PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
School	School of Advanced Technology
Supervisors	Principal supervisor: Dr. Shengchen Li (XJTLU) Co-supervisor: Professor Qiufeng Wang (XJTLU) Co-supervisor: Dr. Jacopo de Berardinis (UoL) External supervisor: Professor Mark D. Plumbley (KCL)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Reverse Engineering for Generative Audio Signals
Contact	Please email shengchen.li@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/ShengchenLi/ https://shengchenli.github.io

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 tuition fees for three years (currently equivalent to RMB 99,000 per annum). 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 proposes a novel reverse engineering framework to detect and analyse generative audio signals. By employing advanced signal processing and machine learning techniques, the project aims to identify the underlying generative models, source audio content, and training datasets used to create synthetic audio. The framework will develop robust feature extraction methods to distinguish authentic from AI-generated audio content, improve algorithm robustness and establish attribution mechanisms for provenance. Results will contribute significantly to digital forensics, copyright protection and media authentication, while providing critical tools to combat audio deepfakes in an era where generative AI increasingly blurs the boundaries between authentic and synthetic media.

There are three other PhD projects under supervision of Dr. Shengchen Li being advertised at the same time. Interested students could visit https://shengchenli.github.io/application.html for more details.

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 fill in the form at https://shengchenli.github.io/application.html with 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

Mail enquires to shengchen.li@xjtlu.edu.cn is also welcome.