PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
Supervisors	Principal supervisor: Professor Jie Sun (XJTLU) Co-supervisor: Professor Zhihong Jia..(JITRI) Co-supervisor: Professor/Dr ……...(XJTLU) Co-supervisor: Professor/Yuyuan Zhao..(UoL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Microstructural evolution and its relationship to properties of spray formed high performance aluminum alloys during thermomechanical process
Contact	Please email jie.sun@xjtlu.edu.cn..(XJTLU principal supervisor's email address) or zhihongjia@njtech.edu.cn (JITRI supervisor's email) 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 in materials, mechanical and mechatronics 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:

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

Project Description:

The advanced spray forming is a type of fast solidification technology, resulting in uniform microstructure of the materials, which has some difference from the traditional melting solidification process. As a result, the response of the spray formed aluminum alloy to subsequent heat treatment and deformation could vary greatly, and the long-term acceptable processes for traditional melting solidification alloy are not suitable for the spray formed alloys. It is urgent to fully understand the microstructural evolution during solidification, heat treatment and deformation processes, because we need to establish the relatively suitable processes for spray formed aluminum alloys with characterized microstructures. The project will explore the recrystallization mechanism, its relationship to second particles existed, grain crystallographic orientation, precipitate etc., in order to design the alloy and thermomechanical process.

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 Sun is currently the Senior Associate Professor of Department of Mechatronics and Robotics. She has broad academic working experience in China and Singapore for more than 20 years.

She has extensive research experience in 3D Printing for Healthcare Product Design, 3D Customized Food Printing, Biomimetic Scaffold Fabrication, Intelligent Process Monitoring, and Mechatronics & Instrumentation. Along with nearly 15 research projects sponsored by Singapore and China government agencies, and industries.

JITRI co-supervisor:

Dr Jia is currently a professor at Nanjing Tech University. In 2010-2021, he worked in Chongqing University, and managed many intentional collaboration projects including

Stragetic University Program on Light Metals Technology under the Research Council of Norway, development and testing of new cast aluminium alloys for elevated temperature applications under the French-Norwegian Foundation, and Impurities in metallurgically manufactured multicyrstalline silicon for solar cell under the Research Council of Norway
He has extensive research experience in alloys, transmission electron microscopy (tem), microstructure, material characterization.

How to Apply:

Interested applicants are advised to email jie.sun@xjtlu.edu.cn (XJTLU principal supervisor's email address) or & zhihongjia@njtech.edu.cn (JITRI supervisor's email) 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