**PhD studentship (Full-time)**

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| Institution | Xi’an Jiaotong-Liverpool University, China |
| Department | International Business School Suzhou (IBSS) |
| Supervisors | Primary supervisor: Dr. Yi Hong (Xi’an Jiaotong-Liverpool University)<br>Co-supervisor: Dr. Jason Laws (University of Liverpool, UK); |
| Application Deadline | Open until the position is filled |
| Funding Availability | Funded PhD project (world-wide students) |
| Project Title | Stochastic Behavior, Term Structure and Margin Adequacy in VIX Futures Market VIX 期货市场中的价格随机行为、期限结构与保证金适合度 |
| Contact | Please email doctoralstudies@xjtlu.edu.cn and copy to yi.hong@xjtlu.edu.cn 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 (Mathematical/Quantitative) Finance. Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 or above, or an equivalent qualification, 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 3500 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:**

Volatility is a key component of derivatives evaluation, while it cannot be observed directly in the financial market. Recently, a subset of derivative securities on volatility arises as a new category of financial asset. Among them, the derivatives written on a volatility index (VIX) are now traded at the Chicago Board of Options Exchange (CBOE). Given the dramatic growth of VIX derivatives in recent years, this project may investigate three issues related to VIX futures:

- Stochastic behaviour, term structure and risk premia in VIX futures;
- Relationship between initial margin and stochastic behaviour in the VIX futures market;
- Margin evaluation and adequacy in VIX futures.

There are three reasons for this project. First, this project requires a systematical study in the VIX futures market from the empirical study of VIX futures to risk control in margin setting, which can be applied to other futures markets. Consequently, its outcomes can make significant contributions to the literature in derivative pricing and risk management, especially including the development of a new framework of margin adequacy and performance on VIX futures. Second, a portfolio of research skills can be developed. The investigation of these three issues needs advanced skills including stochastic modelling, model calibration, advanced econometric analysis towards parameter estimation, and numerical analytics (e.g., the simulation method). Third, the research team may provide a solid support, provided that all team members in this project have diverse background. Therefore, the candidate may receive the team supervision across disciplines.

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

http://www.xjtlu.edu.cn/en/admissions/postgraduate/phd-degree/
feesscholarships.html

http://www.xjtlu.edu.cn/en/admissions/postgraduate/phd-degree.html.

**How to Apply:**

Interested applicants are advised to email the following documents to Doctoralstudies@xjtlu.edu.cn (please put the project title and primary supervisor's name in the subject line).

- CV
- Two reference letters
- Personal statement outlining your interest in the position
- Proof of English language proficiency (an IELTS score of above 6.5 or equivalent is required)
- 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)

**Informal enquiries** may be addressed to Dr. Yi HONG (yi.hong@xjtlu.edu.cn), whose personal profile is linked below,
http://academic.xjtlu.edu.cn/ibss/Staff/yi-hong