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Message from our

PRESIDENT AND VICE-CHANCELLOR

Jane den Hollander AO

Joe Graffam has contributed an article on an innovative solution to breaking the cycle of disadvantage for Australia's prison population.

These are important issues for Australia, and a reminder of how Deakin research is seeding innovation and changing lives. dKin Magazine is a very good read indeed. Last year's magazine competed against 52 universities globally to be awarded gold in the CASE Circle of Excellence Awards for its design, photography and content – I think this year's will be even better.

Reflecting back on my journey with Deakin over the last eight-and-a-bityears, there are some successes that deserve mention. In just five years,

the Geelong Future Economy Precinct on our Waurn Ponds Campus has led to the creation of almost 2000 jobs through industry partnerships and co-location opportunities. We have made a significant contribution to assisting the Geelong region's transition to advanced manufacturing and the knowledge economy. And in an increasingly complex market, Deakin has experienced strong growth in student numbers, now we have 61.000 students (there were 39.600 in 2010). The best statistic? For all eight years Deakin has ranked first in Victoria for graduate satisfaction.

Your University's success is reflected in its performance in the international rankings.

Deakin entered the prestigious Shanghai Jiao Tong Academic ranking of World Universities top 500 for the first time in 2014 and in 2018 it was ranked 211 in the world, and top 10 in Australia! Of course you, our alumni are the most important evidence of Deakin's success, and this year Deakin celebrates 40 years of Deakin alumni.

I still have almost a year before I retire and I hope to meet some of you at the variety of functions over this next period. Thank you for the significant role you continue to play in defining and shaping the university Deakin is today.

Jane den Hollander AO Vice-Chancellor

Photography: Scott McNaughton **Location:** Morgan's walk, Melbourne Burwood Campus





To find out more visit deakin.edu.au/alumni





Wayne Eason Bachelor of Science (Information Technology) Class of 1978

Wayne Eason recently retired after a distinguished 42-year career in IT. He has been part of the Deakin family since Deakin first opened its doors, being among the first graduates and an employee for over 37 years. He also added to the Deakin family with two sons who are graduates. Here he talks about the enormous changes he witnessed during his career at Deakin and the many technology firsts attributed to Deakin IT.

Did you always want to pursue the kind of career you embarked on?

Back in the early 70s the concept of computers didn't exist. It was my love of maths that got me into IT. My degree included units in electrical, mechanical and civil engineering and the highest possible maths. The belief was that we would assist engineers or bankers with their mathematical calculations.

Why did you decide to study at Deakin?

I lived in Geelong and originally studied at the Gordon Institute of Technology which later became Deakin University. I graduated with a Diploma of Information Processing which was a very early IT qualification. When Deakin was created Gordon students were offered a conversion course to a degree which required two weeks on campus plus a 2000 word thesis. I took up this offer and in 1978 I graduated in Deakin's first graduation ceremony.

Is there anything you especially remember about that time?

The first Deakin graduation ceremony was held in a striped circus tent at the Waurn Ponds Campus. At the time there were only three buildings on campus and nothing big enough to accommodate the numbers of graduands. For a new university there were a lot of graduands because of the transition courses that were offered to Gordon students.

Can you tell us about your time at Deakin?

After I graduated I got a job at BHP in Melbourne. When the job at Deakin came up I had been commuting for three years and was ready to work closer to home. I distinctly remember that there were eight people on the interview panel! I managed to get the job and stayed at Deakin for 37 years. My field transformed massively over this time, I saw the introduction of PCs and project-managed the first payroll system for the University.



What was a favourite aspect of your career?

Deakin was always at the forefront of IT so I was always working on the latest technology. At certain points we deployed some of the first equipment ever in the world. In 1993, we were the first Victorian and possibly Australian university to employ microwave technology between campuses. The microwaves went across the bay from Geelong to Burwood. In 2002 we were the first to use a Cisco multilayer director switch - basically a massive hard-drive. We had serial number one. Deakin has the lowest IP address of any organisation in Australia because we were the first to apply for one. We were leading the pack as far as the internet was concerned and that continues to this day. We were always a young, nimble IT department ready for change.

What did you enjoy about working for a university?

I enjoyed working in education. I regularly attended graduations and when I managed staff, I encouraged them to attend graduations so that they could see the result of our work - young people receiving their degrees and happy families.

Have any other family members attended Deakin University?

Both of my sons have graduated from Deakin. Ben graduated last year with a degree in sports science and Sam graduated a few years ago with a Bachelor of Education. Ben is currently an AFL trainer for the Geelong footy club and Sam was recently offered a permanent teaching role.

What are your passions outside your work?

When my children were growing up I was very involved with their schools and sporting endeavours. These days I enjoy my car. I belong to the Renault Car Club and I am working on resurrecting the club magazine.

How do you think Deakin has changed since you studied there?

When I first started working at Deakin we had one campus, three programmer analysts and the University had 300 staff. These days the University is much bigger but still has a welcoming feel.

Photography: Craig Newell

Location:

Geelong Waurn Ponds Campus



Tony Arnel has become an international leader in sustainable planning and design, was a founding Director and Chair of the Green Building Council of Australia, Chair of the World Green Building Council, and is the current President of the Energy Efficiency Council of Australia. He is an Industry Professor at Deakin's Faculty of Science, Engineering and Built Environment and is Chair of the School of Engineering advisory board. He is also Global Director of Sustainability at Norman, Disney & Young, a world-wide engineering company. Here he talks about his interest in sustainability, reviving the City of Melbourne and Deakin's Geelong Waterfront Campus.

Why did you decide to study at Deakin?

Deakin University didn't exist when I started architecture in 1973. I enrolled in the Bachelor of Architecture degree at the Gordon Institute of Technology which became Deakin University in my second year. The Gordon course was one of the oldest architecture courses in Australia and was very highly regarded by practitioners and the industry.

Is there anything you especially remember about that time?

I was awarded a state government cadetship in the second year of the course. These cadetships paid tuition fees and a living allowance with the requirement that you work for your nominated government department during the holidays, and for two years after graduation. So when everyone else went surfing I was working at the Housing Commission which later became the Ministry of Housing.

How has your Deakin degree assisted you in your career?

Architecture was a six-year course. You had to do four years full time and then work for two years while studying part time. In the sixth year you also had to do a design thesis. It was a very thorough and practical course that gave me knowledge and skills that I have used throughout my career.

Can you tell us about your time at Deakin?

I enjoyed four fantastic years at the Waurn Ponds campus which was entirely surrounded by farmland filled with sheep and cows.

What has been the highlight of your career?

My work with the City of Melbourne was a distinct highlight. Twenty years ago Melbourne was a very different city. No one lived in the city centre, Docklands was a wasteland, commercial buildings were vacant and retail shopping was a disaster. I worked with fellow directors of the City of Melbourne on important urban policy and city planning initiatives that helped shape Melbourne into the vibrant world-class city it is today.

How did you become interested in sustainability?

My interest in sustainability was sparked by a building science lecturer at Deakin. He talked about energy efficiency, water saving and passive design at a time when the word 'sustainability' wasn't used. It was only some years later that I realised what an impact he had on me and many of my fellow students. When I got to the City of Melbourne and started to connect some of these ideas I realised that I could put them into practice through some of the policy work I was doing at the time. Melbourne was one of the first cities in the world to pursue the idea of a sustainable city.

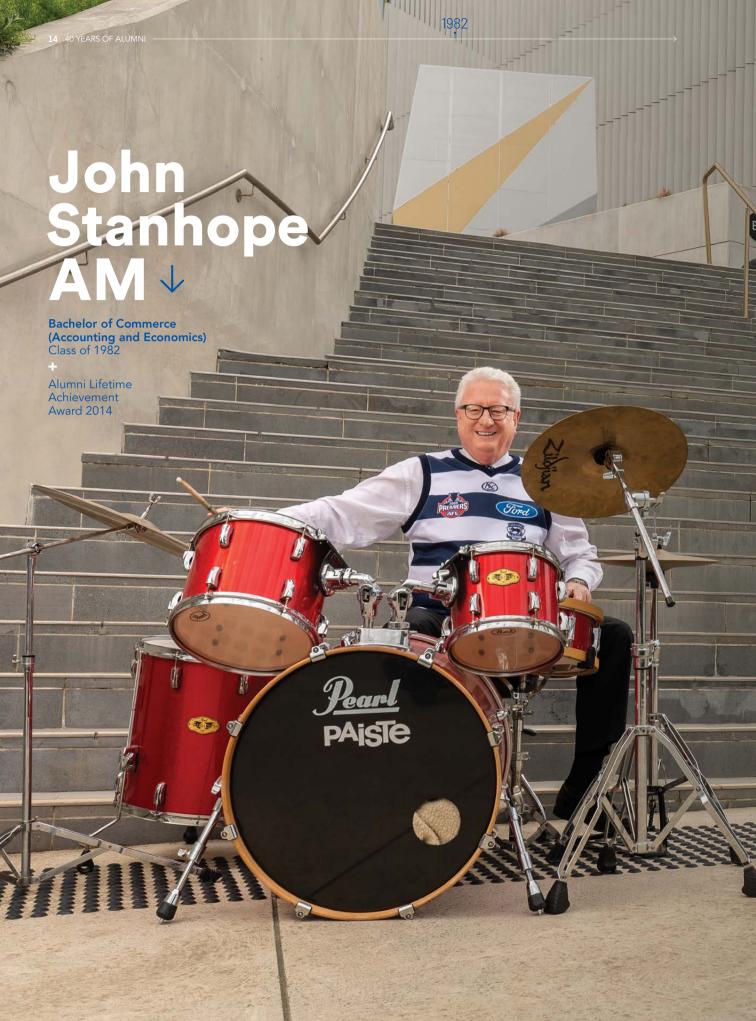
What are the challenges to creating a sustainable city?

Melbourne has been a leader in terms of sustainable urban planning and green buildings. There has been obvious success in transforming the top end of the new building market, but more needs to be done in the housing section and existing building space. I'm a trustee of the Sustainable Melbourne Fund which provides low-cost loans to building owners so that they can retrofit their buildings to make them energy efficient.

How do you think Deakin has changed since you studied there?

Some 40 years after I walked out the door of the Waurn Ponds Campus, it is unrecognisable. As an architect, I feel that one of the most significant things that Deakin has done is to create the Waterfront Campus. The buildings are a great example of adaptive reuse of existing historic buildings and are also very sustainable. It was pure genius from a planning and architectural point of view. It helped revitalise the Geelong Waterfront area, transform the old woolstores and it is an amazing facility for students.

Photography Craig Newell Location: Melbourne CBD



John Stanhope AM is one of Deakin's many successful alumni. Mr Stanhope had a long and successful career at Telstra culminating in the role of CFO and Group Managing Director, Finance, from 2003 until his retirement in 2011. He is currently Chairperson of a number of organisations including Australia Post, the Bionics Institute, the Melbourne International Jazz Festival and the Port of Melbourne. Mr Stanhope has been a proud member of the Geelong Cats for over 50 years and his passionate support has never wavered, through good times and bad. He has been a member of Deakin University's Council since 2012 and was appointed the University's sixth Chancellor in 2015. Here he talks about his memories of OWeek, making himself marketable and his vision for the University.

Why did you decide to study at Deakin?

I lived in Geelong but that wasn't the only attraction. I was interested in commerce and Deakin offered a broad degree that included accounting, marketing, economics and auditing. I was a mature age student – I had been working for 10 years before I started the course – so I was logical in my choices.

Is there anything you especially remember about that time?

I particularly remember Orientation Week at Waurn Ponds. The two headline bands on the first night were Midnight Oil and a band playing one of their first gigs in Victoria – INXS.

Can you tell us about your time at Deakin?

I studied part-time for the first three years. I worked at Telstra in Melbourne during the day and attended classes in the evening. I was then awarded a scholarship by my workplace to complete the remainder of the course full-time. That was fantastic because it meant no more commuting and every now and then I could afford to eat in the bistro with the lecturers!

How has your degree assisted you in your career?

The strong finance skills that I got from Deakin helped me immensely in my career at Telstra. I had many different roles but I tended to gravitate toward my majors, which were finance and economics.

What do you believe Deakin University has given you as a person?

The Deakin commerce degree was a very practical help for me in my career. My goal was to make myself as marketable as possible and that is what that course offered me. Deakin's course offerings have always been focused on what you need to get a job and build a career.

What advice would you give graduates wanting to pursue a similar profession?

I had a philosophy of never saying 'no'. People may not remember when you say 'yes' but they do remember when you say 'no', and they stop asking you.

If you want to go into a leadership role you should generalise as much as your course allows you and move around within an organisation. The broader your knowledge, the more marketable you will become.

What has been your focus as Chancellor of Deakin?

As Chancellor of Deakin University I am passionate about the success of the University. This passion embraces making our graduates the most job-ready in Australia and also commercialising our fantastic research so that we can fund even more research. Deakin University has improved so much over the years because it is agile – an important competitive advantage.

What has been your journey since finishing your course?

I started work at 15 years of age at Telstra and was totally focused on my first pay packet so that I could buy a set of drums. Fortunately, there were some guys I was working with who encouraged me to go back to school. I completed my HSC via correspondence and enrolled in the Bachelor of Commerce at Deakin.

I spent 45 years at Telstra. I always believed that you should move around within an organisation and that is what I did. I wanted to understand all the elements of the business. I originally worked on economic analysis then I went into marketing and advertising. I was then offered the role of Chief of Staff to the Managing Director and from there went on to become the Deputy CFO and then CFO.

What has been the highlight of your career?

The highlight of my career has been the entire evolution of telecommunications, from the introduction of mobile phones to the development of smart phones. I was in a financial and strategy role when mobile phones took off in Australia and I had to predict the take up – I got it wrong by 10 times on the right side of the equation! It was great fun.

Another highlight was being made a Member of the Order of Australia for my contribution to finance and telecommunications.

Photography: Scott McNaughton **Location:**Melbourne Burwood Campus

publishing and web portals. In 2015 she launched (embrace) worldwide, an executive leadership consultancy

empowerment of women. Here she talks about Deakin's impact on her career and starting {embrace}.

At {embrace} we are not waiting for people to turn 40 to get their 'aha!' moment – to find purpose in their career.

Can you tell us about your time at Deakin?

Deakin was a great choice for me because it instantly felt like home. It aligned with what I have now defined as my values. My first semester at Deakin ignited my passion for learning. The combination of practical and theory shaped my mind in such a way that I haven't stopped learning.

Is there anything you especially remember about that time?

I remember winning an ANZ case study award as part of my studies. I think I started the first Indian club at Deakin – the Curry Munchers Club at the Burwood Campus. At the time there were a lot of Sri Lankans, Pakistanis and Indians at Deakin. I also remember the inclusiveness of Deakin. There were people of all ages and cultures. The University managed this diversity really well. There was no status or hierarchy even in the faculty, which was also diverse.

How do you think Deakin has changed since you studied there?

The Burwood Campus has expanded a lot since I attended. Despite its growth, I think it still has its homely, comforting feel because it is surrounded by nature. I enrolled in psychology at Deakin last year as Deakin is well regarded for its psychology graduates, and I found the online and distance learning services to be world-class. Moving forward, I would eventually like to do a PhD through Deakin.

What do you believe Deakin University has given you as a person?

Going to Deakin was the making of my success. Given the level of confusion I had about what I wanted to do it was good that my degree was not too narrow in focus. I discovered how to learn and how to be agile. These are skills that you don't necessarily learn from books.

What is {embrace}?

{embrace} worldwide is a professional development organisation focused on empowering women, championing diversity and creating high-performing, emotionally intelligent and resilient leaders. The program is inspired by Harvard Business School's 'service profit chain' and the notion that happy, successful, and diverse employees generate greater value for corporations. We work with schools, organisations and universities.

Have you always wanted to pursue the kind of career you have embarked on?

I did not consciously pursue my current career but I feel that I have come full circle since my first job at RMIT as a coordinator of in-house training. I'm now working in development and training but with a lot more meaning. I have a huge interest in human behaviour and development and my mission in life has evolved into helping others become the best of themselves.

Is there any advice you would give to a person who is starting out in your career?

Many people see their identity according to their qualifications or the role they have in an organisation, instead of the transferable skills. It is important to think about the skills you are developing and how you can use those to add value to any organisation. I see so many people who are 20 to 30 years into a career with an identity as an engineer or computer programmer. If they become redundant they are lost.

What are your passions outside your work?

My hobbies and interests centre around nurturing, learning and creative expression. I love to nurture through cooking and as part of pursuing this passion I was fortunate enough to have a cooking show that was telecast on Zee TV - an Indian international satellite TV channel I also hosted a talk show titled 'Secrets of Womanhood', which covered topics such as domestic violence, sexual harassment, relationships and careers, to help empower women by changing the mindset of a society held back by traditional cultural stereotypes. For learning, I love to read and to express my creativity – my hobbies are dancing, painting and jewellery making.

Photography: Craig Newell **Location:** Melbourne, Domain

I was working in hotel management and wanted to get a broader perspective in terms of the business aspects of the industry. I chose Deakin because it was a strong MBA with a good reputation that offered a variety of subjects.

Can you tell us about your time at Deakin?

I had a fantastic experience during my course. The lecturers and students that I met were very helpful. When you study and work full-time in the industry you realise how relevant the course is to your career. The course structure and the research are very practical.

Is there anything you especially remember about that time?

One of the memorable parts of the course was getting to know the other students and learning from them. We were from different cultures with different experiences and we all interacted very well.

What do you believe Deakin University has given you as a person?

The most valuable thing I learned from my studies at Deakin was that you never stop learning. It's a starting point in your career when you get the degree. I also gained the confidence of holding a Deakin degree. Wherever you go in the world your resume is considered above the rest when you have an MBA from Deakin.

What has been your journey since finishing your course? Briefly outline your career path.

After I graduated I went back to Sri Lanka, and worked for a small luxury hotel group called Jetwing Hotels. I became one of the youngest managers in the group when I was promoted to manage the St Andrews property which is a replica of the St Andrews property in Scotland. It is the second oldest golf course in Sri Lanka. From there I went to the Sur Plaza hotel in Oman.

Oman is a wonderful place to work, the people are very hospitable. I managed to turn the property around from a loss-making venture to being profitable. After this experience I came back to Sri Lanka to work at Best Western. We managed to double the occupancy by identifying medical tourism as a niche market. I am now the General Manager at Amagi Hotels, boutique luxury resorts in Sri Lanka.

How has the course assisted you in your career?

Applying the knowledge I gained from the MBA to my work helped me a great deal in my career.

Another benefit of studying at Deakin was the experience of interacting with students from different cultures. The open and accepting mindset that Deakin offers has made it easier for me to work successfully around the world.

Have you always wanted to pursue the kind of career you have embarked on?

I always wanted to be a pilot. My father pointed out that I was scared of heights so that might not be an ideal profession. He suggested that I try hotels. Hotels were a new concept in Sri Lanka from the 1950s. At that time the country was peaceful and tourism was increasing. Once I started my undergraduate course I realised that it was for me.

Why are you involved in the Deakin Sri Lanka Alumni Chapter?

After I graduated and got to a certain level in my career I wanted to give something back to Deakin, which had given me so much. I have connected with other alumni in Sri Lanka and we are building up the network here. We want to make sure that there is strong support for Deakin in Sri Lanka. It's a great achievement to get to 40 years and I look forward to the next 40 years of innovation.

Photography:

Location:The Galle Face Hotel, Colombo



My parents were visiting the university fairs in Singapore and Deakin kept popping up because it was the top university at the time. I was doing my marketing diploma at one of the polytechnics in Singapore but the aim was always to go overseas. Deakin felt right and they gave me exactly what I wanted.

Is there anything you especially remember about that time?

Waurn Ponds was such a melting pot and Deakin's ability to get all the cultures together was fantastic. There were multicultural days where every culture was represented in some way, whether through food, music or fashion. It was a great thing to do to help people understand other cultures.

What do you believe Deakin University has shown you/given you as a person?

Apart from the knowledge and skills I needed for my career, Deakin gave me the confidence to apply these skills and a desire to continue growing and developing myself. The internship program cemented all my knowledge. I was able to do mine in Singapore and my boss let me turn one of his rental spaces in Malaysia into a bubble tea shop as my project. I think Deakin was one of the first universities to start international internships.

Was there anyone you met at Deakin who has had an impact on you?

I keep in touch with quite a number of the people I met at Deakin. They are from all over the world. Some have siblings who are studying at Deakin. I also keep in touch with some of my lecturers such as Mark Sheehan. He challenged me, motivated me and built my passion for public relations.

What has been your journey since finishing your course?

After I finished my degree I returned to Singapore and started working for a book distribution company. I did the marketing campaign for Harry Potter and met authors such as Jeffery Archer and Jung Chang. While I was there I decided to pursue my MBA and was head-hunted for a job at the Singapore Institute of Management (SIM) as an account manager. I have stayed there in various roles since then. I am currently Editor, Publications Manager and Head Librarian.

Have you always wanted to pursue the kind of career you have embarked on? When and how did you realise?

When I was a kid I wanted to be a doctor and then I nearly died from dengue fever. That experience put me off. Then I wanted to be a lawyer because I enjoyed debating but my mum dashed my dreams when she pointed out that by the time I completed my studies it would be difficult to find a job. So I decided on writing. I was the editor of the yearbook when I did my diploma. I loved writing and I was interested in human behaviour.

What has been the highlight of your career?

A few years ago I was nominated by my workplace to be part of a government group called Inspirit. Youth leaders from the private sector are asked to be advocates and champions for national issues. Through this, I represented Singapore in a Singapore-Brunei youth leadership exchange program. Through Inspirit, I was also given the opportunity to be a Governing Council member for the Singapore Kindness Movement (SKM) in July 2015.

What are your passions outside your work?

I am a member of the Governing Council for the Singapore Kindness Movement. This organisation promotes kindness among the general community. It's a challenge! I am also a book fairy. Emma Watson started the book fairy movement, which involves leaving books in public places for people to read. I regularly attend Comic-Con in Singapore and I dress up as comic book characters. I have gone as a female Captain America and this year I am going as Spock. I speak a little Vulcan although I am not as fluent as I used to be due to lack of practice!

How would someone describe you?

I have been described as resilient, optimistic, motivated and driven. Some of my friends describe me as quirky, funny, sensible and kind (which helps since I'm involved in the Kindness Movement). My partner calls me Science Officer Dork (instead of Science Officer Spock)!



I am a CPA by training. When I decided to do my master's degree I had been working for 10 years and I thought that it was time to build a new skillset. I also wanted to build a network of people who I could learn from. At the time I was working in Singapore for General Motors and I needed an online course that had real practical experience. The Deakin course attracted me because it was online, specifically a CPA MBA and had a reputation for being very practical.

Is there anything you especially remember about that time?

The MBA included an on-campus component which was an amazing experience. The subject I chose to undertake on campus was crisis management. I had done a lot of training on crisis management during university and at General Motors but what impressed me with the Deakin course was the technicality and practicality. We did a role play where I was acting as a CFO of a company that had an accident in the middle of the night. There was a knock on my hotel door while I was asleep and I was confronted by a journalist and camera crew. It felt so real exactly as it would happen. Then I encountered a media team and had to represent the company to talk about the 'incident' at a radio station. This left a lasting impression and I still use those techniques in my career.

What has been your journey since finishing your course? Briefly outline your career path.

I started my career as an auditor at KPMG in Singapore. I then joined General Motors' Asia pacific headquarters in Singapore where I stayed for 11 years. While I was there I undertook the Deakin MBA. After I graduated I was promoted and given the opportunity to work in Shanghai and China. At General Motors I started as a finance person but then moved into the business arena working on a lot of mergers and acquisitions - for example, I was involved in the Daewoo acquisition in Korea. I left the automotive industry to enter the fast-moving consumer retail sector as Finance Director of L'Oreal China. After that I spent more than four years as Head of Finance at Owen Corning in Asia Pacific. I found my company in 2014 with prime focus on renewable energy.

What is your favourite aspect of your current role? What are the challenges?

I really enjoy the travelling.
Renewable energy is usually out
in rural areas, sometimes in the
middle of nowhere, so I get to travel
to areas that not many people go
to. In China, I go to places many
Chinese people have never been
to and get to eat some interesting
local cuisine, such as insects.

What advice would you give graduates wanting to pursue a similar profession?

It is important to remember that knowledge is not a rare commodity; it is freely available from Google and other sources. What is important is to develop insights from that knowledge. Remain curious, ask questions and be ambitious.

What are your passions outside your work?

It has been three consecutive years that I have taken part in the Asia Pacific Business School Desert Challenge, which is a three-day 70 km trek in the fourth largest desert in China. I was very proud to represent Deakin as the first Australian university to participate since the fifth race in 2016. This keeps me physically fit and also pushes my boundaries. I have been learning how to drive a boat and jet ski and recently got my marine licence. Almost every year I travel with an international medical team to remote regions in China to provide medical assistance to the community. I also help the China Red Cross provide education resources for children who don't have access to a first-class education.

In 2018 the Shanghai Alumni Chapter celebrates its five year anniversary.

Photography: Philippe Roy (KoreStudios.com) **Location:** Yan'an Elevated Road, Shanghai



PASAN V MUTHUMALA

Bachelor of Computing (Computer Science and Software Development) Class of 2005

Class of 2003

Bachelor of Commerce (Honours) Class of 2007

Pasan Muthumala hasn't looked back since completing his degrees at Deakin. He is currently working in the medical imaging industry in London and helping tech start-ups in his spare time. He continues his connection with Deakin through his activity on the UK Alumni Chapter Committee. Here he talks about competitive open-water swimming, Deakin friendships and stand-up comedy.

Why did you decide to study at Deakin?

Growing up in Sri Lanka I loved swimming, so when I was looking for a place to study in Australia one of my criteria was a place that was close to good beaches. Deakin University had a good reputation and the Geelong Waurn Ponds Campus was perfect as it was close to the coast.

Can you tell us about your time at Deakin?

It was my first time living away from home. I was only 18 and didn't know anyone in Australia. The transition was really easy thanks to the peer support student group, but there was still some culture shock. I had to get used to the Australian accent, drink beer out of a can and try to figure out what AFL football was all about.

Is there anything you especially remember about that time?

I was at Waurn Ponds which is a beautiful campus. The University worked hard to encourage student interaction. There were events almost on a daily basis that brought students together. These interactions prepared me to come to London and deal with people from many different cultures.

What do you believe Deakin University has given you as a person?

Deakin allowed me to be part of something special. It was the whole package, starting with the environment at the Geelong Waurn Ponds Campus, to the close communities in Geelong. The lecturers and tutors and support staff for international students were amazing. They allowed me to achieve my full potential.

Was there anyone you met at Deakin who has had an impact on you?

I met three of my closest friends at Deakin. Luke Maguire, an economist, was my best man when I got married a few years ago. I did my honours year with Adam Kirk and then we traveled to Europe together. Then there's Lakmal Abeysekera, who is a lecturer at a leading university in Melbourne. These relationships are very special to me.

What advice would you give graduates wanting to pursue a similar profession?

Whatever your goal is – to change the world or have a comfortable life – keep it as your north star. Things around you will start working out. Stay hungry, travel, go into an environment that you haven't been to before, be silent, look at the stars, meditate, enjoy the moment and listen to Bob Marley. That is what I did and still do.



Have you always wanted to pursue the kind of career you have embarked on?

I have always wanted to have my own business and I wanted to do something with computers which is why I initially did the degree in computing. After I started working at the Geelong Hospital I could see the real benefits of technology when applied to healthcare. My dream is to work with a team that will change the delivery of healthcare with the aid of technology.

How has it assisted you in your career?

The education I got from Deakin was integral in the work I do now. The course content may not have directly impacted my career path but the skills that I gained have been essential.

What are your passions outside your work?

I enjoy open-water swimming and running. Open-water racing is something I got into when I moved to Australia. In 2017 I completed the Pier-to-Pub in Lorne and came 123 out of 4488. I've also completed a few half marathons. I also like watching stand-up comedy and I am going to explore my creative side by doing some stand-up comedy myself. My first gig is set for later this year at a London comedy club. I'm really looking forward to it.

How would you describe **Deakin University?**

Agile and innovative.

Photography:

Raccoon London: www.raccoonlondon.com

Location:

London



Jyoti Shekar had such a great experience during her time at Deakin that she is planning to return next year to take on a PhD. After spending 10 years as in-house counsel providing legal services across various industries she recently started working as an independent legal consultant and is pursuing a number of ventures aimed at empowering women in India and around the world. Here she talks about being a lawyer, starting a magazine and breaking stereotypes.

Why did you decide to study at Deakin?

At the time, law students in India usually chose to go to the UK or US. I did not want to follow the crowd so I decided to come to Australia. I liked the mix of European and Asian cultures. I had narrowed my choice down to the top three universities and decided on Deakin because I was impressed with the subjects allowed in the courses.

Can you tell us about your time at Deakin?

I had a wonderful time at Deakin. It was interesting to explore a different education system. It was a more open culture where it was possible to approach the professors and I was very impressed with the quality of the teaching.

Is there anything you especially remember about that time?

I worked part-time at a grocery store which was a completely different experience for me. They put me in the deli working on the meat counter. I am a vegetarian so for the first week I couldn't eat after finishing my shift! But soon I overcame this and enjoyed my work a lot.

What do you believe Deakin University has shown you as a person?

The course has helped me a lot, not just in terms of employment but also in understanding different perspectives and backgrounds. That gave me the confidence to work with people from different cultures.

What has been your journey since finishing your course?

After the course I joined the law firm Clifford Chance LLP where I worked on international transactions in India, London and New York. Two years later I joined the corporate finance department at Sahara Group where we handled all the acquisitions for the firm. I was involved in the acquisition of a Formula One team, the Plaza New York and many others. I was also involved in aircraft acquisitions and financing. After three years I decided that I wanted to work on Indian transactions so I went to Indian law firm Legasis Partners. I recently started my own practice, launched Empower Women of India Tour and my own online magazine for women: Eyra – eyramagazine.com

yoti↓ Shekar

Master of Laws Class of 2008

Why did you decide to become a consultant?

I had been working as a lawyer for 10 years and the time was right to become an independent consultant. In any case, I wanted time to start my magazine and spend more time on my female empowerment initiative. Last year a friend and I began an online initiative called Empower Women of India Tour. It is a virtual tour where we provide advice to women about how they can stand up for themselves. That project gave me the idea to start Eyra, a magazine that focuses on inspirational women with a particular focus on the obstacles they have overcome on the journey to achieving their goals.

Which of your roles is your favourite?

I really enjoy everything I do.
I particularly enjoy giving guest lectures and conducting training on topics related to gender equity. This is the kind of thing I want to do more of rather than being tied down to a full-time job. I will keep publishing and balance my time between academics and publishing.

What has been the highlight of your career?

A highlight would be the first transaction I ever did on my own. I was with the Sahara Group and I was asked to work on the purchase of a Formula One team. It was the best learning experience.

Is there any advice you would give to a person who is starting out in your career?

Do not get stuck into being a stereotype, especially in law. Many young people have preconceived ideas about what it means to be a lawyer. Today, people with law degrees are not restricted to the traditional roles played by lawyers, there are legal journalists, publishers etc.

How do you think Deakin has changed since you studied there?

Deakin's reputation is growing every year. Deakin is doing a lot more in terms of research, women, and overall development. The University is bold in this area. It's nice to see that. It makes me even prouder to say that I am a Deakin alumna.

Photography: Jananni Rajan

Location: Lodhi Garden, Delhi

When I decided to do a master's degree I was still training and travelling so I needed to find an online program. I was coming to the end of my athletics career and I wanted to use my health and wellbeing background in my post-athletics career. The Deakin Master of Human Nutrition was exactly the course I was looking for.

Can you tell us about your time at Deakin?

The online program was a great experience. There was a forum that was very helpful and I found that the lecturers were prompt in responding to questions. The contact was great because it meant that I was not working in a vacuum.

What do you believe Deakin University has shown you/given you as a person?

Lauren Hewitt Nutrition (www.laurenhewittnutrition.com.au) came about because of the Deakin master's degree. When I started the course I was thinking of retiring. The master's program gave me the knowledge and confidence that I needed to speak expertly to others about nutrition. In a field like nutrition where there is so much misinformation, it is important to have the facts.

How has it assisted you in your career?

The course has allowed me to capitalise on being an athlete. I was able to add to the knowledge I gained during my athletics career and articulate it to a wider audience, from policymakers to five-year-old kids. I attribute that to having access to the latest research and the great lecturers at Deakin.

What has been your journey since finishing your course? Briefly outline your career path.

After I completed my master's
I started Lauren Hewitt Nutrition and worked with various organisations such as Mission Australia, the St Kilda football club, Athletics Australia and VicSport. I worked on VicSport's Healthy Choices program, which involved providing them with resources to engage canteens to provide healthier options.

My family and I have just returned from five months of travelling and I am starting to think about the next phase of my career. I think it's important to start early with nutrition advice and would like to work with school children as a mentor and coach. They have their teachers to support them with their school work but we want them to be well-rounded people. I was 17 and still at school when my athletics career took off and I was lucky to have a whole team supporting me - excellent teachers, supportive parents, a coach, a medical team and a dietician. I think schools are realising that all children need someone other than their parents and teachers to help them achieve their goals.

What is your favourite aspect of your current role?

I really enjoyed working as a nutritionist with Mission Australia in the Dandenong area mentoring Afghani and African women. We took their traditional recipes and made them healthier rather than changing their cuisine. There was a mutual respect and we learned from each other.

What has been the highlight of your career?

My highlight post-athletics has been becoming a mother to Izzy. Career-wise it was developing the schools program – 'Growing Up With Good Nutrition'.

What has been the biggest influence on your career?

My parents have been an enormous influence. I am very grateful that they advised me to continue with my study so that I could have this second career.

Is there any advice you would give to a person who is starting out in your career?

In whatever you choose to do make sure that there is a passion. That is the building block. Passion makes you want to learn and it is easier to impart that knowledge onto others. People can tell if you are genuinely interested and excited about what you are doing. Being an athlete was my passion. I was lucky to be talented at something but I was also willing to work hard and put in the training that was required to be at that level. That is how I feel about nutrition now.

What are your passions outside your work?

I am privileged to have a child and I have enjoyed every single minute of being a mother. I also love to travel. My family and I just returned from five months travelling around the world. My husband and I are both turning 40 this year and our daughter is still young so we thought it was a good time to go.

How would you describe Deakin University?

Deakin University is the best at what it does. It is academic, innovative and constantly pushing the boundaries.

Photography: Craig Newell **Location:** Tooronga, Melbourne



I completed my Bachelor of Architecture at Limkokwing University in Kuala Lumpur and then decided that I needed to consolidate my knowledge with a master's degree. My fellow classmates recommended Deakin to me and the location in Geelong at the Waterfront campus appealed to me.

Can you tell us about your time at Deakin?

Going to Deakin was my first time living overseas and away from home. I was a bit apprehensive but found that despite cultural differences, a common ideology and appreciation of modern life means that our similarities are greater than our differences. Geelong has elements of the past, present and future within one city. The Waterfront Campus is a fantastic example of contemporary industrial architecture and I lived in an original Victorian-era house.

Is there anything you especially remember about that time?

The night sky is clearer in Geelong than it is in Kuala Lumpur. I could see all the constellations vividly. During a camping trip to Wilsons Promontory I was able to see the Milky Way, the governing structure of our galaxy, which made me feel how tiny we are in comparison to the size of the cosmos. It was a wonderful experience.

What do you believe Deakin University has shown you/given you as a person?

The master's degree helped me to articulate my ideas about science and architecture. The professors were all experts in their field and had a depth of knowledge that opened up my mind. In particular, Professor Des Smith, who was the head of the Faculty during that time, was amazing. I had never before encountered such an intellectual way of thinking. He helped me to understand that being an architect is beyond creating a built form; architecture is a product of intelligent design, not another means of making profit.

What has been the biggest influence on your career?

In architecture I have been influenced by Zaha Hadid, Norman Foster and Rem Koolhaas. They all produce brilliant and inspiring architecture. In science I have been influenced by Kip Thorne who is an astrophysicist and was awarded the Nobel Prize in Physics in 2017.

What advice would you give graduates wanting to pursue a similar profession?

Architecture study is rigorous and you need to be prepared for the amount of work that it will require. The best advice is to find a way to organise your time. If you want to succeed you need to put in the hours, although it is still important to get enough sleep!

What are your passions outside your work?

I enjoy heavy metal music and travel to Australia to see my favourite bands, such as Slipknot. These bands don't usually come to Kuala Lumpur.

How would you describe Deakin University?

Deakin is a microcosm of the whole universe.

Naqib Azha

Master of Architecture Class of 2013

After completing his Master of Architecture, Naqib Azha embarked on a freelance career as a designer of commercial architectural projects and also launched a creative venture called Qaaon Karya which translates to 'in the artwork of creation'. Qaaon Karya is a creative studio that combines Naqib's interests in imaginative futurism, technological living and metaphysical conceptions. Here he talks about the night sky in Geelong, his love of heavy metal music and hyperspace architecture.

Photography:

Edmund Leung

Location: Titiwangsa, Kuala Lumpur

BENNETT// MERRIMAN

Bachelor of Commerce (Sports Management) Class of 2009

Entrepreneurs Shannan Gove and Bennett Merriman are co-founders of two complementary businesses - Event Workforce Group (EWG), a workforce management company that provides temporary staff nationally, and Rosterfy, a workforce management software platform used by large-scale events globally to better manage their workforces. The cousins started what became EWG in 2010, while Shannan was in the middle of his Deakin degree. The aim was to provide tertiary students and new graduates with work opportunities that would

help them find full-time work after graduation. In just eight years they have built an international business with clients such as Tough Mudder, Ironman and the Super Bowl in the USA. They have since teamed up with a third technical co-founder, Chris Grant, and now have 14 staff across the globe with offices in Melbourne, San Francisco and London. Here Bennett and Shannan discuss the benefits of living on campus, how the idea for Event Workforce Group was born and the importance of networking.

Why did you decide to study at Deakin?

BM: I chose the Bachelor of Commerce (Sports Management) because I wanted to work within sport and develop my business operations skills, but most of all I wanted to work with Cricket Australia.

Cricket was a main interest of mine and the staff who ran the Deakin course had a number of contacts within Cricket Australia who I hoped would improve my chances of landing my dream job.

SG: I wanted to work in international game development for the AFL. I knew that the game had expanded in Europe and thought that I could combine my love of sport with my love of travel.



MELANIE ORVIS V

Bachelor of Communication (Public Relations) Class of 2016

Melanie Orvis is a recent Deakin graduate and just as passionate about the University as those who graduated 40 years ago. Here she talks about her affinity for public relations, her love of Google Analytics and moving to London.

Why did you decide to study at Deakin?

I was doing an Advanced Diploma of Business Public Relations at another university but I wanted to change to a degree course and the Deakin one stood out because it was focused on the real-life application of units of study. There were more case studies and it seemed a lot more modern and relevant.

Can you tell us about your time at Deakin?

Given that I had not enjoyed my previous course I was worried about how it would go, but it was fantastic. The lecturers and tutors were incredible; they took the time to get to know us and allowed us to be creative and explore our interests.

How has your degree assisted you in your career?

The most useful part of the course for me was the analytics/analysis side of public relations and marketing campaigns. It is important to have amazing creative ideas and implement them, but unless you analyse how they are working you don't know if you are having an impact. During the degree, we had to go through an entire PR campaign and measure its impact. I have become passionate about Google Analytics and statistics.

What is your favourite aspect of your current role?

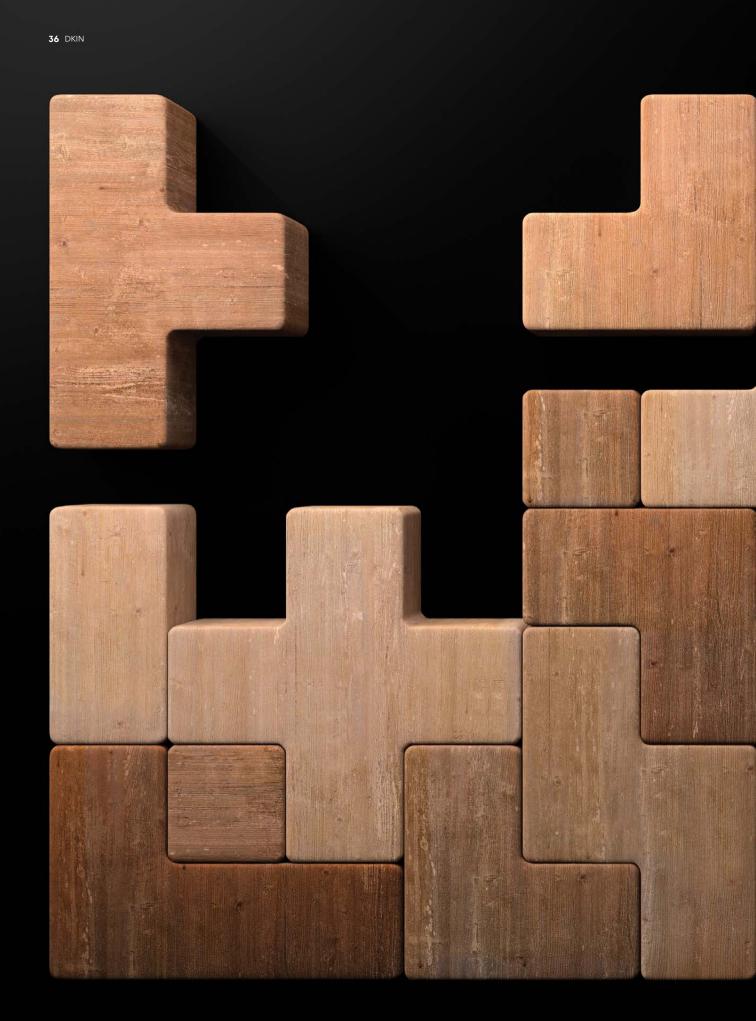
What I enjoy the most about my job is building a relationship with my clients.

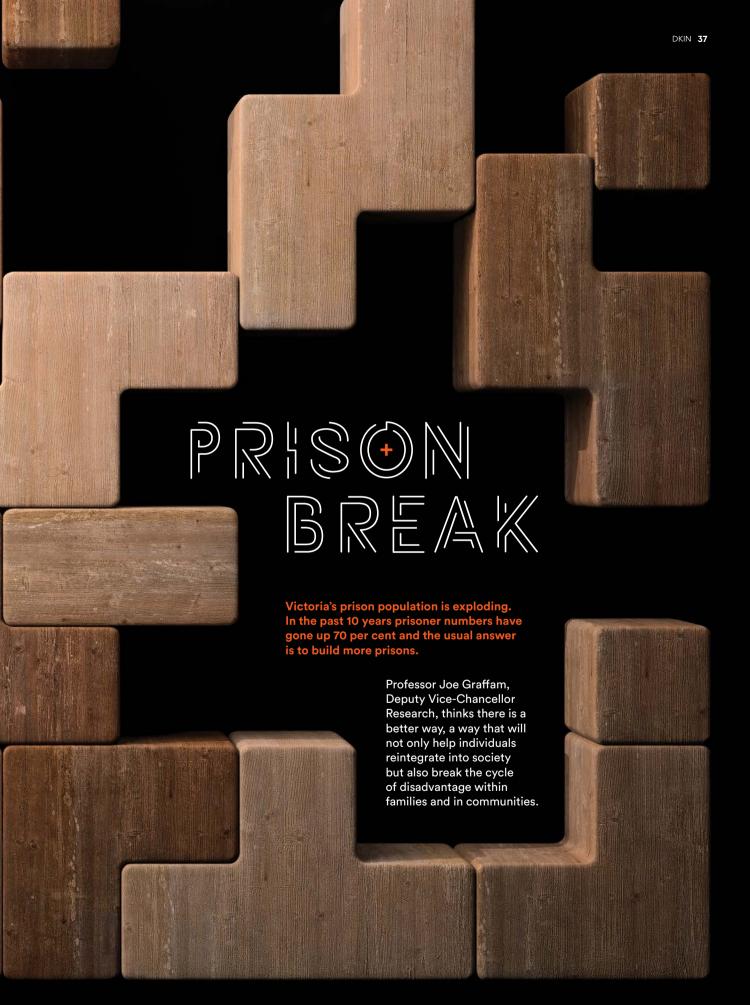
What has been your journey since finishing your course? Briefly outline your career path.

While I was at Deakin I was lucky enough to do work with the Deakin media team. This job and my internship with the Australian Open gave me a wide exposure to different aspects of public relations.

Two days after I graduated I got on a plane to London. I did not have a job lined up but managed to find one within months. I've been with Parliament Hill, a benefits management organisation, ever since. I started as an account executive and now I am a client relations specialist.









Victoria, almost 45 per cent of people released from prison are back in within two years and after five years the reincarceration rate is 55 per cent.

This is a very simple and clear indication that prison does not work for most of the people in prison,' says Graffam.

'Disadvantage is driving this process to a large extent. A 2015 study found that 50 per cent of people in Victorian prisons come from six per cent of our postcodes – the most disadvantaged postcodes. Put simply, conditions of disadvantage drive people down a pathway that for many leads to prison. You could say that disadvantage in communities is contributing to the creation of criminals.'

Professor Graffam contends that addressing disadvantaged conditions within these communities will help reduce the number of people going to prison and help ex-prisoners reintegrate more successfully.

'Most of the people in prison have multiple forms of disadvantage. They have low levels of education, poor numeracy and literacy skills, and no employment history. One-third of prisoners are being treated for a mental illness when they enter prison and there are approximately ten times more people in prison with an intellectual disability than in the general population.'

'This is a very complex situation that will require complexity for its resolution. To successfully reintegrate into society prisoners need help finding housing, employment and accessing health services, along with several other supports. These are also services that are needed by the people who live in disadvantaged communities,' says Graffam.

Professor Graffam is proposing the creation of local services Hubs within disadvantaged communities. These Hubs would be a one-stop-shop for services such as employment, housing, drug and alcohol treatment, mental health, family services and education.



A 2015 study found that 50 per cent of people in Victorian prisons come from six per cent of our postcodes.



I think we have reached a point where people are starting to see the financial and social benefits of helping prisoners to successfully reintegrate.

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While these services are already available in the community they are not coordinated, and this lack of coordination makes it difficult for people to access assistance. Locating them in one place would mean that people don't have to travel to different locations or repeat their stories to each provider. The providers would know where each person is in relation to the set of supports that they need. It's about clearing the roadblocks for people who have multiple complex problems, such as lack of employment history, several chronic health conditions and serious mental health problems. The fact that the Hubs would be available to everyone within the community will reduce the stigma related to prisoner-specific services.

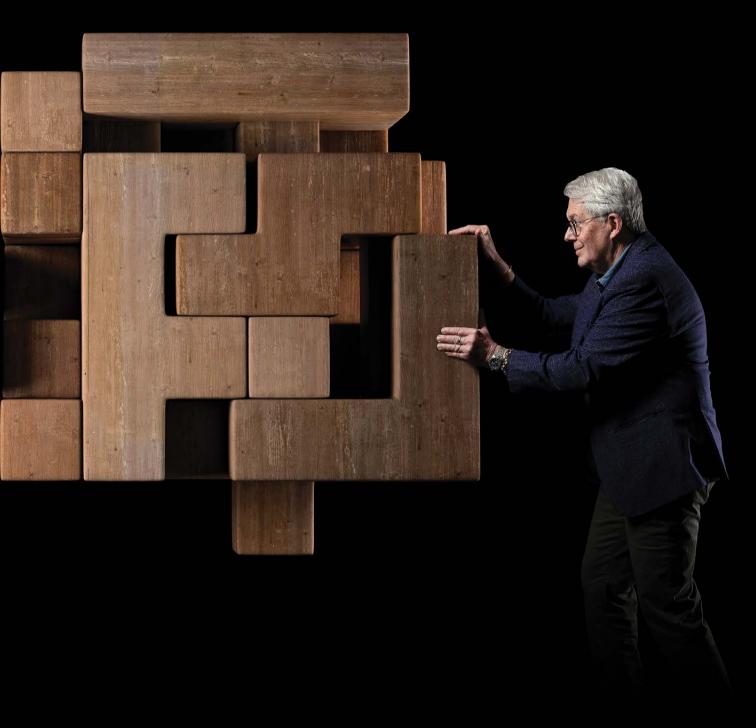
'We have already started work in Corio-Norlane, which is one of the areas in the top 10 postcodes contributing to the prison population. We are in discussions with Corrections Victoria and philanthropic organisations to fund a feasibility study that will give us proof of concept. Once we have shown that this idea works we hope to gain enough support to introduce Hubs to other communities.'

'It may only take two years once the Hubs are up and running to begin to see a shift in crime rates and numbers of people going to prison in these communities,' says Graffam.

The immediate benefits of this project include a reduction in the enormous cost of incarcerating people - in the past year Victoria spent approximately A\$1.2 billion on prisons, not including the cost of building new ones. The longer-term benefits will result from breaking the cycle of disadvantage within communities and reducing the costs to the welfare and health systems. A recent study has found that ex-prisoners have an increased risk of death in the short term from drug overdose or violence, and in the long-term they are more likely than the general population to suffer from chronic conditions such as hepatitis C, diabetes and mental illness.

'I think we have reached a point where people are starting to see the financial and social benefits of helping prisoners to successfully reintegrate' says Graffam. 'They can see the connection between helping these people and improving the community as a whole.'





Saving the Baw Baw frog

Australia's biodiversity is highly regarded for its uniqueness. Our continent is inhabited by more than 600,000 different species, many of which are found nowhere else on the planet.

Professor

Don Driscoll

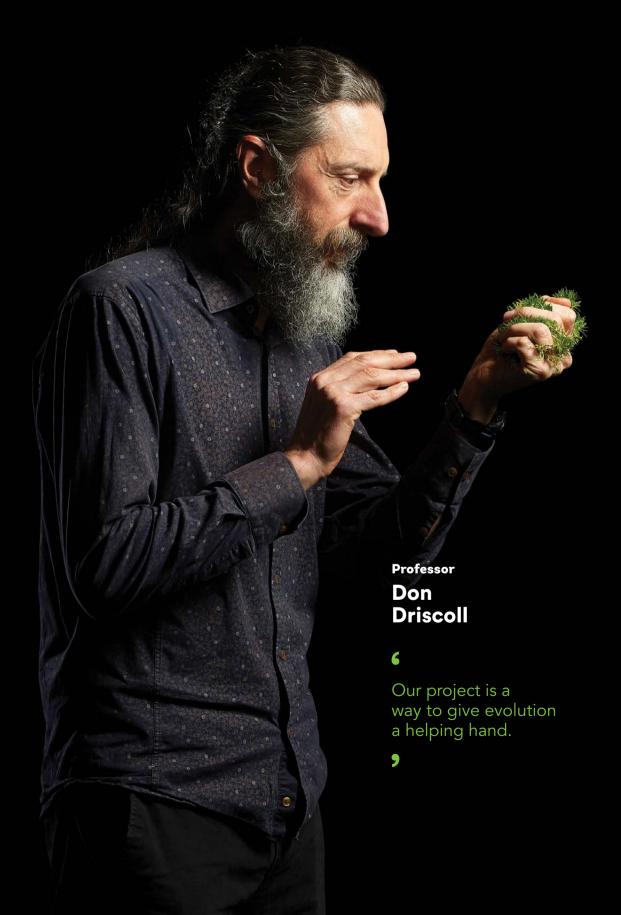


PhD student

Thomas Burns

Unfortunately, this natural heritage is in dire straits. Many of the plants, animals and other organisms that help define our national identity are critically endangered.

Photography: Craig Newell Frog image courtesy of Rick Hammond, Zoos Victoria



Don Driscoll, Professor of Terrestrial Ecology in the School of Life and Environmental Sciences and Director of the Centre for Integrative Ecology, and Thomas Burns, a PhD student with the Centre, are part of the Species Recovery Team working to save one very special Victorian animal – the Baw Baw frog (*Philoria frosti*).

'The Baw Baw frog is a unique frog species only found in the Baw Baw plateau area in the central highlands of Victoria. Surveys of the frog show a massive 98 per cent decline in numbers since the mid 1980s,' says Burns.

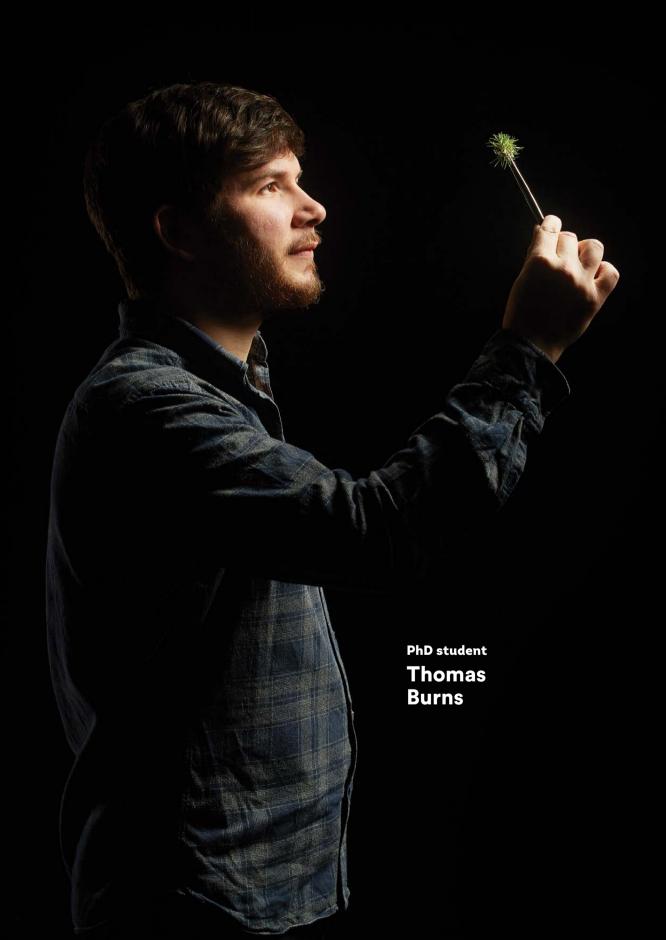
The frog is critically endangered due to a fungus that has caused population declines and extinctions of hundreds of amphibian species around the world. The amphibian chytrid fungus (Batrachochytrium dendrobatidis) attacks the frog's skin and interferes with its respiration, water and electrolyte balance.

The Species Recovery Team for the Baw Baw frog is a group of individuals from numerous organisations working together to make sure the frog survives in its natural habitat. The team includes the Department of Environment, Land, Water and Planning (DELP), Zoos Victoria, the Amphibian Research Centre in Werribee and Deakin University.

'The Melbourne Zoo is running a very successful captive breeding program to ensure that the species does not die out. Our role is to figure out how to get that population back into the wild,' says Driscoll.

The Deakin team is following a novel approach for this species, which is to follow the fungus.

'Our aim is to find places in the environment that have a low fungus risk into which the Melbourne Zoo and Parks Victoria can reintroduce the frog. The hope is that the frogs might thrive for a while and possibly start to develop resistance through natural selection or survive until there is a long-term solution to the chytrid fungus problem. Our project is a way to give evolution a helping hand,' says Driscoll.



'Understanding where and how chytrid is moving through the landscape will be important for reintroduction efforts. Another frog species on Baw Baw, the common eastern froglet, is not susceptible to the fungus but is known to carry it and spread it to other frogs. Understanding the location and movement of common eastern froglets is an important part of understanding where we will find the fungus,' says Burns.

This work is already showing promise. Burns has been sampling frogs and using eDNA (environmental DNA) techniques to determine chytrid fungus levels across the landscape.

'Once we find places that have low chytrid risk the recovery team will have some options for experimental reintroductions,' says Driscoll.

'There is a lot to be gained from experimental reintroduction, especially because the Zoo's breeding program has been very successful. Even if the first reintroduction of the frog fails,

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A healthy ecosystem sustains life and also gives us wonderful cultural, recreational and economic benefits.

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we can learn from it and understand the risks and benefits. The biggest risk of waiting too long to reintroduce the frogs is genetic loss. Genetic variation is lost with each generation and having additional wild populations could help reduce that loss.'

'It is vitally important to maintain the biodiversity on our planet. A healthy ecosystem sustains life and also gives us wonderful cultural, recreational and economic benefits. The Baw Baw frog is just one example of our valuable natural heritage.'



magic of realism

Associate Professor

Maria

Takolander

Associate Professor Maria Takolander knows all about fake news. She is an expert in magical realist literature which interlaces magical elements with real events to expose the fake news of the past.









Magical realist novels are quirky and outrageous but doing some really serious work. It's why they are still being written.

Takolander's scholarship is not limited to magical realism, she is also interested in theories of creativity and creative writing for video games.

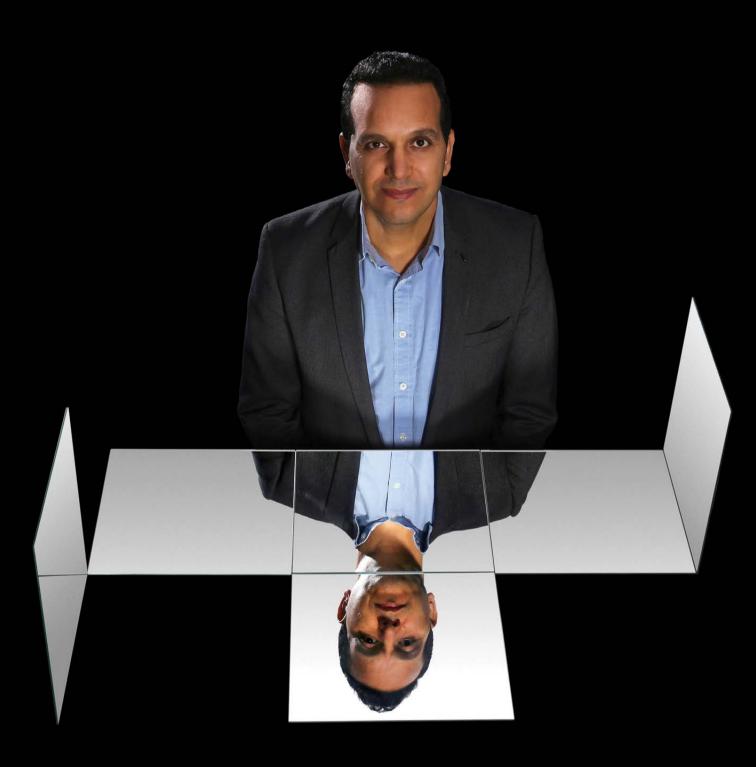
'I have recently begun to focus on how creative writing occurs in a gaming context. Young people play games more than they engage with any other form of media. Some video game companies are already producing games that go beyond the conventional. This is similar to what magical realism does to the realist novel. Some games could even be described as 'literary'.'

'The challenge for literary studies and creative writing departments around the world is how to respond to this changing media landscape, where games are becoming culturally dominant.'

'One of the things I have done is to introduce video games into first year literary studies so we can learn how to 'read' them, and to introduce a new creative writing unit in games writing. One of our graduates, who works as a writer for gaming companies, is helping us with course content,' says Takolander.

As well as being a scholar and educator, Associate Professor Takolander has also pursued her original ambition to be a writer. She is the author of five books that have garnered much acclaim, including three books of poems. Last year she was invited to read her poetry at the International Poetry Festival of Medellín, which is an annual festival held in Medellín, Colombia – the land of magical realism. She is currently working on a new book of poems and a science fiction novel, which will be published next year.

Whether it's through her scholarship or her own creativity Maria Takolander is ensuring that the next generation, no matter what their medium, are tantalised by quirky, intelligent writing.



Re calib rating

Professor Fethi Mansouri

multi cultural ism

Melbourne is one of the most diverse cities on planet earth. Its population is made up of 140 cultures ranging from the original Indigenous communities to recent migrants from countries in Europe, Asia and Africa. Ensuring that people from so many different backgrounds live together harmoniously can be challenging.

Professor Fethi Mansouri is ideally placed and expertly qualified to help Melbournians navigate the shifting face of the city's changing demographics. He is the Director of the Alfred Deakin Institute for Citizenship and Globalisation at Deakin University, holds the UNESCO Chair in comparative research on 'Cultural Diversity and Social Justice' and the Alfred Deakin Research Chair in migration and intercultural studies.

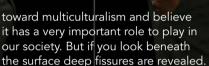
'The issue of diversity is part and parcel of my life story thus far. I grew up in Tunisia speaking Arabic, French, Italian and English and I spent two and a half years in China learning Mandarin. I wanted to pursue diversity and intercultural relations as part of my work and these have been intrinsic to what I have been doing academically since my undergraduate days,' says Mansouri.



multiculturalism. The researchers found that most Australians feel positively

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'It is alarming that at least 20 per cent of Australians have suffered racism and at least five per cent have suffered physical abuse that was racially motivated,' says Mansouri.

This is not totally surprising considering the insecurities people are feeling at present in terms of housing affordability, job security and national security.

'There are always migrant communities that some within mainstream society believe are unable to integrate and view as a burden or a threat to our society. That is one of the main reasons people use to justify negative, even racist, attitudes towards other groups.'

'In my work I am exploring alternative policy options to counteract that type of thinking. Originally, multiculturalism aimed to help migrants assimilate while allowing them to retain elements of their culture, but as the face of diversity changes and becomes more complex, it is no longer possible to sustain multiculturalism without involving mainstream society.'



Interculturalism focuses on the universal values that we share – human dignity, respect, inclusion and acceptance.

'We need to make multiculturalism relevant for the 21st century, relevant for the diversity that we have right now and the external pressure points that are coming to bear on our society, be it globalisation or terrorism,' says Mansouri.

This is where interculturalism (intercultural dialogue) comes into play. While multiculturalism focuses on groups and provides room for people to preserve their culture, interculturalism focuses on the universal values that we share – human dignity, respect, inclusion and acceptance. It is a process that requires active participation from all sections of the community.







trained in intercultural dialogue.

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Our research actually touches people's lives, and changes and improves the way things are done in our society.

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'Ultimately we can only overcome the deep fissures in society when we accept that we all need to embrace change. It starts with education.

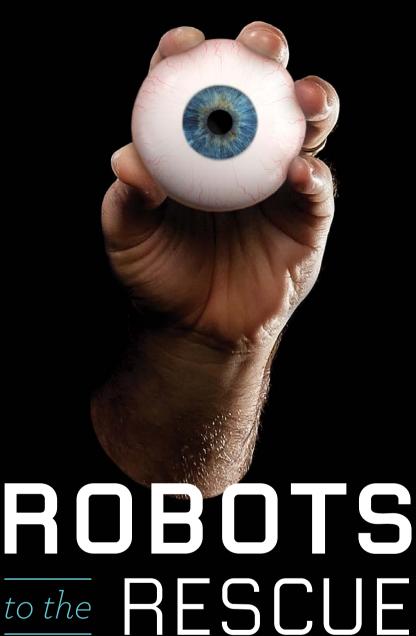
We need to train people in intercultural dialogue at a local level, embed it into schools, local governments and the media,' says Mansouri.

'Deakin was approached to work in this area because we conduct research that has immediate relevance to our communities. Our research actually touches people's lives, and changes and improves the way things are done in our society,' he says. 'No one gains when we discriminate against certain communities. Through our work we want to bring people closer together and maximise the benefits of diversity.'

This work helps create a community that is more peaceful, accepting and prosperous economically, culturally and spiritually. Living in a harmonious, inclusive and safe society will produce better citizens who care for one another and overcome their difficulties in peaceful ways.

'The goal is to create a society where no one suffers physical or verbal abuse because of their race or faith, a society in which kids can go to school without fear of being bullied because of how they look, how their names sound or how they speak'.





The robotic revolution has arrived and Deakin University is at the forefront. For the past 15 years engineers at Deakin have been developing the OzBots, a fleet of robots that have become essential first responders in dangerous situations.

OzBots are now being used by the Australian Defence Force and domestic law enforcement agencies to improve training outcomes, and reduce the risks to police officers, army personnel and the community.



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The OzBot Mk8 is a 16 kg tracked robot that is capable of stair climbing, towing a car and clearing beneath stadium seating.

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Mick Fielding, Principal Research and Development Fellow (Advanced Mechatronics Systems) within the Institute of Intelligent Systems Research and Innovation (IISRI), and the team at IISRI have pushed the boundaries when it comes to the capabilities of the OzBot robots.

The OzBots are remotely controlled using teleoperated and semiautonomous functions, are strong and highly repairable, equipped with cameras, speakers, microphones and a sense of touch (haptics).

'It all started in response to an Australian Defence Force program calling for organisations to demonstrate how advanced technology can significantly enhance defence capability,' says Fielding.

IISRI rose to the challenge, creating the first OzBot following the development of a similar system that could be used to detect landmines in conflict situations. The team has since designed, developed and manufactured a suite of OzBot robots that can be deployed in scenarios as diverse as hostage situations and defence training exercises.



The fleet includes the OzBot Junior, the smallest version which is being used by police negotiators across Queensland; the OzBot Mk 8, a 16 kg tracked robot that is capable of stair climbing, towing a car, and clearing beneath stadium seating or vehicles; and the OzBot Titan, which is shaped like a small tank, weighs 300 kg and primarily serves as a forced entry robot. It has a claw-like arm that can force doors and windows and extract people from dangerous situations.

'A more recent addition to the fleet is the OzBot RAIDER – an unmanned mobile target system, currently in trials with the Australian Army and recently featured as an example of success at the Army Innovation Day in October 2018.

The technology enables armed forces, for the first time, to test and train a wide range of weapon systems in realistic scenarios at bases across the country,' says Fielding.

'The brief was to create a moving target that could be fired upon not just by sub-calibre weapons, but all the way up to the main gun of armoured fighting vehicles. The RAIDER system comprises an electric mobility unit that tows a long-armed trailer that can accommodate a wide variety of targets. It is a highly versatile and adaptable platform that can be set up within an hour and reach speeds up to 40 km/h.'



'One of our most unique developments has been the OzTouch, a haptically-enabled arm that can be attached to the OzBots and give bomb technicians a realistic sense of touch as they disarm IEDs or interrogate suspect packages. The operator can not only see the robot surroundings in 3D using stereocameras, they can feel the device, perceive its weight and determine if it contains a substance. Once technicians know what they are dealing with they can respond more effectively.'

The original intent of OzTouch was to allow bomb technicians to undertake their work from a safe distance.

However, the technology has had some other surprising applications, such as the development of a remote ultrasound machine (HaptiScan), and the HeroSurg robot.

IISRI researchers have used OzTouch technology to create a world's first robot that gives surgeons the sense of touch while they conduct keyhole surgery from the surgeon command station. The HeroSurg robot is a major breakthrough that could make keyhole surgery safer and more accurate through the haptic force feedback it provides. The team has also developed non-invasive medical robotics for use in sonography. This development was



The operator can not only see the robot surroundings in 3D using stereocameras, they can feel the device, estimate its weight and determine if it contains a substance.

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supported by Telstra, leveraging their high reliability, low bandwidth communications infrastructure to enable remote diagnosis using ultrasound. The haptic feedback allows the sonographer to literally feel the amount of pressure they are applying to the patient during the scan, albeit from 1000 km away. The remote ultrasound technology allows patients in remote areas to have access to the same skilled medical professionals based in capital cities.

'IISRI is a multidisciplinary team, capable of drawing together mechatronics, electronics,

mechanical and software engineering skills, in an environment that is conducive to constant innovation. The IISRI team provides timely solutions to challenging problems, and is unparalleled in the country,' says Professor Saeid Nahavandi, IISRI Director.

'As an engineer, it is fantastic to work at IISRI. Staff and students have the freedom to be creative and invent, test and develop elegant solutions to complex problems. With this freedom we are creating tools and opportunities that have a positive impact on people's lives locally and globally,' says Fielding.



A device originally designed to replace green screen special effects in Hollywood is instead transforming the lives of people afflicted by Parkinson's disease, strokes and other neurological problems.

Associate Professor Pubudu Pathirana and his team at Deakin's School of Engineering first began working on the Biokin – a matchbook-sized wearable device – as a way to use wireless technology to capture movement for movies.

'We thought that this device would be a more efficient way to capture the movements of actors during stunts, but after I showed it to some doctors at the local hospital they suggested that it could be used to capture the movements of patients with neurological conditions such as stroke, Parkinson's and cerebral ataxia,' says Pathirana.

'I was surprised that there was no device already available that could do this. Patients were being assessed purely through visual observation. This type of assessment requires years of experience and can vary from clinician to clinician.'



This call to action inspired a change of focus for Associate Professor Pathirana and his team. They started to work with clinicians from the Florey Institute of Neuroscience and Mental Health and St Vincent's Hospital to develop a tool that could help clinicians assess the severity and progress of neurological conditions with more accuracy.

'The Biokin is not a replacement for clinical expertise but can help with early and more accurate detection. By more accurately and frequently judging the severity of the condition it is possible to more reliably determine the treatment path in regard to medication dose and physical therapy.' This is particularly important when patients are based in non-clinical settings such as their home.

The Biokin can be worn on any part of the body and tracks the patient's movements at any time from any location, sending data to the cloud via a smart phone application. It can also be customised to pick up motion related to different physical tests for a number of neurological conditions. For example, the movement used to throw a dart or make a cup of tea.

6

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In the case of Parkinson's disease and cerebral ataxia, a condition that affects the part of the brain that controls muscle coordination, the Biokin works by sensing the movement of patients as they undertake the physical tests used to diagnose these diseases. Deakin researchers then compare this data with data collected from unaffected individuals (controls) making the same movements. The Biokin makes it possible to clearly identify even subtle differences and determine the level of impairment.

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The Biokin has the potential to help doctors assess an elderly person's balance and predict the likelihood of a fall so that pre-emptive measures can be taken.

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'Our system costs less than A\$100 to produce, which makes it an affordable tool to monitor patients while they are undertaking daily activities at home.

'Monitoring disease progression is an important feature of the Biokin. In the case of certain neurological conditions, patients are assessed in the clinic, prescribed medication and then not seen again for a number of weeks. In the meantime, their condition could change,' says Associate Professor Pathirana.

The possible applications for the Biokin are enormous; 20 per cent of the world's population is disabled – a number that increases every year. The Biokin has the potential to help doctors assess an elderly person's balance and predict the likelihood of a fall so that pre-emptive measures can be taken with wheelchairs and walking aids.

It could also be used to assess children with cerebral palsy who do not have easy access to a gait laboratory. Some children in rural areas have to wait up to six months to be assessed before they can be treated. The Biokin is an affordable and accessible way to assess children at any location to a level of accuracy that is suitable for treatment.

Developing the Biokin has been a challenging project but Associate Professor Pathirana is pleased to be working on something that will improve people's lives.

'The Biokin has allowed me to channel my expertise to solve real problems for people.'









Doctor

Elizabeth Kirley



Associate Professor

Marilyn McMahon

Meet me in the library Tuesday, 👉 💣 🦠

Delivered

started when a 12-year-old girl in Virginia, USA sent an Instagram message that included 'meet me in the library Tuesday, finger pointing to a bomb and knife'. The next thing she knew she was being arrested for threatening her school.

When Dr Elizabeth Kirley, a barrister and solicitor in Canada as well as Senior Lecturer in Technology Law at Deakin, saw this story she realised that the courts were unprepared to handle these types of cases.

The explosion in the use of emoji had revealed a gap in the law that needed to be addressed. Partnering with Associate Professor Marilyn McMahon, Deputy Head of Law and a specialist in Criminal Law, the pair began a unique research project on the challenges emoji present to the legal system.

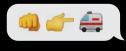
'I was aware that emoji were popular and growing in use quickly but what moved our research forward was the fact that people were being arrested and appearing in court. Emoji were being used as evidence,' says Kirley.

'Most people see emoji as a lighthearted means of communication. A way to make small talk, clarify the intention of a message and smooth out the rough edges of digital life.

Young people use them as a form of code to protect them from prying eyes. However, these little symbols have also been used to bully, defame, harass and threaten."

More than 9 million Australians regularly use emoji and the number of legal cases involving emoji is growing every day. They are coming up in criminal cases, business contracts and defamation law.

Dr Kirley and Associate Professor McMahon found cases where emoji were critical: a contract in Israel where emoji sent in a text message led to the sender being liable to a landlord for damages; a young man in France who was sent to prison for sending a message to his ex-girlfriend that contained a 'death threat in the form of an image' (a gun emoji); and two men in South Carolina who were arrested for stalking when they sent another man a message consisting of a fist and a finger pointing to an ambulance.



Delivered





Doctor



'As we began to research the cases that had made it to the courts we realised that there was confusion about the meaning and the message, there was no uniform response,' says Kirley.

'The danger is that people assume they know what these little symbols mean but research has shown that the same emoji can have different meanings from culture to culture and between age groups. For example, the popular face with stuck out tongue emoji could be used to mean "just kidding", tasty food, ambivalence or intimacy.' Significantly, McMahon suggests that judges vary enormously in their familiarity with emoji. Some members of the judiciary experience particular difficulty when trying to understand the meaning of emoji in a message.

The Unicode Consortium is a group of volunteers who determine which emoji will be officially recognised. They have created an alphabet devoted to standardising images and names of emoji across platforms.

However, there is no dictionary of agreed meaning for each emoji or a defined etiquette for emoji use. Some people would consider that emoji are inappropriate in business communications but then we have the example of Julie Bishop, former Minister for Foreign Affairs, conducting an interview entirely in emoji.

'Our research has made people think about the use of emoji and the need to pay more attention to how they are being used. Emoji can save people time and say things that words can't but they can also get people into real trouble. Young people, in particular, need to understand the potential dangers of emoji use,' says Kirley.

'Emoji have a lot to contribute in terms of humanising digital conversations but there is a need for specialists in digital speech who can help the courts respond to the misuse or misinterpretation of emoji. An inclusive emoji dictionary created by linguists and communications experts will not only help guide law reform but will also help users navigate the constantly changing digital communication landscape.'

Giving to Deakin

Did you know that 15 per cent of domestic undergraduate students regularly go without food because they can't afford it?

At Deakin, we believe in access for all to the benefits of a university education, regardless of financial disadvantage, geographical location or family situation.

Donor-funded scholarships make the inaccessible accessible for students who are struggling financially. Scholarships provide more than just financial certainty – knowing that someone believes in them and wants to see them succeed also gives them a muchneeded motivational boost.

For 19-year-old asylum seeker Mathi Subramaniyam, receiving a Wannon Water Scholarship has provided a glimmer of hope as he pursues a Bachelor of Science at Deakin's Warrnambool Campus.

'I arrived in Australia as an unaccompanied minor at the age of 14,' Mathi says. 'I grew up in Sri Lanka, as part of a Hindu family where my mother is a housewife and my father works in politics as a district representative for the United Nation Party.

'In Sri Lanka, my childhood and schooling were often disrupted by frequent changes of residence. Sometimes I was unable to attend school due to threats to my family in light of my father's political involvement and experiences of family conflict.

'I was forced to separate from my family at a young age and had to manage major life events and transitions without the support of my parents.'

Mathi's brother and sister fled to the UK where they were granted refugee status and a permanent visa respectively.

For Mathi however, the future is still very uncertain as he builds a life in Warrnambool while on a bridging visa as he awaits the final outcome of his appeal for asylum.

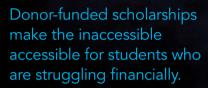
'Despite that, I have continued to live in the present moment and follow my passions,' Mathi says.

'I arrived in Australia not being able to speak or understand English but I' developed my English after leaving the detention centre and living with an Australian family.

'While living with the family for four years, I had the opportunity to play Australian rules football and cricket. In my first year playing in the football club, I was awarded the 'Most Improved Player' of the year and enjoyed my cricket season thoroughly.'

Mathi is hopeful that the Australian Government will grant a Safe Haven Enterprise Visa so that he can continue to live and study in Warrnambool.

'I am currently living in The Foyer (Brophy Youth and Family Services) with some of my living costs covered by the Asylum Seeker Resource Centre,' says Mathi.



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'I attend Uniting Church in Warrnambool where I have felt welcome and made new friendships.

'I would like to give back to Australia, which has provided me with a safe and nurturing environment. If I am able to complete my tertiary education, I hope to share my mind and knowledge in a way that will benefit the Australian community.'



For more information about supporting Deakin through student scholarships, grants and donations, major gifts, or planned giving please visit deakin.edu.au/giving or email giving@deakin.edu.au

Deakin Advancement

It is easy to say each year is a milestone for Deakin and our Alumni Community.

Every graduation we watch new graduates walk across the stage to collect their testamur. This ceremony marks the end of months or years of hard work, late nights, discovery and assignments. It also celebrates their entry into the Deakin Alumni Community.

This year, we have celebrated 40 years since the first Deakin graduation, held in a tent at the Waurn Ponds Campus, which was little more than a few buildings and some paddocks. We have come so far since then, from alumni who lead in their field, change their industry and show us we can achieve great things, to researchers who have seen an opening for new technology or a new idea. Tomorrow our graduates will achieve things we didn't know we needed today.

Over the last 40 years the Deakin alumni family has expanded to include over 250,000 graduates around the globe. In this edition it has been a joy to showcase more of our international community as well as how they are connecting to each other and Deakin.

In another 40 years' time we will celebrate 80 years of alumni. We cannot predict what Deakin University or the world will look like then, but one thing will remain the same: our alumni will still be the beating heart of our community.

Deakin Advancement



