

## PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
Supervisors	<p><i>Please list all the names in the supervisory team. It should be consistent with the information on your approved PGRS proposal.</i></p> Principal supervisor: Dr Jun Qi (XJTLU) Co-supervisor: Professor Yong Yue (XJTLU) Co-supervisor: Dr Junqing Zhang (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Anomaly detection for pathology diagnosis by using EEG
Contact	<p>Please email Jun.Qi@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title.</p> <p>The principal supervisor's profile is linked here:  <a href="https://www.xjtlu.edu.cn/zh/departments/academic-departments/computer-science-and-software-engineering/staff/jun-qi">https://www.xjtlu.edu.cn/zh/departments/academic-departments/computer-science-and-software-engineering/staff/jun-qi</a></p>

### **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, Biomedical Engineering, Communications, Applied Mathematics.

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 80,000 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:**

Electroencephalograph (EEG) is an economical and convenient auxiliary diagnosis tool for many neurological diseases (e.g., stroke, epilepsy, depression etc.). In recent years, machine learning has shown great potential in clinical EEG anomaly detection. While most work on a specific pathology but neglect the potential biomarkers among different neurological diseases. Also, existing methods usually fail to consider the issue of feature redundancy when extracting the relevant EEG features and neglect other important modalities that may impact the classification result such as age or images combined with EEG. Targeting on these challenges, this project proposes a new framework for distinguishing EEG anomalies through identifying different types of significant features. The project may adopt the combination of monitoring systems and intelligent algorithms and integrate the advantages of multi-channel sensing methods to monitor the abnormal EEG signals, for the propose of providing medical guidance for further diagnosis and treatment in the later stage.

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 Jun.Qi@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