PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Robotics
Supervisors	Principal supervisor: Dr. Sze-Hong Teh (Xi'an Jiaotong-Liverpool University) Co-supervisor: Professor John Mottershead (University of Liverpool) External Supervisor: Dr. Ko-Choong Woo (University of Nottingham)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Nonlinear dynamics of aperiodically-excited pendula
Contact	Please email Szehong.Teh@xjtlu.edu.cn (XJTLU principal supervisor's email address) with a subject line of the PhD project title. The principal supervisor's profile is linked here: https://scholar.xjtlu.edu.cn/en/persons/SzehongTeh

Requirements:

A Master's degree with Merit and a Bachelor's degree with first-class or upper second-class honors are required for PhD admissions. Exceptional candidates holding only a Bachelor's degree may be considered on an individual basis in certain disciplines.

Evidence of good spoken and written English is essential. The candidate should have an IELTS (or equivalent) 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 50% tuition fee reduction for three years (RMB 148,500 total value). It also provides up to RMB 16,500 to allow participation at international conferences during the period of the award. The scholarship holders are expected to conduct the majority of their research at XJTLU in Suzhou, China. However, they may apply for a short-term research visit to the University of Liverpool if the project requires it.

Project Description:

This research project is dedicated to the development of a vibratory energy harvester utilizing a multi-pendula device. The dynamics of the device under irregular excitations is to be investigated through both numerical analysis and experimental methods. An intelligent control system is to be devised, and this system will regulate and maintain the pendula's motions, thereby optimizing energy scavenging efficiency in response to these excitations. Subsequently, practical deployment strategies in real-world environments, such as those encountered with sea waves, are to be proposed.

The principal supervisor of this project is Dr. Sze-Hong Teh from XJTLU. Co-supervision will be provided by Professor John Mottershead, the Alexander Elder Professor in Applied Mechanics at the University of Liverpool, and Dr. Ko-Choong Woo from the University of Nottingham. Additionally, Professor Marian Wiercigroch, who holds the Sixth Century Chair in Applied Dynamics and serves as the Director of the Centre for Applied Dynamics Research (CADR) at the University of Aberdeen, will offer guidance in an advisory capacity.

For more information about doctoral scholarship and PhD programme at Xi'an Jiaotong-Liverpool University (XJTLU), please visit

https://www.xjtlu.edu.cn/en/admissions/global/entry-requirements/

https://www.xjtlu.edu.cn/en/admissions/global/fees-and-scholarship

How to Apply:

Interested applicants are advised to email Szehong.Teh@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 formal reference letters
- Personal statement outlining your interest in the position
- Certificates of English language qualifications (IELTS or equivalent)
- Full academic 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