PhD studentship (Full-time)

Institution	Xi'an Jiaotong-Liverpool University, China
Department	CSSE
Supervisors	Principal supervisor: Prof. Ka Lok Man (XJTLU, CSSE) Co-supervisor: Prof. Yutao Yue (JITRI) Co-supervisor: Prof. Eng Gee Lim (XJTLU, SAT) Co-supervisor: Prof. Jeremy Smith (UoL, EEE)
Application Deadline	Open until the position is filled
Funding Availability	Funded PhD project (world-wide students)
Project Title	Multi-target detection and tracking technology based on millimeter wave radar and machine learning
Contact	Please email ka.man@xjtlu.edu.cn (XJTLU principal supervisor's email address) or yueyutao@idpt.org(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 Computer Science/Electrical Engineering/Electronic Engineering/Computer Engineering.
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) Institute of Deep Perception in Wuxi. 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 Wuxi. 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 an annually stipend at a standard around 60,000 RMB as a contribution to living, meal and accommodation allowance.

Project Description:

Millimeter wave radar has been widely used in the field of traffic monitoring due to its advantages of high accuracy, small size, and strong anti-interference ability. With the increasingly complex road environment, the importance of research on target detection and tracking schemes in a multi-target environment has become increasingly prominent. This topic focuses on the research of multi-target detection and tracking of millimeter-wave radar. Considering the characteristics of millimeter-wave radar, such as short wavelength, large time-bandwidth product, and close-range application, etc., the study of the decoupling of the target frequency and speed of the chirp signal in the case of multiple targets , Angle estimation and other multi-target resolution algorithms to solve clustering, filtering, data association, trajectory management and other problems in the multi-target tracking 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:

Ka Lok Man is currently a Professor in the School of Advanced Technology at Xi'an Jiaotong-Liverpool University (XJTLU) in Suzhou, China and an Adjunct Professor in the Faculty of Engineering and Science, Swinburne University of Technology Sarawak, Malaysia. He is also a senior research scientist at the Baltic Institute of Advanced Technologies, Lithuania and a Visiting Professor at imec-DistriNet, KU, Leuven, Belgium.He has about 20 years of international teaching experience, several years of industrial experience in integrated circuit design and has been involving in many industry-oriented research projects in Microelectronics and Computer Science, many of them in cooperation with STMicroelectronics, Synopsys and LG. He has a good publication record and to date has more than 500 published academic articles. Also, he has received more than 50 international research awards and fellowships. Ka Lok Man has become a well-established international researcher within a number of related areas, including formal methods, process algebras, hybrid systems, cyber physical systems, recommendation systems, data analytics, low power integrated circuits, wireless sensor networks & communication, IoT, photovoltaic & battery management systems and signal processing. Currently, he is supervising/co-supervising about 20 PhD students, 3 MSc students, a number of UG students and research assistants in the areas of solar energy, wireless sensor networks, communication, middleware, IoT, signal processing, data mining, machine learning, deep learning, cloud computing and image/video identification.

JITRI co-supervisor:

Yutao Yue received his B.S. degree of applied physics from University of Science and Technology of China in 2004, Ph.D. degree of computational physics from Purdue University in 2010. He then served as senior scientist of Kuang-Chi Institute, team leader of Guangdong “Zhujiang Plan” Introduced Innovation Scientific Research Team, and associate professor of Southern University of Science and Technology of China, etc. He has authored 17 papers and over 300 patents, and advised 13 postdoc researchers. He also serves as the “Industrial Professor” of Jiangsu Province, advisory panel member of SAIIA, technical review expert of Guangdong, Jiangsu, Shenzhen, and Wuxi. He is now the founder and director of Institute of Deep Perception Technology (IDPT), Jiangsu Industrial Technology Research Institute (JITRI). His research interests include modeling and optimization, computational electromagnetics, radar perception, artificial intelligence theories.

How to Apply:

Interested applicants are advised to email ka.man@xjtlu.edu.cn (XJTLU principal supervisor’s email address) or yueyutao@idpt.org (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