

## Ph.D. studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Electrical and Electronic Engineering
Supervisors	Principle supervisor: Dr. Siyi Wang (Xi'an Jiaotong-Liverpool University, CN) Co-supervisor: Prof. Prudence Wong (The University of Liverpool, UK);
Application Deadline	Open until the position is filled
Funding Availability	Funded Ph.D. project (world-wide students)
Project Title	Challenge and Limits of Genome Assembly under a Substitution Model
Contact	Please email <a href="mailto:siyi.wang@xjtlu.edu.cn">siyi.wang@xjtlu.edu.cn</a> (principal supervisor's email address) and copy <a href="mailto:doctoralstudies@xjtlu.edu.cn">doctoralstudies@xjtlu.edu.cn</a> with a subject line of the Ph.D. project title

### **Requirements:**

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification), in **electrical and electronic engineering, computer science and engineering, applied mathematics, physics, physical biology** and other related areas. Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 or above, or an equivalent qualification, if the first language is not English. This position is open to all qualified candidates irrespective of nationality.

Additional requirements specifically for this Ph.D. project can be found via this [link](#).

### **Degree:**

The student will be awarded a Ph.D. degree from the University of Liverpool (UK) upon successful completion of the program.

### **Funding:**

The Ph.D. 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 RMB 3,500 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 Ph.D. scholarships carry out 300-500 hours of teaching assistance work per year. 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 of up to three months, if this is required by the project.

### **Project Description:**

The modern genome assembly technology provides reads which can perfectly reconstruct the original Deoxyribonucleic acid (DNA) sequence. However, the quality of reconstructed sequence is influenced by reads length and coverage depth. There is an advantage to recover the sequence by using short length reads containing less error. However, a certain critical length is always needed to successfully complete the task of reconstruction. When reads length is below a threshold, reconstruction tends to be impossible. Long length reads seem to provide sufficient information for reconstruction at the expense of increased error, which may lead to higher probability of failure. The common errors in reads can be classified as several types such as substitution, deletion, substitution and erasure model. This project aims to overcome the error correction problems occurred in reads under the substitution model. This will enable researchers to prospect this area of research and make high impact contributions to the emerging field.

For more information about doctoral scholarship and Ph.D. programme at Xi'an Jiaotong-Liverpool University (XJTLU): Please visit

<http://www.xjtlu.edu.cn/en/study-with-us/admissions/entry-requirements>

<http://www.xjtlu.edu.cn/en/study-with-us/admissions/scholarships>

### **How to Apply:**

Interested applicants are advised to email [siyi.wang@xjtlu.edu.cn](mailto:siyi.wang@xjtlu.edu.cn) (principal supervisor's email address) the following documents and copy [doctoralstudies@xjtlu.edu.cn](mailto:doctoralstudies@xjtlu.edu.cn) (please put the project title in the subject line).

- CV
- Two reference letters with company/university letterhead
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of above 6.5 or equivalent is required)
- Verified school 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)

**Informal enquiries** may be addressed to Dr. Siyi Wang ([siyi.wang@xjtlu.edu.cn](mailto:siyi.wang@xjtlu.edu.cn)), whose personal profile is linked below,

<http://www.xjtlu.edu.cn/en/departments/academic-departments/electrical-and-electronic-engineering/staff/siyi-wang>