**PhD studentship     (Full-time)**

| Institution | Xi'an Jiaotong-Liverpool University, China |
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| School | Design School – Department of Civil Engineering |
| Supervisors | Principal supervisor:  Professor/Dr Konstantinos Papadikis (XJTLU)<br>Co-supervisor: Professor/Dr Stephen Shaw (XJTLU)<br>Co-supervisor: Professor/Prof. Ping Dong (UoL) |
| Application Deadline | Open until the position is filled |
| Funding Availability | Funded PhD project (world-wide students) |
| Project Title | A lattice-Boltzmann study on the effect of porous media morphology on immiscible displacements. |
| Contact | Please email Konstantinos.Papadikis@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 engineering or related subject area. 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 six months, if this is required by the project.

## Project Description:

The understanding of immiscible two-phase flows in porous media, i.e. fluids that displace but do not mix with each other, is of critical importance in numerous physical and industrial operations such as, enhanced oil recovery, geologic $CO_2$ sequestration, geothermal energy extraction, groundwater supply and remediation and many others. Recent investigations have shown that apart from the physical properties of the displaced immiscible fluid phases, e.g. density and viscosity ratios, the morphological characteristics of the porous media also play a major role on the distribution and hydrodynamic behaviour of the fluid phases. This computational project aims to systematically investigate the effect of porous media morphology, through a set of morphological descriptors called the Minkowski functionals, on the hydrodynamic behaviour of the fluid phases and fluid transmission capacity of porous media.

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

## How to Apply:

Interested applicants are advised to email Konstantinos.Papadikis@xjtlu.edu.cn 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. Konstantinos Papadikis (Konstantinos.Papadikis@xjtlu.edu.cn), whose personal profile is linked below, https://www.xjtlu.edu.cn/en/departments/academic-departments/civil-engineering/staff/k-papadikis