PHD SCHOLARSHIP

The School of Civil Engineering at The University of Queensland (Brisbane, Australia) is offering a PhD scholarship for a motivated student to contribute to research being undertaken within the Transport Research Group. The successful student will be funded through the Department of Transport and Main Roads’ Transport Academic Partnership (TAP) Chair on the project, Development and Use of an Integrated Multi-Sensor, Multi-Source, Multi-Modal Data Platform for Transport Analysis. Potential students should have a strong interest in multi-modal transport, including private automobile, light and heavy commercial vehicles, public transport buses and trains, and in sensor data in a variety of static and dynamic formats.

The scholarships will be for three (3) years and valued at $27,082AUD per year (indexed). Top-up scholarships and international student fee-waivers are also available to exceptional candidates.

PROJECT INFORMATION

Development and Use of an Integrated Multi-Sensor, Multi-Source, Multi-Modal Data Platform for Transport Analysis

Transport has emerged as a very data-rich environment, with greater access to publically-available data from a variety of sources, including: in-roadway sensors, toll tags, Bluetooth readers, GPS tracking of public transport vehicles and other fleet vehicles, transit smartcard transactions, and pedestrian and cyclist GPS traces. While the availability of data is great, the analysis and intelligence in the use of these data is lagging. Many data mining techniques have been applied for predicting traffic conditions in the short term (5 minutes to 1 hour) and for providing useful traveler information. Yet, the data can be used for multi-modal operations, integrated incident management, traveler information services, and long-term strategic service and infrastructure planning. These data may also be used in a performance monitoring system that considers all modes of travel collectively, so that transport can be managed as a single system.

This project will seek to create a data management platform for transport performance monitoring, dynamic operations management, and strategic planning. It will also explore the ability to infer transport conditions, both in real-time and in operations planning, using these data sources. Of particular interest are methods to integrate public transport, cycling, and walking into traditional traffic metrics, to capture the overall transport system performance.

QUALIFICATIONS

Candidates must hold a relevant undergraduate or Master’s degree in a relevant program of civil engineering, transport engineering, transport planning, mathematics/statistics, computer science, or a related quantitative field. Candidates with skills or interest in travel demand modelling, transport network modelling, and data mining are strongly encouraged to apply.

HOW TO APPLY

Interested candidates should submit their scholarship application on the Application for school-based PhD or MPhil scholarship form, together with your supporting documents on the HDR online application system.

Details on the application for admission and scholarship process can be found at http://www.civil.uq.edu.au/HDR-application-apply.

For further details on the scholarship project, please contact Prof Mark Hickman at m.hickman1@uq.edu.au

Submission due by 18/10/2017

www.civil.uq.edu.au