

# 2017/2018 EIS Summer Research Scholarship

Supervisors: A/Prof. Lam Phung and Prof. Salim Bouzerdoum

A scholarship of \$5000 is provided for an excellent UOW undergraduate student to participate on a 10-week research project between 12/2017 and 02/2018.

**Project title: Deep Convolutional Neural Networks for Lane Segmentation in Assistive Navigation**

**Project description:** In recent years, deep learning has gained fervent interests in machine learning, computer vision, , signal processing and many other fields. It has been judged by MIT Technology Review as one of the top-10 breakthrough technologies in 2013. A major architecture in deep learning is convolutional neural network, which is based on the ideas of local receptive fields, weight sharing and sub-sampling. This architecture is widely used for image classification, and recently it has been extended to semantic image segmentation. The aim of this project is apply recent advances in deep convolutional neural networks to the problem of lane segmentation for assistive navigation. The project will involve significant programming using MATLAB and Python for image and video processing. This project is open to students (computer engineering, electrical engineering, computer science) in the first, second, third, or fourth year of their studies at University of Wollongong. It is suitable for motivated students with a mathematical background, experience in MATLAB, Python, or C/C++ programming, and an interest in pursuing a further research study.

**To apply:** Visit <http://eis.uow.edu.au/scholarships/summer/index.html>

**Application deadline:** 16/10/2017.