLU- Civil Engineering)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Holographic Construction Methods for Circular Design
Contact	Please email Mia.Tedjosaputro@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title

Requirements:

The candidate should have a first class or upper second class honours degree and a master's degree (or equivalent qualification) in Architecture/ Architectural Technology / Civil Engineering. Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 or above with a minimum score of 6.5 in writing component, if the first (native) 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 80,000 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 holder is expected to carry out the major part of their research at XJTLU in Suzhou, China. However, they are eligible for a research study visit to the University of Liverpool of up to six months, if this is required by the project.

Project Description:

This research consolidates strengths of multiple areas of research, namely: paperless architecture, augmented reality, holographic construction and *Circular Economy* (CE, henceforth) for design. Particularly, how the use of technology can aid implementations of two principles of circular economy for built environment, *design out of waste* and *design for disassembly* (DfD, henceforth).

The aim of the study is to investigate a holographic construction support for a new structural material made out of solid waste. Examples of solid waste include disposed ground coffee, wine corks, dead-fall bamboo, and construction waste such as concrete. Potential outcomes include a holographic construction framework tailored for circular design principles and a specific Augmented Reality (AR) interface introducing DfD during the early design process.

For this project, we are looking for a candidate with an educational or research background in architectural technology (mainly structural, material and construction) with mandatory digital design skills (high proficiency in Rhino, Grasshopper and Unity). Skill or familiarity with structural simulation tools such as Karamba 3D is also required.

For more information about doctoral scholarships and PhD programmes 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 Mia.Tedjosaputro@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). Interviews will be conducted for shortlisted applicants.

- CV
- Personal statement outlining your interest in the position
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available
- PDF of Design Portfolio

For **final submission** documents, please refer to the above mentioned entry requirements.

Informal enquiries may be addressed to Dr. Mia Tedjosaputro (Mia.Tedjosaputro@xjtlu.edu.cn), whose personal profile is linked below,

<https://www.xjtlu.edu.cn/en/staff-details/staff/mia-tedjosaputro>