

## PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Financial Mathematics.....
Supervisors	Principal supervisor: Dr Conghua Wen... (XJTLU, Financial Mathematics) Co-supervisor: Dr Lu Zong.....(XJTLU, Financial Mathematics) Co-supervisor: Dr Jia Zhai.....(XJTLU, Finance) Co-supervisor: Professor Corina Constantinescu.....(UoL, Department)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Financial crisis early warning systems with market interdependence: A data-driven approach 具有市场依赖性的金融危机预警系统：一种数据驱动的方法
Contact	Please email Conghua.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 Mathematics or Finance subjects. 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) 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 three months, if this is required by the project.

### **Project Description:**

This project proposes a systematic approach to build financial early warning systems (EWSs) in major markets of stock, currency and bond. A wide range of artificial intelligence technics are adopted in order to achieve precise and robust predictions of market turmoil. The research significance of this project is threefold: First, the pre-crisis market evolution is studied through the joint model of statistics and machine learning, in order to determine leading factors as well as the triggering mechanism of financial crises. Second, crisis prediction models of equity, bond and currency markets are constructed to give early warning signals of long/short-term turmoils taking into account both reliability and robustness. Third, the risk transmission channels across China's stock, bond and currency markets are investigated to gain further understanding on the risk structure of China's financial system.

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

<http://www.xjtlu.edu.cn/en/study-with-us/admissions/entry-requirements>

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

### **How to Apply:**

Interested applicants are advised to email.....@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/Dr. Conghua Wen (Conghua.wen@xjtlu.edu.cn), whose personal profile is linked below,  
<http://www.xjtlu.edu.cn/en/faculty/.....>