

Curriculum Vitae of Rocco Zito

Qualifications

Bachelor of Engineering in Civil Engineering, (Hons), 1992

PhD May 2002 (Transport Systems Engineering)

Position

1992 - 2002 Research Engineer, Transport Systems Centre, University of South Australia

2002 – Present, Senior Research fellow, Deputy Director Transport Systems Centre.

Professional Affiliations

Graduate Member, Institution of Engineers, Australia

Member, Australian Institute of Traffic Planning and Management

Member, Chartered Institute of Transport in Australia, South Australian Section

Awards

1999 Young Transport Professional of the Year, awarded by the Chartered Institute of Transport in Australia, South Australian Section.

Biography

Rocco is a Senior Research Fellow and Deputy Director of the Transport Systems Centre. His research interests include the use of the Global Positioning System (GPS) in transportation applications (PhD Thesis, awarded May 2002). This research work has mainly involved real time applications with direct links into a Geographical Information Systems (GIS). In this way positional data obtained by GPS can be displayed and analysed in real time. During the course of the work many research projects and consultancies have been undertaken in a wide variety of applications these include:

<ul style="list-style-type: none">• use of GPS and GIS in Intelligent Transport Systems	<ul style="list-style-type: none">• the use of GPS in trip and travel time surveys
<ul style="list-style-type: none">• demand responsive public transport	<ul style="list-style-type: none">• GPS in the derivation of traffic congestion parameters
<ul style="list-style-type: none">• real time integration of GPS and GIS	<ul style="list-style-type: none">• use of GPS and GIS in mining and heavy earth moving
<ul style="list-style-type: none">• GPS and GIS as a tool for law enforcement	

Some of Rocco's more recent work has involved the assessment and investigation of the environmental impacts of various transport policy initiatives, some of these projects include :

Project Title	Industry Collaborator
Modelling Responses of Urban Freight Patterns to Greenhouse Gas Abatement Measures	Bureau of Transport Economics – Australian Greenhouse Office
Biodiesel Verification Trial In MAN NL202 Diesel Buses	Transport SA and SA Passenger Transport Board
Development of emission models for vehicles	TSC Research Project
Assessment of the full impacts of speeds	Transport SA (Safety Strategy)
Study of Intelligent Transport Systems impacts on greenhouse gas emissions and air quality	Department of Transport and Regional Services
Emissions from freight vehicles	Department of Transport and Regional Services
On-Road emission concentration and sound level measurements of vehicles at steady speed	Transport SA (Environment Strategy)
Development of a Greenhouse Gas Model for Mobile Sources in Metropolitan Adelaide	Transport SA (Environment Strategy) – TSC – SENRAC
Assessment of the environmental impacts of speed limit changes	Transport SA (Environment Strategy)
Derivation of urban drive cycles for analysis of air quality and greenhouse gas emissions from road traffic	Transport SA (Environment Strategy) – TSC – ARC SPIRT
Review of the Diesel NEPM for South Australia	Transport Sa - EPA
Performance of Compressed Natural Gas Buses and Energy Implications of Bus Priority in Public Transport	TSC – Passenger Transport Board – Transport SA – SENRAC

In 1999 Rocco was awarded the Young Transport Professional of the Year, by the Chartered Institute of Transport in Australia, South Australian Section. Awarded for the work performed in GPS and GIS applications and environmental modelling.

Committee Membership

- Member of the Intelligent Access Project Technical Committee
- Member of the Geoinformatic Planning and Building Information Technology Committee
- Member of the Division of Information Technology Engineering and the Environment, Early Career Researcher Committee
- Member of the Unisa General Purpose Computing Pool Committee
- Chair of the IEAUST SA Branch Transport Committee

Selected Refereed Publications :

Taylor, M A P and Zito, R (2004). Adelaide. In Nakamura, H (ed). *Urban Transport and the Environment: An International Perspective*. (Elsevier-Pergamon: Oxford)

*Zito, R (2004). A Typical Adelaide Drive: How should it be derived ?. *Papers of the 27th Australasian Transport Research Forum*. September, Adelaide. CD-ROM, Paper no 47. (Transport Systems Centre, University of South Australia: Adelaide).

Pudney, P and Zito, R (2004). Predicting the energy use of a solar-electric commuter car, and some implications for sustainable transport. *Papers of the 27th Australasian Transport Research Forum*. September, Adelaide. CD-ROM, Paper no 47. (Transport Systems Centre, University of South Australia: Adelaide).

Taylor, M A P, Smith, N, D'Este, G M and Zito, R (2004). Modelling the impacts of alternative policy options to reduced greenhouse gas emissions from urban freight transport – a Sydney case study. *Papers of the 27th Australasian Transport Research Forum*. September, Adelaide. CD-ROM, Paper no 47. (Transport Systems Centre, University of South Australia: Adelaide).

Taylor, M A P, Zito, R and Woolley, J E (2003). Effects of ITS implementations – INMS and ATIS – on greenhouse gas and air quality emissions in an urban road corridor, assessed using an instrumented probe vehicle and microsimulation modelling. In Park, C-H, Cho, J R, Oh, J, Hayashi, Y and Viegas, J (eds). *Selected Proceedings of the 9th World Conference on Transport Research*, Seoul, July 2001. (Pergamon-Elsevier: Oxford), CD-ROM, paper no 6438. ISBN 0-08-044274-9.

Taylor, M A P, Woolley, J E and Zito, R (2002). Immersion reality: combining microsimulation modelling and probe vehicles in traffic studies. *Proc 5th IEEE International Conference on Intelligent Transportation Systems (ITSC2002)*. September, Singapore. (National University of Singapore: Singapore) (CD-ROM ISBN 0 7803 7390 1).

Woolley J E, Dyson C B, Taylor M A P, Zito R and Stazic B (2002). *Impacts of lower speed limits in South Australia*, IATTS RESEARCH, 26(2).

Dyson, C B, Taylor, M A P, Woolley, J E and Zito, R (2001). Lower urban speed limits – trading off safety, mobility and environmental impact. *Papers of the Australasian Transport Research Forum 24*, Session 2c, CD-ROM. (Department of Infrastructure, Energy and Resources: Hobart).

Woolley, J E, Taylor, M A P and Zito, R (2001). Modelling of the Southern Expressway using Paramics microsimulation software. *Journal of the Eastern Asia Society for Transportation Studies* 4 (4), pp.279-295.

Taylor, M A P, Zito, R and Woolley, J E (2001). Effects of ITS implementations – INMS and ATIS – on greenhouse gas and air quality emissions in an urban road corridor, assessed using an instrumented probe vehicle and microsimulation modelling. *Proc 9th World Conference on Transport Research*, Seoul, July, paper no 6403, CD-ROM(Korea Transport Institute/Korean Society of Transportation: Seoul).

Zito, R and Taylor, MAP(2001) Road Transport applications of GPS. Proceedings The 5th International Symposium on Satellite Navigation Technologies and Applications. Canberra July 2001.

- Taylor, M A P, Woolley, J E and Zito, R (2000). Integration of the global positioning system and geographical information systems for traffic congestion studies. *Transportation Research C Vol8 2000*.
- Taylor, M A P, Woolley, J E and Zito, R (2000). Measuring and modelling on-road fuel consumption, emissions and vehicle performance. *Proceedings 6th International Conference on Applications of Advanced Technologies in Transportation Engineering*. Singapore, July (National University of Singapore: Singapore), CD-ROM, Paper CR1038.
- Zito, R and Taylor, MAP(1999) Fuel Consumption and Emissions Modelling of the South Australian Vehicle Fleet Using an Instrumented Vehicle. *Proceedings Intelligent Transport Systems Australia 4th International Conference*. Adelaide May 1999.
- Zito, R and Taylor, MAP(1999) Real Time GPS / GIS Applications. *Proceedings The 4th International Symposium on Satellite Navigation Technologies and Applications*. Brisbane July 1999.
- Zito, R and Taylor, MAP(1999) Real Time GPS/GIS Navigation for Police Helicopter Operations. *Proceedings Intelligent Transport Systems Australia 4th International Conference*. Adelaide May 1999.
- D'Este, G M, Zito, R, Taylor, MAP (1998). Using GPS to measure traffic system performance. *Journal of Computer Aided Civil and Infrastructure Engineering*. 14 pp 273-283
- Zito, R and Taylor, MAP(1998) Real Time Navigation for in Police Operations. *Proceedings 3rd International Symposium on GPS Technology*. Tainan, Taiwan. Nov 1998.
- Zito, R and Taylor, MAP (1997) New developments in GPS and GIS technology, *Proceedings of the 21st ATRF conference*, Adelaide Australia, Vol 21.
- Zito R., Taylor M.A.P., and Blanks C. (1997), Differential GPS for Efficient Vehicle Movement, *Proc, The Third International Conference of ITS Australia*, Brisbane, March 1997.
- Tan F. C.K, Zito R. and Jaksa D. (1996), Real Time Integration of GPS for Vehicle Monitoring, *2nd International GPS Symposium*, Taiwan, May 1996.
- Zito, R and Taylor, MAP(1996) Speed Profiles and Vehicle Fuel Consumption at LATM Devices. *Proceedings ARRB 18th Conference*, Vol 18(7) pp. 391-406
- Zito, R, Taylor, MAP and D'Este, GM (1995) GPS in the Time Domain: How Useful a tool for IVHS. *Transportation Research C*, Vol3c (4) pp. 193-209
- Zito, R, Taylor, MAP and D'Este, GM and F.C.K. Tan (1995) Road Transport Applications of GPS. *Proceedings The 5th South East Asian and 36th Australian Surveyors Conference*. Singapore 16 - 20 July, pp. 65-75
- Zito, R, Taylor, MAP and D'Este, GM (1995) What can GPS Deliver? What do Users Really Need?. *Presented at World Conference of Transportation Research*. Sydney Australia. July.
- Zito, R and Taylor, MAP(1995) An Integrated GPS/GIS System for Real Time Congestion Delay and Vehicle Performance Monitoring. *Proceedings International Conference Applications of New Technology to Transport Systems*. Melbourne Australia. 17-19 May, Vol1 1, pp.91-105.

Zito, R. and Taylor, M.A.P. (1995). The use of GPS and GIS in environmental impact assessment. *Journal of the Eastern Asia Society for Transportation Studies*, Vol1 (2), pp. 487-497.

Zito, R and Taylor, MAP (1994) The use of GPS in Travel Time Surveys. *Traffic Engineering and Control*. Vol 35 (12), pp685-690.

Zito, R and D'Este, G (1994) GPS in the Time Domain. *Proceedings of International Conference on Advanced Technologies in Transportation and Traffic Management*, Singapore.

Successful Research Funding

- 1996/1997 Faculty Research Performance Fund
- 1997/1998 Faculty Research Performance Fund
- 1998/1999 Faculty Research Performance Fund
- 1999/2000 Co author of Successful Australian Research Council Grant on Advanced GPS/GIS Applications in the South Australian Police Department
- 1999/2000 Co author of Successful Australian Research Council Grant on the Application of New Technologies in Public Transport systems
- 1999/2000 Co author of Successful S.A. State Energy Research Advisory Committee (SENRAC) Grant on the Development of a Greenhouse Gas Model for Mobile Sources in Metropolitan Adelaide
- 2000/2001 Co author of Successful S.A. State Energy Research Advisory Committee (SENRAC) Grant on the Performance of Compressed Natural Gas Buses and Energy Implications of Bus Priority in Public Transport
- 2000/2001 Co author of Successful Australian Research Council Grant on the Derivation of urban drive cycles for analysis of air quality and greenhouse gas emissions from road traffic
- 2003 Co author of Successful Australian Research Council Grant on the Derivation of Emissions Models from Vehicle Certification Tests
- 2004/2006 Co author of Successful Australian Research Council Grant on the Derivation of Emissions Models for Commercial Vehicles

Professional Interests

Environmental Impacts of Transportation, Information Technology, Computer Modelling, Application of GPS and GIS in Transportation Engineering.