Dr Geoffrey Tilden Clifton

BEcon Hons UQ PhD Sydney

Senior Lecturer in Transport and Logistics Management
Institute of Transport and Logistics Studies, University of Sydney Business School

Email geoffrey.clifton@sydney.edu.au

Telephone 02 9114 1881

Postal address 378 Abercrombie Street (H73)

THE UNIVERSITY OF SYDNEY NSW 2006

Website http://sydney.edu.au/business/itls/staff/geoffrey.clifton

Current position

Senior Lecturer in Transport and Logistics Management at the Institute of Transport and Logistics Studies (ITLS) within the Business School of the University of Sydney.

July 2017 to current.

Previous positions

Lecturer in Transport and Logistics Management at the Institute of Transport and Logistics Studies (ITLS) within the Business School of the University of Sydney.

January 2011 to July 2017.

Part time tutor in Transport and Logistics Management at the Institute of Transport and Logistics Studies (ITLS) within the Business School of the University of Sydney. 2004 to 2010.

Part time consultant at Pricewaterhouse Coopers (PwC), Sydney. 2003 to 2008.

This role involved the provision of professional consultancy services for governments, transport operators, and other private and not for profit organisations, selected projects are listed under consulting experience below.

Graduate Analyst/Analyst, Financial System Stability Department, Reserve Bank of Australia, Sydney.

2000 - 2003.

Part time tutor and Peer Assisted Study Session (PASS) co-ordinator, Department of Economics, University of Queensland, Brisbane.

1998-1999.

Brief biography

Geoffrey has extensive experience in teaching transport, logistics and supply chain management. Although holding a teaching focussed appointment which has limited his time available for research, Geoffrey has also developed research expertise in areas including travel behaviour, the design and management of bus services that provide a higher level of service (e.g., Sydney's Metrobuses), the travel needs of young people with an intellectual disability for transition to mainstream employment and the impacts of new heavy and light rail projects on travel times for existing public transport users. Furthermore, Geoffrey has 14 years of experience consulting and engaging with industry, government and the broader community.

Geoffrey has taught across the post graduate transport, infrastructure, logistics and supply chain management programs with a particular focus on quantitative methods and economics and recently began teaching economics and data analysis in the University of Sydney Business School's MBA program. In a previous role at the University of Queensland, he also taught undergraduate students. Geoffrey has supervised PhD students, MPhil students and students undertaking research projects within coursework programs, and managed a number of casual Research Assistants as part of various research projects.

Geoffrey is the Program Director for the Master of Logistics and Supply Chain and the Master of Transport Management. Geoffrey is also the Post Graduate Co-ordinator responsible for the teaching of all ITLS units in the Master of Commerce and the three specialisations primarily serviced by ITLS (Logistics and Supply Chain Management, Aviation and Maritime Management and Logistics, Infrastructure and Transport Management).

Previous consulting experience, includes working for Pricewaterhouse Coopers (PwC) from 2003 to 2008 in the economic and government consulting team. During this time, Geoffrey consulted to a number of charities, all levels of government, transport and logistics enterprises including ports, airports, airlines and the rail industry. Geoffrey also worked on Australia's unsuccessful World Cup bid.

Since joining the University of Sydney, Geoffrey has consulted to the ACT Auditor General on two projects as well as providing consulting services to bus companies, a number of startups, industry bodies and the NSW government. In addition, Geoffrey runs the successful Bus Operator Accreditation Scheme Online Training Course which provides mandatory training for all prospective bus operators in New South Wales and previously ran the Certificate of Transport Management professional development course. Geoffrey is also one of the two First Aid Officers for ITLS.

Geoffrey holds a Bachelor of Economics with first class Honours in Economic Statistics from the University of Queensland and a PhD in transportation management from the University of Sydney, completed in 2011. The topic of his thesis was 'The role of frequency & connectivity in delivering enhanced bus systems in urban areas: Developing a network of corridor services'. Prior to joining ITLS, Geoffrey worked for three years at the Reserve Bank of Australia in Sydney in the Financial System Stability Department.

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Publications

Book chapter

• Mulley, C. and Clifton, G.T. (2016) 'Decision making in flexible transport: The importance and application of the 'golden rule' in Mulley, C. and Nelson, J. (eds.) *Paratransit:* Shaping the Flexible Transport Future (Transport and Sustainability, Volume 8), Emerald.

Papers

- Mulley, C., Clifton, G.T., Balbontin, C. and Ma, L. (2017) 'Information for travelling: Awareness and usage of the various sources of information available to public transport users in NSW', Transportation Research Part A: Policy and practice, vol.101, pp. 111-32.
- Mulley, C., Ma, L., Clifton, G.T. and Tanner, M. (2017) 'Are network planning guidelines based on equal access equitable?', Transportation Research Record, vol. 2561, pp. 1-11.
- Clifton, G.T. and Mulley, C. (2016) 'A historical overview of enhanced bus services in Australian cities: What has been tried, what has worked?', Research in Transportation Economics, vol. 59, pp. 11-25.
- Mulley, C., Ma, L., Clifton, G.T., Yen, B. and Burke, M. (2016) 'Residential property value impacts of proximity to transport infrastructure: an investigation of bus rapid transit and heavy rail networks in Brisbane, Australia', Journal of Transport Geography, vol. 54, pp. 41-52.
- Clifton, G.T., Mulley, C. and Hensher, D.A. (2014) 'Bus Rapid Transit versus Heavy Rail in suburban Sydney - Comparing successive iterations of a proposed heavy rail line project to the pre-existing BRT network', Research in Transportation Economics, vol. 48, pp. 126-41.
- Tsai, C.-H., Mulley, C. and Clifton, G.T. (2014) 'Forecasting public transport demand for the Sydney Greater Metropolitan Area: A comparison of univariate and multivariate methods', Road and Transport Research, vol. 23, no. 1, pp. 51-68.
- Clifton, G.T. and Rose, J.M. (2013) 'A simulation of the simple Mohring model to predict patronage and value of resources consumed for enhanced bus services', Research in Transportation Economics, vol. 39, no. 1, pp. 259-69.
- Tsai, C-H., Leong, W., Mulley, C. and Clifton, G.T. (2013) 'Examining estimation bias and efficiency for pseudopanel data in travel demand analysis', Transportation Research Record 2354, pp. 1-8.

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Conference proceedings

• Clifton, G.T., Hensher, D.A. and Mulley, C. (2012) 'The North West Rail Link: Winners and losers in the locality of the North West area', 35th Annual Australasian Transport Research Forum ATRF 2012, Perth, Australia, 26 - 28 September.

Conference papers

- Clifton, G.T. and Mulley, C. (2017) 'Barriers and facilitators of integration between buses with a higher level of service and rail: An Australian case study', 15th International Conference on Competition and Ownership in Land Passenger Transport (Thredbo 15) 2017.
- Mulley, C., Ma, L., Clifton, G.T. and Tanner, M. (2017) 'Are network planning guidelines based on equal access equitable?', 96th Annual Meeting of the Transportation Research Board TRB, Washington, D.C., United States, 12th January 2017.
- Clifton, G. and Mulley, C. (2017) 'The incidence of transport benefits for new public transport infrastructure: Winners and losers in the locality of the Sydney Metro North West', World Symposium on Transport and Land Use Research (WSTLUR), Brisbane, Australia, 3 - 6 July.
- Mulley, C., Clifton, G.T., Balbontin, C. and Ma, L. (2016) 'Information for travelling: Awareness and usage of the various sources of information available to public transport users in NSW'. 38th Australasian Transport Research Forum ATRF 2016, Melbourne, Australia, 15 - 18 November.
- Mulley, C., Ma, L., Clifton, G., Yen, B. and Burke, M. (2016) 'Effects of Bus Rapid Transit on Residential Property Values in Brisbane, Australia', 95th Annual Meeting of the Transportation Research Board TRB, Washington, D.C., United States, 10 14 January.
- Clifton, G. and Mulley, C. (2015) 'An overview of enhanced bus services in Australian cities: What has been tried, what has worked?', 14th International Conference on Competition and Ownership in Land Passenger Transport Thredbo 14, Santiago, Chile, 30 August 3 September.
- Clifton, G. (2015) 'The Journey to Work: Recent Australian Evidence of Transport as a Barrier and Facilitator for the Transition to and Maintenance of Paid Employment for People with an Intellectual Disability', 14th International Conference on Mobility and Transport for Elderly and Disabled Persons TRANSED, Lisbon, Portugal, 28 - 31 July.
- Mulley, C., Ma, L., Clifton, G.T. and Tanner, M. (2015) 'Are network planning guidelines based on equal access equitable?', 37th Australasian Transport Research Forum ATRF 2015, Sydney, Australia, 30 September - 2 October.
- Clifton, G., Beck, M.J. and Rose, J. (2014) 'Putting attitudes towards public transport in context: the influence of situational factors on the results of Likert and Best-Worst surveys', 10th International Conference on Transport Survey Methods, Leura, Australia, 16 - 21 November.

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- Clifton, G., Mulley, C. and Hensher, D.A. (2013) 'Bus Rapid Transit versus Heavy Rail in suburban Sydney – Comparing Successive iterations of a proposed heavy rail line project to the pre-existing BRT network', 13th International Conference on Competition and Ownership in Land Passenger Transport - Thredbo 13, Oxford, United Kingdom, 15 - 19 September.
- Clifton, G.T., Hensher, D.A. and Mulley, C. (2012) 'The North West Rail Link: Winners and losers in the locality of the North West area', 35th Annual Australasian Transport Research Forum ATRF 2012, Perth, Australia, 26 - 28 September.
- Clifton, G. and Rose, J.M. (2012) 'A simulation to sensitivity test the simple Mohring model for enhanced bus services', 13th International Conference of the International Association for Travel Behaviour Research IATBR, Toronto, Canada, 15 - 19 July.
- Clifton, G. and Rose, J.M. (2011) 'A Simulation of the Simple Mohring Model to Predict Patronage and Value of Resources Consumed for Enhanced Bus Services', Thredbo 12: International Conference Series on Competition and Ownership in Land Passenger Transport, Durban, South Africa, 11 - 15 September.
- Rose, J.M. and Clifton, G. (2011) 'Sensitivity testing of inputs into the Mohring Model:
 How sensitive are patronage and value of resources consumed estimates for Enhanced
 Bus Services to changes to parameter inputs?', Thredbo 12: International Conference
 Series on Competition and Ownership in Land Passenger Transport, Durban, South
 Africa, 11 15 September.

Industry papers and symposiums

- Chair of session on the Future of the Transport Industry at the French Australian Chamber of Commerce's 2017 Schneider Electric Innovation Hub Business Forum.
 Presenters included Renault Australia, NRMA and Transport for NSW.
- Clifton, G.T. (2016) 'Usage of information sources by public transport travellers' Transport for NSW.
- Clifton, G.T. (2012) 'Passenger focussed bus services' Informa Urban Transport Planning Summit.
- Clifton, G.T. (2010) 'Tools for historical research in transportation' Academic Association of Historians in Australian and New Zealand Business Schools (AAHANZBS) Conference 2010.

Internal working papers

- Mulley, C., Ma, L., Clifton, G.T. and Tanner, M. (2016) 'Are network planning guidelines based on equal access equitable?', ITLS Working Paper <u>WP-16-20</u>, University of Sydney, Australia.
- Mulley, C., Clifton, G.T., Balbontin, C. and Ma, L. (2016) 'Information for travelling: Awareness and usage of the various sources of information available to public transport users in NSW', ITLS Working Paper WP-16-14, University of Sydney, Australia.
- Mulley, C., Ma, L., Clifton, G.T., Yen, B. and Burke, M. (2015) 'Spatial variations of the
 effects of bus rapid transit on residential property values', ITLS Working Paper WP-1519, University of Sydney, Australia.

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 Clifton, G.T., Mulley, C. and Hensher, D.A. (2012) 'The North West Rail Link: Winners and losers in the locality of the North West area', ITLS Working Paper <u>WP-12-24</u>, University of Sydney, Australia.

Opinion pieces

- Authored article 'New bus services will make Sydney easier place to live' for <u>The Sydney Morning Herald</u>, 6 June 2018.
- Authored article discussing the pros and cons of High Speed Rail (HSR) for <u>Infrastructure</u> <u>Magazine</u>'s Big Ideas Forum, *November 2016*
- Authored article on The Conversation website on the costs and benefits of HSR and the
 use of Value Capture as a funding mechanism 'High speed rail plan still needs to prove
 economic benefits will outweigh costs', 2 August 2016.
 Republished on Rail Express Australia, 5 August 2016.
- Authored article as part of the ITLS Thinking outside the box series on the link between transport planning and urban planning in the context of city place making '<u>Density</u> <u>matters</u>', 1 September 2016.
- Co-authored article with Corinne Mulley as part of the ITLS Thinking outside the box series on whether fares are more expensive in Australia than elsewhere 'Are public transport fares more expensive in Australia than anywhere else', 13 August 2015.
- Co-authored article with Corinne Mulley for Rail Express magazine (Australia) on the need for improved bus-rail interchange facilities for public transport users 'Breaking down the silos: Intermodal connections and the NWRL', March 2013.

External research consulting and funding

 Report on frequent public transport network and the second on the economic benefits of the Capital Metro light rail project. ACT Government Auditor-General's Department 2015-16: \$30,000

Internal research funding July 2012 to July 2017

The Journey to work for young people with an intellectual disability

2016 Business School Pilot Research Scheme \$7500, 2014 Business School Seed funding \$5000.

The Commonwealth government aims to move people from the Disability Support Pension into mainstream employment. Disability affects social inclusion and access to job opportunities by creating major barriers in travelling. Flexible transport for non-work trips (e.g. for people ageing or with disabilities) is well researched but not travel for work. This project aims to fill the gap in knowledge of the travel related barriers and facilitators for young people with an intellectual disability in transitioning to mainstream employment. The focus will be on success factors for travel training programs with the outcome of assisting in the creation of improved programs.

- Business School Research Publication Awards 2013-15: \$1312.
- Business School Conference Travel Grants 2012-17: \$27900.

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Internal funding for teaching and curriculum development

Developing a 'flipped' classroom for ITLS5200 Quantitative Logistics and Transport
 2016-17 Teaching innovation grant: \$17,000

Funding to develop a new curriculum for ITLS5200 based around a series of in-class workshop activities to replace the previous lecture/workshop model. Videos are being developed to present the relevant theory to students before class with follow up videos showing students the steps for each analysis technique/spreadsheet model covered in class. Subsequent videos will be developed with alumni and industry partners to demonstrate how the techniques are applied outside the classroom. There are increasing pressures on students to develop better analytical skills at an earlier stage. This project aims to improve students' analytical skills in their first Semester of study prior to their final Semester industry project.

• Building capability and capacity: A model for curricula and co-curricula engagement with the non-government and community.

2011-13 Divisional Strategic Teaching Enhancement Project Scheme (STEPS): \$34,997 with Ruth Steel.

Funding to develop ITLS' suite of co-curricula industry engagement activities for preexperience post graduate students. These include the ITLS Post-Graduate Work Experience Program.

Research goals

To improve the management of transport and logistics firms, it is necessary to understand both the demand side and the supply side. Building up our knowledge in this area will support the development of logistics and transport outcomes that are both socially optimal and financially viable to operators and the community as a whole.

On the demand side, this means developing our understanding of the aspects of a passenger transport service that appeal to passengers and potential passengers so as to better understand how the design, regulation and pricing of services can account for people's preferences. This research recognises that preferences are heterogeneous and transport networks impact people differently depending on their location and circumstances.

On the supply side, distribution links transportation and supply chain management. Understanding the role of supply chains within the economy and within the transportation industry will help to develop cost-effective solutions to assist in meeting the future passenger and freight transport needs of society.

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Research focus

1. Enhanced bus services (a.k.a. buses with a higher level of service or BRT Lite)

Topics of interest include the history, design, funding and implementation of these services and the manner in which these services are integrated with other modes. There is a trade-off here as money that is made available for infrastructure construction is money not available for service provision elsewhere, yet infrastructure investments tend to also require ongoing investments in service provision. Furthermore, infrastructure investments are often thought to generate benefits for political leaders and the general public distinct from the transport service improvements delivered (e.g. agglomeration benefits, prestige, facilitation of urban regeneration and housing development). This is a major issue in both Australia and internationally with urban and High Speed Rail proposals justified in terms of place making rather than in terms of transport improvements. Geoffrey has published a number of papers in this area and has started work on a project to look at the integration of enhanced bus services and heavy rail in Sydney and a project to look at people's preferences for Buses with a Higher Level of Service.

2. Transport needs for young people with an intellectual disability around the transition to mainstream employment

Governments have as a priority the transition of people living with a disability from welfare to mainstream employment. Transportation links people to jobs and is essential for the success of the transition and the maintenance of employment over the longer term. However, the travel needs of people with an intellectual disability is underresearched and whilst governments fund various transport schemes and travel training programs, their effectiveness is not always well documented. This project aims to gather evidence of the transport needs, gaps and success factors for interventions.

3. Bus industry supply chains

Supply chains in the bus industry have similarities with supply chains in other industries. However, unlike 'traditional' supply chains such as fast moving consumer goods, the bus industry primarily supplies a service. Furthermore, the ultimate customers are a mixture of governments who specify and procure services on behalf of potential customers and individuals and groups purchasing services in the less regulated charter and long distance markets. Working with an academic in the supply chain field this project is mapping supply chains and examining issues involving procurement in the industry. A Master of Logistics and Supply Chain student recently completed a project on procurement of bus services working with a local bus company as part of the research unit.

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4. Information for travelling

Increasing use of the internet and particularly smart phones has created changes in the way that passengers use information in planning the travel and have changed the way that transport operators communicate with the public. Governments and operators were initially slow to embrace these changes but have started to move quite quickly with the release of real time information to app developers and the removal of printed timetables from stations and distribution to the public. This project explores the way that information is being provided and used with particular references to the various stages of the public transport trip (e.g. trip planning, walking to the stop, waiting for the service, on board, walking to the destination).

5. Economic modelling of the resilience of fresh food supply chains

In 2016 an outbreak of Salmonella poisoning occurred in New South Wales. The source was traced back to a batch of rock melons that had become contaminated at some point in the supply chain. Thanks to the early detection, a shipment of rock melons to Hong Kong was intercepted just before it was to be distributed to shops. In this case, the current screening systems were effective in minimising the effects on the community and minimising the impact on the reputation of our fresh food exporters. This incidence has prompted a number of researchers across the University to come together to map out the supply chains, to understand the risks from future outbreaks and to model the economic benefits of improvements to the systems which protect consumers from similar outbreaks. The aim is to develop evidence-supported interventions to improve the resilience of fresh food supply chains and the surveillance system. A number of grant applications are being developed and it is intended that an industry linkage grant will be applied for in the near future.

Reviewer activity

Geoffrey regularly reviews papers for journals such as Transportation, Transportation Research Part A and Transportmetrica A: Transportation Science as well as more diverse journals such as Sustainability, Australian Planner and Research in Transportation Economics. Geoffrey has also reviewed book chapters for Emerald's Paratransit: Shaping the Flexible Transport Future (Transport and Sustainability, Volume 8) and acts as a reviewer for a number of conferences, including the Australasian Transport Research Forum (ATRF), the International Conference Series on Competition and Ownership in Land Passenger Transport (Thredbo Series), the Transportation Research Board Conferences and the World Conference on Transport Research Economic Analysis and Policy.

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Post graduate teaching experience

ITLS5000 Foundations of Supply Chain Management

2018 Semester 1: 154 students

2018 to current (Unit of Study Coordinator and lecturer)

This is the foundation unit for all commencing Logistics and Supply Chain Management students. The course covers the fundamentals of the field of Logistics and Supply Chain Management along with the concepts essential to professional managers in this industry.

ITLS5200 Quantitative Logistics and Transport

2017 Semester 1: 86 students

2016 Semester 1 USE score 4.69 for Q1: Overall, I was satisfied with the quality of teaching by the teacher(s).

2014 to 2018 (Unit of Study Coordinator and lecturer), 2004 to 2011 (Tutor, workshop coordinator and occasional lecturer)

Previously TPTM6495 Analysis Tools, this unit is the foundation quantitative unit taken by all MTM and MLSCM and is also offered to MCom students. The course includes basic statistics, regression modelling, spreadsheet modelling, linear programming, time series modelling and simulation. The unit is taught in a workshop model with four streams taught over the course of a year. Funding has been received from the Business School to create a 'flipped classroom' for the unit whereby students will study the course material before coming to class, including via video, and the classes will consist of practical exercises. From 2004 to 2011, Geoffrey was tutor and workshop co-ordinator for this unit.

ITLS5100 Transport and Infrastructure Foundations

2017 Semester 1: 35 students

2014 Semester 2 USE score 4.33 for Q1: The teaching in this unit helped me to learn effectively

2011 to 2014 (Unit of Study Coordinator and lecturer) and 2015 to 2018 (lecturer)

Previously known as TPTM6241, this is the foundation unit for all transport management, infrastructure, aviation and maritime students. It is also offered to students in the MCom and was taken as an elective by LSCM students until 2013. Geoffrey redesigned the unit and delivered the course from 2011 to 2014. Since 2015, Geoffrey has been a lecturer in the unit but not coordinator.

ITLS6100 Logistics and Transport Economics

2012 to 2014 (Unit of Study Coordinator and lecturer), 2006 to 2011 (tutor)

Previously known as TPTM6130, this unit covers the micro and macroeconomic knowledge needed to run a transport, infrastructure or LSCM enterprise along with some of the essential business management skills such as pricing, understanding costs and demand as well as performance management and benchmarking. The unit has been rested since 2014.

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ITLS6900 Research Case Study

2008 to 2012 (Coordinator), 2016 (Acting Coordinator)

Formerly, TPTM6300/TPTM6330, this unit is a one Semester research project where students work individually with an academic on a topic of mutual interest. Geoffrey redesigned the unit so that students would gain training in the design of a research project, proposal writing and research presentation seminar. Students also must complete a written research report with a view to publication.

ITLS6103 Sustainable Transport Policy

2017 Semester 1: 18 students

2017 (Co-ordinator), 2011 to 2018 (Lecturer)

Formerly TPTM6240/ITLS6104 Public Transport Operations and Policy, this unit covers urban transport policy with an emphasis on the link between public transport and urban design. The unit is notable for its use of a wide range of speakers from other disciplines of the University, including urban planning and archaeology. Since 2011, Geoffrey has led a field trip to look at transport infrastructure and urban developments within the Sydney urban area and in 2017 became the Co-ordinator and main lecturer working with another academic to deliver the unit.

SMBA6003 Data Analytics and Modelling

2018 Semester 1: 18 students

2017 to current (Co-ordinator and lecturer)

This MBA unit embeds the teaching of data analysis techniques within a unit looking at modelling the micro-economic performance of a firm and the broader macro-economic performance of countries. This unit is being taught as part of a team with another ITLS academic. MBA students are more diverse than our other students in terms of previous experience and expectations of both the unit and their own performance. Furthermore, students tend to find both data analysis and economic analysis to be challenging topics which makes this unit an interesting challenge in its own right.

Geoffrey has also provided a lecture on the foundations of transport and infrastructure appraisal in the unit ITLS6106 Infrastructure Appraisal and marking and student support in the unit TPTM6440 International Freight Transportation.

Under graduate teaching experience

EC135 and EC136 Statistics for Economics and Business 1999 (Tutor), 1998 (PASS Coordinator)

These were the two foundation quantitative units for first year Bachelor of Economics, Bachelor of Commerce and Bachelor of Management students at the University of Queensland. Geoffrey was a tutor in 1999 and a Peer Assisted Study Session Co-ordinator in 1998.

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Teaching awards

Geoffrey was awarded the University of Sydney Business School Dean's Citation for Teaching in:

- 2017 Semester 1 for ITLS5200: Quantitative Logistics and Transport,
- 2016 Semester 1 for ITLS5200: Quantitative Logistics and Transport,
- 2012 Semester 1 for TPTM6241 Transport Modes and Systems,
- 2011 Semester 1 for TPTM6495 Analysis Tools for Transport and Logistics,
- 2010 Semester 1 for TPTM6495 Analysis Tools for Transport and Logistics, and
- 2008 Semester 1 for TPTM6130 Transport & Logistics Economics.

Feedback from students

ITLS5200

- o Geoffrey teaches very clearly (2016 Semester 1).
- Great online resource provided such as the workbook and exercises (2017 Semester 1).
- o It is a great course, so much focus on real life problems we will encounter in our careers, and very good teachers! (2017 Semester 1).

ITLS6100

- Such a great teacher who breaks everything down and makes something so complicated easy to understand (2014 Semester 1).
- Also find the group discussions excellent, we have different ways of understanding things which reinforces and refreshes important topics (2014 Semester 1).
- Transport and Logistic Strategy gave me the opportunity to interact with renowned experts, as well as the access to cutting-edge literature. I am convinced the knowledge shared during this class will be essential for my professional career as a transport economist (2013 Semester 1).

TPTM6241

 I would also like to express my thanks to Geoffrey Clifton lecturer of the subject (TPTM6241) and supporting staff who spent much effort in passing on the knowledge, guiding our learning and stimulating our thoughts on the subject (2013 Semester 1).

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Non award teaching experience

Bus Operator Accreditation Scheme Online Training Course

2010 to current (Coordinator)

This course is mandatory for all prospective bus operator in New South Wales. The course was designed by ITLS and the NSW Government working with the bus industry body (BusNSW) and private bus operators to ensure that all bus operators have the knowledge needed to provide safe, reliable and comfortable bus services. Over 200 students a year take the course which Geoffrey redesigned including re-writing the course modules and writing new practice and final examination questions. The unit is delivered online and final exams are held throughout the year.

Certificate of Transport Management

2011 to current (Lecturer)

The CTM is an annual professional development short course for managers in the bus, coach and community transport sector as well as regulators and planners. The course involves four days of classes plus three assignments. Geoffrey administered the course from 2011 to 2013 and has been involved in the teaching and management of the course since.

Teaching development and management of teaching programs

Discipline Post Graduate Coordinator 2016 to current

Program Director for the Master of Transport Management and member of the University of Sydney Business School's Graduate Studies Board January 2016 to January 2017

Acting Program Director for the Master of Logistics and Supply Chain Management July 2016 to January 2017

Since 2009, Geoffrey has had responsibility within the discipline for the administration of the curriculum and for the development of the quality of teaching, for instance around the use of the learning management systems and around engaging students.

In 2010, Geoffrey worked with the Master of Commerce team on the development of the Logistics and Supply Chain Management foundation unit alongside academics who managed the other foundation units.

Since 2016, Geoffrey's role has again extended to the Faulty level as the Discipline Post Graduate Co-ordinator responsible for the academic co-ordination of three Master of Commerce Specialisations: Logistics and Supply Chain Management, Aviation and Maritime Management and Logistics, Infrastructure and Transport Management. In this role Geoffrey is responsible for the curriculum of the three Specialisations as well as a pastoral role regarding the progression of students through Specialisation and the broader Master of Commerce program.

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This role involves identifying and working with industry partners (including the ITLS Board of Advice) to ensure that the content of the programs are relevant; as well as working with the Business School and the broader University to maintain the accreditation of the programs and to develop teaching excellence. Within this role, Geoffrey is working on increasing the amount of content delivered outside of the traditional class-room setting through the increased use of audio-visual material with readiness assurance tests to ensure students study the material before coming to class. Geoffrey is also a member of the Business School's Graduate Studies Board which has overall responsibility for all the post graduate teaching programs of the Business School.

In 2016 Geoffrey was the Program Director for the Master of Transport Management and was the acting Program Director for the Master of Logistics and Supply Chain Management. Geoffrey's role in relation to the Master of Transport Management was to create better integration between the various units taught in the program and to work on increasing demand for the program to protect its longer term viability. A second project was to improve the work integrated learning opportunities within the program as University's goal for 2020 is to ensure that all students work with industry during their studies. Currently, we run a competitive industry placement program but we are working on increasing the industry engagement opportunities in other units of study.

Geoffrey's role in relation to the Master of Logistics and Supply Chain Management was to strengthen the existing linkages with industry and to place more emphasis on the development of 'job ready' skills for students within their first Semester of study. This includes, written and verbal presentation, team work and data analysis skills so that students are ready to work with industry partners as part of their final Semester studies. Where once students would be expected to have developed these skills before completing their final Semester, students are now expected to have developed these skills in their first Semester and this requires a change in focus for the foundational units of study. Geoffrey was awarded the Dean's citation for his teaching of the foundational quantitative unit in Semester 1, 2016 which indicates that this approach is appreciated by students.

Research degree supervision

- Secondary Supervisor of Patrick Chi-Hong Tsai, 2012 2013 (PhD completed).
- Secondary Supervisor of Ines Osterle, 2014 2018 (MPhil completed).

Coursework student research unit supervision

- Primary Supervisor of Danfeng Wang, 2016 (completed).
- Primary Supervisor of Kelvin Nicholson, 2012 (completed).
- Primary Supervisor of Zhiqin Cai, 2011 (completed).

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Industry and community engagement and consulting experience

As an Australian Research Council Centre of Excellence, the Institute of Transport and Logistics Studies expects a high standard of industry engagement.

Geoffrey has extensive industry engagement with the public transport industry, other transport industries, infrastructure, government and other enterprises. Over many years, Geoffrey has been involved with the bus industry in particular, working with bus operators, the New South Wales <u>Bus Industry association</u>, government planners, regulators and funders on a range of projects including pricing reviews, the impacts on operators of fare reforms, the development of better bus services and the impacts of de-regulation of point to point services (e.g. taxis, higher cars and Uber services).

Geoffrey has also worked closely with the Community Transport sector around the government's plans to bring the industry into the regulated bus market whilst de-regulating other established parts of their businesses. This is an ongoing project that will take a number of years to play out.

In terms of consulting with government, two projects have been completed in the last year for the Australian Capital Territory's Auditor-General. The first was a report written for the A-G on Canberra's <u>frequent public transport</u> network and the second on the economic benefits of the <u>Capital Metro light rail</u> project. Both reports were inputs into performance audits being conducted by the A-G.

In addition to academic conferences, Geoffrey has presented his research to government and Industry at various forums. The Thredbo series brings together academics, governments and industry representatives and Geoffrey is a regular presenter at these events. Geoffrey has also presented at the Informa Urban Transport Planning Summit 2012 on the topic of 'Passenger focussed bus services' (research project 1 above) and, alongside Prof. Mulley, to Transport for NSW in 2016 on the topic of 'Usage of information sources by public transport travellers' (research project 4 above).

Geoffrey engages with the Logistics and Supply Chain Management industry through his work teaching the foundation quantitative unit and as Post Graduate Coordinator for ITLS. Specific projects have included defining the core-sets of quantitative skills needed by employers of graduate supply chain analysts and working with Coca-Cola Amatil (alongside two other academics) to develop opportunities for our students to work on real projects exploring long-term trends in CCA's supply chains and conceptualising ways for CCA to respond to those long-term trends. This project is in its initial stages but create better connections between students, our curriculum and employers and allow students to work on more realistic problems than the traditional, theoretical, case study.

Other industry and community engagement

Writing articles for online publications and industry journals is an additional form of research dissemination and improves engagement with industry, government and the broader community. Geoffrey has contributed a number of articles in recent years as listed above in the section on research outputs.

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On a quarterly basis, ITLS publishes a newsletter to bus industry, *Bus Buzz*. Geoffrey has been a co-editor of the newsletter since 2011 which aims to inform the industry of academic research of interest and the activities of the public transport team. This is part of an effort to bridge the gap between academic and practice in transportation.

Whilst undertaking his PhD (2003 to 2008), Geoffrey worked as consultant with PricewaterhouseCoopers (PwC) as part of their Economics and Government consulting arm. In addition to consultations relating to public transport, Geoffrey also worked with hotel chains, venture capital firms, a number of airlines, ports, airports, charities and railways. A particular highlight was working on the unsuccessful World Cup bid.

Since 2010, Geoffrey has been the Sydney convenor of the *Australian Timetable Association*. This is an organization for the history and analysis of Australian transport operations with a mix of academic, professional and enthusiasts. In addition, Geoffrey is the archives officer, in this role Geoffrey has been working with the State Library of Victoria on building up an archive of every public timetable published in Australia that is not held elsewhere. So far, Geoffrey has indexed 2500 individual items.

Additional professional development undertaken by Geoffrey Clifton

- Red Cross HLTAID001 Provide cardiopulmonary resuscitation, 2016.
- Red Cross HLTAID002 Provide basic emergency life support, 2016.
- Red Cross HLTAID003 Provide first aid, 2016.
- Diversity and inclusion workshop, June 2016.
- Research supervisor training for supervision of post-graduate research students, 2014.
- Disability confidence for University staff, April 2015.

Additional service to Discipline, Business School and University

- Member of the University of Sydney Business School Faculty Board, Appointed to Interim Faculty Board for 2017 as part of the transition to new governance framework for the University's faculties.
- Member of the Business School's Graduate Studies Board since January 2016.
- Member of the ITLS Award Program Committee since 2010 and co-chair in 2016.
 This role includes responsibility for ensuring ITLS' compliance with Discipline, School and University requirements regarding Academic Honesty, lecture material, design of assessment and Unit of Study Outline templates.
- Week 4 // Open Door 2017, Participation in Week 4 // Open Door event where University academics were invited to join my class to observe my teaching.
- University Welcome to New Students 2017, Academic procession and attendance at the University Welcome to New Students 2017 as one of two representatives from the Business School., 1 March 2017.
- Presented the University of Sydney Business Award 2013 at Girraween High School's Presentation Day, 9 December 2013.

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Media appearances 2017 to 2018

Issues in transportation are often contentious. Geoffrey has an extensive record of working with the media to communicate academically sound content in a clear and simple manner to help further sensible debate. In addition to authored opinion pieces listed above and background briefings provided to a number of journalists, Geoffrey has made the following media appearances in 2017 and 2018:

- Interviewed by Channel 7 TV news about driverless buses being tested in NSW, 24 May 2018
- Quoted by The New Daily newspaper regarding impact of disruption on Sydney's transport network, 5 April 2018
- Quoted by The Sydney Morning Herald regarding the New South Wales Government's Future Transport 2056 strategy, 31 March 2018
- Quoted by news.com.au regarding impact Sydney's traffic and transport network have on liveability of the city, 27 February 2018
- Interviewed by ABC Radio South Australia regarding the SA State Government's proposed public transport fare cut for Adelaide, 16 February 2018
- Quoted by The Sydney Morning Herald regarding traffic congestion in Mascot, 12 February 2018
- Interviewed by 2SER radio regarding Richmond train derailment and Sydney Trains Strike, 23 January 2018
- Interviewed by ABC TV news regarding potential Sydney Train strike, 17 January 2018
- Quoted on <u>news.com.au</u> regarding potential solutions to overcrowding of trains in Sydney, 11 January 2018
- Quoted by Daily Telegraph newspaper regarding disruption on Sydney Trains network, 13 December 2017
- Interviewed by ABC Radio Sydney regarding disruption to evening peak services on Sydney's rail networks, 12 December 2017
- Interviewed by ABC TV News Sydney regarding disruption on Sydney's train network,
 12 December 2017
- Interview on 2SER radio about the impacts of the new Sydney train timetable and discussing the reasons for the change, 6 December 2017
- Interviewed on ABC Radio South Australia Drive show regarding new measures to counter fare evasion in Adelaide, including fare gates and more ticket inspectors, 14 November 2017
- Interviewed by ABC Radio South East NSW regarding IPART's recommendations that regional bus fares be reduced, operations made more efficient and flexible transport services introduced, 16 October 2017

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- Interviewed by The Wire (radio) regarding the release of new carpooling apps, 16 October 2017
- Quoted by SBS Online regarding feasibility of congestion charging and road user charges for Australia, 3 October 2017
- Interviewed by C91.3FM radio regarding a proposal from a group of local councils (WSROC) to build a new train line linking the Hawkesbury to Badgerys Creek and Campbelltown, 27 September 2017
- Quoted by the <u>Sydney Morning Herald</u> regarding strong growth in rail passenger numbers in Sydney's CBD, 31 August 2017
- Quoted by the Sydney Morning Herald regarding strong growth in rail passenger numbers in Sydney, 17 August 2017
- Quoted by City Hub newspaper regarding Light rail construction impacts on small businesses, 6 July 2017
- Interviewed by ABC Radio regarding proposed new roads in Western and Southern Sydney, 13 June 2017
- Extensively quoted by the <u>Daily Telegraph</u> newspaper regarding link between housing affordability and long commuting times, 8 June 2017 This article was syndicated to The Herald Sun and news.com.au
- ABC News (TV), Australia, 26 May 2017
- Interviewed by ABC TV news regarding on demand bus services and franchising of Inner Western Sydney bus services, 26 May 2017
- Quoted the Guardian newspaper regarding franchising of Inner Western Sydney bus services, 23 May 2017
- Quoted by <u>Xinhua</u>'s English language news agency about Transport for NSW refusing
 to support a draft plan to create thousands of new homes in Sydney's northern
 beaches, 26 April 2017
 This article was syndicated by <u>China.org</u> (China), <u>Sina</u> (China) and <u>Asia Pacific Daily</u>
 (Hong Kong).
- Quoted by <u>Xinhua</u>'s English language news agency regarding future congestion in Sydney's train stations, 21 April 2017
 This article was syndicated by <u>Yahoo!</u> (India), <u>Business Standard</u> (India) and <u>Asia</u> <u>Pacific Daily</u> (Hong Kong)
- Interviewed regarding Auditor-General's report on Sydney's future rail network capacity on ABC TV's 7:00 PM News, 12 April 2017
- Radio interview with 2GB's The Alan Jones Breakfast Show with Chris Smith on potential solutions for Sydney's traffic congestion, 5 January 2017
- Radio interview with 2UE's Summer Breakfast with Murray Olds & Deb Knight on Sydney's worsening traffic congestion, 5 January 2017
- Quoted in <u>Daily Mail Australia</u> regarding Sydney's congested roads being slower than New York, 5 January 2017

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- Quoted in The Sydney Morning Herald regarding finding that Sydney's roads are slowest in Australasia, *5 January 2017*
- Quoted regarding future levels of traffic congestion in Sydney by <u>Yahoo 7 News</u> online, 5 January 2017

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