

PhD studentship (Full-time)



Institution	Xi'an Jiaotong-Liverpool University, China
Department	Department of Electrical and Electronic Engineering
Supervisors	Principal supervisor: Dr. Pengfei Song (XJTLU, EEE) Co-supervisor: Prof. Yunchang Xin (JITRI, Innovation Center for Advanced Materials and Technology) Co-supervisor: Dr. Zhongwei Guan (UoL, Department of Civil Engineering and Industrial Design)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Plastic deformation transfer behavior of hexagonal close-packed materials using crystal plasticity finite element modeling
Contact	Please email Pengfei.song@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 mechanical engineering, civil engineering, material engineering or any other related engineering subject.

Evidence of good spoken and written English is essential. The candidate should have an IELTS score of 6.5 (with a minimum of 5.5 in each component) 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

This PhD project is a collaborative research project between XJTLU (<http://www.xjtlu.edu.cn>) and JITRI (Jiangsu Industrial Technology Research Institute) Innovation Center for Advanced Materials and Technology (<http://www.jitri.org/>), both of which locate at Suzhou, China. The student will be registered as an XJTLU PhD student but is expected to carry out the major part of his or her research at the Institute. Tripartite agreement will be signed among student, XJTLU and institute.

The PhD scholarship 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 no less than 5000 RMB as a contribution to living expenses. Additional meal and travel allowance may be provided by the Institute.

Project Description

There are comprehensive deformation modes for hexagonal close-packed materials, including twinning, basal slip, non-basal slip and so on. Deformation transfer behavior between

neighboring grains is closely related to the mechanical behavior and hardening effect of grain boundaries. The present project involves the study on the selection of plastic deformation mechanism and its grain boundary orientation relationship, the stress concentration at grain boundaries and so on using crystal plasticity finite element modeling, with the aim to build a quantitative relationship between the deformation transfer behavior and mechanical behavior/grain boundary strengthening effect.

How to Apply

Informal enquiries may be addressed to Dr. Pengfei Song (pengfei.song@xjtlu.edu.cn), please find Dr. Song`s personal profile [here](#).

Applicants are required to prepare the following documents to upload onto the [online application system](#) to submit formal application.

- [Research proposal](#)
- Full academic transcripts of university studies and grading system (both bachelor and master)
- University degree certificate or enrollment statement (both bachelor and master)
- Verification report of degree certificate (Chinese students only, both bachelor and master)
- A copy of Master dissertation (or an equivalent writing sample) and examiners reports if applicable
- Certificates of English language qualifications
- Personal statement
- Two formal reference letters
- A copy of your passport (for international students only)

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

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