

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	Design School
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/Dr. Lei Fan (XJTLU) Co-supervisor: Professor/Dr. Ron Mahabir (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Interpretable machine learning models for landslide susceptibility mapping
Contact	Please email Lei.Fan@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/LeiFan

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in Computer Science, Geoscience, Civil Engineering and Geotechnical Engineering. Evidenced ability in computer programming is essential for this project. While not prerequisite, having knowledge in machine/deep learning and data analytics is preferred.

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.

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:

Landslides are a serious natural hazard that can cause casualties, asset damage and economic losses. To address these challenges, a common approach is to perform landslide susceptibility mapping. However, a major problem with existing methods for landslide susceptibility mapping is that they cannot interpret the contribution of individual landslide contributing factors for specific landslide(s), thus limiting the overall mapping accuracy.

This research's main goal is to develop interpretable machine learning models tailored for landslide susceptibility mapping and to study the impact of incorporating data uncertainties in the mapping process, with a focus on landslides in the Three Gorges Reservoir Area. The expected research outcomes will deepen our understanding of the fundamental mechanisms behind landslides, providing valuable insights for effective risk mitigation and disaster management in the Three Gorges Reservoir Area and similar landslide-prone regions globally.

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 Lei.Fan@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