

### 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> <p>Principal supervisor: Dr Dongyao Jia... (XJTLU)  Co-supervisor: Dr Limin Yu...(XJTLU)  Co-supervisor: Dr Guangliang Cheng...(UoL)</p>
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Information-based driving strategy for connected automated vehicles in mixed traffic environment
Contact	<p>Please email <a href="mailto:Dongyao.jia@xjtlu.edu.cn">Dongyao.jia@xjtlu.edu.cn</a> (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="http://www.xjtlu.edu.cn/en/study/departments/school-of-advanced-technology/communications-and-networking/department-staff/academic-staff/staff/dongyao-jia">http://www.xjtlu.edu.cn/en/study/departments/school-of-advanced-technology/communications-and-networking/department-staff/academic-staff/staff/dongyao-jia</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 mathematics, control, computer science, transportation, etc.

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). 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:**

The gradual evolution of autonomous driving technology will lead to the long-term coexistence of traditional vehicles and connected automated vehicles (CAVs). This mixed traffic flow brings more complexity and uncertainty to CAV driving strategy design in terms of road safety and traffic efficiency. This topic represents a pioneering endeavour by addressing the complex and ever-evolving challenges associated with autonomous driving: (1) propose an adaptive driving strategy framework that integrates spatio-temporal information model into control modules, (2) quantitatively explore the impact of information topology on the driving performance, and (3) effectively combine local and global information to design a multi-objective driving strategy that includes safety, stability, and driving efficiency. This project will undoubtedly fill the gap of deeply understanding the fundamental interaction between information and traffic control performance

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 Dongyao.jia@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