PhD studentship   (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Mathematical Sciences
Supervisors	Principle supervisor: Dr. Dejun Xie (XJTLU, Department of Mathematical Sciences) Co-supervisor: Dr. M.B.N. (Thijs) Kouwenhoven (XJTLU, Department of Mathematical Sciences) Co-supervisor: Dr. Michael Ellington (UoL, Department of Finance)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Towards a more scientific and rigorous debt management: investigation of numerical and simulation approaches
Contact	Please email Dejun.Xie@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), infinance, economics, financial mathematics, quantitative finance, financial computing, financial statistics, or related fields. 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.

<u>Project Description:</u>

It has been well recognized that higher leverage ratio and poor debt management are fundamental factors leading to financial crisis across all economies. This project aims to provide a mathematical tool, facilitated with implementable computing schemes, to best assess, monitor, and manage the optimal level of debt at macroscopic level, so as to facilitate the decision of policy makers and regulators. Because of the complicatedness of the problem, it is not realistic to find a ready-to-apply model from existing literatures, although many of the previous studies have provided very good insights and tools to tackle the problem from various partial angles. What we propose is a unified approach combining mathematical and numerical simulations towards a comprehensive decision platform for debt management purposes. The debt management strategy constructed and calibrated by the proposed Ph.D. project is expected to allow for stochastic uncertainties arising from the dynamics of the real economic conditions. The project itself is not only intellectually interesting but also practically important, as it facilitates the decision making of the many participants in the economy, including investment bankers, bond underwriters, and other financial institutions.

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/feesscholarships.html

<u>How to Apply:</u>

Interested applicants are advised to email Dejun.Xie@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 Dr. Dejun Xie (Dejun.Xie@xjtlu.edu.cn),, whose personal profile is linked below,

http://www.xjtlu.edu.cn/en/departments/academic-departments/mathematical-sciences/staff/dejun-xie