

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Internet of Things
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> <p>Principal supervisor: Dr Wenzhang Zhang (XJTLU) Co-supervisor: Dr Bintao Hu (XJTLU) Co-supervisor: Professor Eng Gee Lim (XJTLU) Co-supervisor: Professor Yi Huang (IEEE Fellow) (UoL)</p>
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	AI-Assisted Wireless Charging System Design and Optimization
Contact	<p>Please email Wenzhang.Zhang @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: https://scholar.xjtlu.edu.cn/en/persons/WenzhangZhang</p>

Requirements:

A Master's degree with Merit and a Bachelor's degree with first-class or upper second-class honors are required for PhD admissions. Exceptional candidates holding only a Bachelor's degree may be considered on an individual basis in certain disciplines.

Evidence of good spoken and written English is essential. The candidate should have an IELTS (or equivalent) 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 holders are expected to conduct the majority of their

research at XJTLU in Suzhou, China. However, they may apply for a short-term research visit to the University of Liverpool if the project requires it.

Project Description:

In recent years, wireless charging technologies have attracted much attention due to its potential to provide a continuous power supply without a physical connection. Currently, most existing studies focus on optimizing wireless charging systems for specific applications, while overlooking the real-time capabilities introduced by artificial intelligence (AI) technology to the system. The application of AI in wireless charging systems can monitor and optimize the power transfer efficiency of wireless charging systems in real-time, potentially improve charging efficiency, reduce energy loss and enhance overall system performance. Despite this, there is still a gap in designing and optimizing AI-assisted wireless charging system.

To advance the field, this gap must be bridged by AI algorithms that can dynamically adjust charging parameters and predict system behaviour under various operating conditions. By solving this problem, we can not only advance theoretical research on wireless charging systems, but also promote the practical application of AI in the field of low-altitude economy.

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 Wenzhang.Zhang@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