Postgraduate Scholarships in IoT and Intelligent Transportation Systems

Two full-time PhD scholarships are available for suitably qualified candidates with a Master degree (with a research component over 50%), a first-class honours degree or equivalent (with an average mark of above 80 approximately) in electrical, telecommunication or civil engineering, computer science or mathematics to undertake research studies leading to **PhD in IoT and Intelligent Transportation Systems** at the University of Technology Sydney.

The successful candidates will be supervised by Prof Guoqiang Mao, Professor of Wireless Networking, IEEE Fellow, IET Fellow, University of Technology Sydney and conduct research in one of the following topic areas:

- High-precision (cm-level) vehicular localization techniques in complex urban environment
- Road-vehicle cooperation techniques to overcome the sensing and communication limits of vehicle on-board sensing devices
- Big data modelling and analysis of intelligent transportation systems (ITS)
- IoT for ITS and smart cities
- Advanced sensing and communication techniques for ITS and smart cities
- Structural health monitoring and analysis techniques for roads, bridges and other key infrastructures

BRIEF DESCRIPTION OF RESEARCH AREA: The past decades have seen many technological innovations that have fundamentally changed our life, e.g., Internet, smartphones, high-speed computers, mobile communications and IoTs. Our roads, the most critical infrastructure we rely on and use on daily basis, however stayed essentially the same. The recent emergence of new technologies such as artificial intelligence, IoTs and V2X opens the door to transforming our roads into smart ones. Such technological upgrade comes at a much lower cost than building a completely new infrastructure and allows the deployment of smart transportation solutions and customer services. This project will investigate IoT based techniques for smart roads with an aim to utilize advanced sensing and communication techniques to provide smart infrastructure support for current ITS and for future connected and autonomous vehicles.

ABOUT UTS: UTS is a dynamic and innovative university in central Sydney. One of Australia's leading universities of technology, UTS has a distinct model of learning, strong research performance and a leading reputation for engagement with industry and the professions.

The most prestigious international rankings agencies have ranked and rated UTS highly in recent years. Here are some of our recent achievements:

- Highest performing university in Australia under 50 years old (Times Higher Education Young University Rankings 2017), (QS Top 50 Under 50 2018)
- Ranked in to the Top 200 universities globally (QS World University Rankings 2018)
- Winner, Hybrid Learning Award (QS Reimagine Education Awards 2015)
- 8th highest performing university in the world under 50 years old (QS Top 50 Under 50 2018)
- 5 stars for excellence across all 8 categories (QS Stars Rating 2015–2017)

ELIGIBILITY: Applicants should have solid mathematical, telecommunications, electrical or civil engineering background. **The scholarship is only for PhD candidates.** Successful applicants should meet the admission requirements for PhD and are expected to start their enrolment at the University of Technology Sydney in Semester 2, 2019 or Semester 1, 2020. **Preference may be given to candidates who can start early.**

AMOUNT AWARDED: The scholarship is currently valued at **A$ 27,596 per annum** (tax exempt) and may be renewed for up to three and half years, subject to satisfactory progress. Successful applicants from overseas may also be awarded a tuition fee waiver scholarship.

APPLICATION GUIDE: Further information can be obtained from Professor Guoqiang Mao (E-mail: guoqiang.mao@uts.edu.au). Applications should be sent directly to Prof Mao at the above address and should include a curriculum vitae, a copy of an academic transcript, a research proposal in the aforementioned mentioned areas, and the names and contact details of at least two referees. For overseas students, English test results, e.g. IELTS or TOFEL, should be included.

CLOSING DATE: The offer is available until the position has been filled