

PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Mathematical Sciences
Supervisors	Principle supervisor: Dr. Lu Zong (XJTLU, Department of Mathematical Sciences) Co-supervisor: Dr. Hyung-Chul Chung (XJTLU, Department of Urban Planning and Design) Co-supervisor: Dr. Jionglong Su (XJTLU, Department of Mathematical Sciences) Co-supervisor: Dr. David Liu (XJTLU, Department of Mathematical Sciences) Co-supervisor: Dr. Kamila Zychaluk (UoL, Department of Mathematical Sciences)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Geostatistical Analysis of Macro- and Micro- Housing Markets in China: A Dynamical Spatio-Temporal Modeling Approach 中国宏观及微观房地产市场的地理统计分析：一个动态的时空建模方法
Contact	Please email lu.zong@xjtlu.edu.cn (XJTLU principal supervisor's email address) and copy doctoralstudies@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 the field of mathematics. 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 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:

This project places the key concerns on the modeling and pricing of real estates, namely the spatial-temporal correlation and heterogeneity, in a hierarchical modeling framework. Geostatistical methods are applied in the aim of understanding the spatial behavior of housing price variations, whilst dynamical models are incorporated with the hope of explaining the interdependence and the structure in the spatio-temporal covariance.

The main contribution of the proposed project is threefold. First, housing markets in China are investigated at the level of cities, in order to understand the price relationships among different regions, as well as to predict housing prices under endogenous shocks in specific locations. Second, a hierarchical dynamical spatio-temporal model is constructed taking explicit account of cross-sectional dependence and heterogeneity, thus to obtain robust predictions of housing prices in space and time. Last, spatial impacts of external factors, in particular macroeconomic and neighborhood build environment factors, are analyzed and discussed with the purpose of optimizing portfolio management decisions and policy making processes related to properties.

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/phd/entry-requirements.html>

<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)

Informal enquiries may be addressed to Dr. Lu Zong (lu.zong@xjtlu.edu.cn), whose personal profile is linked below,

<http://www.xjtlu.edu.cn/en/departments/academic-departments/mathematical-sciences/staff/lu-zong>