PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
Supervisors	Principal supervisor: Dr Dongyao Jia (XJTLU) Co-supervisor: Dr Dong Ngoduy (Monash University) Co-supervisor: Dr Xingyu Zhao (University of Liverpool)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Data-driven approach to information-based Traffic flow modelling
Contact	Please email dongyao.jia@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title. The principal supervisor's profile is linked here: https://www.xjtlu.edu.cn/en/departments/academic-departments/communications-and-networking/staff/dongyao-jia

Requirements:

The candidate should have a first class or upper second class honours degree, or a master's degree (or equivalent qualification). 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 80,000 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:

With the help of vehicular communication and ubiquitous sensing, more traffic information is becoming available to human/autonomous vehicles, which may fundamentally change driving behaviour and traffic dynamics. Traditional traffic flow models only describe statistical driving/traffic features and cannot fully capture the complex interactions among heterogeneous road users. This project aims to address this research gap and develop novel information-based driving models in which the impacts of communication connectivity, spatio-temporal information, and interaction among human/autonomous vehicles will be comprehensively explored. Specifically, taking advantage of big data and deep learning, a novel joint design methodology will be proposed for the first time that integrates data-driven and kinematics models. The proposed traffic flow models will be extensively validated on an advanced digital-twin-enabled simulation platform as well as real-world testing zone, which may contribute advancing knowledge both theoretically and practically.

We are looking for highly motivated and self-driven student Prospective candidate should have an excellent background in computer science, transportation engineering, mathematics, or other related fields. Coding skills, as well as related experiences are desirable.

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