**PhD studentship (Full-time)**

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| Institution | Xi'an Jiaotong-Liverpool University, China |
| School | Department of Electrical and Electronic Engineering |
| Supervisors | Principal supervisor: Professor/Dr Wen Liu (XJTLU)<br>Co-supervisor: Professor/Dr Yi Pei (JITRI)<br>Co-supervisor: Professor/Dr Yinchao Zhao.(XJTLU)<br>Co-supervisor: Professor/ Dr Ivona Mitrovic (UoL) |
| Application Deadline | Open until the position is filled |
| Funding Availability | Funded PhD project |
| Project Title | Monolithic integrated GaN power devices with Integrated Gate Drivers |
| Contact | Please email Wen.Liu@xjtlu.edu.cn (XJTLU principal supervisor's email address) and (yi.pei@dynax-semi.com) 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 Microelectronics.

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.

**Please note that the joint PhD project is industry-based and the candidate is expected to undertake part of the research at the partner organization in China.**

**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) …… 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 ……

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). 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 4000-6000 per month by Dynax Semiconductor.

**Project Description:**

This project is dedicated to the study of the power integration technology based on GaN devices to realize the monolithic integration of main power high-voltage devices and low-voltage gate drive devices, current detection, overcurrent and overtemperature protection devices, etc., and to study the parasitic inductance distribution and influence of the drive loop. To evaluate the actual performance of monolithic integration technology based on GaN materials in terms of power integration degree, circuit complexity, temperature range, power level and drive capability.

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. Wen Liu received the B.S. degree from Peking University, Beijing, China, in 2004, and the Ph.D. degree from Nanyang Technological University, Singapore, in 2008.She worked in CPG Corporation until 2014, and joined department of Electrical and Electronic Engineering, School of Advanced Technology, Xi'an Jiaotong-Liverpool University, Suzhou, China. Her current research interests include investigation of novel transistor architectures based on new materials with the goal of expanding the frontiers of electronics to reach higher frequencies, higher speed, smaller size, extremely low power consumption, higher operating temperature, particularly the potential of III-V and III-N compound semiconductors for new applications.

Dr. Wen Liu is a Fellow of The Higher Education Academy of the UK, Member of the Youth Innovation Promotion Committee of the Third Generation Semiconductor Industry Technology Innovation Strategy Alliance (CASA), executive deputy director of the International Innovation Institute for third generation semiconductor power electronics devices and power integration of XJTLU, IEEE Senior Member. She has published 30+ journal papers, 40+ conference papers, and applied 20+ patents. In the last 5 years, she has been granted various level of funds of more than 6 millions RMB.

**JITRI co-supervisor:**

Yi Pei received the B.S degree in Electrical Engineering from Peking University, Beijing, China, in 2004, the M.S and Ph.D degrees in Electrical Engineering from University of Santa Barbara, U.S.A, in 2005 and 2009, respectively. He is currently the V.P. of technology, in charge of GaN product design, cutting edge GaN technology development and I.P. strategy. He is guest professor in Xi'an Jiaotong-Liverpool University, Peking University and Suzhou University. He is also a senior member in IEEE/CIE and TPC member in Power Supply Society. His research interests include microwave and millimeter wave GaN electronics design and modeling, GaN power electronics design and application, and Ⅲ-N semiconductor processing technology development. He is the author or coauthor of more than 100 journal and conference papers. He also holds more than 150 granted patents and patent applications.

**How to Apply:**

Interested applicants are advised to email Wen.Liu@xjtlu.edu.cn (XJTLU principal supervisor's email address) or (yi.pei@dynax-semi.com) 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