



ITS (MONASH)
2004 ANNUAL REPORT

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**INSTITUTE OF
TRANSPORT STUDIES**

The Australian Key Centre
in Transport Management

The University of Sydney
and Monash University

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FROM THE DIRECTOR'S DESK – HIGHLIGHTS OF 2004

As I reflect on the activities of the past year and all that has been undertaken, it is no wonder that the team looks forward to the end of year break. This has clearly been a year of achievement across all of our key activity areas.

In 2004 we said goodbye to Dr Stephen Greaves, who took up a position at ITS (Sydney), and welcomed Dr Majid Sarvi into his new role as Lecturer in Civil Engineering. Majid had come to us in 2004 as a research fellow from the University of Tokyo, having worked with Professors Avi Ceder and Masao Kuwahara. He is now applying his considerable talents in transport modelling and microsimulation to his teaching and research activities at Monash.

Transport professionals and the community regard education programs as a very important 'core business' activity for universities, and ITS (Monash) has always taken pride in the quality and diversity of the education programs which it delivers. This year saw record enrolments in the undergraduate transport subjects, with enrolments of close to 60 in the final year elective units, reflecting the strength of career opportunities in the transport sector at present and the high quality of the transport teaching at Monash.

The postgraduate program in Transport and Traffic also continues to attract increasing numbers, and a highlight of 2004 was our postgraduate graduation ceremony where staff gathered to meet students from all over Australia. The final unit in the Master of Transport program was delivered, introducing on-line discussion tools in order to provide new opportunities for student-student and student-staff interaction. PhD enrolments reached 7 this year, more than double the number enrolled four years ago. Jim Youngman was awarded his PhD and Merle Chan submitted her thesis. Ruimin Li converted from Masters by research to PhD candidature, and we welcomed Mark Karpovitch and Richard Yeo to the Masters and PhD programs. Mark comes to us after spending a number of years working in the consulting industry in South East Asia, while Richard joins us from the TRRB Transport Research Ltd.

The Transport Management Course in Bus and Coach Operations continues to provide an important foundation for those who are entering the industry or wishing to advance within it. Student numbers are stable, and the revised fees structure has meant that the course is sustaining itself financially. Feedback from the course continues to be very positive, and the program will be further strengthened by some important initiatives which will be unveiled in 2005.

Workshops, lectures and seminars were offered as usual during the year. The Traffic Engineering and Management Workshop was held in Melbourne and as always attracted registrants from throughout Australia. This year saw the launch of the latest edition of the 'Traffic Engineering and Management' book, which sold out to local and international customers in only ten months and is now being reprinted. The 2004 Ogden Transport Lecture was delivered by Professor Graeme Hodge, Professor of Law at Monash University, who spoke about "Transport in the Privatised State" to a capacity audience gathered in the university's city office seminar room in Collins Street.

While maintaining our commitment to quality in our teaching activities, we have been focussing increasing attention on expanding our research activities. Three management initiatives are assisting this process. First, steps were taken to reconstitute our external advisory committee with the first meeting scheduled in early 2005. Second, we have formed an internal Transport Research Management Committee, which considers the overall progress of ongoing research and explores opportunities for engaging in new areas. Finally, we have increased the frequency of our Transport Research Workshops to fortnightly, giving students and staff a more regular forum for presenting work and discussing grant applications. New research projects include performance of bus rapid transit, public transport provision in relation to transport need, modelling weaving phenomena, road space allocation, transport and social exclusion, kerbside tram stop safety, public transport interchange design, real time passenger information systems, performance reviews of the last three Olympic Games, freeway ramp merging processes, public transport training in higher education, evaluation of the Monash University TravelSmart initiative, and examination of opportunities to enhance employee access to an industrial area in metropolitan Melbourne.

As can be seen from this list of new projects, Professor Currie, Australia's first Professor of Public Transport, has continued to strengthen our public transport research activities, supported by the Department of Infrastructure, VicRoads and the Bus Association of Victoria. His ongoing work promotes greater collaboration with and contribution to both industry and governmental transport initiatives over a wide range of areas. They include VicRoads, the Bus Industry Confederation, RTA Sydney transit ways, DOI Tasmania and Victoria, City of Port Phillip, Yarra Trams, the National Passenger Transport Summit, the Victorian Local Governance Association, Transport Research Board technical committees, the University of Queensland, the Victorian Planning and Environmental Law Association and the Victorian auditor general's office.

As always, we have showcased our research work by participating in a range of international conferences, including the Transportation Research Board Conference (USA), European Conference on Mobility Management (France), Urban Transport 2004 Conference (Germany), ITS World Congress (Spain), World Conference on Transport Research (Turkey) and the European Transport Forum (France). A number of joint initiatives with overseas researchers are being discussed for 2005, amongst which is my own Outside Studies Program in the Netherlands. The year ended on a high note on the research front with two of our PhD students, Ruimin Li and Rita Seethaler, being jointly awarded the Rodney Vaughn Prize for the best postgraduate paper presented at the 26th Annual Conference of the Australian Institutes of Transport Research (CAITR).

We also started on our 'face lift' in 2004, with the release of materials consistent with the latest visual image for Monash University. We re-designed and re-launched our web site, which now provides more comprehensive coverage of our activities and allows prospective students to download enrolment forms. We released an eye catching new brochure for the postgraduate program in transport and traffic. We were a launch user of the new Monash University on-line payment system, successfully handling all registrations and payments for the Traffic Engineering and Management workshop and the majority of sales of the Traffic Engineering and Management book.

My comments above highlight the scale and scope of the teaching, research and administrative activities at the Monash node of the Key Centre. In response to the growth and diversity of activities at the two nodes of the Key Centre, each node is preparing an individual annual report for 2004. This reflects the ongoing evolution of the Key Centre's operations and provides each node with the opportunity to present its achievements over the year in a way which is most meaningful to its stakeholders. Through sharing of research resources, ongoing interaction between the academic staff and staff research seminars, the Key Centre continues to evolve and facilitate collaboration between the two nodes. Of course, that evolutionary process has not drawn to an end and there will be some further changes made in 2005 which will continue the evolution of the National Key Centre in Transport Management.

We hope that you find this report of the 2004 activities of ITS (Monash) to be of value. Please do not hesitate to contact us if you would like further details about any item.

A handwritten signature in black ink that reads "G. Rose". The signature is written in a cursive, flowing style with a large initial 'G'.

Associate Professor Geoff Rose
Director, ITS (Monash)

ABOUT ITS (MONASH)

The Institute of Transport Studies was established in 1995 as a Commonwealth Key Centre of Teaching and Research in Transport Management. While transport education and research programs had been offered at the Monash University Clayton campus for over 35 years, the formation of the Institute of Transport Studies heralded an expansion of those activities and in particular the development of a number of off-campus learning (distance education) programs. The Institute of Transport Studies (Monash) now operates as a self-funded entity. ITS (Monash) is located within the Department of Civil Engineering, the original home of the transport education and research programs at Monash University.

Our Mission

- ◆ To progress transport knowledge and practice

Our Vision

- ◆ To be regarded as a provider of international standard transport education and research which contributes to the prosperity and sustainability of industry and the wider community

Our Values

In following our mission, we:

- ◆ Lead through innovation
- ◆ Provide quality education and research services
- ◆ Build a supportive team

Develop effective partnerships

- ◆ Practise self-sustaining financial management

Our Core Activity Areas

The activities of ITS (Monash) are concentrated in the following areas:

Education:

Education activities contribute to building professional capacity in the transport and traffic industry and focus on transport and traffic engineering, transport policy, planning and operations management. Education programs are offered at the following levels:

- ◆ Undergraduate
- ◆ Postgraduate
- ◆ Continuing education: seminars, short courses and workshops
- ◆ Industry programs

Research:

ITS (Monash) conducts research which contributes to the prosperity and sustainability of industry and the wider community through understanding, predicting and evaluating travel demand, transport operations, transport and

traffic management and public transport planning and management. ITS (Monash) research is focused in four program areas:

- ◆ Travel demand
- ◆ Transport operations
- ◆ Transport and traffic planning and management
- ◆ Public transport planning and management

Professional and community service:

ITS (Monash) staff engage in a range of professional and community service activities including:

- ◆ Arranging public lectures on contemporary transport issues
- ◆ Serving as committee members of national and international bodies
- ◆ Contributing to the organization of state, national and international conferences
- ◆ Providing editorial services to professional journals and publications
- ◆ Reviewing papers submitted for publication at conferences and in journals

Our Team

The ITS (Monash) team includes:

- Professor Bill Young, Head of the Department of Civil Engineering
- Professor Graham Currie, Professor of Public Transport
- Professor Rahmi Akcelik, Adjunct Professor
- Professor Tony Richardson, Adjunct Professor
- Associate Professor Geoff Rose, Director of ITS (Monash)
- Mr John Clements, Program Director, Transport Management Course
- Dr Majid Sarvi, Lecturer, Department of Civil Engineering
- Ms Astrid de Alwis, Assistant Program Director, Transport Management Course
- Ms Brenda O'Keefe, Administration Manager
- Ms Julia Arnold, Administration Officer (Finance)
- Ms Merle Chan, research student
- Mr Jim Youngman, research student
- Ms Rita Seethaler, research student
- Mr Tim Martin, research student
- Mr Tan Yan Weng, research student
- Ms Ruimin Li, research student
- Mr Mark Karpovitch, research student
- Mr Richard Yeo, research student
- Mr Martijn Abeling, research student

EDUCATION ACTIVITIES

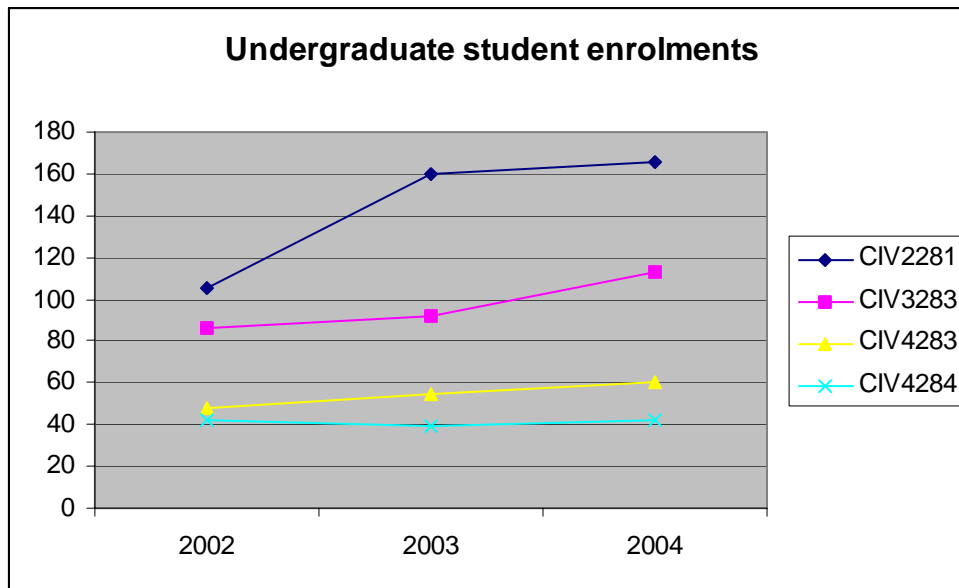
The educational activities and programs at ITS (Monash) include:

- Undergraduate teaching
- Postgraduate degrees by research
 - PhD program
 - Master of Engineering Science by research
- Postgraduate degrees by coursework
 - Graduate Certificate in Transport and Traffic
 - Postgraduate Diploma in Transport and Traffic
 - Master of Transport
 - Master of Traffic
 - Master of Infrastructure Engineering and Management (course management responsibility)
- Transport industry education programs
 - Transport Management Course in Bus and Coach Operations
 - Education Program in Parking Management
- Professional development, workshops/short courses

Undergraduate teaching

Staff associated with ITS (Monash) play a key role in the delivery of the undergraduate transport units in the civil and environmental engineering programs. These teaching activities are important to the stability of the group because they underpin three staff appointments (Professor Bill Young, Associate Professor Geoff Rose and Dr Majid Sarvi). The undergraduate programs are significant because they are a common entry path into the transport profession.

The last major course revision produced a structure of core units in both levels 2 and 3 followed by two electives in level 4. The core unit at level 2, CIV2281 Transport and traffic, is taught by Associate Professor Geoff Rose, the core unit at level 3, CIV3283 Road engineering, is taught by Dr Majid Sarvi, one final year elective (CIV4283 Transport planning) is taught by Associate Professor Geoff Rose while the other (CIV4284 Transport systems) is taught by Professor Bill Young. Student enrolments over the last three years show a substantial increase in three out of the four units (see Figure 1). The core level 2 unit increases student awareness of career opportunities in transport and the presence of core units in both levels 2 and 3 helps to stimulate student interest in the level 4 electives.



KEY TO UNIT CODES:

CIV2281 - Transport and traffic

CIV3283 - Road engineering

CIV4283 - Transport planning

CIV4284 - Transport systems

Figure 1: Trends in undergraduate transport unit enrolments

Staff also supervise final year research project students who are enrolled in CIV4210 Project A and CIV4211 Project B (Professors Bill Young and Graham Currie, Associate Professor Geoff Rose and Dr Majid Sarvi). Details of those projects are provided in the section of this report which deals with research activities. Dr Majid Sarvi also contributes to the transport component of the major group design subject (CIV4212 Civil engineering practice 4) which is a core unit in the final year of the civil engineering degree.

Staff are also responsible for two other units in the civil and environmental engineering programs: CIV3204 Engineering investigations which is taught by Dr Majid Sarvi and CIV3205 Project management for civil engineers which is taught by Professor Bill Young.

Undergraduate student prizes

The following prizes were awarded in 2004:

- **The GHD Highway Design Prize** – awarded to the group of BE students who submitted the best highway design – Joseph Bowden, Michael Powell, Jackson Ross and Duncan Stewart
- **The Richardson Prize in Transport** – awarded to the BE student showing the greatest proficiency in one transport elective and project – Peter Doran
- **The Traffix Group Prize** – awarded to the BE student showing the greatest proficiency in level 4 transport engineering elective subjects – Andrew Somers

Undergraduate student scholarships

- **The ITS (Monash) Undergraduate Student Scholarship** was initiated in 2001 to encourage outstanding undergraduate students to consider a research career in transportation. David Young was awarded a scholarship to undertake an international review of education and research activities in the public transport industry. He worked with Professor Currie from December 2003 to February 2004.
- **The Traffix Group** (formerly Turnbull Fenner Pty Ltd) generously offers two scholarships to students who have an interest in and intend to pursue careers in transport engineering. The students must be in levels 2 and 3 of the Bachelor of Engineering (Civil Engineering) degree at the time of application, and are awarded \$1,000 and \$1,500 respectively, as well as six to twelve weeks' work experience with the company. In 2004, the level 2 scholarship was awarded to Freya Mills and the level 3 scholarship to Jeffrey Wright.

ITE student industry night

Majid Sarvi is the ITE student chapter co-ordinator for 2004, and in this role he organised the annual ITE student industry night. Representatives of local and state government organisations, private industry and Monash University presented an overview of the job potentials for transport graduates. The evening was attended by 60 students and was highly successful.

Postgraduate teaching

Enrolments in the postgraduate coursework program, as well as higher degree by research enrolments (MEngSci (Research) and PhD), show a strong increase over the last five years as shown in Figures 2 and 3.

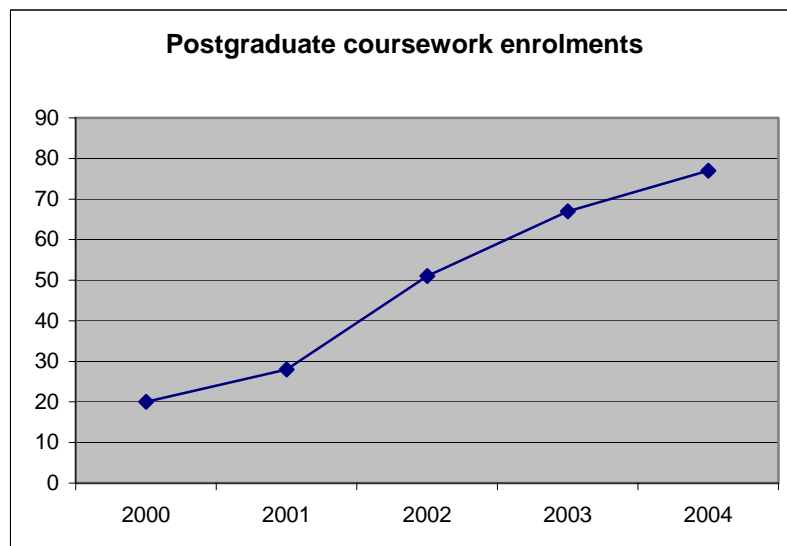


Figure 2: Trends in postgraduate coursework student enrolments

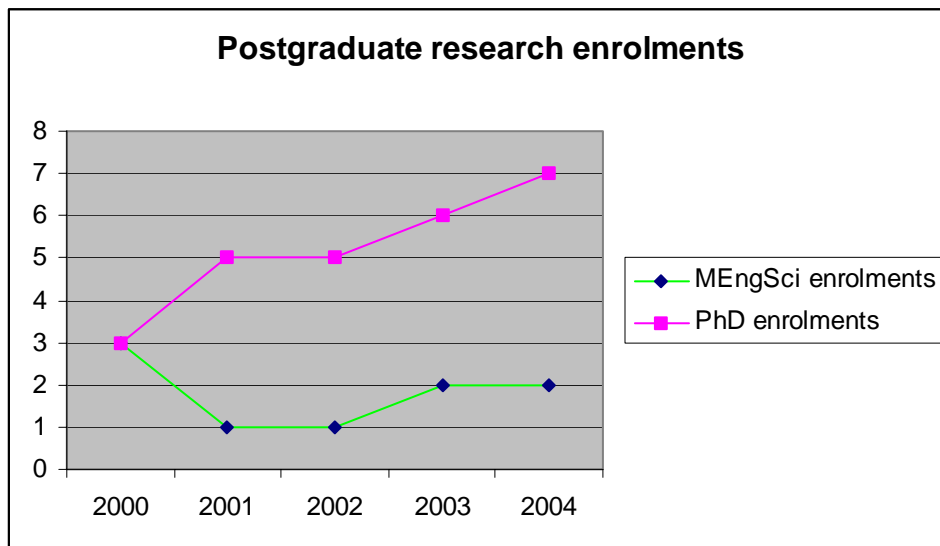


Figure 3: Trends in postgraduate research student enrolments

PhD program

Students engaged in PhD research at ITS Monash during 2004 were:

Merle Chan: Impacts of in-vehicle navigation systems on travel behaviour (submitted thesis in September 2004)

Tim Martin: Predicting pavement performance at a road network and road program level.

Tan Yan Weng (external): A study of parking in multi-use facilities

Jim Youngman: The modelling and intelligent optimisation of field service territories (awarded degree in October 2004)

Rita Seethaler: Investigation into the use of persuasion techniques in transport policy

Richard Yeo: Effects of emerging large road freight vehicles on the performance of typical Australian road pavements

Ruimin Li: Improving travel time estimation models

Master of Engineering Science by research

Students engaged in Masters research at ITS Monash during 2004 were:

Dudung Purwadi: Using stated preference method to examine travel preference in Indonesia

Mark Karpovitch: Transferred technology based transport, infrastructure and engineering projects financed and undertaken in China and Asia

Postgraduate degrees by coursework

The revised distance education postgraduate program in Transport and Traffic came into effect in 2003 following revisions made to the program during 2002. As part of the course changes, two new units were added to the program: CIV5315 Transport

economics, which was first offered in semester 2, 2003, and CIV5314 Transport planning and policy which came on line in semester 1, 2004.

The course continues to attract strong interest from throughout Australia and increasingly overseas. A preliminary review undertaken during 2003 laid foundations for more detailed development to be undertaken in 2004/5 on additional units and specialisations for the program. A new unit covering public transport planning and management will be added.

Transport and traffic related units offered in 2004 as part of the distance education postgraduate coursework degree programs are listed below, along with details of the unit co-ordinator:

- CIV5301 Traffic engineering fundamentals (Rose)
- CIV5302 Road traffic: engineering and management (Young)
- CIV5303 Quantitative methods (Sarvi)
- CIV5304 Intelligent transport systems (Rose)
- CIV5305 Transport network models (Sarvi)
- CIV5306 Road safety engineering (Daly/Rose)
- CIV5307 Parking policy and design (Young)
- CIV5308 Case studies in transport (Rose/Currie)
- CIV5310 Infrastructure project management (Seethaler)
- CIV5311 Infrastructure project and policy evaluation (Richardson)
- CIV5314 Transport economics (Clements)
- CIV5315 Transport planning and policy (Rose)

Master of Infrastructure Engineering and Management

Using the same format and operational methods as the ITS (Monash) postgraduate programs in transport and traffic, the Department of Civil Engineering developed a distance education masters program in infrastructure engineering and management in 2001. The course consists of eight units dealing with asset management, project management and project and policy evaluation, with specialisations in traffic, transport and water engineering. As a result of the experience gained in running the Bus and Coach and Transport Masters courses, it is managed by the Administration Manager of ITS (Monash), Brenda O'Keefe, on a contract basis for the Department. The course was offered for the first time in 2002 and there are 42 students enrolled in 2004.

Postgraduate graduation ceremony

The move in the late 1990's to distance education radically changed the ways in which staff and students communicate. While graduation ceremonies are always a real source of joy, the end of year graduation this year took on a special meaning when, for some of us, it was the first time we had met. It is testimony to the quality of communication which can be established by phone and email that the gathering seemed like a reunion of old friends rather than a group of people who had never met before. Students travelled from Queensland, New South Wales, Western Australia, Tasmania and New Zealand to attend the graduation, and the reception hosted prior to the graduation ceremony provided an opportunity for us all to meet and celebrate everyone's achievements. We look forward to future occasions of this kind, and are encouraged that the on-line discussion tools which are now being incorporated into new units presented from 2004 onwards will continue to enhance student engagement.



Figure 4: Attendees at the postgraduate graduation reception
 (L to R: Professor Bill Young, Mr Daniel Harney, Mr Keith Midson, Ms Christine Wong, A/Prof Geoff Rose, Ms Brenda O'Keefe, Mr Johann Tay, Mr John Clements, Mr Jason Bolger & Ms Kala Senathirajah)

Postgraduate student awards

- **Rodney Vaughn prize** – sponsored by Professor Tony Richardson - for the best postgraduate student paper presented at the annual Conference of the Australian Institutes of Transport Research (CAITR) – Ruimin Li and Rita Seethaler (shared)



Figure 5: Rita Seethaler and Ruimin Lee (left and right) with Professor Tony Richardson at the presentation of the Rodney Vaughn prize

Transport industry education programs

The transport industry education programs remain core activities of ITS (Monash). Following the launch of the Bus and Coach accreditation course in 1999, enrolments have stabilised (See Figure 6) as new operators join the industry or existing operators employ new staff or seek to upgrade their qualifications. Enrolments in the course in Parking Management remain steady.

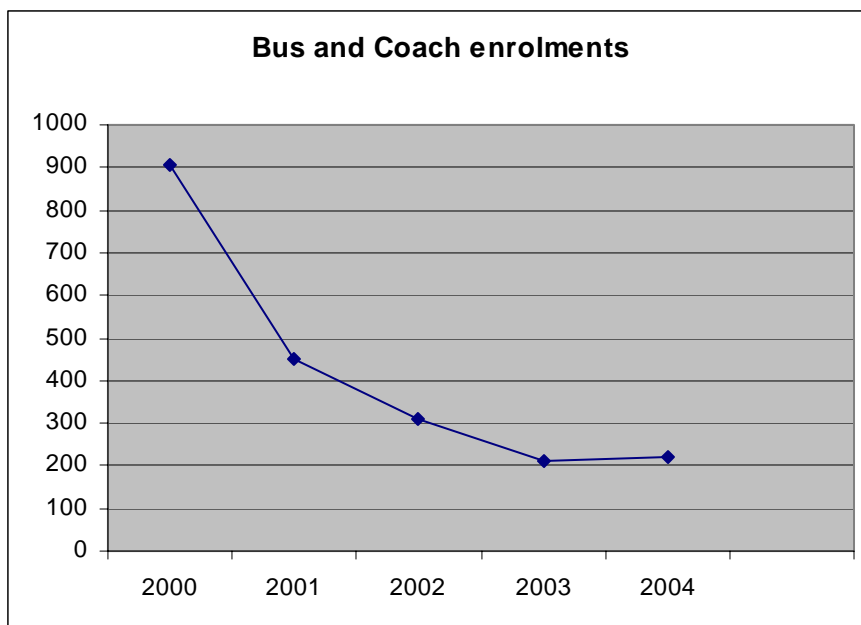


Figure 6: Enrolments in the Transport Management Course in Bus and Coach Operations

Transport Management Course in Bus and Coach Operations

The Transport Management Course in Bus and Coach Operations, which forms part of the industry accreditation system, was launched in March 1999. The distance education delivery is supplemented by a half day introductory ‘face-to-face’ session at the beginning of each semester, for students who are new to the course. Since the course was introduced, over 1300 operators have successfully completed.

Course structure

The full course consists of four units, each of which requires one semester (12 weeks) of study. Unit selection is determined by the category of accreditation being sought. The four units are:

- Unit 4101 Introduction to legislation and operations
- Unit 4102 Financial management
- Unit 4103 Human resource management
- Unit 4104 Marketing, planning and operations

All units selected for study need to be completed within two years of initially enrolling in the course. Operators of scheduled services that operate five or less vehicles (normally school bus operators only) need to complete unit 4101 only. Operators of

scheduled services that operate five or less vehicles who wish to upgrade from small operator accreditation to offer tour or charter services need to complete units 4102, 4103 and 4104. All other operators (including tour and charter) need to complete all four units.

Course developments

Feedback from course participants has been excellent, indicating the modifications to the course undertaken since its inception have further improved its relevance and service delivery, especially with regard to meeting the needs of new participating groups of large operators (industry entrants, additional management and supervisory staff, aspiring managers), and of small operators wanting to expand their range of services.

With fewer unit enrolments, efficiencies in course delivery have been successfully achieved and financial viability of the program improved. To maintain financial viability in a rising cost environment, annual unit fee changes have been introduced.

In response to participant feedback, in 2003 a revised schedule for offering the management subjects was introduced. One management subject was made available in each of the three semesters, with the introductory subject 4101 continuing to be offered in all three semesters. Subject manuals were revised to enable the management subjects to be taken in any order, thereby enabling participants to complete the course in minimum time. The Department of Infrastructure and the Bus Association of Victoria supported these changes as a means of continuing to provide efficient service to operators in an environment of naturally declining enrolments.

In 2004, as predicted, numbers have finally stabilized at around 200 unit enrolments a year, and there is an economically viable number of enrolments in each of the three semesters. Course fees have been increased in line with cost increases and with fee changes for postgraduate award courses. Course notes and examinations continue to be updated regularly. ITS (Monash) staff have met with the Department of Infrastructure Bus Accreditation Group and further discussions will be held early in 2005 to consider implementation of enhancements to the course to ensure it meets the needs of all stakeholders.

Education Program in Parking Management

The Education Program in Parking Management was initiated by ITS (Monash) in February 1998. It is a national course offered by distance education. The program was developed by ITS (Monash) and the Parking Association of Australia Inc., in consultation with parking operators, equipment manufacturers, consultants and local government engineers. The course is aimed at operators, managers, engineers, analysts and planners working in the parking area. The education program aims to develop knowledge and understanding of parking specialisations which will assist participants to advance their careers in the parking industry by providing knowledge of management, policy, design, technology and information systems. The program enables participants to bring together knowledge from the many disciplines involved in the parking industry and to communicate effectively with other people in the industry and the wider community. It also addresses issues related to local government, regional and state authorities, consultancies and others in the parking profession.

The four units are each comprised of 12 topics, and there are self assessment review questions for each topic and an assignment for each unit. A prize of \$200 is made each year to the top student completing the program. There were 5 enrolments in the course in 2004. The units offered are as follows:

- Unit 1101 Introduction to parking
- Unit 1102 Parking management
- Unit 1103 Parking design & policy
- Unit 1104 Parking technology & information collection.

Transport industry education program and postgraduate coursework program awards

In 2004, the presentation of awards to outstanding students in the Transport Management Course in Bus and Coach Operations and the postgraduate program in Transport and Traffic was again held in conjunction with the fourth annual Ogden Lecture (see page 28). This evening provides the ideal forum in which to recognize the achievements of our most successful students. There were 84 bus and coach operators and 10 postgraduate coursework students who completed their courses in 2003/4.

Industry and government sponsored awards for outstanding performance in these courses were:

- **VicRoads prize in Transport Engineering** – awarded to the postgraduate student who has achieved the highest average mark in their coursework units – Daniel Brown
- **The Bus Association of Victoria Overall Award for best performance in all units** - George Scott, Seasight Tours.
- **Department of Infrastructure Small Operator Award for Unit 4101 Introduction to legislation and operations** - Ian Wright, Covenant College
- **iComply, AC/AO Operator Award for Unit 4101 Introduction to legislation and operations** - Jian Ming Yuan
- **The Pitcher Partners Large Operator Award for Unit 4102 Financial management** - Peter Jennings, Martyrs Bus Service
- **The Eastside Truck and Bus Service Centre Award for Unit 4104, Marketing, planning and operations** - Alan Fenner, Park Trek
- **The Grenda Group Award for Unit 4103 Human resource management** – Luke Konynenburg, Deluxe Coachlines Australia



Figure 7: Award recipients and sponsor representatives associated with the Transport Management Course in Bus and Coach Operations at the annual awards night

(L to R – Luke Konyenburg (4103 winner), Paul Molemar (iComply, AC/AO operator 4101 sponsor), Kevin Norris (Grenda's, 4103 sponsor), Andrew Cornwall (Eastcoast, 4104 sponsor), Trisha Brett (DOI, small operator 4101 sponsor), John Stanley (BAV, overall TMC award sponsor), Peter Jennings (4102 winner), Lorna Clerkin for Alan Fenner (absent, 4104 winner)

Professional Development

Traffic Engineering and Management Workshop

The Traffic Engineering and Management workshop was held on 22 and 23 March 2004 at the Bayview Conference Centre, Monash University. As always, this workshop attracted considerable interest from transport professionals from a wide geographical area with a total of 59 participants drawn from Queensland, New South Wales, Victoria, Tasmania and South Australia. David Anderson, the Chief Executive of VicRoads spoke at the workshop dinner. Topics covered at the workshop included human factors, planning for special events, design for public transport and risk management. At this year's workshop, the latest edition of the book "Traffic Engineering and Management" was launched.

RESEARCH ACTIVITIES

Transport research at ITS (Monash) is focused into four program streams with each covering a range of topics as listed below:

- Travel demand
 - Mobility management and travel behaviour change
 - Role of information (e.g. ATIS) in influencing travel behaviour
 - Transport and land use interaction
 - Disabled access
 - Demand response to innovative transport modes and technologies

- Transport operations
 - Road based public transport
 - Operations management
 - Environmental impacts
 - Intelligent Transport Systems
 - Non-motorised transport

- Transport and traffic management
 - Road space and traffic management
 - Investment appraisal and evaluation
 - Demand management
 - Policy

- Public transport planning and management
 - Service planning and development
 - Transport needs analysis
 - Demand assessment and forecasting
 - Rural and regional transport
 - Mass transit
 - Transport planning for special events

Overview of current research projects

The following abstracts of current research projects have been classified under the above research program streams. Funding source is noted where applicable.

Travel demand

- **Evaluation of the 2004 Monash University TravelSMART initiative (Rose)**

This report evaluates the TravelSMART initiative run at the Monash University Clayton Campus in 2004. Statistically significant changes in travel behaviour were measured between 2003 and 2004 with greater use of walking, cycling, public transport and carpooling. The survey revealed the components that students valued most (public transport tickets and information) and also provided insight into barriers which need to be overcome to increase the use of environmentally friendly modes of commuting to campus. This research has been undertaken in conjunction with the Victorian Department of Infrastructure.

- **Enhancing South Dandenong employee access (Rose)**

Employers have noted concerns that some employees find it difficult to access workplaces in the South Dandenong area of outer south east Melbourne. The main concerns raised are poor public transport services, the widely dispersed nature of development and the lack of footpaths and bicycle facilities for access. ITS (Monash) is undertaking a feasibility assessment for development of an employee travel plan in this area. The feasibility assessment considers the range of suitable mobility options and the process through which a mobility plan could be developed for outer metropolitan employer(s). This research has been undertaken in conjunction with the City of Greater Dandenong.

- **Impacts of in-vehicle navigation systems on travel behaviour (Chan/Rose) –PhD project**

In-vehicle navigation systems (IVNS) are now available in Australia as a result of the production of navigable map databases for major Australian cities. These devices provide synthetic voice turn-by-turn guidance to assist the driver in navigating to a nominated destination.

These in-vehicle devices have the potential to improve safety and mobility. This project focused on the mobility aspect by exploring the extent to which devices of this form can influence decisions relating to trip timing, trip frequency, destination, mode choice and route choice. The extent of impact was determined by the GPS data collected from a field study. Private car drivers were recruited to trial the use of an IVNS for up to four weeks. The participants were required to keep a travel diary. The recorded trips facilitated a comparison of their travel behaviour before and after the usage of the IVNS. To capture their route choice behaviour, a routing exercise was conducted to understand the decision process employed by each participant when following the routes advised by the IVNS. The last part of data collection required the participant to indicate their stated choices of destination and trip timing in a self-completion questionnaire.

Merle Chan submitted her thesis in September 2004.

- **A study of parking in multi-use facilities (Tan/Young) - PhD project**

Tan Yan Weng is an Associate Professor in the School of Civil and Structural Engineering at Nanyang Technological University, Singapore. His current PhD research

is in the area of parking systems design, with particular emphasis on developing an interactive stated preference approach to collect information on parking behaviour in multi-use facilities. This study investigates the application of parking modelling to the design and enhancement of multi-storey parking facilities. The PARKSIM model is used as a base and vehicle movement in multi-storey facilities modelled to enhance its present capabilities. The microsimulation model considers different user and vehicle types within a mixed use development as well as different types of parking operations. It incorporates algorithms for route choice, car following and lane-changing within the car park and external road network.

- **Travel behaviour change opportunities of major events (Rose)**

This study is exploring the potential of major events (specifically a “ride to work” day) to provide a basis for longer term travel behaviour change. The research is being conducted in conjunction with Bicycle Victoria and the Victorian Department of Infrastructure (DOI) and is funded by the Australian Greenhouse Office and DOI.

- **Impact of ticket parking on travel behaviour at Monash University – Clayton campus (Jenkinson/Rose) – undergraduate research project**

This project undertakes a survey of the users of the day ticket facility in the new Engineering multi-level car park. Over the 2003/2004 summer break, two new levels were added to the Engineering multi-level car park. One of those new levels was designated for users who purchase a day ticket. This facility is being provided in part because of the loss of parking at Blackburn Road as a result of the construction of the synchrotron. This project examines usage of the facility and undertakes a survey of users to provide insight into who is using the facility.

- **TravelSmart and car ownership decisions (Li/Rose) – undergraduate research project**

This study seeks to discover whether there is scope to develop an information and/or support program to influence a household’s car ownership decisions in a way which enables that household to continue to participate in activities while reducing motor vehicle use. A household’s car ownership decisions have profound implications on travel patterns. Of particular interest to this project are single car households who are contemplating the purchase of a second car, or two car households contemplating the sale of one car. The study seeks to discover whether there is scope to develop an information and/or support program to influence these decisions in a way which enables the household to continue to participate in activities while reducing motor vehicle use.

- **Parking behaviour (Zivanovic/Yeung/Young) – undergraduate research project**

The process of searching for a parking space is crucial in the design of parking facilities. It is necessary to understand how and why people search for particular spaces. This study investigates the search pattern for drivers in multistorey parking facilities.

Transport operations

- **Predicting pavement performance at a road network and road project level (Martin/Young) – PhD project**

Tim Martin is a principal research engineer with ARRB Transport Research Ltd, and commenced his PhD in April 2001. It is postulated, and generally observed, that pavement performance is influenced mainly by levels of maintenance expenditure, climate, traffic loading and its associated dynamic effects and the structural condition of the pavement and its variability along the pavement. All factors are interrelated and correlation of these factors is prevalent in the usual historical performance databases

used in quantifying pavement performance. This research aims to develop improved network and program level roughness deterioration models, including identifying the components of uncertainty associated with these models. The quantification of pavement performance will take the form of deterioration relationships expressed as a function of time, traffic loading and other variables and will cover sealed granular pavements (typical of 95% of Australia's sealed road network) and the typical range of traffic levels and climatic conditions for pavements (network and program level) within most road networks in Australia. Pavement performance will be assessed by an overall serviceability and surface condition measure and an overall structural condition measure. More accurate deterioration models will improve the reliability of the estimates of road wear and cost allocation (with implications for heavy vehicle charging), of the estimates of the differences in road maintenance costs that are due to the various climatic regions in Australia, and of the estimates for maintenance and rehabilitation scheduling along each road in the road network (with implications for the estimation of the capital costs of increased pavement capacity under the regime of increased road use).

- **The modelling and intelligent optimisation of field service territories (Youngman/Rose) – PhD project**

Jim Youngman has many years of experience in operations research related to field service management through a long career with the RACV. Field service is concerned with the delivery of services to customers who are spatially distributed. Common examples are emergency services (police, fire and ambulance), photocopier or computer repair, home maintenance (e.g. plumbers and electricians) and roadside vehicle breakdown services. For a variety of reasons, it is common for service staff (henceforth referred to as “units”) to be assigned to territories each of which is manned by one or more units. Two distinct forms of travel occur in field services. In cases such as ambulance and fire services the requests are often so urgent that there must be a small probability that no units are available when the request is received. This implies that utilisation will be small and units would normally return to their base station at the end of a job: “round trips”. The focus of this project was the “sequential” trip situation where utilisation is much higher and units usually travel directly from one job to the next. The aim of the project was to find a process for subdividing any region into territories that results in near minimal response times for service requests, assuming the total number of staff available is fixed.

Jim was awarded his PhD in October 2004.

- **Performance based standards for heavy vehicles (Young)**

This study has explored the role and potential for performance based standards in improving the economic, safety and environmental performance of the road system. This study is part of an Austroads project on performance based standards for heavy vehicles.

- **Regulation of personal mobility devices (Rose)**

ITS (Monash) has continued a research interest in the regulation of motorised personal mobility devices such as scooters, power assisted bicycles and the Seqway Human Transporter. A submission was made commenting on the Australian Transport Council's Working Group Report titled “Review of the safety of, and associated rules for, scooters and other wheeled recreational devices” and an associated presentation made to the Victorian Bicycle Advisory Committee.

- **Environmental impacts of transport (Young)**

This project explores the relationship between land use, transport and the environment. Long term changes in transport and their impact on land use and the environment are investigated.

- **Sustainability and urban transport (Young)**

This project explores the interaction between the transport system and sustainability of cities. The study proposes a number of projects and investigates their utilisation of framework acceptability.

- **Mobile phones as traffic probes (Rose/Sekercioglu/Ygnace)**

This study is exploring the scope for using mobile phones as traffic probes to collect traffic data. This technology has application to parts of the road transport network which are not instrumented with traditional data collection equipment. This is a collaborative project involving A/Prof Geoff Rose from ITS (Monash) along with Dr Ahmet Sekercioglu from Electrical and Computer Systems Engineering at Monash University and Dr Jean-Luc Ygnace from INRETS, France. The study is being supported by an Engineering Faculty Small Research Grant.

- **Travel time prediction (Li/ Rose) - PhD project**

Information on travel time is important to road users and road system managers. This project is developing models which can be used to predict travel times. While traditional approaches focus on prediction of average travel time, this research is also aiming to estimate the level of uncertainty of the forecast. The models are being developed on the basis of the traffic data routinely collected by inductive loop detectors on motorways (speed, flow and occupancy) as well as probe vehicle data which can be provided by automatic vehicle identification systems. This study is being undertaken in conjunction with Transurban and Vic Roads.

- **The effects of emerging large road freight vehicles on the performance of Australian road pavements (Yeo/Young) - PhD project**

- **Transferred technology based transport, infrastructure and engineering projects financed and undertaken in China and Asia (Karpovitch/Young) - MEngSci project**

High economic growth rates of the economies in Asia and China have meant increased transport and infrastructure construction project activity in the region. This program of research aims to investigate and analyse the influence of systems of managing and financing large public transport and infrastructure projects on their outcome.

- **Vehicle drive cycles (de Marco/Warren/Young) – undergraduate research project**

Private and public transport vehicles are significant contributors to energy consumption and air pollution in urban areas. In order to predict the levels of energy consumption and pollution created by vehicles, it is necessary to understand how drivers make travel route decisions. Data loggers are used to follow private and public transport vehicle movements through the road system. This data forms the basis of a study of vehicle drive cycles which will be used to help predict the levels of energy consumption and pollution created by vehicles.

- **Bicycle holding rails – help or hindrance? (Chau/Rose) – undergraduate research project**

Bicycle holding rails are often provided where bike paths cross roads/intersections so that cyclists can wait to cross while remaining seated on their bike and ready to push off. These rails cost money to install and may require maintenance. In some circumstances they are a potential hazard to pedestrians and may restrict footpath access for individuals in wheelchairs. This study explores their application and, through selected case studies, gauges user reactions in Melbourne. A survey of a number of sites provides a basis for correlating the different site characteristics with use and possible negative safety impacts. The project is being undertaken in conjunction with the City of Yarra.

- **Bicycle travel time and delay survey (Comport/Rose) – undergraduate research project**

This project explores the application of automated equipment to the collection of bicycle travel time and delay data. The equipment includes a portable GPS receiver and data logger and a wireless bicycle mounted computer/data recorder. The study compares the speed data recorded by the two devices and then undertakes a field study to measure bicycle travel times and delays along some case study routes.

- **Alternative fuelled vehicles and transport policy (Fung/Rose) – undergraduate research project**

This project examined developments in alternative fuelled vehicles with a particular emphasis on electric and hybrid (petrol/electric) vehicles. In addition to exploring the current availability of these vehicles worldwide, the study also sought to identify transport policy instruments which are being used around the world to stimulate purchase and use of these vehicles.

Transport and traffic management

- **Accuracy and traffic simulation modelling (Young)**

This project looks at the reliability of traffic simulation models. In particular it investigates the assumptions made in the model and their impact on the output. Particular attention will be paid to assumptions about drivers risk taking.

- **Using stated preference method to examine travel preference in Indonesia (Dudung Purwadi/Young) - MEngSci project**

A state preference approach will be used to investigate mode preference. Dudung hopes to transfer to the PhD program.

- **Modelling transport demand and parking management (Young)**

This project models urban travel on a city-wide scale using activity analysis.

- **Using the psychology of persuasion for effective implementation of transport policy (Seethaler/Rose/Allen) – PhD project**

Policies aiming to increase the sustainability of urban transport often face the problem of overcoming unsustainable behaviour patterns that are principally centred around the car and largely dominated by routine choices that do not take sustainability considerations into account. To overcome the barrier of habitual behaviour patterns, awareness campaigns, principally based on the provision of information about the effects of modal choice, are insufficient for stimulating change. Social psychology

offers a series of persuasion techniques that are able to reach beyond the mere raising of awareness. For example, involving the target population in a process of personal commitment is likely to increase the up-take of the policy intervention and will therefore have a better chance of creating lasting changes in behaviour. Based on the travel behaviour change (TBC) policy currently under development by the Victorian DOI, this project attempts to study the effect of different persuasion techniques individually and in combination by using an appropriate experimental design and evaluation techniques. This research is being supported by a Victorian Minister of Transport Scholarship.

- **Road space allocation (Day/Young) – undergraduate research project**

The road system provides a base for the car, public transport, non-motorised vehicles and goods vehicles to move around and provide the mobility to people living in cities. The use of road space relates to the level of density of development and community needs and preferences. This project investigates the allocation of priority to vehicles on particular roads in terms of the road cross-section and the likely impact of change in allocation.

- **Road space allocation using a simulation program (Stebbing/Sarvi) – undergraduate research project**

This study investigates the impact of green time ratios on the performance of arterial roads.

- **Road space allocation using simulation program (freight) (Powell/Sarvi) – undergraduate research project**

This study investigates truck interaction with public transport in the same lane of traffic.

- **Road space allocation using simulation program (Bowden/Sarvi) – undergraduate research project**

This study investigates the impact of dwell time of buses on travel time and delay on a '2 by 2' lane arterial road.

- **Modelling of weaving phenomena observed during traffic congestion (Young/Sarvi)**

This work focuses on a little researched area of modelling vehicle acceleration-deceleration behaviour during weaving manoeuvres under congested traffic situations. Traffic congestion frequently occurs at weaving bottleneck sections and it is vital to investigate traffic behaviour and characteristics during traffic weaving processes under congested traffic flow in order to design safer and less congested weaving points.

- **Weaving section study (Sittiarjharn/Sarvi) – undergraduate research project**

This study focuses on the weaving manoeuvre in congested conditions in Melbourne. In this preliminary study, all suitable sites to conduct data collection are investigated.

- **Pedestrian and cyclist conflicts (Cuthbert-Sayers/Rose) – undergraduate research project**

This project examines the conflicts between cyclists and pedestrians and explores the extent to which this is a behavioural problem or an infrastructure problem. Common conflict points are in the CBD (specifically in relation to cyclist couriers) and on shared use paths which can be used by pedestrians and cyclists. A key part of this project explores Australian and overseas experience with conflicts on these facilities, and in particular identifies whether the introduction of more powerful electric power assisted bicycles overseas has increased these conflicts.

Public transport planning and management

- **Improving methodologies to assess on road public transport priority (Currie/Sarvi/Young)**

This project examines previous approaches to allocating road space for all users and also reviews approaches to giving public transport priority in road space allocation. A new approach to determining 'optimum' road space allocation is developed using a Social Cost Benefit approach. Advanced micro-simulation approaches to model traffic impacts of alternative public transport priority designs is used to determine guidelines for 'optimal' road space allocation in relation to public transport. The project is being funded by Vic Roads.

- **Identification of spatial gaps in public transport provision in relation to transport needs in the community (Currie)**

A major requirement of public transport in median and smaller urban centres is that they are provided effectively in relation to social need for transport. However, no techniques are available or used to assess the effectiveness of public transport in catering for needs particularly on a spatial basis. This project develops an innovative set of techniques in this area and has been applied in recent work in Tasmania.

- **The demand performance of bus rapid transit (Currie)**

This project compiles valuations of passenger trip attributes which vary with transit mode to identify how bus rapid transit projects compare with heavy and light rail. It includes an international review of available evidence. The results suggest that demand performance should be similar, but the research has identified weaknesses in the approaches adopted and in the coverage of research in this area.

- **A review of Australian bus rapid transit system developments (Currie)**

A review of current developments in the field of bus rapid transit (BRT) in Australia with an emphasis on performance, lessons learned and future plans. The review is undertaken for the international session on BRT applications for the 2005 Institute of Transportation Engineers conference.

- **Innovative accessible tram stop design (Currie/Smith)**

A review of the performance of an innovative tram stop design using a speed hump as a means of providing access to a center, road located tram service from a kerbside stop. To date, speed reductions for through traffic have been documented and customer satisfaction is positive. The project is undertaken in collaboration with the City of Port Phillip.

- **Features of successful real time passenger information systems (Currie/Burke)**

A review of the successful features of systems providing real time passenger information systems for rail, tram and bus systems. The project is undertaken in collaboration with Connexionz New Zealand.

- **A review of the performance of the Athens 2004 Olympic transport system (Currie)**

A review of the operations of the spectator and Olympic family transportation system for the 2004 Olympic Games. Included a review of day to day performance, an assessment of reports from the various Olympic transport agencies and media monitoring throughout games time. The outcomes of the research were presented to the Bus Association Victoria as an input to transport plans for the 2006 Commonwealth Games in Melbourne.

- **A review of the performance of the Atlanta 1996 and Sydney 2000 transport system (Currie)**

A review of the operations of the spectator and Olympic family transportation system for the 1996 and 2000 Olympic Games. The review was undertaken as part of the planning for the 2004 Athens Olympic games and was presented at the 8th International Conference on Applications of Advanced Technologies in Transportation Engineering in Beijing in May 2004.

- **Knowledge management in Australian public transport (Currie)**

This study provided a review of the way in which knowledge regarding urban public transport planning and management is managed in a range of international countries including a comparison with approaches in Australia. The study found significant gaps in Australian approaches, with a lack of a coordinated national approach to knowledge development, retention and distribution. The findings were presented to the second Australian National Public Transport Summit.

- **Transport and social exclusion in metropolitan, rural and regional Australia (Currie)**

A review of international and Australian research concerning travel for the transport disadvantaged in rural and regional Australia. At this stage the project has focused on a literature review, although some analysis of aggregate transportation statistics for rural and regional areas has been undertaken. Key preliminary findings were presented to the Victorian Planning and Environmental Law Association Annual Conference in 2004.

- **Planning for metropolitan rail-rail interchange (Abeling/Currie)**

This project aims to identify types of rail-rail interchange in Melbourne and to assess the quality of planning and design to cater for transfers between trains. The project included an international literature review and the development of a typology of rail-rail interchange types for metropolitan Melbourne. A hierarchy for different types of interchanges was developed and a site survey was conducted to determine the quality of the planning and design of different station types. This field work established that planning and design is focussed on only certain types of stations whilst important kinds of transfer behaviours are not being catered for. The research is part of an international student research project in cooperation with the University of Twente in the Netherlands.

- **Investigating tram pedestrian collisions (Logan/Currie) – undergraduate research project**

The project reviews tram pedestrian collision information through available research literature and performs an interrogation of the tram incident database provided by Yarra Trams. The research has identified significant reductions in accident rates as a result of the introduction of ‘super stops’.

- **Review of kerbside tram stop safety (Wright/Currie) – undergraduate research project**

Almost two thirds of tram stops in Melbourne are kerbside stops. This project includes a review of available tram safety literature and traffic regulations and an analysis of a tram company incident database, and looks for practical solutions to the problems raised.

- **Designing for pedestrians (Macdermott/Currie) – undergraduate research project**

This project considers design principals and practice to improve the travel environment for pedestrians. A review of relevant research and design literature is undertaken and techniques for the assessment of the ‘walkability’ of urban environments reviewed.

- **The design of public transport interchanges and terminals (Ross/Stewart/Currie) – undergraduate research project**

These two projects include a review of research literature regarding public transport stations, terminals, interchanges and bus and tram stops in order to understand the design requirements, techniques for evaluating interchanges and good practices and innovations in design.

- **Bus rail coordination (Firgaira/Lim/Currie) – undergraduate research project**

Two projects are being undertaken in this area. They include a review of relevant research literature, site surveys of coordination arrangements at Huntingdale railway station and surveys of scheduled and actual departure and arrival times of trains and buses.

- **Public transport stop analysis (Radion/Cheng/Sarvi) – undergraduate research project**

This study focuses on the functionality of different tram stops in terms of safety and interaction with general traffic.

- **Independent review of new transitways demand forecasting research – RTA Sydney Transitways (Currie)**

This study performs an assessment of international research evidence concerning travel time savings and impacts on public transport demand. This was used as a basis to assess travel demand forecasts for the proposed North East Transitway in Sydney.

- **Review of transit trip attribute values for bus rapid transit (Currie)**

This project provides a compilation of international evidence concerning transfer penalties and mode specific constants for on street bus, heavy and light rail and bus rapid transit systems. The research was used to compare likely demand performance of bus rapid transit against alternative public transport modes.

Transport Research Workshops (TRWs)

ITS (Monash) has always held seminars during the year, at which research personnel were able to present recent results, discuss grant applications and workshop new ideas for projects. In 2004, Professor Currie formalised these by scheduling them at fortnightly intervals, and by presenting at each workshop a written agenda which gave up to date details of all projects in hand, as well as grant applications and their status. At each TRW, a formal presentation was made by one of the ITS (Monash) staff or students or by a visiting researcher. Presentations made during 2004 included:

- Persuasion principles applied in a community based TravelSmart project - conduct of a small scale pilot test in Fairfield, 2003 – Ms Rita Seethaler
- Ride to Work day research program findings – Assoc. Prof. Geoff Rose
- Driver behaviour in traffic weaving conditions - Dr Majid Sarvi
- Transport and social exclusion – Prof Graham Currie

- International Youth Summit on Sustainable Transportation – Canada – Mr David Young
 - Mr Young, an undergraduate student at ITS (Monash), was awarded a scholarship to attend the 2004 International Young Transport Summit in Ottawa, Canada. The scholarship was competitive and sponsored by Metlink. Mr Young was awarded the scholarship based on his research on Public Transport Education undertaken at ITS. His presentation concerned the format and coverage of the summit and its major conclusions.
- Bicycle network demand modelling - Assoc. Prof Geoff Rose
- World Transport Conference - experimental vehicles – Dr Majid Sarvi
- Improving methodologies to assess on road public transport priority – Prof Graham Currie
- Western technology based transport, infrastructure and engineering projects financed and constructed in China and Asia – Mr Mark Karpovitch.
- Transport research at the University of Central Florida – Professor Esswam Radwan
 - Professor Esswam Radwan visited the Department of Civil Engineering on Friday 5 November 2004. He made a presentation at the Transport Research Workshop on the transport program at University of Central Florida and then presented a departmental seminar on the use of a driving simulator in traffic engineering research. Prof Radwan is currently on sabbatical leave at the Institute of Transport Studies, University of Sydney
- Highly utilised repainer territories research – Mr Jim Youngman
- Australian Research Council Linkage Program - project success factors - Prof Xiao-Ling
- Traffic engineering education and safety research at the Lulea University of Technology, Sweden – Dr Charlotta Johanssen, Lulea University
 - Dr Johanssen is currently a visiting researcher at the Monash University Accident Research Centre (MUARC) as part of the strategic linkage with Lulea University in Sweden. Her presentation outlines the transport education and research activities of her group and then focussed on her current research on safety issues associated with non-motorised transport.
- European Transport Conference 2004 – Prof Graham Currie
- Introduction to transport education and research activities at the University of Twente, Holland, and Planning for metropolitan rail to rail interchange in metropolitan Melbourne – Mr Martijn Abeling, University of Twente, Holland
 - Mr Abeling spent three months at ITS (Monash) as part of a student placement for his Masters in Civil Engineering degree at the University of Twente. During his stay he presented two TRW seminars. The first focussed on transport activities at his home university while in his second he presented the findings of a research project undertaken at ITS (Monash) The project concerned the assessment of the quality of transfers between rail services in metropolitan Melbourne.
- Travel time variability analysis – Ms Ruimin Li

COMMUNITY AND PROFESSIONAL SERVICE ACTIVITIES

Fourth Annual Ogden Transport Lecture

The Ogden Transport Lecture was initiated in 2001 by the Institute of Transport Studies (ITS) to recognise Professor Ken Ogden's role in founding Monash's transport program in 1969. The 2004 Ogden Lecture was held on 18 November at the Monash University City Office, Collins Street, Melbourne. The keynote address was given by Professor Graeme Hodge, Professor of Law and Founding Director of the Centre for the Study of Privatisation and Public Accountability, Monash University. Professor Hodge's lecture was entitled *Transport in the Privatised State*. He explored the issues presented by the unprecedented private sector involvement in Melbourne's transport system, reviewed global lessons in this area and examined their implications for our transport future. A capacity audience of over 100 people attended.



Figure 8: Professor Bill Young presents Professor Graeme Hodge (left) with a plaque to commemorate the 2004 Ogden lecture

International positions

- Fellow, Chartered Institute of Logistics and Transport, United Kingdom (Clements, Young).
- Fellow, Institute of Transportation Engineers, U.S.A. (Young).
- International panel member, Transport Cooperative Research Program Project H-32 'Determining elements needed to create high ridership transit systems' (Currie)
- Transportation Research Board Committee A1E1 'Bus transit systems' – International Friend of the Committee (Currie)
- Transportation Research Board Committee AP025 'Public transportation planning and development' – International Friend of the Committee (Currie)
- Transportation Research Board Committee 'Transit capacity and quality of service' - International Friend of the Committee (Currie)
- Member, Transportation Research Board (Sarvi)

Australian positions

- Member, Institute of Transportation Engineers (ITE) Australia and New Zealand Section (Sarvi, Rose)
- Fellow, Institute of Transportation Engineers (ITE) Australia and New Zealand Section (Young)
- Student Chapter Coordinator, Institute of Transportation Engineers (ITE) Australia and New Zealand Section (Sarvi)
- Member, Advisory Committee, NRTC Committee on Performance Based Standards (Young)
- Member, Australian Institute of Traffic Planning and Management (AITPM) (Rose)
- Member, Chartered Institute of Logistics and Transport (de Alwis)
- Member, Chartered Institute of Logistics and Transport (Victorian section), General Committee and Passenger Transport Group Committee (Clements)
- Corresponding Member, National Committee on Transportation Engineering, Institution of Engineers, Australia (Rose)
- Member, Institution of Engineers Australia Victorian Division Transport Branch Committee (Sarvi)
- Member, Monash University Faculty of Engineering Board, Steering Committee (Young)
- Chair, Monash University Department of Civil Engineering Management Committee (Young)
- Chair, Monash University Faculty of Engineering Graduate and Further Education Committee (Young).
- Deputy Chair, Monash University Faculty of Engineering Education Committee (Young)
- Member, Monash University Education Committee (Young)
- Member, Monash University Car Parking Policy Committee (Rose)
- Member, Monash University Transport Planning Committee (Rose)
- Member, Monash University Faculty of Engineering Senior Lecturer Promotions Committee (Rose)
- Member, Victorian Local Governance Association Committee on Sustainable Transport (Currie)
- Academic member, Victorian Road Based Public Transport Advisory Committee (Currie)
- Steering committee member, Victorian Auditor Generals Office (performance audit of rail franchising arrangements) (Currie)
- Secretary, AITPM Victorian Committee (Young)

Editorial positions

- Bill Young is on the Advisory Board of the journal *Transportation*.
- John Clements is a member of the International Editorial Advisory Board of the *International Journal of Logistics: Research and Applications*.

Reviews of papers

- Geoff Rose refereed papers for *Road and Transport Research*, the *ATRF Conference* and the *International Symposium on Transportation and Traffic Theory*.
- Majid Sarvi reviewed papers for the *ARRB journal* and the *International Symposium on Transportation and Traffic Theory*

Conference, seminar and forum presentations and attendance

- European Transport Conference, Strasbourg, October 4-6 2004 (Currie)
- 83rd Transportation Research Board, Washington DC, January 2004 (Rose, Currie)
- World Congress on Transport Research, Istanbul, July 4-8 2004 (Sarvi)
- Victorian Planning and Environmental Law Association Conference, September 2004 (Currie)
- 2nd National Public Transport Summit, Coffs Harbour, May 2004 (Currie)
- 8th International Conference on Applications of Advanced Technologies in Transportation Engineering, American Society of Civil Engineers and China Academy of Transportation Sciences, Beijing, May 2004 (Currie)
- Victorian Planning and Environmental Law Association Annual Conference, September 2004 (Currie)
- G. Currie gave an address entitled “Bus rapid transit – smart futures for old problems” to the Smart Urban Transport meeting (February 2004)
- G. Currie gave an address to the City of Yarra Public Transport Forum entitled “Public transport – Yarra demands better” in association with Prof Peter Newman (November 2004)
- G. Currie attended the University of Queensland and Columbia University Seminar on “Transit oriented development in Brisbane” (February 2004)
- G. Currie gave an address entitled “Integrated transport strategies for local government” to the Victorian Local Governance Association Board Meeting (February 2004)
- G. Currie and G. Rose were a part of a discussion session on “Traffic congestion policy options” run by the Department of Infrastructure (August 2004)
- G. Currie gave an address entitled “Metropolitan bus planning in Melbourne” as part of the University of Queensland ‘Transport futures’ seminar series (February, 2004)
- G. Currie gave an address on the development of a national cooperative research program in public transport for Australia to the UITP Board Meeting on Public Transport Education and Research Issues in Australasia (February 2004)
- G. Currie was a presenter at a short course entitled “Measuring multi modal transport system performance” in Brisbane. (June 9-11 2004)
- M. Sarvi was invited to give a seminar at ITS (Sydney) on the VicRoads integrated arterial road planning, research and development project (November 2004)

- G. Rose and G. Currie made an oral submission to the Inquiry on Sustainable Communities, Environment and Natural Resources Committee, Parliament of Victoria. (December 2004)
- G. Rose made a presentation to the Victorian Bicycle Advisory Committee on the regulation of personal mobility devices, a report made in response to the Australian Transport Council’s Working Group Report entitled “Review of the safety of, and associated rules for, scooters and other wheeled recreational devices”.



Figure 9: A/Professor Geoff Rose with his Ride to Work poster presentation at the Transportation Research Board conference in Washington in January 2004.

Overseas and interstate visits

In May 2004, Geoff Rose presented a paper on applying principles of persuasion in TravelSmart campaigns at the European Conference on Mobility Management held in Lyon in France. While in Europe, Geoff also presented a seminar at the University of Twente and the Technical University of Delft, both in the Netherlands. He also undertook a guided tour of the town of Houten, a new town developed on the outskirts of Utrecht, which provides cyclists with priority over motorists for movements within the town.

In May 2004, Professor Currie was invited to speak at the 8th International Conference on Applications of Advanced Technologies in Transportation Engineering (ASCE and the China Academy of Transportation Sciences) in Beijing. The engagement included presenting a paper on the performance of the transport planning for the Atlanta, Sydney and Athens Olympic Games transport systems.

In July 2004, Majid Sarvi attended the World Congress on Transport Research in Istanbul, presenting his work on the development of an instrumented vehicle and its application to the study of freeway ramp merging phenomena. While in Istanbul, he also visited various transport systems, including subways, their extensive bus network, minibuses and ferries. He met with Professor Ben-Akiva from MIT University and Dr.

Hidas from University of New South Wales, exchanging research ideas regarding ramp metering, micro simulation and car following behaviours.

In October 2004, Professor Currie presented at the European Transport conference in a special session on Building the Transport Profession. As part of this trip he visited the Transport Operations Research Unit at the University of Newcastle Upon Tyne. This included lecturing on public transport network design modelling and discussion of collaborative research activities in the public transport area. The latter has included collaboration on a major European funded transport project called OPTIMUMM (Opportunities for Public Transport through Innovative Measures in Urban Mobility Management). Professor Currie also visited the University of Ulster and lectured on public transport needs research in Australia. This visit also involved planning for a collaborative research project in Australia on Transport Disadvantage and Social Exclusion.



Figure 10: Professor Currie being interviewed about 'Transport Futures' by Channel 4 Washington during his visit to Washington for the Transportation Research Board 2004 Annual Meeting

Other activities

- G. Rose was invited to join the inaugural board of the 'Bicycle Research Institute' being established by Bicycle Victoria.
- G. Rose was invited to become a member of the Melbourne Travel Survey Reference Group, Department of Infrastructure.
- W. Young was appointed an external examiner for MSci at Nanyang University of Technology, Singapore for a two year term during 2002-2004.
- G. Currie reached an agreement with the US National Transit Institute (NTI) regarding the sharing of course materials in public transport planning and management. NTI is based at Rutgers, the State University of New Jersey and is funded by the US Federal Transit Administration. It is the principal provider of public transport training in the United States and offers more than 50 short courses in all aspects of public transport management, planning and operations.

CENTRE MANAGEMENT ACTIVITIES

In 2004, a number of initiatives were undertaken to improve efficiency and effectiveness in managing the centres' activities and to enhance the visual appeal of key communications tools and products. Initiatives of particular note included enhancements to the series of regular internal staff meetings, greater use of on-line systems for workshop registrations and publication orders, re-design of the ITS (Monash) web site and steps to increase interaction with external stakeholders through re-constitution of the ITS (Monash) advisory committee. Those and other initiatives are briefly reviewed below.

Internal staff meetings

ITS (Monash) uses a series of regular staff meetings to facilitate internal communication and decision making. An annual planning session is held early in the year to formalise plans for major activities in the year ahead and to begin planning of activities for future years. Throughout the year, progress on the annual plan is reviewed at regular staff meetings. In addition to those regular staff meetings, a separate series of Research Management meetings was initiated in 2004. Those meetings reflected a decision to place greater priority on increasing research activities. The research management meetings seek to address strategic and procedural issues associated with the increasing research activities of the group and provide a forum to provide greater attention to those issues than was possible in the regular staff meetings which deal with all the activities of the centre.

On-line registration system

Brenda O'Keefe, Administration Manager at ITS (Monash), piloted an on-line registration system for the Traffic Engineering and Management workshop in March 2004. The new system, which provided a very efficient enrolment procedure and gave added convenience to workshop registrants, completely replaced the former paper-based enrolment procedure. The on-line registration procedure proved to be such a success that it will be used in all subsequent workshops run by ITS (Monash).

"Traffic Engineering and Management" book reprint

The new edition of the book "Traffic Engineering and Management", which was issued in December 2003, sold out by October 2004 and is now being reprinted. Brenda O'Keefe, Administration Manager at ITS (Monash), pilot tested a new 'e-cart' system to facilitate orders electronically via the Monash web site. The e-cart system provided added convenience to purchasers of the book and facilitated efficiencies in the processing of book orders. Following the successful pilot, ITS (Monash) will use the on-line ordering system for all future publications.

Re-branding of ITS (Monash) publicity and course materials

Brenda O'Keefe, Administration Manager at ITS (Monash), was extensively involved in implementing the new Monash branding guidelines introduced in 2003 to ITS (Monash) publicity, course materials and websites. Her involvement ranged from discussions with the university's Department of Marketing and Public Affairs and the Faculty of Engineering's Marketing Manager to implementation of the new style with printers and designers. In consultation with Geoff Rose, the brochure for the postgraduate program in transport and traffic was completely redesigned and released in

a format consistent with the new brand guidelines. Work was also completed on the design of the new covers for the unit manuals in the postgraduate program. The new cover designs will be used from Semester 1, 2005. Preparatory work was also undertaken on the design of a new visual image for the Transport Management Course in Bus and Coach Operations with 'roll-out' scheduled for 2005.

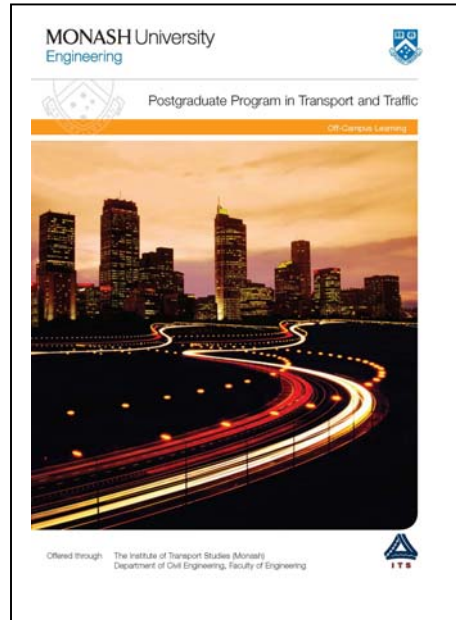


Figure 11: Cover of the new postgraduate program brochure

ITS (Monash) website re-design

Brenda O’Keefe and Geoff Rose were heavily involved in the re-design of the ITS (Monash) home page. The new layout is consistent with the Monash branding guidelines and provides a clearer overview of the activities of ITS (Monash) along with more detailed information on staff, research activities, education and community and professional service activities. The site also allows on line registration for courses and seminars and purchase of ITS products via the Civil Engineering e-cart. The re-designed web site is accessed with an updated and shortened address: <http://civil.eng.monash.edu.au/its>



Figure 12: Main page of the new ITS (Monash) web site

Reconstitution of the Advisory Committee

Following one of the recommendations of the Faculty Review of the Centre conducted in 2003, steps were taken in 2004 to reconstitute the Advisory Committee. Due to retirements and career changes, it was timely to review the membership of the former committee and to reconstitute it in line with the current activities and priorities of the centre. The individuals identified below have agreed to serve on the committee, and the first meeting has been scheduled for February 2005. It is anticipated that the committee will meet at most twice per year.

External members of the ITS (Monash) Advisory Committee are:

Name	Position	Organisation
Dr Anthony Ockwell	Assistant Secretary	Federal Department of Transport & Regional Services (DoTARs)
Mr Stuart Hicks	Chairman	National Transport Commission
Dr Tim Patton	Manager, Planning & Policy Division	Department of Infrastructure
Mr Ted Vincent	General Manager, Traffic & Transport Integration	VicRoads
Dr Michael Kennedy	Chief Executive Officer	Mornington Peninsula Shire
Mr John Stanley	Executive Director	Bus Association Victoria
Dr Ken Ogden	General Manager, Public Policy	RACV
Mr Bernie Carolan	Chief Executive Officer	Metlink
Dr Mary Lydon	General Manager, R & I	ARRB Transport Research
Mr William McDougall	Melbourne Traffic & Transport Team Leader	Sinclair Knight Merz
Mr Peter Hunkin	Business Centre Manager, Traffic Division	Hyder Consulting (Aust) Pty Ltd
Mr Ian Pitcher	Director, Victoria Division	Maunsell Consulting
Ms Charmaine Dunstan	Director	Traffix Group Pty Ltd
Ms Kate Partenio	Director	GTA Consultants
Mr Jim Stevenson	Special advisor	Department of Infrastructure and National Transport Commission

APPENDIX A – STAFF



**Geoff Rose, BEng QIT, MSc PhD
Northwestern, MIEAust CPEng**

Associate Professor, Department of Civil
Engineering

Director, ITS (Monash)

Geoff's professional interests cover intelligent transport systems, travel behaviour and non-motorised transport. His experience spans government, consulting and academia. He is Director of the postgraduate program in transport being offered by distance education and is the author of three units, *Intelligent transport systems*, *Traffic engineering fundamentals* and *Transport network models*, currently offered in the program. Active research projects relate to travel behaviour change programs, bicycle facility level of service, impacts of intelligent transport systems on travel behaviour and strategic planning of field service systems.



**William Young, BE (Hons I) UNSW,
GradDipMgt Deakin, MBA Deakin,
MSc, PhD, FIEAust, FCIT, FITE,
MACRS**

Head, Department of Civil Engineering,
Monash University

Professor William Young is Chair of Civil Engineering, Monash University. He has a distinguished professional and academic career, having worked at Monash University for 29 years and prior to joining Monash in the transport industry in England, Germany and several states of Australia for four years. He has also held visiting positions at Oxford, Nanyang, Karlsruhe, Michigan State and Hong Kong Universities, and with the Australian Bureau of Transport and Communication Economics. He received his BE (with honours) degree from the University of New South Wales (1970), his Graduate Diploma in Management and MBA from Deakin University (1997, 1999), and his Master of Science (1990) and PhD (1982) from Monash University. Professor Young has wide-ranging interests and has researched, consulted and published widely in the areas of land-use/transport/environment interaction, parking, engineering management and education. He has worked on several international research projects with teams from Sweden, Hong Kong, Japan, the UK, Germany and Indonesia, and was an Associate Editor of the international journal *Transportation* for 12 years. He has published over 300 papers and co-authored four books on transportation. He has been

awarded a Chartered Institute of Transport Excellence Award, Bureau of Transport and Communication Fellowship, Alexander Von Humboldt Fellowship, and Monash Postgraduate Award. He has 29 years experience in teaching at an undergraduate and postgraduate level, and has also developed and run many distance education programs, short courses and workshops for industry. Professor Young has held a number of senior administrative positions at Monash, including: Head of the Department of Civil Engineering (1999-date), Head of the Caulfield Division of the Department of Civil Engineering (1995-1997), Head of the Institute of Transport Studies (Monash) (1995-1998), Head of the Monash Transport Group (1994,1995,1996), Director of Graduate and Further Education in the Faculty of Engineering (2001-date) and Chairperson of the Monash University Advisory Committee on People with Disabilities (1997-2002). He is a Fellow of the Institution of Engineers, Australia (IEAust)), the Institute of Transportation Engineers and the Chartered Institute of Transport, and a Member of the Australian College of Road Safety. He has been Chair of the Victorian Transport Committee (IEAust), the National Committee of Transport (IEAust), and the Institution of Transportation Engineers Australia.



***Graham Currie, BSc (Hons)
Huddersfield, MSc Cranfield***

Professor of Public Transport, Department
of Civil Engineering

Professor Currie has over 20 years experience in public transport planning, research, management and operations, and has been based in Melbourne for the last 10 years. He is an internationally recognised advisor on public transport planning and has undertaken research projects in Europe, Asia, North America and throughout Australasia. He is a World Bank accredited consultant and has developed and managed training programs in public transport planning for them in Asia. Professor Currie specialises in public transport development strategies, public transport network design, strategies for public transport planning by local government, transit market research and demand forecasting, transport needs assessment, investment and performance appraisal in transit planning and transport for major special events. He was an advisor to the Athens Olympic Committee on transport planning for the 2004 Olympic Games. He has managed numerous recent public transport research and consultancy projects in Australia including a patronage forecasting review for the Melbourne airport rail link, studies of transport needs in rural and regional Australia, demand forecasting studies for the Victorian Fast Trains Project, integrated municipal transport strategies in numerous areas in Victoria and inter-state and a review of the Athens, Sydney and Atlanta Olympic Games transport systems.



**John Clements, BCom DipEd MEc
MAdmin FCILT**

Program Director, Transport Management
Course in Bus and Coach Operations

John joined ITS (Monash) in July 2000 after spending many years on the staff at RMIT University. Prior to joining ITS (Monash), John was Acting Head of the School of Marketing at RMIT University, and had previously been Head of the Department of Marketing, Logistics and Property and a Principal Lecturer responsible for the Transport and Logistics Management Group at RMIT. John is a Fellow of the Chartered Institute of Logistics and Transport and actively involved in the CILT (Victorian Section) General Committee and Passenger Transport Group. His major academic and research/consulting interests are in transport economics, policy and management and he is the author of the postgraduate unit *Transport economics* which is offered by distance education as part of the ITS (Monash) postgraduate program in transport and traffic. He has professional and consulting experience in the public sector, including the Victorian Ministry of Transport, the public transport operating authorities and water resource boards. John is a member of the editorial advisory board of the *International Journal of Logistics: Research and Applications*. He has undertaken quality assurance auditing with Open Learning Australia.



**Majid Sarvi, BEng MEng Tehran, PhD
Tokyo**

Lecturer, Department of Civil Engineering

Majid's masters degree was in highway and transportation engineering. He worked at Tokyo University on the subject of traffic and transportation with emphasis on human factors and freeway operation and obtained his PhD there. He worked as a research fellow at Tokyo University and was the Chief Engineer at the i-transport laboratory in Tokyo in 2002. Majid has also worked as the chief researcher of the ITS research group of the Social System Research Institute and as a transport analyst with the Hong Kong Transport Department. Majid's research interests include traffic operations, traffic flow theory, transport modeling, micro simulation programming, intelligent transport systems, public transit, application of GPS to transport studies, and highway operations.

Majid joined ITS as a Research Fellow and was appointed to the position of Lecturer in Civil Engineering in December 2003.



***Astrid De Alwis, BA Melb,
GradDipTr&DistMgt RMITU,
MLogMgt, MCILT***

Assistant Program Director, Transport Management Course in Bus and Coach Operations

Astrid is a logistician and lecturer with a background in Transport Systems, which she has taught or practised for more than twelve years. She has worked as a transport consultant to several commercial organisations, and published key documents for some. Astrid's chief strength lies in her varied and cross-disciplinary educational and experiential background. Having worked in government, industry and academia, and on local and international projects, Astrid brings to ITS (Monash) a broad blend of skills and aptitudes. While assisting with the ongoing development and delivery of the Transport Management Course in Bus and Coach Operations, Astrid is also pursuing a consulting interest in business systems and business development.



Brenda O'Keefe

Administration Manager

Brenda is responsible for managing administrative support at ITS (Monash). This includes administering all aspects of ITS (Monash)'s industry distance education programs in the Transport Management Course in Bus and Coach Operations and the Education Program in Parking Management. She handles all general course enquiries, student enrolment and record keeping as well as all written communications with students throughout the semester. Brenda is also heavily involved with the role of administering all aspects of the Department of Civil Engineering's off-campus learning postgraduate programs in Transport and Traffic and also the Infrastructure Engineering and Management program. This also includes handling all general course enquiries, processing enrolments, re-enrolments, withdrawals and completions and carrying out extensive liaison with the Off-Campus Unit at Gippsland, other areas within the university system and the Faculty of Engineering's Postgraduate Manager. In her administrative support role, Brenda manages the production of all advertising and study guide material (which includes extensive liaison with printers and designers), and

supports all other ITS (Monash) activities including seminars, workshops and public lectures. Brenda also undertakes website and WebCT development and maintenance for ITS (Monash) as well as for the Department of Civil Engineering's postgraduate programs.



Julia Arnold

Administrative Officer (Finance)

Julia works one day a week to provide income and expenditure reports, budgets, projections and other financial accounting services, as well as assisting with reports and other large administrative tasks. During 2004, Julia became more involved with the research activities on the group through participation in the regular Transport Research Workshops and Research Management meetings.

Adjunct faculty

Rahmi Akçelik, CivEng ITU, PhD Leeds, Fellow IEAust, Fellow ITE

Director, Akçelik and Associates Pty Ltd

Dr Akçelik is an Adjunct Professor in the Department of Civil Engineering at Monash University, and Director of Akçelik and Associates Pty Ltd. He is a leading scientist and software developer in the area of traffic management, with over 240 technical publications in his area of expertise. His research and software development company specialises in the areas of road traffic operations, traffic engineering, management and control. Dr Akçelik is member of various US Transportation Research Board (TRB) Committees. Awards received by Dr Akçelik include the 1999 Clunies Ross National Science and Technology award for outstanding contribution to the application of science and technology in Australia, and the Institute of Transportation Engineers Australia and New Zealand Section Certificate of Commendation in recognition of an outstanding contribution to the advancement of the profession, and the Institute of Transportation Engineers (USA) 1986 Transportation Energy Conservation Award for research into energy savings from urban traffic management.

Rita Seethaler, MEc Berne

Rita graduated with a Master of Economics and Political Science from the University of Berne, Switzerland, in 1994.

She has worked for the Swiss Federal Office of Statistics and for the Bureau of Transport Studies (Federal Department for Environment, Transport, Energy and Communications), Berne. She is presently a Director of the Urban Transport Institute, Victoria and an Associate of the Institute of Transport Studies (Monash University). She is the author of the postgraduate unit *Infrastructure project and policy evaluation*,

which is offered by distance education as part of the postgraduate program in infrastructure engineering and management at ITS-Monash. Rita is currently undertaking a PhD with ITS (Monash).

Tony Richardson, BE (Hons) MEngSc UNSW PhD

Tony has wide experience in academia, having worked at Monash University, RMIT, the University of Melbourne, the University of Sydney and Cornell University in the USA. He has also worked for the Australian Road Research Board, the Victorian Ministry of Transport and in his own consulting practice.

As well as being an Adjunct Professor at Monash, Tony is also a Director of the Urban Transport Institute, Victoria. He is the author of the postgraduate unit *Infrastructure project management* which is offered by distance education as part of the postgraduate program in infrastructure engineering and management at ITS-Monash.

Visiting research scholars

Martyn Abeling

In 1999, after finishing University Preparatory School, Martijn Abeling started the Masters program in Civil Engineering and Management at the University of Twente in the Netherlands. After completing the requirements for his Bachelor's degree, he chose to graduate in the area of Traffic and Transportation Management.

At the University of Twente, Martijn was involved in a range of extracurricular activities with a transport theme. In 2002, Martijn was on the organizing committee of a symposium entitled "The city heart revitalized: New ways of inner city renewal" that was delivered as a Civil Engineering symposium on Urban Planning at the University of Twente. In 2002 and 2003, he participated in an educational program organized in association with the Technology and Development group at the University of Twente. This program included a study tour to China. The theme of the program and study tour was "Integrated area development".

As part of his Masters program in Civil Engineering, he conducted a three month internship, starting in September 2004, at the Institute of Transport Studies at Monash University. His internship was focussed on research in the area of public transport.

PhD students

Jim Youngman, BSc Auckland, MEngSc UNSW, DipEd Melb, GradDipAppComp UCQ, PhD

Jim has a broad experience of traffic and transport engineering practice gained from appointments with the New Zealand Ministry of Transport and the Victorian Road Safety and Traffic Authority. He also has an interest in education developed through secondary school teaching.

Jim's PhD research was focussed on the strategic planning of field service operations, specifically the determination of optimal operating boundaries for field service teams. Jim has had several years of experience in operations research related to field service

management through a long career with the RACV. He submitted his thesis in November 2003 and was awarded his doctorate in October 2004.

Merle Chan

Merle completed her undergraduate degree in civil engineering at the University of Auckland, and is examining the impact of in-vehicle navigation systems on travel behaviour. The study focuses on the mobility impacts of these devices but recognises that there are related safety impacts through changes to exposure. She submitted her thesis in September 2004.

Ruimin Li, Bachelor of Highway and Railway Engineering Inner Mongolia Polytechnic University, Masters of Transportation Civil Engineering SEU China

Ruimin has worked as a professional engineer in Beijing in highway and intersection design. Previous research interests included pavement management and the evaluation of paving on steel decking. Ruimin was awarded a Monash Graduate Scholarship for her PhD study, which focuses on the long-term travel time variability prediction. Based on historical travel time data and weather forecasting information, the proposed model would be able to provide estimation of travel time variability, such as 90th percentile travel times, a few days before the journey.

Tim Martin

Tim is a principal research engineer with ARRB Transport Research Ltd, and commenced his PhD in April 2001. He is working on the components of uncertainty in predicting pavement performance at a road network and road program level.

Tan Yan Weng, BE MEngSc MCILT MIE S'pore MREAAA

Yan Weng is an Associate Professor in the School of Civil and Environmental Engineering at Nanyang Technological University, Singapore. His current PhD research is in the area of parking systems design, with particular emphasis on developing an interactive stated preference approach to collect information on parking behaviour in multi-use facilities.

Rita Seethaler, MEc Berne

Rita graduated with a Master of Economics and Political Science from the University of Berne, Switzerland, in 1994 and is presently a Director of the Urban Transport Institute, Victoria and an Associate of the Institute of Transport Studies (Monash University). She was awarded a PhD scholarship by the Victorian Minister for Transport to develop evaluation approaches for "total transport" strategies. Rita is currently looking at this concept from the perspective of developing and measuring the impact of psychological persuasion techniques on peoples' travel choices.

Richard Yeo BE (Hons) M Eng (Res) RMIT

Richard is a principal research engineer at ARRB Transport Research Ltd. His PhD project is on the effects of emerging large road freight vehicles on the performance of Australian road pavements.

MEngSci students

Mark Karpovich BE MEng Sci

Mark has more than 20 years' experience in infrastructure and transport engineering projects in Hong Kong and Australia. His present field of study is transport and infrastructure projects with western technology financed in Asia and the Far East.

Dudung Purwadi, Master of Engineering Science (Transportation) University of Michigan

Dudung is head of the transportation laboratory and a senior lecturer in the Department of Civil Engineering at the Surabaya Institute of Technology in Indonesia and is an external student at Monash University. His consultancies include projects in transportation planning and modeling and highway engineering design. His masters project is entitled "Using stated preference method to examine travel preference in Indonesia". A 'state preference' approach will be used to investigate transport mode preference in the east-west corridor of Surabaya. Dudung hopes to transfer to the PhD program.

APPENDIX B - PUBLICATIONS

Books and book chapters

- Currie, G. (2004) Planning and design for on road public transport, in: Young W. (ed.) *Traffic Engineering and Management*, 2nd ed, Department of Civil Engineering, Monash University, Melbourne.
- Currie, G., Sarvi, M. & Young, W. (2004) A new methodology for allocating road space for public transport priority, in: Brebbia, C.A. and Wadhwa, L.C. (eds.) *Urban Transport X: Urban Transport and the Environment in the 21st Century*, WIT Press, Germany.
- Rose, G. (2004) Basic traffic variables, relationships and applications, in: Young W. (ed.) *Traffic Engineering and Management*, 2nd ed, Department of Civil Engineering, Monash University, Melbourne.
- Rose, G. (2004) GPS and vehicular travel, in: Hensher, D., Button, K., Haynes, K. and Stopher, P. (eds.) *Handbook of Transport Geography and Spatial Systems*, Elsevier.

Journal articles

- McGeogh, C. and Rose, G. (2004) “Using base year matrix estimation adjustments to update future year O-D matrices”, *Road and Transport Research*, vol. 12, no. 3, pp.16-28.
- Sarvi, M., Kuwahara, M. and Ceder, A. (2004) “Freeway ramp merging phenomena in congested traffic using simulation combined with a driving simulator”, *Journal of Computer Aided Civil and Infrastructure Engineering*, vol. 19, no. 5, pp.351-363.

Journal articles (in press)

- Currie, G. (forthcoming 2004) “The demand performance of bus rapid transit”, *Journal of Public Transportation*.
- Sarvi, M., Kuwahara, M. and Ceder, A. (forthcoming 2004) “Developing control strategies for freeway merging points under congested traffic situations using modelling and a simulation approach”, *Journal of Advanced Transportation*.

Journal articles (in progress)

- Sarvi, M., Ceder, A. and Kuwahara, M. “Development of a micro simulation program to study freeway ramp merging processes in congested traffic conditions”, submitted to: *Journal of Computer Aided Civil and Infrastructure Engineering*.

Conference papers (presented/published)

- Ceder, A. and Sarvi, M. (2004) “Optimal design evaluation of Hong Kong passenger ferry routes”, at: *83rd Transportation Research Board Conference*, Jan. 2004, Washington DC.
- Currie, G., (2004) “Public transport needs gap analysis”, at: *83rd Transportation Research Board Conference*, Jan. 2004, Washington DC.

- Currie G. (2004) “The knowledge management gap in Australian public transport”, at: *2nd National Passenger Transport Summit*, May 2004, Coffs Harbour.
- Currie, G. (2004) “A review of the performance of the Sydney 2000 Olympic Games transport system”, at: *Eighth International Conference on Applications of Advanced Technologies in Transportation Engineering*, May 2004, American Society of Civil Engineers and China Academy of Transportation Sciences, Beijing.
- Currie, G. (2004) “Transport and social exclusion in rural and regional Victoria”, at: *Victorian Planning and Environmental Law Association Annual Conference*, Sept. 2004.
- Currie, G. and Karlaftis, M. (2004) “A critical comparison of the 1996, 2000 and 2004 Olympic Games transport strategies – lessons for urban planning futures”, at: *European Transport Conference*, Oct 4-6 2004, Strasbourg,
- Currie, G., Sarvi, M. and Young, W. (2004) “A comprehensive approach to balanced road space allocation in relation to transit priority”, at: *83rd Transportation Research Board Conference*, Jan. 2004, Washington DC.
- Currie, G. and Wallis, I. (2004) “Cost-effective bus service improvement measures to increase patronage – a synthesis of experience”, at: *Australasian Transport Research Forum*, Sept. 29 – Oct. 1 2004, Adelaide.
- Currie, G. and Young, D. (2004) “An international review of public transport training in higher education”, at: *European Transport Conference*, Oct 4-6 2004, Strasbourg.
- Rose, G., Marfurt, H., and Harbutt, P. (2004) “Using a ‘Ride to Work’ day event as a travel behaviour change initiative”, at: *83rd Transportation Research Board Conference*, Jan. 2004, Washington DC.
- Sarvi, M., Kuwahara, M. and Nishikawa, I. (2004) “Development of an experimental vehicle and its application to investigate freeway ramp merging phenomena observed in traffic congestion”, at: *World Conference on Transport Research*, July 4-8 2004, Istanbul
- Seethaler, R. and Rose, G. (2004) “Incorporating the principles of psychological persuasion in communications components of travel behaviour change programs”, at: *European Conference on Mobility Management*, 5-7 May 2004, Lyon.
- Rose, G. (2004) “Educating engineers about planning and design for bicycles”, at: *Australian Association of Engineering Educators Conference*, Sept. 27-29 2004, Toowoomba.
- Tan, Y.W. and Young, W. (2004) “Simulation support for modelling traffic and parking in urban development” in: *Proceedings of the 4th International Conference on Decision Making in Urban and Civil Engineering*, Oct 28-30 2004, Portugal.
- Young, W. and Tan, Y.W. (2004) “Data and discrete event parking simulation models” in: *Proceedings of the International Symposium on Transport Simulation*, 2002, Japan.

Conference papers (submitted)

- Sarvi, M., Ceder, A. and Kuwahara, M. (2005) “Freeway ramp merging process observed in congested traffic: Lag vehicle acceleration model” submitted to: *16th International Symposium on Transport and Traffic Theory*, July 19-21 2005, Maryland.

ITS Working Papers

- Currie, G. (2004) *The Knowledge Management Gap in Australian Public Transport*, working paper no: ITS-WP-04-13, 10pp., Institute of Transport Studies, Monash University, Melbourne.

Project reports

- Currie, G. and Sarvi, M. (2004) *Review of Impacts of Clearway Removal – High Street Preston*, for VicRoads North West Region.
- Currie, G., Sarvi, M. and Young, W. (2004) *Improving Methodologies to Assess On Road Public Transport Priority – Final Report*, VicRoads Research and Development Project 799.
- Currie, G., Sarvi, M. and Young, W. (2004) *High Street Case Study*, VicRoads Research and Development Project 799.
- Currie, G., Sarvi, M. and Young, W. (2004) *Manningham Road Case Study*, VicRoads Research and Development Project 799.
- Rose, G. (2004) *Regulating the Availability and Use of Personal Mobility Devices*, submission to the Australian Transport Council’s Working Group.