

## PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of INT
Supervisors	Principle supervisor: Dr Xiaobo Jin (XJTLU, INT) Co-supervisor: Professor Kaizhu Huang(XJTLU, INT) Co-supervisor: Professor Frans Coenen(UoL, CS)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Learning to Rank for Web Searching (基于排序学习的网络搜索研究)
Contact	Please Xiaobo.jin@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title

### **Requirements:**

The candidate should have : (1) a first class or upper second class honours degree, or a master's degree (or equivalent qualification); (2) solid mathematical background and strong programming skills in python or C/C++ (good research experience is preferred); (3) strong motivation and passion for conducting research and publishing papers. 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:**

The rampant spam of search engines has severely affected users' search experience and the order of the Internet. Traditional ranking algorithms based on link analysis such as PageRank algorithm cannot effectively solve the problem. The general ranking algorithms do not take into account the spam property of the webpage, hence they can not provide a correct ranking for the webpage. We conduct research on learning to rank algorithm to give a fair ranking according the quality of the webpages as an important supplement of the search engines. The four sub-topics are extended for the research goal: (1) Extract features that can represent the spam property of the webpages; (2) Study semi-supervised learning to rank algorithms; (3) Use online algorithms and user-feedback to build a dynamic learning to rank algorithms. The accomplishment of the project will improve search quality, save the energy consumption of search engine, and regulate Internet order.

搜索引擎作弊严重影响了用户的搜索体验和互联网秩序。传统的基于链接分析的排名算法（如 PageRank 算法）无法有效解决该问题。常规的排名算法未考虑网页的作弊属性，因此无法为网页提供正确的排名。我们根据网页质量进行排序学习算法的研究，将它作为搜索引擎的重要补充。为此,我们拟从 4 个方面进行研究：（1）提取可以表示网页作弊属性的特征；（2）研究半监督的排序学习算法；（3）使用在线算法和用户反馈来建立动态排序学习算法。该项目的完成将提高极大地搜索质量，节省搜索引擎的能源消耗，并规范互联网秩序。

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 Xiaobo.Jin@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. Jin (Xiaobo.Jin@xjtlu.edu.cn), whose personal profile is linked below,  
<https://www.xjtlu.edu.cn/en/departments/academic-departments/electrical-and-electronic-engineering/staff/xiaobo-jin>