

MAPPING A NEW JOURNEY TOGETHER

Transport systems and civic infrastructure are central to Australia's rebound from the pandemic of 2020. Governments at all three levels have committed to significant investments in transport and have begun to engage with each other, with private partners, and with tertiary institutions such as Victoria University, to expand and improve the structures and processes for moving people and goods.

Victoria University's new virtual School for Transport Systems and Civic Infrastructure, directed by **Bill Petreski**, convened an Industry Day on 2 October to help researchers, public officials and private entrepreneurs to get to know more about each other's plans and capabilities.

Three main headlines emerged in this conversation. One is the enthusiasm in government circles for stronger connections between jurisdictions, among types of transport, and other policy goals (such as environmental



BILL PETRESKI DIRECTS THE SCHOOL FOR TRANSPORT SYSTEMS AND CIVIC INFRASTRUCTURE AT VICTORIA UNIVERSITY [SOURCE: SUPPLIED]

health, skilling and new jobs, and regional employment). Another is a reconsideration of how codes of building practice can be better aligned with cost reduction, sustainability and inspection regimes, and the consequences of these changes for tertiary teaching. The third message was the pervasive role of digital transformations in every aspect of the transport business.

A STRONGER ROLE FOR GOVERNMENTS

The billions of dollars promised by government, both state and federal, will be invested using new mechanisms of funding. Central to this spending, as outlined by **Wade Noonan**, executive

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director of WoMEDA (West of Melbourne Economic Development Alliance), will be City Deals that connect these governments to local governments, such as the alliance of northern and western Melbourne suburbs building on WoMEDA's experience. A key strategy is to provide a better transport system in this rapidly growing part of Melbourne to increase the circulation of workers and available jobs. The first three precincts (Footscray, Sunshine, Werribee) will become transport hubs that connect to each other. With the new Footscray Hospital, for example, complementing Victoria University's University Town initiative, better transport links will provide access to the newly created jobs for health professionals from a wide range of suburbs. Sunshine railway station will become as significant a transport hub as Southern Cross, producing new commercial and retail opportunities in that precinct.

The first City Deal was struck in 2017, incorporating Geelong in a \$370m agreement, while another in Perth involves \$1.5b of investment. Four of Melbourne's northern suburbs are under consideration as precincts on the western suburbs model. The 2020 pandemic has hit this part of Melbourne hard, underscoring the case to be made for government investment.

FOOTSCRAY, SUNSHINE AND WERRIBEE WILL BECOME TRANSPORT HUBS THAT CONNECT TO EACH OTHER



THE GOVERNMENT PLANS FOR MELBOURNE'S WESTERN AND NORTHERN SUBURBS RECEIVED POSITIVE PUBLICITY IN THE TABLOID PRESS [SOURCE: HERALD-SUN, 24 AUGUST]

State government departments of transport will play a stronger role in these economic developments if they can move from being collections of silos to become properly amalgamated agencies. Victorian Transport Department Secretary

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Paul Younis described the recent restructure of his department as an amalgam of all existing functions – it now sees transport across the state in a holistic way, integrating walking, cycling, private cars, public transport and ports. Victoria is unusual among jurisdictions in this approach, and is also distinctive in the level of privatisation characteristic of the state. It is one of the most privatised transport networks in the world – its buses, trams, metropolitan trains and ports are operated



COBBLEBANK STATION IS LOCATED NEAR THE UNIVERSITY'S FORMER MELTON CAMPUS [SOURCE: COBBLEBANK FACEBOOK PAGE]

by private enterprise, as well as a significant number of its major roads.

The department designs new infrastructure, such as the Cobblebank railway station in Melton South, by taking an integrated approach to the modes and connections required to put transport at the centre of Melbourne's dramatic urban growth, with a million people being added to its population every seven or eight years.

As public transport recovers from the 2020 pandemic, the state department plans to find ways of better connecting customer journeys, busting congestion, bringing people back to a safer system, including digital products that will help them plan their trips. As Melbourne continues to grow, public transport becomes even more important. Central to this future are the big train projects such as the Metro Tunnel (taking pressure off the City Loop), the suburban rail loop, the western rail plan, and the Melbourne Airport Rail. These are part of the bigger upgrade across the state, including the Sunshine Super Hub, the Fast Ballarat Line, and the Fast Geelong Line.

TEACHING THE REDESIGN OF THE BUILDING ENTERPRISE

These developments have significant implications for the curriculum in the built environment, as explained by Associate Professor **Zora Vrcelj** and industry expert **Stephen Kip**. Urban planning and design is the academic discipline responsible for healthy communities and climate sensitive design. Construction is taught with an emphasis on sustainable materials and green infrastructure. Building energy programs include more attention to Artificial Intelligence.

The building enterprise consists of three parts: design, traditionally the work of

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architects; construction, the phase dominated by builders; and occupation, involving both owners and tenants. The regulation of the industry sees compliance measures and codes of practice in considerable flux. Over the past three decades surveying has been privatised, technical provisions have been deregulated, and licensing requirements have been delegated from government to private inspection.

How its students in construction learn their technical and other skills at institutions typified by Victoria University is undergoing important changes. Governments want better compliance and more sustainable buildings. A good example of the inherent tension in this field is the interplay between making buildings greener and the problems of water condensation that can emerge in such structures. Rather than the costly fix that is often required once a building has been completed, it is preferable that the designer or the builder take more responsibility for anticipating defects. In the case of cladding, for instance, which has proven to be a major fire risk, this arose out of tougher energy efficiency rules introduced in the early 2000s. Building code curriculum has to become front and centre in architectural courses. Another example is photovoltaic batteries, which,

while an environmentally positive step forward, carry a fire risk.

THE DIGITAL THREAD IN TRANSPORT THINKING

The paradigm shift to high-tech companies underpins the digital transformation. This transformation is not as easy as it might sound, according to Professor **Yuan Miao**, but this is where the jobs of the future are being created. The sweep of such transformations is quite impressive: from Artificial Intelligence, to Cyber security, ICT management, data analytics, Cloud computing, content management systems and enterprise resource planning. Transport is one of the industries where the cumulative effect of these transformations will be even more dramatic than it has been to date.

THE DIGITAL TRANSFORMATION IS NOT AS EASY AS IT MIGHT SOUND, BUT THIS IS WHERE THE JOBS OF THE FUTURE ARE BEING CREATED

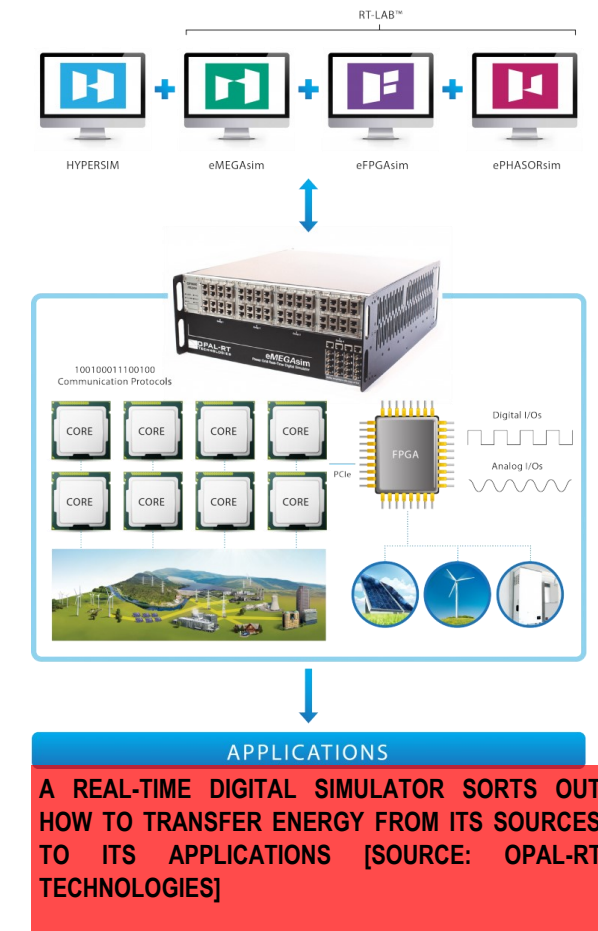
At the local Footscray level, as explained by **Paul Shea** and **Chris Lang**, the Smart City initiative promises to revolutionise the ways its residents and visitors make their way on foot, by bicycle, car, tram and train. Beginning in July 2019, with hardware installed up and down Nicholson Street at 21 sites, data is being collected on pedestrians, vehicles and cyclists. As this

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data set grow, busy times will become clearer, accidents and congestions can be communicated, and measures can be taken of air quality and other environmental aspects of local life.

Research led by Victoria University's **Akhtar Kalam** and his colleagues is helping provide the framework in which the new digital technologies can be deployed. Behind the digital transformation is a revolution in how energy is produced and distributed. 'Smart controls' require complex systems that will function at all times. Working with industry partner, OPAL-RT Technologies, led by **Chris Genganantha**, Victoria University's engineers use a high-end real-time digital simulator to validate and optimise complex control systems. Simulators are critical for planning energy distribution, as tests are difficult in the field and expensive to fix.

In order to harness the new sources of energy (including solar power and wind turbines) for Australia's transport needs, according to AusNet's **Derek Jayasuriya**, we need to be able to manage the electrification at different level, to suck up and store energy when there is an excess, and release power at the local level. Gone are the days where a centralised generation of power is delivered in one direction



across a network. The uptake of Electrical Vehicles (EVs) is astonishing, as it is embraced by public transport systems across Australia, even if the purchase of private EVs is modest.

Jemena's **Peter Wong** argues that the key is the development of smart substations. The megatrends are clear: decarbonisation, decentralisation, and digitisation. Taken together, these developments are pushing transport systems in the same direction, toward distributed energy networks that will power the tram and train systems.

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Hheavy transport puts pressure on the energy supply and storage systems. It does sometimes cause ‘harmonics’ on the network, as do renewables from time to time. But it is important that as the digital transformation of heavy transport increases, researchers need to simulate those developments and anticipate how much extra power will be required.

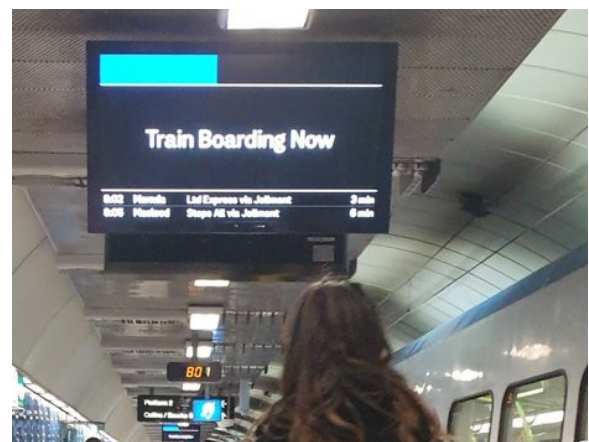
What industry is seeking can be instanced by the example of Melbourne’s train system. This system is undergoing a profound shift in its use of digital technologies, as explained by **Catherine Baxter**, from Metro Trains. The system is huge, with 222 railway stations on 1000 km of track, employing 6000 people. Onboard diagnostics identify and prevent the train faults that jam a system of this size.



METRO TRAINS ARE NOW EQUIPPED WITH INCREASINGLY COMPLEX CONTROL PANELS [SOURCE: DEPARTMENT OF TRANSPORT]

The 9000 CCTVs used through the

Melbourne train system to target vandals and trespassers are fitted on moveable masts that can zoom in and out of locations. These CCTVs are now being complemented by drones. A track app is under production that will improve the safety of maintenance crews working on the line. High-capacity signalling will mean trains can be driven with more confidence at higher speeds. Digital displays (known as ‘burn lines’) inside the carriages give passengers a clearer sense of anticipating when a train will reach its next destination.



A ‘BURN LINE’ ANNOUNCEMENT IN ACTION [SOURCE: METRO TRAINS]

These technologies are broadening the range and complexity of future jobs in the rail industry.

PREVIOUS STORIES:

WEST OF MELBOURNE ECONOMIC DEVELOPMENT ALLIANCE (DECEMBER 2019)

TRANSIT ORIENTED DEVELOPMENT (NOVEMBER 2019)

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THE FIRST PEOPLES OF WESTERN VICTORIA



KATH TRAVIS [SOURCES: AIATSIS]

Victoria University's **Kath Apma Travis Penangke** was the guest speaker at this year's AIATSIS Family History online sessions. In August the Australian Institute of Aboriginal and Torres Strait Islander Studies celebrated family history month with three sessions that attracted a total of more than 500 people. The sessions were designed to outline the services the AIATSIS Family History Unit can offer Aboriginal and

Torres Strait Islander people and to highlight the extensive AIATSIS collection, which has now grown to more than one million items.

Kath Travis shared her very personal family history story, outlining the process she undertook to research her ancestors and the complexities that exist around navigating and interpreting archives. Her first-hand knowledge as a historian was crucial to the presentation because by talking about the places where she had to look for information, and the time it took to incorporate her findings into something that her family could own and share, helped participants understand that family history is a complex and time-consuming activity.

Kath Travis spoke at length, drawing on primary sources, emphasising the importance of leaving a legacy for future generations of the story in a First People's narrative, culminating in her self-authored book *Minnie, Mum and Me: The Black Headed Snake*. Her zest to continue to look for information to build on what she

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already had in her possession was inspiring and resonated with the audience, leaving them with a desire to pursue their own journeys. The feedback from all sessions in response to her presentation was overwhelmingly positive with participants appreciative of her first-hand account of how to put into practice ideas that had been outlined by AIATSIS staff before her presentation. The following comments from participants are typical:

A massive thank you to Kath for sharing her story. Such a powerful demonstration of how records can assist with piecing together a family history that was deliberately torn apart. It was moving, heart-breaking and empowering all at the same time. A real privilege to listen to. Thank you again.

Hearing Kath advice was great as I know there are things I can now do to make my journey less messy

I loved it! I'm so grateful Kath that you shared your personal journey with us, it was very inspirational and made me want to learn more about my own family. Thank you!!

The AIATSIS team was grateful to Kath Travis, and hopes to have a continued partnership with her.



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VICES VICES HEALTH INVESTMENTS REPORT LAUNCHED AT CONCORDIA SUMMIT IN NEW YORK

On 21 September a new report by VICES (the Victoria Institute of Strategic Economic Studies) on the social and economic benefits of investing in health was launched virtually at this year's Concordia Summit in New York City. The Summit brings together leaders in business, government and the not-for-profit sector to address major global issues. The former PM Hon **Kevin Rudd** is on the Concordia's leadership council.

The report was commissioned by the US Chamber of Commerce. It makes an argument for the value of investing in treating non-communicable diseases in countries with low or medium incomes.

Led by principal author, Professor

Bruce Rasmussen, the VICES research uses the World Health Organization's OneHealth Tool (OHT) to demonstrate the economic benefits in reducing absenteeism and underperformance at work caused by ill health. Poorer countries typically comprise ageing populations with high rates of non-communicable diseases.

These diseases include cardiovascular disease, diabetes and mental illness.



THE CONCORDIA SUMMIT IS A PRESTIGIOUS ANNUAL MEETING OF LEADERS [SOURCE: CONCORDIA]

By scaling up strategic clinical interventions and reducing risk factors, a return of \$20 for every \$1 invested can be achieved.

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“BY SCALING UP STRATEGIC CLINICAL INTERVENTIONS AND REDUCING RISK FACTORS, A RETURN OF \$20 FOR EVERY \$1 INVESTED CAN BE ACHIEVED.”

In his speech, Professor Rasmussen emphasised the role played by COVID-19 in highlighting the complex interdependencies between health and the economy, and the impact this relationship has on society. ‘We are seeing that those living with Non-communicable diseases such as diabetes, cardiovascular disease, and respiratory diseases are susceptible to the most serious consequences of COVID-19. The pandemic has exposed the limitations of health care systems to respond to these threats, while also treating ongoing chronic disease.’

Among those of working age, these non-communicable diseases make up 70 per cent of the disease burden. ‘Our study demonstrates that there is a powerful economic argument for investing in non-communicable disease prevention and treatment to enable people to work more productively, to increase social and economic inclusion, and to improve the health resilience of the global population in anticipation of future pandemics.’

‘This study addresses the questions many government finance officials ask, “what do we get from our health spend.” We hope that these findings will help to build the business case for why health should be viewed as an investment in economic and social development, as opposed to a cost centre whose budgets must be trimmed.’

‘These high benefit-cost ratios, arising from the enhanced productivity of those being treated, demonstrate the value of investing in the treatment programs for these diseases among the working age population.’

What was unexpected was the finding that the returns are particularly high among the developing countries, emphasising the importance of addressing non-communicable diseases in these countries. These diseases have traditionally been seen as a problem merely for richer countries.

VISES was established by Professor **Peter Sheehan** as the Centre for Strategic Economic Studies (CSES) at Victoria University, Melbourne, in 1993, and is now

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one of the leading applied economic research groups in Australia. Its director is Professor **Bruce Rasmussen**.

The report is available at https://www.uschamber.com/sites/default/files/increasing_social_and_economic_benefits_globally.pdf



DR KIM SWEENEY, PROFESSORIAL FELLOW
PETER SHEEHAN AND PROFESSOR BRUCE
RASMUSSEN [SOURCE: VICTORIA UNIVERSITY]

PREVIOUS STORY: ADULT WELL-BEING
IN BURUNDI [AUGUST 2020]

RIGHT WING TERRORIST IN AUSTRALIA

The research of Associate Professor **Debra Smith** and Colleagues in the area of right-wing terrorism continues to attract attention in this current context. She is quoted in the 29 August issue of *The Saturday Paper* in an article questioning whether the Australian Government understands the full extent of the menace posed by these radical right activists.

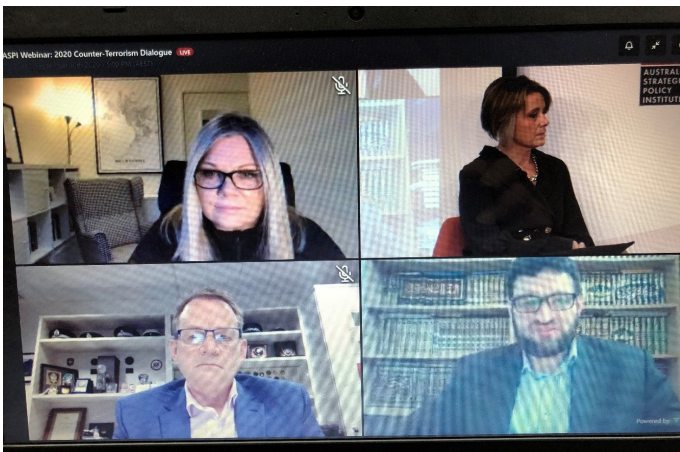
Professor Smith was invited to speak alongside the Hon. **Kristina Keneally** and Victorian Deputy Police Commissioner **Ross Guenther** at the 2020 Counter-Terrorism Dialogue auspiced by ASPI (the Australian Strategic Policy Institute), held on 10 September. Over 300 people from around the world tuned in to hear how right-wing extremist activity is on the increase, aided by technology, particularly social media, and the current COVID environment. Right-wing extremists have continued to create their own threat to civil order through spreading disinformation, conspiracy theories, and justifications of violence. In particular, Professor Smith used her platform at ASPI to point out that far right extremism is not a conservative movement,

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but a radical one that is seeking to undermine the principles of democracy. The so-called humour and irony of far-right social media posts forms part of a strategy to create a seemingly fun and positive sub-culture, one that camouflages the extremeness of the dehumanising and anti-democratic message that sits at its heart.



SOME CONSPIRACY THEORISTS THINK THAT COVID-19 IS A HOAX [SOURCE: DAILY MERCURY]



THE 2020 COUNTER-TERRORISM DIALOGUE, WITH ASSOC PROF DEBRA SMITH, SENATOR KRISTINA KENEALLY, DEPUTY COMMISSIONER ROSS GUETHNER, AND SHEIKH MOUSTAPHA SARABIKI [SOURCE: SUPPLIED]

Things might be about to get worse, according to Professor Smith. ‘This could just be the calm before the storm’, she said on the ‘7am’ podcast with **Osman Faruki** on 31 August. Violent protests are encouraged by Australians who believe the pandemic is fabricated.

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WHO KILLED THIS EDUCATION REFORM?

Claire Brown, national director of AVID, has completed her PhD at Deakin on the defeat of an ambitious education reform package in Queensland, 2000-2003, entitled New Basics. New Basics was introduced by **Peter Beattie's** Labor Government, but sank without trace in Australia.

The thesis is entitled 'Murder on the Education Policy Express: Requiem for New Basics', and was supervised by former Victoria University colleagues **Tim Corcoran**, **Brenda Cherednichenko** and **Roger Slee**, as well as **Josephine Lang**.

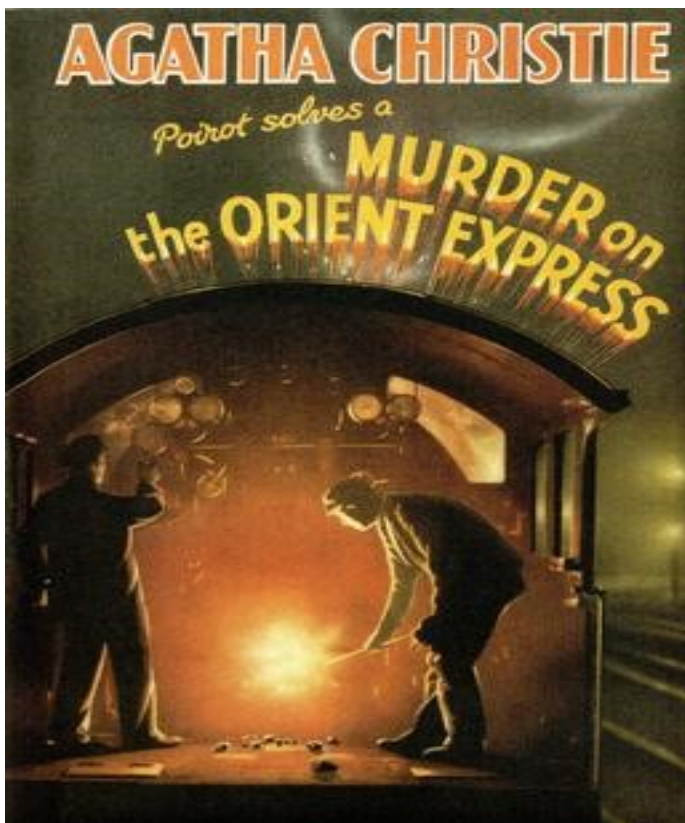
The point of the title, for those who love their whodunits, is significant. There are two possible endings to the novel *Murder on the Orient Express*, just as there are two possible ways of understanding why this reform failed.

The abstract to this dissertation is as follows: 'This thesis examines the sustainability and scalability of education policymaking in Australia. New Basics was a major education policy initiative launched in Queensland in 2000 that portended to disrupt traditional Australian education philosophies, structures, and practices. During the first three years of a proposed ten-year trial, New Basics improved aspects of teaching and learning in a number of classrooms. However, education policy decision-making at the time resulted in New Basics being abandoned rather than scaled up across Queensland or nationally.'

'Twenty years later, New Basics is still implemented in other countries. This thesis explores the complexity of education policymaking drawing on a blend of qualitative methodologies that includes diffraction (Barad, 2007) and ethnography (Van Maanen, 2011). It responds to the question, What happened to New Basics? New tools to improve the quality of education policy analysis are proposed from this research.'

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Conclusion: 'As the New Basics case study has illustrated, entrenched hierarchies in education systems and schools are likely to resist change and any perceived erosion of their dominance. It is challenging for policymakers to hear voices who have valuable insights to offer but struggle to make them heard against the stridency and volume of louder, more powerful voices.' (p.365)



FIRST EDITION OF AGATHA CHRISTIE'S FAMOUS NOVEL [SOURCE: COLLINS CRIME CLUB]

SPECIAL COLLECTIONS IN THE VICTORIA UNIVERSITY LIBRARY

During the 2020 pandemic various collections of rare materials held in the University Library are being featured in an online format, on a monthly rotating basis. In all, there are 14 collections in the Library. For further information, email: special.collections@vu.edu.au.

The **Elda Vaccari Collection** is a significant resource for researchers interested in the history and culture of immigrants to Australia. The collection was established in 1988 by **Robert Pascoe**, using resources donated by the Foundation created by community leader **Gualtiero Vaccari**, and named in honour of his widow.

The **Foley Collection** is a selection of digital works by the Indigenous activist and academic **Gary Foley**.

The **John & Shirley McLaren Collection** comprises rare and valuable resources of Australian, New Zealand, and South Pacific fiction (novels, plays and poetry) and

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criticism. John McLaren (1932-2015) served as the head of the Humanities Department throughout the 1980s, and Associate Dean (Research and Research Training) in the Faculty of Arts from 1992 to 1997..



ROBERT PASCOE AT FOOTSCRAY PARK CAMPUS IN 1988

Mathematical Inequalities & Applications (GMIA) contains information about the GMIA technical reports and mathematics journals exchanged with other universities. The Research Group in Mathematical Inequalities and Applications is comprised of academics and researchers from Australia, Asia, Africa, Europe and

North America. The aims of the group are to (1) disseminate results via publication in electronic form and conferences, (2) create an awareness of the theory of inequalities and support seminars and visiting academics, and (3) illustrate the applicability of inequalities in the sciences, such as numerical analysis (including quadrature and integral equations), statistics, probability and information theory.

The GMIA was founded in September 1998 and was based at Victoria University until 2009. It is chaired by **Sever Dragomir** and boasts over 1300 members worldwide.

The **Patrick Wolfe Collection** covers Indigenous peoples, religion, philosophy, race, Marxism and women's rights. The internationally recognised scholar **Patrick Wolfe** (1948-2016) published his germinal work, *Settler Colonialism and the Transformation of Anthropology*, 1999, while a Research Fellow at Victoria University.

The **PNG and the Pacific Collection** has books, reports, journals, newsletters, yearbooks and pamphlets focusing on Papua New Guinea, the greater Pacific and South East Asia.

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PATRICK WOLFE WAS AN INSPIRING TEACHER AND COINED THE TERM 'SETTLER COLONIALISM'

The **Radical Literature Collection** is a research collection of material related to radical left-wing groups in Australia.

Rare & Valuable Books: books across diverse subjects including Australian literature, history, art, music, anthropology and town planning.

The **Rationalist Collection** Includes books, pamphlets and journals on history, politics, education, economics, civil society and anthropology.

Regional **Archive** preserves the records of individuals and organisations from the western region of Melbourne. This

collection was begun by librarian **Fran Hegarty**, who later headed the library at Swinburne University.

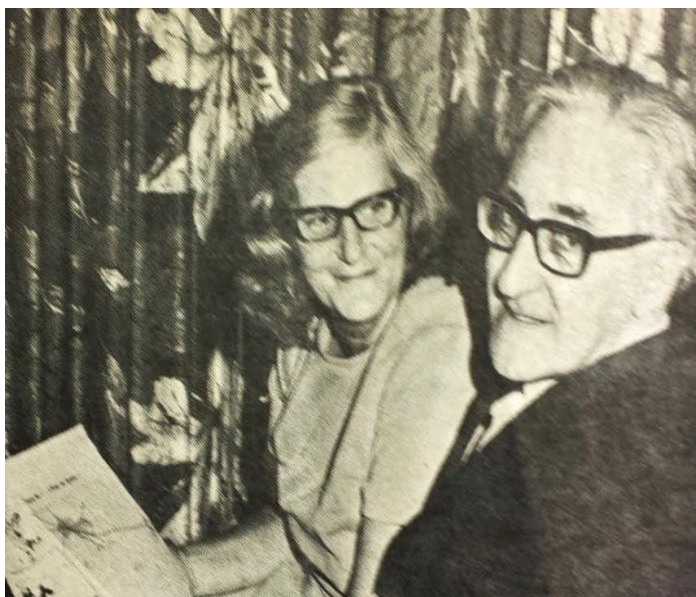


Fran Hegarty [SOURCE: Swinburne]

The **Ray Verrills Collection** includes materials on Australian literature, philosophy and left-wing politics.

The **Ruth & Maurie Crow Collection** consists of over 2700 books and pamphlets on a variety of social and political issues, including urban planning, women's issues, labour economics, social issues and services, and conservation.

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RUTH AND MAURIE CROW WERE COMMUNITY ACTIVISTS BASED IN NORTH MELBOURNE

focusing on Timor-Leste. Victoria University has had links with this nation since its independence and housed its first consulate in Victoria.

The **Sir Zelman Cowen Collection** includes resources on Australian constitutional law, federal politics and the law, Australian architecture and Australian literature. Cowen was a Distinguished Visiting Professor at Victoria University, an achievement he esteemed very highly.

The **Timor-Leste Collection** features a range of books, reports, journals, newsletters, yearbooks and pamphlets

SUSTAINABLE INDUSTRIES

DESTROYING THE CHEMICALS IN FIREFIGHTING FOAM

A scholarly article published last year by Dr **Jianhua Zhang** and colleagues has won an award as one of the best ten papers in the top-tier journal, *Environmental Science: Water Research and Technology*.

The article reports on techniques used to destroy the deadly PFAS, per- and poly-fluorinated alkyl substances, chemical compounds that are highly persistent in the environment and accumulate in the food chain. They are linked to cancers and do not biodegrade in the natural environment. PFAS are associated with Teflon-based products and have been used in firefighting foams and in the cleaning of aircraft. Consequently, Australia has a lot of groundwater contamination associated with PFAS, and defence installations and airports are major sites. The tunnelling of the West Gate Tunnel has come to a halt because the 200 tonnes of firefighting foams used in containing the Coode Island disaster of 1991 has made it a PFAS hotspot.



PUTTING OUT THE COODE ISLAND FIRE, 1991
[SOURCE: UNITED FIRE FIGHTERS UNION OF AUSTRALIA]

Treatment of PFAS is hazardous because it is very difficult to break down, as the carbon-fluoride bond is very stable. Hence, destruction usually requires concentration, followed by high temperature incineration, so it is very expensive to treat.

The team investigated three kinds of treatment: by UV (treatment with light in the UV radiation wavelength), by ozone (an oxidising gas) flotation in combination with UV, and by air flotation in combination with UV. They undertook the work in partnership with EGL, a local Victorian company who sell a UV-ozone process. Flotation with gas is practised commercially, but the UV-ozone combination is novel. The work

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demonstrated enhanced removal and possible destruction of PFAS with UV-ozone when compared to the use of air in combination with UV, ozone flotation alone, or UV treatment alone. Destruction of PFAS was not complete as increased concentrations of shorter chains of PFAS were detected after treatment. The paper is significant because it does show destruction of PFAS which is difficult to achieve and is not possible with UV or ozone treatment alone, only in combination.

The team: Jianhua Zhang, the lead author, completed his PhD at Victoria University and has become a senior research fellow in ISILC. **Zongli Xie** was also a doctoral student before going on to CSIRO – she is also an adjunct. **Brian Dorian** is the industry partner for EGL. **Xiaodong Dai**, from China, spent a year in the University laboratories as a PhD student about 12 years ago, and has recently started resumed his collaboration with the University. The other co-author is **Stephen Gray**.

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VISUALISING INFORMATION

Information Visualisation is a relatively new intellectual endeavour, vitally important across many fields. In the words of deputy vice-chancellor **Corinne Reid**, ‘the ability to visualise large heterogeneous data volumes into meaningful information to create knowledge offers a powerful tool for inquisitive minds in all disciplines’. As the amount of data we need to comprehend every day grows exponentially, we need to recall Napoleon’s famous advice: ‘Un bon croquis vaut mieux qu’un long discours’, or ‘A good sketch is better than a long speech!’

The first Information Visualisation Forum started in London in 1997. The fourth forum, entitled ‘IV2020’, was the first time it was held online and the first time it was being hosted and co-organised by Victoria University.

Over five days (7-11 September), the conference comprised delegates and

keynote speakers from Australia and 32 countries spread over several time-zones. Dean of Engineering Professor **Farzad Khosrowshahi** has been involved with the conference from its inception, and has funded the Informational Visualisation Society based on participants in the conference.



DEAN OF ENGINEERING PROFESSOR
FARZAD KHOSROWSHAHI

Information Visualisation now consists of several disciplines, such as the following:

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- AI & Visual Analytics
- Knowledge Visualisation:
- BioMedical Visualisation
- Graphical Models and Imaging
- Visualisation in Built Environment

A panel discussion on ‘Future Cities’, organised and chaired by Associate Professor **Zora Vrcelj** included Dr **M. Reza Hosseini** (Deakin University), **Emma Hendry** (Australia for Women In PropTech), **Gavin Cotterill** (PCSG) and Dr **Maria Prokofiev**.

The conference keynote speakers included **Melissa Harris** (Victorian Department of Environment, Land, Water and Planning), **Franco Ucci** (Oracle Fusion Middleware Australia), Professor **Sarah Kenderdine** (Lausanne, Switzerland) and Professor Tomasz Bednarz (University of New South Wales).



A FAMOUS INFORMATION VISUALISATION: THE LONDON UNDERGROUND [SOURCE: LABLASCVEGMENU]

SCHOOL FOR THE VISITOR ECONOMY

THE SCHOOL FOR THE VISITOR ECONOMY

Greetings from the School for the Visitor Economy. As you would be well aware, the tourism, transport, hospitality and events sectors, that make up the visitor economy, have been the hardest hit of all industries by the bushfires and the pandemic. As the events have been so long lasting, it has been difficult to see clearly just how bad the damage to the industry has been. However recent data from Tourism Research Australia (TRA) shows that domestic overnight tourism spending continued to grow up until March 2020 despite the bushfires, but declined sharply in April (overnight spend down 91% compared to April 2019) and May (down 82%) following the introduction of travel restrictions. The latest [TRA data](#) might be of interest to those who would like the detail. The bottom line for industry, however, is that travel restrictions have been devastating.

Plans for recovery, however, are well underway and the School for the Visitor

Economy have been working closely with our partners at the Victorian Tourism Industry Council (VTIC) in the development of an industry recovery plan. You can see the plan that was delivered to government in July [here](#). In summary, the plan emphasises the need for investment in marketing, events, industry strengthening and real time data insights to guide decision making and collaboration across regions and between states. Importantly, support for industry to innovate as we move into the ‘new normal’ will be imperative.

What the pandemic has highlighted, however, is just how important tourism, hospitality and events are to the wider economy in terms of jobs and spending on goods and services that are both directly and indirectly related. We are seeing business closures not just by restaurants, hotels and transport providers, but many other services that cater to visitors and events. The range of businesses that are indirectly reliant on tourism is large, including security companies, photographers, set designers, equipment hire and so on. Businesses servicing the accommodation sector such as building maintenance and pool maintenance are

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other examples that are struggling. The outlook for these businesses is uncertain and how many will reopen is yet to be seen. Forecasts suggest, however, that there is reason to be optimistic and that while the jobs outlook in our industry is poor in the short-term, rebuilding will be essential in the longer term for wider economic growth. A key consideration for industry will be on how to do this safely and how to innovate and respond to changing consumer preferences and behaviours.

The School has also been active in working with VTIC on exploring the lessons arising from both the bushfires and the pandemic. We are excited to be working on a project funded by the VU Planetary Health Research Program to explore disaster impacts, recovery and resilience across the state with the goal of building a roadmap for resilience and recovery. Through the project outcomes, we hope to be part of giving definition to how the industry can ‘grow back better’ and take the opportunity to build a more resilient and sustainable industry. Here is an update on our progress with the project.

Building the resilience of tourism destinations to disasters – the 2020 Victorian bushfires and COVID 19 pandemic.

Our researchers within the SVE have a strong record in international and local research on risk, recovery and resilience in the tourism industry. We are excited therefore to be undertaking a project investigating the impacts of the crises with the aim of developing a roadmap for industry recovery. We are very grateful for support by the VU Planetary Health Research Program to undertake the project as well as to our partners at the Victorian Tourism Industry Council (VTIC) who are working with us. The project is being implemented by a multi-disciplinary team that includes myself with Professor Terry De Lacy, Dr Ancy Gamage, Dr Gabrielle Lindsay-Smith, VanKhanh Nguyen and Chris Porter from VTIC.

The focus of the project is on building the resilience of the visitor economy in destinations across Victoria. This is in recognition of the vital role that tourism has on the social, economic and environmental health and wellbeing of

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localities, particularly in regional areas. Our objectives include examining the impact of bushfires and the pandemic across Victoria, identifying strategic responses that will help the sector in the short, medium and long term, and, developing a roadmap for destination transformation. The broad aim is to support the transformation of the tourism industry into the emerging green economy and assist the adjustment to a 'new normal' as we accept the long-term realities of climate change and public health risks.



SOURCE: DR JOANNE PYKE,
DIRECTOR, SCHOOL FOR THE
VISITOR ECONOMY

Facilitated by our project partners, the project will be informed by state-wide surveys of tourism stakeholders and two case studies of destinations impacted by both bushfire and the pandemic. These case studies are the Echuca-Moama area and Bright in Victoria's NE. Interestingly, both are also impacted heavily by border crossing restrictions – a condition that few of us could have imagined until recently.

We are currently collecting data and look forward to posting project updates as we continue. If you are interested in further information, contact gabrielle.lindsay-smith@vu.edu.au.

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SUSTAINABLE TOURISM

Professor **Terry DeLacy** has accepted an invitation to serve on the World Economic Forum's Sustainable Tourism Global Futures Council. Best known for its Davos meetings, the World Economic Forum also hosts a network of Global Future Councils, interdisciplinary knowledge networks dedicated toward shaping the future. The 40 Councils, across ten areas, consist of 800 prominent thought leaders. One of these Councils is devoted to sustainable tourism, an area in which Professor DeLacy is a world leader. His co-edited ***Green Growth and Travelism*** is one of the foundational texts in the field.

The Global Futures Council on Sustainable Tourism is managed by a fellow Australian, **Isobel Fenton**, who is the Platform Curator, Aviation & Aerospace, at the World Economic Forum. As she explains, the Council 'will be comprised of around 20 members, and the council composition will seek to maximize diversity in all aspects; gender, regional, organization type and size

and will cover the entire ecosystem of the travel & tourism industry, and especially seeks to involve voices that are not already part of the Forum's ongoing initiatives.'

Other members of this Council include key industry players of airports and airlines such as Christchurch Airport and the Emirates airline, and heads of sustainability from other large organisations across the industry such as Marriott, Iberostar and Visa, and also includes the CEOs of disruptive and tech focused eco-tourism companies such as jetBlue Technology Ventures, Peek, Traveloka, Dynamic Planet and Adventure Scientists. It also includes Ministers of Tourism (such as the Minister of Tourism of South Africa and the Minister of Tourism of Costa Rica), the Executive General Manager of Tourism Australia, as well as representatives from international organisations and industry associations such as WTTTC and IATA, ETC, and UNWTO. Fenton notes that 'academic voices are crucial' in these discussions.

The Council's mandate is as follows:

'Although the tourism industry has been among the hardest hit by the COVID crisis, its hallmark resilience is expected to foster

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its recovery. However, the prior decades' boom of tourism led the industry to volumes and practices that challenge its sustainability; overcrowding and the carbon footprint of flying.

'This council will evaluate the conditions or policies that would be needed for the success of progressive business models that place sustainability in their DNA and may explore the development of industry-wide metrics that enable comparability and accountability. It will also consider how developing technologies can be harnessed to support the transition to ultimately achieve a clean, safe and inclusive tourism industry.'

DECADES OF TOURISM LED THE INDUSTRY TO VOLUMES AND PRACTICES THAT CHALLENGE ITS SUSTAINABILITY



VICTORIA'S SURF COAST HAS BEEN ONE OF TERRY DELACY'S RESEARCH PROJECTS [SOURCE: BUDGETYOURTRIP.COM]

FROM THE DESK OF THE ACTING DIRECTOR

ANNUAL MEETING OF THE DEANS OF SCIENCE

The Australian Council of Deans of Science will meet by Zoom on 26-27 October. Each dean is invited to present a list of the five main challenges facing their faculty this year. ‘We all gain a great deal by learning about what is happening in different institutions, what challenges we have in common and the variety of ways that we are trying to meet them’, writes Professor **John Rice**, the ACDS’s executive officer.

Professor Rice suggests that the five main challenges facing academic scientists might include the following:

- ◆ Loss of funding from international students,
- ◆ Disruption to international recruitment,
- ◆ Projected loss of funding from changes to government higher education funding,
- ◆ Interruptions to accessing overseas-based services for installing and maintaining instrumentation, and
- ◆ Less funds for co-investment, for example in CRC’s and industry-led projects.

Farewell to Robyn Broadbent

After more three decades of service to the University, Professor **Robyn Broadbent**, head of the Youth Studies area, has announced she will retire at the end of 2020 to spend more time with family and travel. A farewell function is planned later in the year.

Australian Institute of Nuclear Science and Engineering (AINSE) Opportunity

Last year Victoria University became a university member of AINSE. Professor **Khalid Moinuddin** is the VU Councillor for AINSE. AINSE provides a number of opportunities for university staff members and students.

These include:

- ◆ Postgraduate Research Award (PGRA)
- ◆ Residential Student Scholarship (RSS)
- ◆ Early-Career Research Grant (ECRG)
- ◆ Women in STEM and Entrepreneurship (WISE)

FROM THE DESK OF THE ACTING DIRECTOR

We encourage colleagues to avail themselves of these opportunities and to encourage their students to apply. AINSE facilities (beam time allocation) can be useful in the following areas:

- ◆ Health science – nuclear medicine, tissue structure analysis
- ◆ Electrical Engineering – semiconductor, silicon etc fabrication
- ◆ Chemistry/food - organic and polymeric structure analysis
- ◆ Fire – analysis of fire retardance, concrete, lithium-ion batteries structure in elevated temperature

Seminar at one of India's top Law schools

Last month (26-27 September) **Robert Walters** presented at the Gujarat National Law University on 'Data Protection Laws in Selected Jurisdictions'. Formed in 2003, the GNLU sits on a greenfield 50-acre campus situated in the Knowledge Corridor of [Gandhinagar](#). Recently his book on *Data Protection Law: A Comparative Analysis of Asia-Pacific and European Approaches*, was ranked as international No 1 among Internet Law eBooks on the website Book Authority.

Nutrient Removal and Recovery during Wastewater Treatment

Dr Dimuth Navaratna has been invited to edit a Special Issue of the high-ranking journal *Sustainability* on the theme of 'Recent Technological Advancements in Nutrient Removal and Recovery during Wastewater Treatment'. He is calling for expression of interest in contributing an article – by June 2021.

Top refrigeration student

Our student **Nima Izadyar** is on the shortlist for the 2020 AIRAH (Australian Institute of Refrigeration, Air Conditioning and Heating) student of the year award. We wish him well!

Conference on 'Texts and Their Limits' in July

Victoria University is hosting Australia's triennial Convention for Literary Studies, July 20-24. Due to the pandemic, this will be an all online event. Several ISILC people, including Dr **Tom Clark**, are on the Local Organising Group, and we are keen that many colleagues participate.

FROM THE DESK OF THE ACTING DIRECTOR

The theme is 'Texts and Their Limits', a frame specifically proposed for bringing this Convention to our University.

What is the nature of text – and how do we define where it begins and where it ends? How might such definitions influence the ways in which we read and accord significance to different kinds of textual production? And at a time of political, social and environmental crises, what roles have texts played in the deep cultural divisions we see around us, and what are the possibilities for texts to heal division, discrimination and despair? Are there limits to the social benefits that texts can provide in troubling times?

Please submit your proposals to litstudiesproposals@gmail.com by **Wednesday 27 January 2021.**



ACTING DIRECTOR OF ISILC, RANDALL ROBINSON, WITH DR PATRICK JEAN GUAY, ECOLOGY RESEARCHER [SOURCE: VICTORIA UNIVERSITY]

ORTQI- Admissions & Candidature Team

The Admissions & Candidature, ORTQI, kindly reminds supervisors of how enquiries should be lodged for:

Enquiries from **new (future) students:**

Phone **+61 3 9919 6100**

[Chat with us online\(external link\)](#)

Ask questions at [GOTOVU\(external link\)](#)

Enquiries from **current, enrolled students** and staff:

Phone **+61 3 9919 6100**

[Chat with us online\(external link\)](#)

Ask questions at [ASKVU\(external link\)](#)

In addition, if a prospective applicant seeking admission contacts you and you are willing to provide an 'in-principle' approval for their research project, the applicant must submit evidence of this approval with their application. As a result, you must complete the [Prospective Supervisor form](#) and return it to the applicant. VU International and ORTQI do not accept applications without this completed form.

FROM THE DESK OF THE ACTING DIRECTOR

A/Prof Randall Robinson

**Acting Director, Institute for
Sustainable Industries and Liveable
Cities**



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