

To whom it may concern:

I wish to apply for the Australian Institute of Traffic Planning & Management's (AITPM) Young Professional Award 2018 (through AITPM's Western Australian Branch).

I recently completed a Master of Professional Engineering, majoring in Civil Engineering at the University of Western Australia. Since graduating, I have been fortunate enough to have commenced working as a Graduate Transport Engineer with WSP's Integrated Transport Planning team (starting in March 2018).

My interest in transportation started from a young age, I was always fascinated at how transport infrastructure can change people's lives, from major transport infrastructure linking regional communities to cities, to active transport facilities which enables people to live more healthy and active lifestyles. As such, during my studies I actively sought the opportunity to work within various sectors of the transport industry, including construction, government and consulting. This experience has allowed me to understand the development and delivery of transport infrastructure, and has increased my passion for working in this industry.

My earliest experience in the transport sector was with Hebei Guangtai Road and Bridge Engineering Corporation in China, working on highway construction for several months in 2015. This role allowed me to appreciate how much it costs to build and maintain roads. The experience I gained from this role encouraged me to undertake a "Transportation Engineering" unit as part of my university studies.

Whilst undertaking research for this unit's course content, I came across the "Traffic congestion management program" on the Main Roads WA (MRWA) website. This program excited me as it included innovative measures to improve traffic flow beyond traditional expensive construction methods. By actively pursuing this opportunity with numerous people, I was able to obtain a volunteer internship with MRWA's Network Operations Directorate between November 2016 and February 2017.

Whilst working at MRWA I learnt about the range of innovative technologies used to manage Perth's road network, including SCATS and the "managed freeways" initiative. I also gained experience in the use of various modelling tools used by MRWA in assessing and developing road improvement projects and how strategic transport models such as ROM seek to forecast demand across the city based on projected future land use.

I was also fortunate enough to develop my first microsimulation (VISSIM) model for the iconic Perth Children's Hospital project. This provided me with an opportunity to learn about the complex processes involved in developing traffic models, for which I have established a strong interest.

I also provided input into the development of the LinSig and SIDRA components of MRWA's new Operational Modelling Guidelines, which sets out modelling best-practices and a common standard for modelers. I also took part in the review of the Perth Freeway AIMSUN model. In addition to being impressed by the size and complexity of this model, I was amazed at how accurate it was in predicting real-world traffic conditions.

After completing my internship at MRWA, I wrote my university thesis on the calculation of saturation flows used in LinSig and SIDRA. To complete this research, I worked with researchers across different faculties and was awarded a distinction. Similar research is now being led by MRWA on a much greater scale.

During my final year of study, I worked part time for Flyt transport consultancy, undertaking transport impact assessments and modelling projects. One of the highlights during my time at Flyt was the opportunity to develop numerous LinSig models for the Perth Stadium Contingency Plan. Visiting the Stadium after the project was completed, and seeing the work I did work in real life, gave me a great sense of pride.

AITPM

Xin.Hou@wsp.com

Page 2

Since starting at WSP, I have been involved with the Westmead and Wentworthville Planned Precincts - Traffic and Transport Study in NSW. The project entails transport, social, environmental, economic and urban design investigations. A key driver of this project is to improve sustainable transport by reducing the need for trips and travel distance. I am predominately involved with the Aimsun modelling component of the project, testing the ultimate land use scenario catering for all modes of transport.

I have also had the opportunity to assist with the development of several regional cycling strategies, which has given me an appreciation of the benefits of increasing active transport's mode share in Australia's towns and cities. I am also currently working on the Riverside Drive Feasibility Study and Concept Design, which considers reducing the capacity of this important corridor to facilitate higher intensity land use and improve connectivity between the Swan River and the Perth CBD.

Throughout my short experience in the transport planning industry I have enjoyed learning new skills and solving complex problems to help shape a better future for our society. I see the future of our industry with barrier free communication between city planners, road designers, engineers, road users and asset managers. Enhancing communication between stakeholders has been my passion since the start of my career.

Over the next few years, I anticipate there will be several dramatic changes to our industry. Although congestion levels may continue increasing in the short term, the development of intelligent transport systems, autonomous vehicles and a stronger emphasis on prioritising active modes of transport will help create opportunities to make our cities more efficient and livable. I am looking forward to pursuing a long and purposeful career during such an exciting time of our industry.

In 2017, I was awarded the *Young Women in Transport* subsidy to attend 2017 AITPM conference in Melbourne. This trip increased my awareness about the different facets of transport planning and the role it plays in shaping our communities. Talks about active transport really encouraged me, and I am now more aware of it in daily life too. For example, on my last trip to China, I paid extra attention to their public transport, cycling, and pedestrian facilities, and took a number of photos of these facilities that I have shared with friends and colleagues.

In this year's conference program, I am very interested in the talk from keynote speaker Paul Steely White, and the research being presented by Tim Judd promoting 30km/h neighborhood streets, as they are both encouraging active transport and giving back our urban areas to human activities. I am also interested in the talks about big data and the potential they have to influence model inputs, possibly leading to more accurate modelling results. The conference also provides the opportunity for me to learn about new ideas and to network with other professionals in traffic and transport community.

I joined AITPM as a student member in 2017 and joined the conference committee earlier this year. Following the conference, I would relish the opportunity to sit on the State Branch Committee as a Young Professional representative. In this role, I plan to liaise with other YPs, help organise social events and technical forums, and share my knowledge and ideas with other young professionals in our industry.

If you have any questions, please feel free to contact me at 0451 692 300.

Best Regards

Xin Hou