

PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University (XJTLU), China
School	Design School
Supervisors	Principal supervisor: Dr Guobin Gong (XJTLU) Co-supervisor: Professor/Dr Weijian Han (JITRI) Co-supervisor: Professor/Dr Shiyao Huang (JITRI) Co-supervisor: Dr Xue Zhang (UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Integrated Computational Materials Engineering Methodology Development for Unibody Die Casting of Aluminum Alloy
Contact	Please email Dr Guobin Gong (guobin.gong@xjtlu.edu.cn) (XJTLU principal supervisor) or Dr Shiyao Huang (huangsy@jitri-amrd.com) (JITRI supervisor) with a subject line of the PhD project title

Requirements:

The candidate should have at least a first class or upper second class honours degree, or preferably a master's degree (or equivalent qualification) in mechanical engineering, materials engineering, applied mechanics or related fields. Evidence of good spoken and written English is essential. The candidate should have at least an IELTS score of 6.5 (or equivalent), 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>) in Suzhou and JITRI (Jiangsu Industrial Technology Research Institute) Yangtze Delta Region Institute of Advanced Materials in Suzhou. 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 in Suzhou.

The PhD studentship is available for three years subject to satisfactory progress by the student. The studentship covers tuition fees for three years (currently equivalent to RMB 80,000 per annum). In addition, during the period of undertaking main research at the institute in Suzhou, the PhD candidate will be provided with a monthly living allowance of 5000 RMB by Yangtze Delta Region Institute of Advanced Materials.

Project Description:

Unibody die casting of aluminum alloy has attracted considerable attention among the automotive industry recently. To gain wide applications, there are several topics in which further research is needed, such as new alloy development, part geometry distortion, local properties variation, etc. The aim of this study is to develop integrated computational materials engineering methodology for high pressure die casting of aluminum alloy, where the root causes of part geometry distortion and local properties variation will be investigated. Meanwhile, simulation framework will be integrated into CAE software to predict part geometry distortion and local properties distribution.

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>

Supervisor Profile:

Principal Supervisor: Dr. Gong is an associate professor in civil engineering at Xi'an Jiaotong-Liverpool University (XJTLU). He obtained his first degree (honours) and master degree in civil engineering both from Hua Zhong University of Science and Technology (HUST) in China, and then a PhD in geotechnical engineering from the University of Birmingham (UK) in 2008. He worked in consultant companies including Mott MacDonald Limited (head office in London) and URS-Scott Wilson (Hong Kong office). He also worked in Harbin Institute of Technology (Shenzhen, China) as an academic fellow before joining XJTLU. His research interests include micromechanics of granular materials, soil liquefaction, constitutive elastic-plastic models, structural dynamics and vibration, concrete filled steel tubes, finite element method and discrete element method.

JITRI co-supervisors:

Dr. Weijian Han received his Ph.D of Mechanical Engineering in Tulsa University, served as Director of Research and Advanced Engineering for Asia Pacific at Ford before retirement (24 years of service). He led the team to carry out more than 100

research projects in China, published 8 books and over 40 academic articles on vehicle