

PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Statistics and Actuarial Science
Supervisors	Principal supervisor: Dr Jiajun Liu (XJTLU, Department of Statistics and Actuarial Science) Co-supervisor: Dr Fei Ma (XJTLU, Department of Applied Mathematics) Co-supervisor: Dr Yi Zhang (UoL, Department of Mathematical Science)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Measuring Tail Operational Risk under Extreme Value Theory 极值理论下操作风险尾风险的度量
Contact	Please email Jiajun.Liu@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 Actuarial Science/Statistics/Applied Math but not limited to, but with a solid mathematical background.

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:

Operational risk is defined as "the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events" by Basel Committee on Banking Supervision (BCBS, 2003).

This project aims to employ a statistical procedure in analyzing data of financial operational risk in U.S., with a focus in empirical studies on the heavy-tailedness of tail risks, extreme dependence across financial markets, and joint behavior on operational risk under extremes. Based on the outcomes of empirical studies on operational risk data, we model the univariate and multivariate operational risks with its methodology based on capital approximation, within the framework of the Basel II/III regulatory capital accords. Some limit behaviors will be derived for certain distortion risk measures of aggregate operational risks. Based on the asymptotic analysis of tail risks on aggregate operational losses, several simulation experiments will be conducted.

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 Jiajun.Liu@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
- Any other related documents (e.g., your undergraduate/postgraduate thesis,

paper...)

Informal enquiries may be addressed to Professor/Dr. Jiajun.Liu (Jiajun.Liu@xjtlu.edu.cn), whose personal profile is linked below, <https://www.xjtlu.edu.cn/en/departments/academic-departments/statistics-and-actuarial-science/staff/jiajun-liu>