

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
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 Huiqing Wen (XJTLU) Co-supervisor: Dr Wen Liu (XJTLU) Co-supervisor: Dr Jiafeng Zhou (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Development of High-Power-Density Power Module Based on GaN Monolithic Integration
Contact	Please email Huiqing.Wen@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, or a master's degree (or equivalent qualification), in *Microelectronics or Power Electronics*. 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) 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 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 six months, if this is required by the project.

Project Description:

With the increase of device switching frequency and power density, GaN devices are susceptible to parasitic parameters such as di/dt , dv/dt , and oscillation due to their low threshold voltage, resulting in device performance degradation and even circuit functional failures. It is urgent to adopt power integration technology to suppress the negative impact of parasitic parameters. Therefore, GaN power integration technology has become a key common issue in improving the reliability of energy internet. Benefiting from the GaN Monolithic Integration techniques, GaN-based power modules can significantly shorten the gate drive circuit and reduce parasitic inductance by arranging gate drivers close to the GaN power switch, thereby improving the reliability of the GaN power switch.

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 **Huiqing.Wen@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 reference letters with company/university letterhead
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of 6.5 or above)
- 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)
- PDF copy of Master Degree dissertation (or an equivalent writing sample) and examiners reports available

Informal enquiries may be addressed to **Professor Huiqing Wen** (**Huiqing.Wen@xjtlu.edu.cn**), whose personal profile is linked below,

<https://www.xjtlu.edu.cn/en/study/departments/school-of-advanced-technology/electrical-and-electronic-engineering/department-staff/academic-staff/staff/huiqing-wen>