

May 23, 2019

Attention: Derrick Hitchins CPEng, RPEQ
Australian Institute of Traffic Planning and Management (AITPM)
QLD Branch President

Subject: AITPM 2019 Young Professional Award Application

Dear Mr Hitchins,

My name is Stephanie Cipressi and I am a first year Transport Engineering Graduate at Jacobs. I graduated in July 2018 with First Class Honours in Engineering and Commerce (Accounting) from the University of Queensland. I wish to apply for this award as I see it as an exciting opportunity to have an influence on what AITPM offers to QLD young professionals and to network with industry members to further grow my understanding of the sustainable transport field.

2013 - 2018 ● **Interest in Transport Engineering field – university achievements**

When I decided to pursue a Civil Engineering degree, I was unsure of what I wanted to do but just knew that I wanted to use my problem-solving skills to improve society. This confusion cleared once I completed a second-year course; Introduction to Transport Engineering, where I was introduced to the principles behind network planning. With a strong desire to learn more about the field, I applied for and was awarded a position in the UQ Icarus Program Transport Planning and Modelling team. In this team I worked under the supervision of a UQ academic and completed the following transport projects whilst studying full time:

2015 ● **Cultural Centre Bus Station Simulation**

This project introduced me to the phenomenon of transport modelling and its capabilities to validate transport network solutions. My team and I used Discrete Event Simulation coupled with Virtual Reality to simulate the Cultural Centre Bus Station. We used the simulation to find a solution to the peak-hour queuing of buses along Victoria Bridge which is a critical bottleneck affecting system reliability and resulting in a negative customer experience. My role involved; field data collection, input parameter modelling, operation analysis and optimisation. We presented our findings at the Australian Transport Research Forum (ATRF) and were awarded runner-up for the David Willis Best Poster.

2016 ● **Computer Programming for data analytics**

Given the success in the station simulation project, I wanted to gain skills in data analytics to further develop my skillsets, so I enrolled in a second Icarus project – “Computer Programming for Transport Data Analysis”. This project involved developing an application in the C++ programming language using Microsoft Visual Studio and Qt Creator to isolate CityCat ticket information from GoCard data. This data was then analysed by focusing on terminal demand and peak travel periods to understand ferry usage across Brisbane. The time spent using excel, learning C++ coding and understanding the basics of probability to infer results for this project put me in good stead for my future work experiences in the transport advisory industry.

2015 - Current ●

Time in profession

My success in the Icarus Program led me to gain considerable experience in different areas of the transport field. These positions are a testament to my passion and desire to learn more about the industry.

2015 - 2016 ●

NineSquared Economic Consulting

Through my presentation at the 2015 ATRF conference I was offered a vacation position as Student Analyst at NineSquared Economic Consulting firm. In this position, I was able to apply my knowledge in both Engineering and Commerce degrees to calculate affordability changes in public transport fare levels. The results of my analysis were then published as part of NineSquared's Fare Benchmarking Report 2015. This exposure to transport advisory improved my understanding of how benefits are quantified and how best to maximise them when developing transport infrastructure and policies.

2017 ●

Brisbane City Council – Transport Planning and Strategy experience

To gain experience in Transport Strategy, I worked as a Student Engineer for Brisbane City Council in their Transport Planning and Strategy team. In this role I worked alongside engineers to provide solutions to traffic issues reported by the public, participated in negotiations and engaged in stakeholder meetings. From this role, I learnt that social and economic factors ultimately influence the design process and as engineers we need to understand the needs and preferences of our customers.

2017 - Current ●

Jacobs

I started working at Jacobs as an undergraduate in July 2017 and transitioned to a graduate role in July 2018. During my time at Jacobs I have been fortunate enough to work on a wide range of projects including assisting with the Transport Demand Modelling for the 2018 Commonwealth Games, Bicentennial Bikeway Feasibility Study, Far North District Cycleway Planning and Active Transport modelling for the Kangaroo Point Bridge Business Case. My highlight so far has been working on the Bicentennial Bikeway Feasibility Study as it involved several influential stakeholders and major design limitations that encouraged us to think broadly and outside “the box”. My main role in this project was to support the Project Manager in coordinating the design teams and formulating options to present to stakeholders. This was a challenging but interesting project given that a standard bikeway bridge design was not feasible, so international cycle path and bridge designs were investigated and manipulated to fit within the constraints of the site. I was given the opportunity to present these findings to stakeholders and to have an active role in project engagements.

2019 + ●

Future ambitions

From my undergraduate work experience and success with the UQ Icarus projects, I have developed a keen interest in developing and improving sustainable transport infrastructure to combat the challenges of rapid urbanisation in our major cities. I enjoy devising strategies to improve the efficiency and accessibility of public transport networks through designing new systems or by improving current infrastructure to cater to growing populations. With my experience in cycleway planning projects, I understand that a well-designed transport network isn't what governs a shift in demand for sustainable transport, but it is also a social acceptance and behavioural change required from potential users. I have learnt the importance of considering the social, environmental and economic aspects of new transport systems and hope to build on my engagement skills to successfully work with stakeholders to find the most sustainable outcome. It is a very exciting time to be entering the industry and I hope to build my technical understanding and modelling capabilities to establish a successful career in this field.

July 2019 ● **Interest in 2019 AITPM National Conference**

There are many sessions planned for the conference that I would be very interested in attending. The key sessions of interest would centre around Transport Planning and new Transport Advisory Stream topics such as *Planning and design for safer cycling infrastructure* and *New Ways for Station Planning and Design* as they relate to the work I have undertaken in the industry. The opportunity to actively participate in these sessions and network with professionals and other young professionals would benefit my technical understanding immensely. To ask questions and learn first-hand from industry leaders will be inspiring and beneficial for my career where I can bring these new design ideas to my projects, making me a valuable and knowledgeable team member.

2019 + ● **Willingness to sit on the AITPM QLD State Branch Committee**

With my leadership experience listed below, I understand the responsibility and commitment required to be a valuable committee member. As the AITPM Conference will be held in Brisbane next year, I would like to be part of the committee to help with this event either by organising events for Young Professionals or arranging presenters. I can use my experience this year to coordinate conference activities and help with increasing involvement of young professionals in the workshops offered.

● **UQ Women in Engineering Student Leader**

As a student leader we were tasked with organising events for female high school students to inspire their enrolment in STEM subjects and to pursue an engineering career. It was a challenging pursuit, given the stereotypes within the industry, however it taught me lessons on how to successfully run events and engage with a different age demographic. From the success of the program, we were awarded the “Engineers Australia Diversity Award for most encouraging student group” which was a testament to our dedication to the program and success within the industry.

● **Secretary of UQ Civil Engineering Student Association (CESA)**

In my final year of university, I was Secretary of CESA where I managed meetings, organised events and communicated with all student members. The over-arching purpose of the student association is like that of AITPM but in a different setting. We ran events to facilitate networking between students and industry members, hosted information sessions to inspire students to undertake certain electives and held training seminars to prepare students for job interviews and working in the industry.

Overall, I believe that greater exposure of AITPM to university students is key to increasing interest in the field. As these students progress into young professionals they will be more likely to get involved in events and take advantage of the opportunities on offer. This can be achieved through AITPM members attending career fairs or engaging with student associations to ensure students are aware of what AITPM offers. From my experiences, I believe I am the right person to encourage these young professionals to get involved in this great organisation, especially at the 2020 AITPM National Conference.

Thank you for your consideration.

Yours sincerely,

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