Microelectronics Research Group Summer Scholarship

An opportunity exists for a 10 week summer internship for an undergraduate electrical/electronic engineering or physics student who has completed at least three years of study. The program is open to both students from The University of Western Australia as well as students from other Australian universities. The student will be awarded a weekly scholarship of $500. Non UWA enrolled students who are required to relocate to Perth will be remunerated for the cost of their travel and one week accommodation up to the value of $1000.

The Microelectronics Research Group (MRG) at The University of Western Australia undertakes fundamental and applied research into advanced microelectronic, optoelectronic, and photonic materials, devices and systems with applications in agriculture, defence, manufacturing, medicine, remote sensing, environmental monitoring, spectroscopy, and surveillance. The microelectronics research group has been responsible for developing the highly-acclaimed infrared microspectrometer concept, which integrates micro-electro-mechanical systems (MEMS) with infrared sensor technology. The major outcome has been the world-first demonstration of a tunable SWIR sensor module. This disruptive technology has resulted in (i) a $2.4 million GRDC contract to develop a low-cost, portable SWIR tunable optoelectronic spectroscopic sensor for food/agriculture applications, and (ii) in 2008 MRG was awarded the inaugural DSTO Eureka Prize for Outstanding Science in Support of Defence or National Security.

Project Description

The project aims to design a field deployable infrared MEMS spectrometer. The goal of this activity is to design and construct a compact electronic system (i.e. sensor-on-board) for the UWA MEMS spectrometer. The electronic system will include the hardware and software needed for I/O interface with the MEMS spectrometer, signal conditioning, CPU communication, and power supplies. Due to the defence related nature of the project, applicants must host an Australian citizenship

Specific Qualifications

• Team-work
• Excellent verbal and written communication skills
• LabVIEW
• Analog and digital electronic circuit design

The application shall be written in English and must include the five following items:
1. A cover letter including a statement addressing specific qualifications for the position (in order as shown above)
2. Evidence of Australian citizenship
3. Copy of academic transcript
4. Curriculum Vitae
5. Name and contact details of two referees

Please email your completed application to Dr Ramin Rafiei ramin.rafiei@uwa.edu.au before COB Thursday 31st of October.