

## PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Electrical and Electronic Engineering
Supervisors	Principle supervisor: Dr. Yang Du (Xi'an Jiaotong-Liverpool University) Co-supervisor: Dr. Lin Jiang (University of Liverpool, UK); Co-supervisor: Dr. Huiqing Wen (Xi'an Jiaotong-Liverpool University)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Localized Design of Reliable PV Inverter/高可靠性光伏逆变器的本地化设计
Contact	Please email <a href="mailto:yang.du@xjtlu.edu.cn">yang.du@xjtlu.edu.cn</a> (principle supervisor's email address) and copy <a href="mailto:doctoralstudies@xjtlu.edu.cn">doctoralstudies@xjtlu.edu.cn</a> with a subject line of the PhD 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 engineering, electronics engineering, automation, control and other related disciplines. 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.

Applicant with the following experience will be a plus:

- Publish research papers in the international conferences or journals.
- Research experience on power electronics especially the PV inverter.
- Hands-on experience on power electronic prototyping

### **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 3500 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 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:**

Solar photovoltaic (PV) power generation is a promising solution for the energy crisis and environment problems. However, the cost of the energy generated from PV system is still much higher than the energy from conventional sources. The life-time of the PV inverter is only 10-15 years for most of the commercial product, which is less than the PV panel's lifetime (25 years). The yield energy and inverter's life-time can vary from one location to another under the effect of local meteorological environment (such as temperature, irradiation conditions). Since the PV system is not moveable in most of the application for more than 20 years, it worth to customized design the inverter for a specific location to reduce the cost and increase the reliability. In this project, the method of localized design of reliable PV inverter will be proposed. Field experiments will be carried out to verify the effectiveness and superiority of the proposed methods.

The successful candidate will carry out inverter design and conduct simulations to model typical meteorological environment characteristics. This project also provides a unique opportunity for students to work with our academic collaborators including The University of Sydney, University of Technology, Sydney as well as industry partners.

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

<http://www.xjtlu.edu.cn/en/admissions/phd.html>

<http://www.xjtlu.edu.cn/en/admissions/phd/feescholarships.html>

### **How to Apply:**

Interested applicants are advised to email [yang.du@xjtlu.edu.cn](mailto:yang.du@xjtlu.edu.cn) 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
- 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. Yang Du ([yang.du@xjtlu.edu.cn](mailto:yang.du@xjtlu.edu.cn)), whose personal profile is linked below,

<http://www.xjtlu.edu.cn/en/departments/academic-departments/electrical-and-electronic-engineering/staff/yang-du> and <https://ydsolar.wordpress.com/>