Scientia Ph.D. Scholarship:
Network Methodologies for Optimising Smart Mobility

Never Stand Still | Engineering | Civil and Environmental Engineering

A UNSW Scientia Scholarship position is offered for a Ph.D. in Network Methodologies for Optimising Smart Mobility. Scientia PhD Scholarships are designed to attract the best and brightest prospective students to work in an enhanced culture of research excellence, mentoring, career development, leadership and community.

The full-time position is available in the School of Civil and Environmental Engineering at the University of New South Wales, Sydney, Australia. The research will be conducted under the supervision of Prof. Travis Waller within the Research Centre for Integrated Transport Innovation (rCITI).

The position is funded for 4 years starting in July 2017 (semester 2). A stipend of AUD 40,000 per annum (tax free) will be provided throughout the doctorate together with a travel/support budget of an additional amount of up to AUD10,000 per annum. Additional funding may be available via teaching activities.

The topic of the Ph.D. thesis will be oriented towards the development of Network Methodologies for Optimising Smart Mobility. With increases in communication technology and availability of diverse real-time data, new transport network models are needed to describe and optimise system-wide behaviour. This project will develop new formulations and solution methods for dynamic transport network equilibrium including mechanisms for improving system congestion and reliability.

Applicants should hold a degree in Mathematics, Computer Science or Engineering (minimum upper second class Honours) or a Masters by Research with a substantial research component. A solid background in mathematical programming and optimization algorithms is recommended. Some experience in computer programming (C, C++, Java or Python), knowledge of Traffic Flow Theory and Transport Planning/Modelling is desirable.

Scientia scholars will have a strong commitment to making a difference in the world with demonstrated potential for contributing to the social engagement and/or global impact pillars of the UNSW 2025 Strategy.

Prospective applicants should discuss their proposal and its alignment with UNSW research and strategic goals with Prof Travis Waller at s.waller@unsw.edu.au before the 11 November 2016 deadline.

For more information on the research environment visit http://www.rciti.unsw.edu.au/ and for guidelines on the UNSW Scientia PhD Scholarship Scheme 2016/2017 visit the https://research.unsw.edu.au/unsw-scientia-phd-scholarship-scheme website.

Selection Criteria

1. Excellence – candidates must demonstrate their capability to carry out high quality research, using a combination of qualifications, experience and outputs.

2. Research Area – the proposed research must be of the highest quality and be closely aligned with the nominated research areas. It should also align with the goals of the UNSW 2025 Strategy.

3. Global impact and Social engagement – candidates must demonstrate a strong commitment to making a difference in the world with evidence of potential for contributing to the learning and teaching excellence, social engagement and/or global impact pillars of the UNSW 2025 Strategy. This may encompass such themes as knowledge exchange, equity and diversity or specific initiatives relating to indigenous communities, global development and disability.

4. Career and Development – candidates must demonstrate a strong commitment to how they will use the resources provided to develop their careers and to engage with knowledge exchange activities.