

# 3010



university of melbourne magazine 2019



## Fighting to feed the world

University researchers are taking the lead  
in the quest for food security





COVER IMAGE: CHRIS HOPKINS

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# New life for Old Quad

With its iconic archways and bold architectural presence, the Old Quad is the foundational building of the Parkville campus and endures as the strongest connection to the University's fledgling years.

An extensive restoration, completed in 2019, has returned the 160-year-old North Wing and areas of the East Wing to their original design, allowing for the display of items from the University's cultural collections, including a dedicated temporary exhibition space in the Treasury Gallery.

The heritage-listed architectural features and historic furniture demonstrate the early history of this original University of Melbourne building.

[about.unimelb.edu.au/old-quad](http://about.unimelb.edu.au/old-quad)



FROM TOP:  
**Tom Nicholson,**  
*Towards a glass monument, 2017-19*  
(installation photograph).

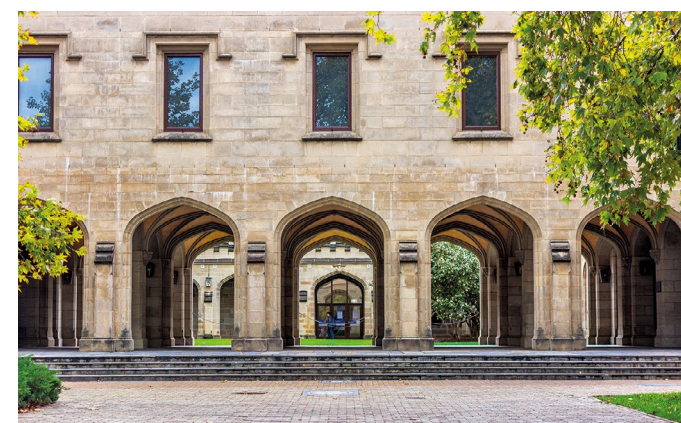
Stained-glass lead and steel frame in two screens, each containing 20 lancets. Realised through Monash Art Projects, Melbourne; Geoffrey Wallace Stained Glass, Melbourne; and courtesy of Milani Gallery, Brisbane.

PICTURE:  
CHRISTIAN CAPURRO.  
© TOM NICHOLSON

Installation  
photography of  
*Ancestral Memory*  
exhibition, 2019.

PICTURE:  
CHRISTIAN CAPURRO  
IMAGE © THE ARTISTS

The Old Quad's  
iconic exterior.



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## New buildings around campus

### IAN POTTER SOUTHBANK CENTRE



The heart of the University's Southbank campus, the Ian Potter Southbank Centre, officially opened in June 2019.

The \$109 million conservatorium is filled with state-of-the-art, world-class equipment. It can accommodate more than 7000 students and contains a 400-seat auditorium, 200-seat ground floor studio and a variety of rehearsing, performing, teaching and research spaces.

Barry Conyngham, Dean of the Faculty of Fine Arts and Music, said he was excited about the potential for expanding the program of events in the new centre in coming years.

### LIFE SCIENCES COMPLEX



The newly opened \$100 million Life Sciences Complex at the corner of Tin Alley and Royal Parade boasts the most sophisticated STEM teaching laboratories and facilities in Australia.

It is the first time that staff and students from different faculties will share one building as home. Students from Science and Veterinary and Agricultural Sciences, along with those from Medicine, Dentistry and Health Sciences, will have access to three large practical teaching laboratories, an object-based learning facility, three classrooms for small group and problem-based learning, as well as informal learning and study spaces — all of which are dedicated to preparing the bioscientists, doctors and veterinarians of the future.

The four-level, 6-star Green Star building will be a hub of interdisciplinary activities, further demonstrating the University's commitment to global excellence in life science teaching, learning, research and engagement.



### IN BRIEF

#### DNA DETECTIVES: ON THE TRAIL OF THE PLATYPUS

■ University of Melbourne researchers in collaboration with San Diego Zoo Global, Cesar and several state agencies are using traces of platypus DNA left in the wild to track down dwindling populations.

Advances in genetic sequencing technologies are allowing the researchers to detect animals in their habitats without direct encounters. The technology has been used to launch the largest investigation of platypus populations ever undertaken.

Considering the difficulty of detecting platypuses in the wild, exacerbated by population decline and localised extinctions in some areas, the research is providing a more affordable and logistically viable way to shed light on their true conservation status and the impacts of major threats to the platypus on a large scale.

The project will also enable analysis of why populations have declined in areas where they once thrived, informing actions to conserve this unique, duck-billed, beaver-tailed, egg-laying Australian mammal. [pursuit.unimelb.edu.au/articles/on-the-dna-trail-of-the-platypus](https://pursuit.unimelb.edu.au/articles/on-the-dna-trail-of-the-platypus)

#### RESPECT: EVERYONE'S RIGHT, EVERYONE'S RESPONSIBILITY

■ In February 2019, Vice-Chancellor Professor Duncan Maskell addressed the issue of sexual assault and harassment on campus. In a video distributed to all students and staff, he acknowledged the problem, shared current measures to combat the issue and highlighted future steps necessary to make the University a safer and more inclusive space.

"By working together, students, staff and the wider University community can help to eliminate sexual assault and harassment," Professor Maskell said.

The video's release was followed by the launch of an anonymous register where students, staff, alumni and visitors can privately report instances where they have witnessed or experienced inappropriate behaviour. The register is part of the Safer Community Program, an online platform that provides support and advice to members of the University community about their safety.

### FUNDING

#### \$4 million for Science Gallery Melbourne



Science Gallery Melbourne has received a generous donation of \$4 million from Ruth and Peter McMullin (BCom, LLB 1974) ahead of its opening in late 2020.

Established as a space where science and art collide, Science Gallery creates unique and interactive exhibitions with the goal of nurturing young people's interest in STEAM (science, technology, engineering, art and mathematics).

Announcing their gift during National Science Week, the McMullins said they believed the gallery had the potential to make a genuine impact on young people's lives.

"By placing young people at the centre of programs, the Gallery genuinely reflects their voices and concerns," they said.

"The Gallery provides experiences that are transformative at a crucial time in a young person's life. We believe Science Gallery will have a lasting impact on the future and consider this gift an investment in Australia's next generation of scientific and creative trailblazers."

As the first Australian node of an international network, Science Gallery Melbourne will open as part of Melbourne Connect, the University's new innovation precinct on the former Royal Women's Hospital site at the intersection of Swanston and Grattan Streets. Melbourne Connect will incorporate research, industry, government and students in a single, purpose-built location.

The McMullins' gift includes an expectation that Science Gallery Melbourne will use this opportunity to secure match funding from other supporters and friends.

### PARTNERSHIPS

#### STRENGTHENING RELATIONSHIPS IN INDIA AND INDONESIA

■ The University has recently launched two five-year international strategies to build closer relationships with India and Indonesia.

*Engaging with India (2020-2024)* and *Engaging with Indonesia (2020-2024)* reflect on strong existing relationships with both nations and outline further commitments to building a shared future.

Vice-Chancellor Professor Duncan Maskell said the launch of the new India strategy would "strengthen our longstanding ties and accelerate collaborations with our Indian partners to address shared social and scientific global challenges".

Similarly, the strategy in Indonesia aims to strengthen existing partnerships.

"Our academics are working with Indonesian scholars on research with an impact on the priorities and needs of Indonesian development and on the regional challenges that Indonesians and Australians share," Professor Maskell said.

Both strategies, launched in August 2019, have been welcomed by Australian representatives in each country — Harinder Sidhu, High Commissioner to India, and Gary Quinlan, Ambassador to Indonesia. The University has developed engagement plans for three key countries in the region: India, Indonesia and China. *Engaging with China (2020-2024)* is due in 2020.

### SCIENCE GALLERY

#### FUN FACTS:

■ A microscope image of horse cartilage has been used in the building facade as part of the facility's innovative design.

■ The complex has a solar power system producing 140,000 kWh of solar energy a year — offsetting the power usage for mechanical ventilation, fans, fume cupboards and lifts.

### Stroke solution in the skies

Australia could become home to the world's first stroke air ambulance, transforming rural and regional access to emergency stroke treatment.

A research group led by Professor Geoffrey Donnan and Stephen Davis at the University of Melbourne and the Royal Melbourne Hospital was awarded a \$1 million grant as part of the Australian Government's Medical Research Future Fund Frontiers initiative.

They will develop, test and ultimately implement portable brain imaging tools that can be transported in air and road ambulances, allowing life-saving equipment to be taken directly to a patient.

This is critical in circumstances such as stroke onset in which the first hour is known as the 'golden hour', offering the best chances of patient survival.

Experts from more than 30 of Australia's leading health and academic institutes and charities are involved in the project.



Medicine, Dentistry and Health Sciences Dean Shitij Kapur, Stroke Foundation CEO Sharon McGowan, Professor Davis, Minister for Health Greg Hunt and Professor Donnan at the announcement.

PICTURE: Peter Casamento





Esther Stewart installs her work at the Accademia di Belle Arti di Firenze.  
PICTURE: O'ROUKE & GATES

## ART

## Create a work that ...

**Represents the idea of human physical perfection** (*David* – Michelangelo)

**Divulges a deeply personal, yet unattainable desire** (*Self-Portrait with Monkeys* – Frida Kahlo)

**Pushes the boundaries of your discipline to the extreme** (RMS Titanic)

These are some of the briefs 30 emerging artists received from the Faculty of Fine Arts and Music for their first commission.

At the time, they did not know that these briefs were inspired by some of the most iconic art and cultural pieces currently in existence. In response, these young artists created a wide range of contemporary works, addressing issues from current global crises, such as climate change and refugee treatment to age-old themes of love, grief and loss.

While the brief Michelangelo received in 1501 led to the creation of *David*, an iconic symbol for physical perfection, its interpretation by Melbourne visual artist Esther Stewart and Australian Indigenous artist Ashley Perry challenges traditional understanding of being perfect. "Human physical perfection is whatever you want it to be, not what you are told it is," said Perry.

Beyond visual art, the commission inspired by *David* has also been interpreted by

choreographer and dancer Jack Riley, interactive composer Samuel Kreusler and classical composer Danna Yun.

University of Melbourne Vice-Chancellor Professor Duncan Maskell, who launched First Commissions in Florence, believes in the power of art in the 21st century.

"As our world becomes increasingly automated, our creative artists and musicians have the ability to work together to solve problems and meet the challenges that we face in society," said Professor Maskell. "A fine arts and music education is transformative, and encourages confidence and a strong sense of self-belief. It gives students the courage to think independently and critically. It fosters collaboration and creative risk-taking, passion, determination and resilience."

You can find all the artists' responses to their commissions here: [firstcommissions.com.au](http://firstcommissions.com.au)



## IN BRIEF

### UNIVERSITY ESTABLISHES FELLOWSHIP IN HONOUR OF ASSOCIATE PROFESSOR ALLISON MILNER

The University of Melbourne has established a Fellowship to honour the legacy of Associate Professor Allison Milner who was killed in a tragic accident at Princes Park in Carlton in August.

Associate Professor Milner, 36, was Deputy Head of the Disability and Health Unit at the Centre for Health Equity at the University and was highly regarded for her research in the field of suicide prevention.

In her honour, the University has established the 'Allison Milner Early Career Research Fellowship' in public health to fund a talented early career researcher to develop a program of research to reduce inequities in line with Associate Professor Milner's values and interests.

The Fellow will demonstrate the values and qualities that she emulated, including a commitment to social justice, valuing of diversity and inclusion in the workplace and collaborative team-based research that includes academics, government and non-government organisations and advocates.

### INAUGURAL LGBTQIA+ ALLY NETWORK

The University of Melbourne's LGBTQIA+ ally community, the Pride in Action Network (PiAN), promotes visibility and inclusivity of diverse gender and sexuality identities.

The idea of the network was first introduced to students and staff in an online consultation process. Of 773 respondents, 98 per cent agreed that the aims of the group resonated with them. This led to the network launch in 2019 at the Midsumma Pride March.

Students and staff are encouraged to sign up as allies and access free resources to equip them with the knowledge and skills to proactively create a safer campus and online environment for all.

PiAN has been involved in a number of initiatives, including hosting panel discussions during the International Transgender Day of Visibility, and the International Day Against Homophobia, Transphobia and Biphobia, as well as running free regular training sessions on how to be a good ally.

The group works closely with departmental and student-run LGBTQIA+ programs, including Melbourne University Sport's Pride in Sport, UMSU (the University of Melbourne Student Union) Queer Department and GSA (Graduate Student Association) Queer Department.



PICTURE: CHRIS HOPKINS

# The voice for a new era

The University's chief has a lot on his plate, which he is relishing. **Peter Wilmoth** talks to **Vice-Chancellor Duncan Maskell**.

**D**uncan Maskell is well equipped for the role of University of Melbourne Vice-Chancellor. His rich academic career and varied lived experiences are proving – for a thought leader driving the University into a range of new areas both here and globally – extremely useful.

A microbiologist by training (he did his doctoral thesis on finding vaccines to fight typhoid), Professor Maskell spent most of his adult life at Cambridge University, studying (he was the first in his family to attend university), teaching and then as its Senior Pro-Vice-Chancellor. He arrived in Melbourne late in 2018 with his wife Sarah, also a microbiologist: "We met in the lab at Oxford," he says.

His passions include soccer (his childhood dream was to play for Manchester United), cricket (on his first visit to Melbourne in 1994 he attended the venerated Boxing Day Test at the MCG) and AFL football (for years, he watched highlights packages on TV in England and he has chosen Carlton as his team, mainly because he lives opposite the Blues' Princes Park). "I love AFL," he says.



FROM PAGE 7

"When I got here, people were surprised that I knew the rules."

We've met Professor Maskell at the Ian Potter Southbank Centre, part of the Southbank campus in the heart of Melbourne's arts precinct. The centre is the new home for the Melbourne Conservatorium of Music (it relocated from Parkville in March). He takes us on a tour of some of the performing spaces and outside to the Linear Park precinct which will host film screenings and music performances. Over the road is The Stables, home to the visual arts students.

It's little wonder he's excited to be overseeing all this cultural activity; music has always been central in his life. Aged 11, he sang the solo part in Benjamin Britten's 60th birthday concert in London's Queen Elizabeth Hall and later took up clarinet and saxophone. The band he later joined was once on the same bill as Bob Geldof's Boomtown Rats. There was even some record company interest. "There were a couple of opportunities we could have taken up," he says, a touch wistfully.

He is about as far from the don-in-the-ivory-tower as you could get, which goes some way to explaining why he has settled so well into Melbourne life.

This eclectic CV will undoubtedly help with the impressively ambitious and diverse array of programs and collaborations Professor Maskell is overseeing for the University: developing the seven-hectare engineering hub at Fisherman's Bend and the Melbourne Connect project on the former Royal Women's Hospital site, "a connected innovation ecosystem in the heart of Melbourne" where academics and industry will get into the same space to interact, he says.

"I'm hoping to do exhibitions and festivals and all sorts of other things with the City of Melbourne where we can really leverage our cultural assets and do some really exciting things."

Its purpose is to place highest-calibre research, industry, government, higher-degree students and other elite thinkers in a single purpose-built precinct. One floor will be devoted to Science Gallery Melbourne, part of an international network designed to bring together students and members of the public to explore science and art.

Professor Maskell also wants the University to allow greater access to its valuable art collections and for the public to have a better experience of its performing arts. "We are developing the Cultural Commons project," he says.

**ABOVE: Professor Maskell taking part in the lighting of the wilin (flame) ceremony at the Wilin Centre for Indigenous Arts and Cultural Development at the Southbank campus in May, marking the start of National Reconciliation Week.**



PICTURE: DREW ECHBERG

"We want to get our art and cultural objects to be much more visible and accessible to the public. I'm hoping to do exhibitions and festivals and all sorts of other things with the City of Melbourne where we can really leverage our cultural assets and do some really exciting things. I am energised by the possibilities. It's a big task but I actually thrive on having lots on my plate."

The various projects will generate jobs and further embed the University into the daily life of Melburnians. "It's unavoidable that the University of Melbourne is a key part of the city of Melbourne," he says. "Its foundation stone was laid on the same day as the foundation stone of the State Library ... What the University has to do is make sure it's not just an historical fact but that it's meaningful here and now."

This is far from the only change the University is undergoing. "We all need to bear in mind that universities are constantly evolving," Professor Maskell says. This includes funding models. International students – predominantly from China – make up a significant proportion of the student body. "I think there is always risk in over dependence on any one particular source of revenue," he adds. "Are we over-reliant on Chinese revenue? It's possible we are slightly."

"I wouldn't over-egg it though. It's not too much. If it all changed tomorrow, we would be able to survive for long enough to modify our model."

Professor Maskell sees great value in collaborations with other countries. He recently visited India and Indonesia to meet government and university counterparts to discuss opportunities, including collaboration on research projects.

"We're not in those countries primarily to recruit students," he says. "We want to make relationships with those countries. They are big and important countries. We have not done as much as we could with those countries."

"We need to make good research relationships, academic exchange and student relationships. By doing those things then, yes, we may get more students coming over from those countries as a happy accident."

He says any great university has to be international and Melbourne University could lead internationally in some areas – "and, in a sense, do our share of the heavy lifting in terms of global leadership."

Back home on campus there are issues to consider around the learning experience, including the future of physical lecture theatres in the face of the digital revolution.

"Universities worldwide are all struggling to understand how their teaching program will change," he says. "And it will change with the advent of digital technology, which is moving so fast at the moment

that anything we think we can predict we're probably going to be wrong in 10 years' time."

When at Cambridge, Professor Maskell had posited the view that the university should not build any new lecture theatres, which triggered some pushback.

"That was a bit of a challenging statement," he reflects. "It was a challenge to make people think whether they really did need lecture theatres in the future."

"I don't know what it's going to look like in 10 years. What I do know is that most of the students get their factual information from the internet. So, the idea that there's going to be set-piece lectures for hundreds of students where a bloke like me stands at the front and imparts my wisdom in terms of knowledge download, those days are numbered. However, I do think personal contact is really important."

Professor Maskell likes the idea of deeper collaboration with the corporate world whereby practitioners come onto campus and work alongside academics.

"I believe very strongly in collaboration. No single person has a monopoly on the good ideas."

A corollary is the commercialisation of research, another growth area. "Universities are there primarily to be engines of discovery, to be basic research engines," he says. "However, if there are things coming out of the research that are translatable, then they should be translated, and I think we should not avoid our obligations to do that translation."

"And translation, not just commercialisation. There are plenty of things that come out of the University that could be translated for the public good, which are not

"We need to make sure our students have an outstandingly good experience at the University, that they get all the teaching they need ..."

necessarily easily monetised or commercialised. But commercialisation is also important. If we can translate stuff that we produced and also make it commercially viable and make money out of it, then I think that's a really good thing."

But at its core, the University of Melbourne should "put the students at the heart of everything we do". "We need to make sure our students have an outstandingly good experience at the University, that they get all the teaching they need ... but also get a great deal of other challenges, the ability to expand their minds into other areas. They get taught how to think."



# A therapeutic BEAT



PICTURE: STEPHEN MCKENZIE

Music is helping people with dementia to connect with their carers, writes **Kate Cole-Adams**.

Two women are singing side by side on a sofa, swaying to the music. “I know you love *Amazing Grace*,” the younger woman reminds her mother.

Now she plays another old favourite, a slow song. The older woman joins in at first, but then frowns and starts plucking restlessly at her hands. Suddenly, she stands and moves away. Whimpers. Hides her face in her palms.

It is a scene that may strike a chord for anyone who has a family member or loved one with advancing dementia: the abrupt changes of mood, the growing agitation. And, for the carer, that familiar sense of helplessness.

study will assess the use of music as a targeted intervention to improve the quality of life not only for people with dementia, but also for those caring for them at home, potentially enabling people to live in familiar surroundings for longer and saving millions of dollars along the way.

“The beautiful thing about music, is that it has a unique potential to stimulate autobiographical recall,” says Professor Baker, head of Music Therapy at the Melbourne Conservatorium of Music, and director of International Research Partnerships for the Creative Arts and Music Therapy Research Unit.

She says music activates brain pathways

The process involves carers using familiar songs to tune in to the emotional states of their loved one to encourage connection.

“We show carers how to sing in a way that initially matches the level of distress in the person with dementia, and to then slowly adapt the way they sing to encourage the person with dementia to follow them and calm down.”

These strategies are not difficult to teach, she says. During the study, a trained music therapist comes to the home to provide one-on-one training for the primary carer. Carers learn how to interpret the body language, behaviours and moods of the person with dementia, and then how to select music appropriate for that moment and adjust it when necessary.

The study will include an economic analysis comparing the cost-benefits of delivering the intervention training with the costs of not. Given estimates that the 2015 global cost of dementia was \$US818 billion and rising, the stakes are high.

The study is being coordinated through the European Union’s Joint Programme for Neuro-degenerative Diseases, and funded locally by the National Health and Medical Research Council. Professor Baker and her teams in Australia, Germany, the UK, Poland and Norway are now recruiting participants for the study.

The next step Professor Baker and her team hope to develop is different modes of training, including a mobile device app, so that the training can be delivered globally, adapting the music and the content of the interventions to accommodate different cultural needs.

Professor Baker emphasises that you don’t need to be a good singer. The aim of the music is to support the central relationship between the person with dementia and their carer – and to help each find new meaning in sometimes confusing moments. “Music is the connector,” she says.

But the results can be transformative. “You see the person behind the dementia. All of a sudden, they become activated, they come out of themselves. They start to look at you, recognise you, smile, and through doing so, offer precious moments of connecting with their carer.”

Professor Baker and her team are developing a music therapy app that carers can use at home. Gifts will help fund the development of the app, which will support the lives of family carers and people living with dementia.

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Professor Baker uses music to connect with people living with dementia.

But what happens next may not be so familiar.

As she registers her mother’s agitation, Joanne calmly changes the music. This time she puts on a jazzy number with a distinct beat. Smiling, she takes her mother’s hands, moves them in time to the music, urges her to dance. “Spin me mum, spin me! . . . I remember you and dad used to do this all the time.” Her mother smiles back, tentative at first; now laughing. Together, they twirl.

This small exchange happened seven years ago but has helped pave the way for a new study that could help transform the care of people living with dementia, including Alzheimer’s disease. The scene is depicted in a video reconstruction of part of a pilot that has since evolved into a major multinational study. Led by Professor Felicity Baker, the Homeside

that remain relatively intact even in people with advanced dementia. Familiar songs arouse positive emotions and help people reconnect with their memories.

Unlike other studies that have focused on the effects of music therapy in care-home settings, the Homeside study aims to teach family carers of people with dementia to use music strategically to help manage the distressing behaviours associated with dementia.

Crucially, as well as assessing the impact of the intervention on dementia symptoms such as agitation and depression, this study measures changes in the carers’ own quality of life, levels of depression and resilience, and how competent they feel in the caring role.

Professor Baker uses the word “attunement” to describe how Joanne responded to her mother that day.



# Replenishing the global food bowl

Scientists are facing up to the challenge of food security and sustainability on myriad fronts.

BY GARY TIPPET

Somewhere in the Pearl River valley region of China, perhaps as long ago as 13,500 years according to recent genetic evidence, a prehistoric farmer took a type of wild grass and began the long process of domesticating it into what we now know and love as rice.

Today, a variety of rice is grown on every inhabited continent and it is the staple food of more than half the world's population, with at least 3.5 billion people dependent on the grain for 20 per cent of their daily energy. In poorer parts of Asia, that figure rises to more than 50 per cent.

But apart from carbs and calories, it gives them little else. Common white, long-grain rice is low in many essential micronutrients such as iron and zinc, with no vitamin A, vitamin C or beta-carotene, and with very little fibre. These deficiencies can lead to serious health consequences, from anaemia and stunted growth to irreversible blindness. However, thanks in part to pioneering biotech research by University of Melbourne plant biologist Associate Professor Alex Johnson, that is changing.

Dr Johnson, of the University's School of BioSciences, is an expert in the problem of "hidden hunger", a chronic lack of vitamins and minerals in the human diet, and he and his team have developed a new strain of "biofortified" rice enriched with iron and zinc – promising significant improvements in nutrition, health and quality of life for malnourished millions.

"It's estimated that one in three children around the world suffer from a lack of micronutrients," he says. "We need to tackle hidden hunger, and one way to do that is to enrich our staple food crops with minerals and vitamins, referred to as biofortification."

After completing his PhD at Virginia Tech in the US, Dr Johnson first used genetic modification (GM) technology to make new types of potatoes that were resistant to a major pest, the Colorado Potato Beetle. He then turned his attention to rice, "digging through the genome to see how we could change the genes to make a better rice plant".

White rice grains contain a mere two-to-five parts per million (ppm) of iron, well short of the 13ppm needed to address rampant iron deficiencies in rice-dependent populations, and the tiny bit that's in the grain is not very "bio-available", or easily absorbed into the body. Dr Johnson's team has studied a variety of genes that help rice to absorb iron from soil, and found that most of these genes only switch on when the plant detects that it is iron-deficient.

"We've just changed the way one of these genes is expressed so that it's on at higher levels all the time," he says. "You could say, we've fooled the rice into thinking it's iron-hungry."

It has proved a win-win situation by a factor of three or four – the biofortified grains have reached 15ppm iron in the field; they have had the added benefit of increased zinc concentration; the minerals are bio-available; and, the GM rice is just as high-yielding as existing varieties.

The technology is now being taken into Bangladesh, one of the most rice-dependent countries in the world and one of the worst-affected by iron and zinc deficiency. Meanwhile, Dr Johnson's team is using the same technology – and the same rice gene – to biofortify the world's other great staple, wheat. His team is aiming to bring iron biofortified wheat to Pakistan in the near future.

CONTINUED PAGE 14

Associate Professor Alex Johnson is using GM technology to bolster nutrients in rice. "You could say, we've fooled the rice into thinking it's iron-hungry."

PICTURE: CHRIS HOPKINS



# THE FOOD FIGHTERS



## PROFESSOR TIMOTHY REEVES

**YOU MIGHT SAY TIM REEVES WAS** born to agriculture. His family came from Kingston on Thames, just 15km from London, but in the last year of World War II his pregnant mother was evacuated from the heavily-bombed city.

"I was actually born in a farming village and lived my first few months of life on a farm," he says. "I'm thinking that's where I caught the farming bug."

An interest in biology took him into agriculture at the University of Nottingham and a talent for rugby brought him to Rutherglen in north-east Victoria after a State Department of Agriculture official correctly guessed he could transition to the indigenous game and knew the local

team was looking for players.

Now, 150 games later, the former Director-General of the International Maize and Wheat Improvement Centre and now Professor in Residence at the Faculty of Veterinary and Agricultural Science, Dookie, Reeves advocates "sustainable intensification" – making agriculture more sustainable and also more productive to meet global nutritional needs.

"We have to have much greater diversity in our farming systems. I'm confident we can meet these challenges because we're as good as any country in the world at scientists and farmers working together to help adapt our agricultural systems."



## DR DORIN GUPTA

**DORIN GUPTA BELIEVES SHE WAS** blessed to grow up in Himachal Pradesh in the Himalayan ranges of north India. "I was born and brought up in nature," she says. "I've seen how nature works in harmony."

Dr Gupta moved to Australia in 2012 and is senior lecturer in sustainable agriculture at Dookie campus where she focuses on resource-efficient production systems with the inclusion of technology, pre-breeding and breeding to increase disease and drought-resistance. She is researching unexplored wild lentil seeds for disease and drought-resistant genes that have been bred out of commercial crops.

"The world is primarily reliant on three major crops: wheat, rice and corn. We have narrowed down the diversity of crops so much. There are more than 50,000 edible plants on Earth, and we are almost totally reliant on a handful, maybe 14 or 15, and those three are the major energy providers for most of the world.

"With the changing environment, we need more diverse and native crops we can tap into current production systems. They won't replace the three staple crops but will be part and parcel of adding more diversity and especially resilience, because you don't have to do much to them – they have been tried and tested by time."



## PROFESSOR PHILIP BATTERHAM

**PHILIP BATTERHAM WAS STRUCK BY** a mural he saw on Facebook recently. It showed a honeybee with the grim promise: "When we go, we're taking you all with us."

Some scientists have warned that we face an 'insect apocalypse'. A 2014 analysis of 452 species estimated that insect abundance had dropped 45 per cent over 40 years. In April this year, a study warned four in 10 insect species could become extinct. And, echoing that bee on Facebook, Harvard entomologist E O Wilson warned we could follow. "Without insects, other life, and humanity 'would mostly disappear ... And within a few months'. Widespread use of

insecticides, particularly neonicotinoids, has been blamed.

Professor Batterham, a global leader in the genetics of insecticide resistance at the School of BioSciences' Bio21 Institute, has devoted his career to better and alternative pest control and, lately, to the downstream effects of low doses of insecticides on the environment and other insect species.

"But one thing I should say about insecticides is that, while people are looking at their downsides, without them there'd be a whole lot less food in the world," he says. "We cannot just stop using these chemicals; we need to find effective and safe alternatives."

FROM PAGE 12

**B**iofortification is just one area in which University of Melbourne researchers are working to address the pressing issue of world food and nutritional security – defined by Dookie campus-based sustainable agriculture scientist Dr Dorin Gupta as the need to ensure "that all the people, all the time, have the right quantities and, particularly, quality of food, all year round."

But that ambition is a daunting one.

Professor Timothy Reeves, professor in residence at Dookie, which is part of the Faculty of Veterinary and Agricultural Sciences, was recently awarded the Farrer

Medal, the highest honour in Australian agriculture. In his oration, he outlined what he described as the five Grand Challenges to food and nutritional security, which were posing "a perfect storm" for agriculture.

"Globally, for me, these are absolutely humankind's greatest challenge," he tells 3010.

With the global population growing by 160 people every minute, the world will need to increase food production by 70 per cent by 2060. And that will need to happen in the face of:

- The loss and degradation of natural resources of air, land and water – with, for instance, one hectare of productive land lost every 7.67 seconds

- Adaptation to climate change – "now a crystal-clear reality right before our eyes"
  - Nitrogen fertiliser-use inefficiency
  - Food loss and waste
  - The neglect and erosion of rural communities, with seven in every 10 people likely to be living in cities by 2050.
- "But in addition, it is vitally important to view these challenges in the stark context of nutritional security," he adds.

Malnutrition in its widest definition is rampant, with 88 per cent of countries having two or more major concerns around nutrition. Two billion people are malnourished and lack key micronutrients, with 800 million of those going to bed hungry every night; 155 million children are stunted and

52 million are wasted; while, on the other hand, 2 billion adults and 41 million children are overweight or obese.

To battle this, Professor Reeves believes the world needs a new revolution of diversified and integrated farming, aiming for – in what might sound like a contradiction – the "sustainable intensification" of agriculture.

"Basically, we have to produce more food from existing land with fewer resources, and do so more efficiently," he explains. "It can mean very specific things but the way I define it is, you're looking at agriculture that is regenerating the natural resource – you're improving soil health, you're improving biodiversity and you're improving the resilience

and sustainability of our farming lands.

"Sustainable intensification is one of the key pathways to 'regenerative agriculture' because it concentrates on those five elements: conservation agriculture, soil health, efficient water management, better genetic material and integrated pest management."

**R**esearchers in Melbourne and Dookie, near Shepparton, have been tackling many of these challenges – often with ground-breaking results and implications for food security.

In 2017, Dr Gupta and a multi-disciplinary team used a hyper-spectral sensor on board a drone to detect the

onset of crop diseases well before they became visible to the naked eye. The sensor, able to capture light in and outside the visible spectrum in 100 times more colour channels than normal digital cameras, was flown over tomato crops, detecting minute changes of pigment indicating early signs of disease. It enabled Dr Gupta and the team to build a spectral library of tomato diseases.

"Matching the surveillance data to the library data with further advancement in interpretation of this data can assist growers to selectively spray well in time before a pathogen can establish to a level of significant damage," she says. "This is part of precision agriculture; we don't

CONTINUED PAGE 16



# THE FOOD FIGHTERS



## PROFESSOR ARY HOFFMANN

AS A BOY ON HIS FAMILY'S VEGETABLE farm near Christchurch, New Zealand, Ary Hoffmann developed a keen interest in bugs; beetles, wasps and lacewings were everywhere on the farm, some bugs preying on others.

"My father certainly spent a lot of his time spraying," he says, "And I always thought, 'This is crazy, we can't keep going like this'."

Young Ary was ahead of the curve. Now, Melbourne Laureate Professor at the University of Melbourne School of BioSciences, and a past president of the Australian Entomological Society, Professor Hoffmann works on integrated pest controls, including

bacterial parasites, to block the spread of viruses.

"We can't rely on broad-spectrum pesticides anymore," he says. "They're not selective. You're not just killing one particular pest but a lot of different insects - also the many parasitoid wasps and the beetles that can potentially control the pests. There's a whole lot of good guys out there."

"We need to change our thinking and come up with new ways of doing it. But those new ways have to make economic sense, and therein lies the challenge, because people want to pay less for their loaf of bread, not more."



## DR RACHEL CAREY

ONE OF THE ATTRACTIONS THAT enticed Rachel Carey, when she moved to Melbourne from England 20 years ago, was the city's famed food culture. Now, she is protecting and enhancing that aspect of her adopted home.

A lecturer in food systems at Dookie, Dr Carey was the lead author of *Roadmap for a Resilient and Sustainable Melbourne Foodbowl*, which outlines the keys - including recycling water and organic waste, and protection of inner farmland viability - to ensuring the fertile fringe continues to provide some of Melbourne's fresh food needs.

Originally working in the field of human-centred design, Dr Carey

combined her experience and passion for good food to collaboratively designing food systems that are healthy and sustainable, while designing policy to support that.

"I think we're not really aware of how dependent Melbourne's food culture is on the quality of fresh food that's grown around the city," she says. "I'd like to think future generations will be able to source that same quality of food."

"The consequence of not protecting these areas is we lose our supply of fresh, local food. As we become more dependent on more distant sources of food, we'll have a less resilient food supply."



## ASSOCIATE PROFESSOR ALEX JOHNSON

ALEX JOHNSON'S INTEREST IN PLANTS bloomed early. As a child in Washington DC, he would follow his mother around the backyard helping her plant flowers and vegetables, although his habit of digging them up to see how they were progressing could be annoying.

An interest in human health almost took him to medicine, but he realised he was more attuned to plant biology. At Virginia Tech in the early years of commercialisation of genetically modified crops in the US, he realised he could combine the two, studying how biotechnology could be used to make healthier foods.

Now at the University of Melbourne's School of BioSciences, Dr Johnson and his

team are utilising a wide range of biotech strategies to biofortify rice and wheat with essential vitamins and minerals.

Dr Johnson says there is still resistance to GM foods, but believes it is waning. "We've now had 23 years of commercialised GM crops. People ask how many GM meals have been consumed and it's trillions, and not a single health incident from any of them."

"The papaya industry in Hawaii was wiped out by virus decades ago and the only way back was GM. I was in Hawaii recently and made a point of eating a lot of GM papaya. It was delicious."

INTERVIEWS BY GARY TIPPET

FROM PAGE 15

have to spray all the paddocks. And, in the long term, it's going to be beneficial for environmental health."

From Silent Spring to the "insect apocalypse", populations of many insect species seem to be rapidly shrinking in size with insecticides being blamed. A collapse in European populations of the major pollinator, honeybees - and the subsequent threat to food production - has led to the EU banning some neonicotinoid insecticides.

Whatever the reality of impending Armageddon, the University of Melbourne has a long, impressive history of work towards better and alternative pest control.

Professor Philip Batterham describes himself as "the latest baton carrier in a research relay team" that has studied insecticide resistance at the University since 1977. His team have used genetic approaches to identify the proteins in the insect brain that are targeted by neonicotinoids.

"But more recently, we've become interested in the downstream effects of low concentrations of neonicotinoids and other insecticides on non-pest insects," says Professor Batterham. "We don't have enough data at the moment. It's like a jigsaw puzzle with some holes ... [but] we need answers - and we need them quickly."

Professor Ary Hoffmann, Melbourne Laureate Professor in the School of

BioSciences, says that in the past, particularly in broad-acre agriculture, farmers would "insurance-spray" relatively cheap broad-spectrum pesticides, "whacking it on just in case. The opposite of that is something we call integrated management, but that's a more complicated game."

Professor Hoffmann has worked with the wine industry to increase shelter belts and understory that protect the beneficial insects and mites that prey on pests; developed genetic markers to discover invasion patterns of earth mites; and fought dengue fever using the bacterial parasite *Wolbachia*, which stops mosquitoes passing on the virus.

His group is now investigating how the

same parasite might block the spread of plant viruses.

But the threats to food security are not just out in the broad hectares of wheat, rice and canola. Currently, the fertile food bowl in Melbourne's hinterland produces enough food to meet 80 per cent of the city's demand for vegetables and 41 per cent of its total food needs. But as the city's population heads toward 7 million, that could fall to just 18 per cent.

"Right now, about 55 per cent of people globally live in cities, but by 2050 we expect almost 70 per cent of people to do so," notes Dr Rachel Carey, an expert in food systems. "How we feed people in cities is a vital part of ensuring food security."

In March, Dr Carey and an inter-

"Right now, about 55 per cent of people globally live in cities, but by 2050 we expect almost 70 per cent of people to do so. How we feed people in cities is a vital part of ensuring food security."

faculty team produced a comprehensive and far-reaching plan, *Roadmap for a Resilient and Sustainable Melbourne Foodbowl*. It outlines a vision for retaining a resilient, healthy and fair food supply for the city, underpinned by key pillars of farmland protection, farm viability, water access and re-use, nutrient recycling through composting city organic waste, and sustainable farming.

All these advances are important in the fight for food and nutritional security, but Professor Reeves warns: "One of the things we have to be careful about is saying something like, 'If we can get this right, we'll solve the world's food problems.' All these are just tools in the whole system. There is no silver bullet."

3010



# A bank of knowledge

The University holds a treasure trove of material authored by alumni that is being shared freely across the globe.

BY **ANDERS FURZE**  
(MJOURN 2016)

How do we make knowledge available to everyone? That question is driving the growing “open access” movement in higher education, which seeks to make research available online, for free, to anybody who wants it.

The University of Melbourne has had an open-access repository, known as Minerva Access, since 2001. The work in the database collectively tells a story about the University’s scholarship, says Donna McRostie, Deputy Director of Research and Collections in Scholarly Services.

“It’s a showcase of all the research at the University, and all the student scholarship as well. It really profiles the breadth and depth of our research endeavour,” she says.

McRostie works closely with Jenny McKnight, a research consultant specialising in open access, to help University academics consider making their research available to anyone.

“What I find fascinating is the sheer diversity of our most highly downloaded items,” McKnight says. “If you look at our most popular publications in Minerva at any one time, they span a huge range of areas.”

Much of the database’s traffic comes from developing countries, which McKnight notes plays into ideas of equitable access that underpin the open access movement.

“The vast majority of academic research outputs, globally, are behind paywalls. What that basically means is, if you’re outside a wealthy, often Western

university, you don’t have access to peer-reviewed research generally.

“Open access enables people who otherwise wouldn’t have access to peer-reviewed research created at our University to access it for free.”

Among the most popular works accessed in 2019 were a severe thunderstorm climatology, a paper comparing the experiences of physical education teachers in Kenya and Australia, and a journal article on Mexican painter Frida Kahlo. The most popular item of 2019 so far is an edited collection of letters from Aboriginal women in Victoria from 1867 to 1926.

Other highlights from the collection include the first two PhD theses to ever be completed in Australia, as well as the first thesis ever completed at the University of Melbourne (*An examination of Teutonic Law*, completed as part of a Doctor of Laws in 1893).

Indeed, Minerva houses more than 12,000 theses written by University alumni, as well as other research publications, including articles, book chapters and even creative works. All up, items have been downloaded more than one million times so far this year.

“You’ll see a lot of things that are popular with practitioners,” McKnight says. “You would never go through the top 20 downloads for a month and see a particular discipline dominating. They’re all represented.”

Research suggests that people who work outside of universities rely on open-access databases to gain access to knowledge that would otherwise be unavailable to them. “Practitioners, policymakers, business professionals. Typically, they will do a Google or

Google Scholar search. If they can access something free of charge then they’ll use it, but if they can’t they’ll move on to something else. It’s the main way people out there access our content.”

McRostie says the University can’t rely on readers coming to its websites to find articles. Instead, they must be clever about coming up with ways to bring content to readers.

“One of our main aims is to make the content as visible as possible, so users don’t actually have to know where to come. Instead, you can do a search and find this stuff using any mechanism that you choose: Google, Google Scholar, Trove, etc.”

It’s a mammoth logistical undertaking, and staff can’t just click their fingers and make everything freely available.

“Permissions must be provided by students and academics, then there are issues such as copyright,” McRostie says.

“When we talk about digitising, that’s the easiest part of the process. But then there’s the contextual metadata to make them discoverable, the online tools to get them out there. We’re challenged to keep up with all of that as well.”

Alongside increasing accessibility, McKnight says the other purpose of the repository is to preserve the work for future generations.

“I have people approach me, often close to retirement, and they want their body of work preserved. They know then that their work will be there and discoverable, even if a journal publisher gets bought out or closes everything up.”

Adds McRostie: “It’s a work in progress, and finite resources limit what we can do. But the opportunities here are huge.”



## MINERVA BY THE NUMBERS\*

**3,976** open access theses

**10,817** open access research publications  
(journal articles, book chapters, reports, etc)

**6,116,477** total downloads

**1,306,730** total downloads for 2019

## MINERVA’S TOP 10 MOST POPULAR ITEMS

**In the mood for love: intersections of Hong Kong modernity**  
Audrey Yue  
**23,100**  
DOWNLOADS

**The challenges of teaching physical education: juxtaposing the experiences of physical education teachers in Kenya and Victoria**  
Michael N Wanyama  
**66,480**  
DOWNLOADS

**Beyond black and white: Aborigines, Asian-Australians and the national imaginary**  
Peta Stephenson  
**29,460**  
DOWNLOADS

**The mechanics of tractor-implement performance: theory and worked examples: a textbook for students and engineers**  
Ross MacMillan  
**26,720**  
DOWNLOADS

**Constructing nurses’ professional identity**  
Dr Georgina Anne Parkes Willetts  
**24,260**  
DOWNLOADS

**Dynamics of critical Internet culture (1994-2001)**  
Dr Geert Willem Lovink  
**18,390**  
DOWNLOADS

**A dynamic structural analysis of trees subject to wind loading**  
Kenneth Ronald James  
**23,270**  
DOWNLOADS

**Letters from Aboriginal women of Victoria, 1867-1926**  
Edited collection  
**38,490**  
DOWNLOADS

**An ethical defence of modern zoos**  
Dr Jennifer Helen Gray  
**19,500**  
DOWNLOADS

**Embedded: the Australian Red Cross in the Second World War**  
Dr Jonathan A Spear  
**16,870**  
DOWNLOADS

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# Taking on the world

Twins **Anchuli Felicia King** and **Aphiwan Natasha King** shared their undergraduate years at the University. But embarking on very different study paths has led to two distinctly successful global careers. They spoke to **Lani Thorpe**.

## NATASHA

Growing up across Thailand,

the Philippines and Australia has definitely had an impact on who I am today. I spent most of my childhood and adolescence surrounded by friends and students with a variety of backgrounds and life experiences, so I think I still feel the most comfortable being in that kind of global environment.

From as early as I can remember, I can recall my parents telling me that I would make a good lawyer because I was loud and argumentative. Having been in the company of law students and lawyers for a few years now, I can't say I see much truth in that stereotype! I have a vague recollection of being convinced for a spell in high school that I wanted to be either an immunologist or maybe a physicist but, overall, I kept coming back to the idea of the law.

After high school, I wasn't sure if I wanted to commit to pursuing law or go overseas to study. I decided I wasn't ready to leave Melbourne and all my friends and my sister, so I opted to do a Bachelor of Commerce at the University of Melbourne. I figured it would be a useful degree to have in case I ended up going into corporate law, with the tentative plan that I would probably complete a postgraduate degree in law afterwards.



**Natasha** (BCom(Hons) 2014) is a junior lawyer at the World Trade Organization in Geneva.

I absolutely loved my time at Melbourne. It was such an incredible environment to get to be a young adult, figuring out your creative passions and tastes and intellectual interests. I particularly enjoyed getting to do a generalist degree, which allowed me to do courses on everything from the history of economic thought to the development of musical theatre.

'Leech' (Felicia) was my roommate and partner in crime throughout our undergrad. We had almost no classes together, but we were collaborating constantly on various student theatre productions. She was typically in a creative role, like an actor or costume designer, and I was typically in a technical role, like a stage manager or lighting designer. The University of Melbourne has the most incredibly diverse and democratic student theatre program.

After finishing at Melbourne, I was lucky enough to be accepted to do an affiliated law degree at the University of Cambridge. After that, I decided to complete a master's degree at Georgetown in order to specialise in two fields: investor-state arbitration and



**Felicia** (BA(Hons) 2015) is an award-winning playwright based in New York.

international trade law. While I was there, a career counsellor encouraged me to apply for an internship at the World Trade Organization. Thankfully, I listened and was fortunate enough to be selected for the internship.

I'm now working at the WTO as a junior dispute settlement lawyer in the Legal Affairs Division, which provides legal advice and information to WTO dispute settlement panels, members, bodies and other WTO divisions. It's an incredibly interesting role. Now that I actually have gotten to do work that I love, I can't imagine doing anything else.

Because we ended up on very different career paths, people tend to assume that my sister and I have very different personalities. There's some truth to that statement; Leech's always been a bit more of a pathbreaker and non-conformist, whereas I'm basically a grandmother pretending to be a millennial. But I also think that we're very similar in terms of a lot of our personal traits: workaholism, intellectual curiosity, a hostility towards paternalism. We're also best friends and rarely go a day without talking.

**FELICIA** Natasha and I have been artistic collaborators since we could talk, writing bizarre albums and musicals and screenplays. Our parents definitely expected that the art thing would be a hobby. My mum was gunning for the classic Asian pairing of a doctor and lawyer. The fact that I've ended up being a playwright is a real shock actually, because Tash (Natasha) was always the writer of the family. I never thought I'd end up writing for a living.

I wasn't exactly the most diligent student. I totally loved my undergrad degree, being exposed to a ton of literature and plays and art, but at a certain point my artistic extracurriculars definitely cannibalised my studies. But my time at Melbourne Uni, particularly working in the Union House theatre community, has absolutely shaped who I am as an artist and a human being.

My sister and I lived together for our whole undergrad, down the road from uni. We were doing very different degrees; she was studying commerce and I was studying literature. But we took a bunch of esoteric electives together, like one on the history of Broadway.

Plus, we were constantly collaborating on theatre productions. We split the portfolios; you could get the King Twins as a comprehensive creative team. We actually wrote two musicals together! Tash wrote the book and I wrote the music and lyrics. We toured one to Adelaide Fringe.

My mantra has always been: pursue your career on every front, keep learning new skills, work your arse off. I often talk about how I accidentally became a playwright, and to an extent that's true, but I still worked really hard to get here. I was just working hard at everything, and playwrighting slowly emerged as the central path. After I graduated from Columbia, I was freelancing as a designer and writing academic papers and working an arts administration job, all while submitting my plays to every festival and playwrighting group and prize in existence.

I have also just been preternaturally lucky. And that's a pretty major caveat. I stumbled around blindly trying to create as much work as I could, and then providence took care of the rest. My major break was getting my first play, *White Pearl*, on at the Royal Court Theatre main stage this year in London.

A huge part of my job is research and reading. But I also want to make sure that my politics are reflected in my work. I've become aggressively globalist in my art-making, in large part as a response to the frightening resurgence of nationalism that I see happening in the world. I want my rehearsal rooms to be global villages. I want to lift up voices and stories that I feel aren't being represented. I want to increase empathy for other people's cultures and experiences of the world. I take that really seriously.

I'm dipping my toes into film and TV, but for the moment I'm really just having a wonderful time being an international playwright. But the arts are fickle and it's pretty hard to plan even six months in advance. As long as I can keep supporting myself as an artist and making work all over the world, I'll be happy.

**"I want to lift up voices and stories that I feel aren't being represented ... I take that really seriously."**





1959



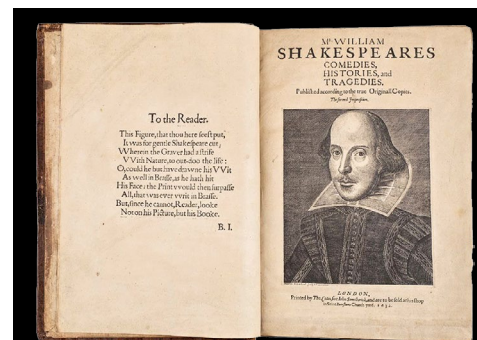
2019

85% Amount of the annual materials budget spent on online resources

BAILLIEU LIBRARY

4m Approximate number of titles in the library collection

100,000 Visitors each year



### From the collection ...

**Second folio, William Shakespeare (1632)**  
An updated version of the first folio of Shakespeare's works.

**The Birds of Australia (1848) and The Mammals of Australia (1863)**  
John Gould - the first major book on Australian birds and mammals.

**Latin Bible Mainz: Peter Schoeffer (1472)**  
A Latin Bible printed less than 20 years after the *Gutenberg Bible*, one of the earliest books printed in the west.



PICTURE: KATE BOWMAN

# An intellectual legacy

The University's Baillieu Library is turning 60, and fast adapting to the digital world.

BY **ANDERS FURZE**  
(MJOURN 2016)

Most people who have studied at Parkville have a Baillieu Library story. From one student meeting her future husband across a communal study table to the political firebrand etching graffiti onto the leg of a study carrel, this one building has both hosted and encouraged human curiosity for 60 years.

"It's stood the test of time," senior librarian Karen Kealy says of the Baillieu. "It's adapted quite well to the changing needs of the community."

One small example of that adaptation can be found in the Robin Boyd-designed tables introduced into the building in 2015. Originally created as dining tables, the library sought permission from the Boyd Foundation to expand the original designs

to provide enough space for laptops and books, with added power points placed discreetly underneath the tabletops.

"They're beautiful pieces of furniture," Kealy says of the tables and the accompanying Featherston Mitzi chairs, another mid-century design icon that has featured in the Baillieu since its foundation. "I often get approached by architects and designers asking if we're ever going to sell them. And I say, 'No, we're just going to keep refurbishing them!'"

Prime Minister Robert Menzies opened the Baillieu Library in 1959. It was the University's first permanent library and remains its biggest. Plans had been in the works for years, but World War II and a lack of money stalled progress, before a £105,000 donation from the Baillieu family changed everything.

"It was the first purpose-built library built after World War II," says Kealy, who is Associate Director, Information Services and Library Spaces. "It was a pretty

amazing thing to have achieved back in the 1950s."

John F D Scarborough, who helped design parts of Scotch College and other university libraries, and who taught at the University, designed the building. Although elements have expanded and been refurbished, much of the original design remains.

"All the builders who come in, comment on the design," Kealy says. "That original structure and design has enabled us to do those things quite well."

The Baillieu might be a specialist arts and humanities library, but its prime position in the centre of the Parkville campus, and its large size, means it attracts students from all faculties. It's easily the most popular of the University's libraries, attracting about 100,000 visitors a year.

It's not just students using it either. Alumni and members of the public are regularly welcomed into the building, and there's even an alumni library membership

available, which gives access to ejournals and book borrowing privileges.

"We get people coming in who might want to get stuck into the archives," Kealy says. "We get lots of requests from families who might say, 'My grandmother wrote a thesis, can I come in and have a look?'"

All up, there are around 4 million volumes across the University's collections, with the Baillieu housing the biggest print-based collection. But, in 2019, are people still borrowing books?

"Our loans figures have reduced over time," Kealy admits. "But because of the nature of the collection, people are still borrowing, particularly our postgraduate students."

Still, there's no denying that times are changing. Some 85 per cent of the library's annual materials budget is now spent on online resources, including ebooks, software and journal access.

But then, there has always been more to the library than books. Indeed, the

sheer scale of what's on offer is mind-boggling. There is study, research and IT support on hand, archives and even a gallery, expanded in 2014 thanks to a bequest from alumna Noel Shaw.

A report written for the 1959 University Gazette notes that, "During First Term practically every seat has been occupied for the greater part of the day." It could have been written last week: space for students has been a perennial problem. The library has increased student seat numbers from 1340 in 2012, to 1878 last year.

Although students can access so many resources at home, many are still choosing to visit the Baillieu to access the internet, get advice on studying, take workshops and browse the collections. Taking their Featherston seats at their Boyd tables, they engage with each other, and the University's intellectual legacy, in the process.

"The Baillieu is not just a study hall," Kealy says. "We're a library!"

3010



# Decoding the Everest of SCRIPTS

## FIVE QUESTIONS FOR DR BRENT DAVIS ARCHAEOLOGIST



In the 1950s, great progress was made in the field of undeciphered scripts when English architect Michael Ventris deciphered the ancient Mycenaean Greek script Linear B. But its parent system, the Minoan script Linear A, remains famously undeciphered. Archaeologist Dr Brent Davis (PhD 2011) has devoted his career to its study, winning the Michael Ventris Award for Mycenaean Studies earlier this year in recognition of his work on undeciphered Aegean scripts.

Dr Brent Davis is a lecturer in Archaeology and Ancient Egyptian in the Faculty of Arts' School of Historical and Philosophical Studies. His background is in both archaeology and linguistics, and his interests include the ancient cultures of the eastern Mediterranean and their languages and scripts.

### 1 What is an undeciphered script?

It's a script we can't read. Or, if we can read it, we can't understand it. There are around 20–25 different undeciphered scripts around the world, some of them much more important than others. Decipherment of Linear A has always been one of the holy grails of archaeology, because the Minoan civilisation was so important, especially as a background for the Greek civilisation.

The Minoans were a Bronze Age civilisation that lived on Crete. They used Linear A on ritual objects and deposited them by the hundreds at Minoan outdoor shrines, so we have a lot of things like offering bowls with Linear A inscriptions around them. The sentences are very similar to each other but they're never exactly alike, so by comparing them all to each other you can tell quite a lot about the language behind the script.

The Greeks, when they arrived on Crete in the Late Bronze Age, borrowed the writing system of the Minoans to write in Greek. We call this customised version of Linear A 'Linear B', and this script was deciphered in the 1950s by Michel Ventris. Because we know what sound values the various signs have in Linear B, we can

actually pronounce Linear A words, but they're gibberish, because they're in a language we don't recognise.

### 2 Why does deciphering Linear A matter?

As I tell my students all the time, archaeology is not about the stuff that you find, archaeology is about the people behind the stuff. That's the only reason for digging it up – to try to understand more about them. And what better way of understanding a people than to be able to read their records in their own voice? Deciphering Linear A would be enlightening, as it would tell us things about the Minoans we might not have any other way of finding out. That's the value of it, it's a direct pathway into these ancient peoples' brains. Awesome.

When the Greeks arrived on Crete, they absorbed a heck of a lot of Minoan culture and religion, so the Minoans have coloured Western civilisation. But we can't read their records. It's just like before we could read Egyptian hieroglyphs. People made guesses, but 95 per cent of them were wrong about what the Egyptians were trying to say with their writings. Once we could read hieroglyphs, then we could hear the Egyptians talking in their own language, in their own voices.

### 3 How does one get into the business of decipherment?

My father was a meteorologist, but he'd always dreamed of being a history teacher. It was never to be, but he had this wonderful set of bookshelves crammed with ancient history books, and even as a seven-year-old I'd look through them and just absolutely fell in love with archaeology.

I got my undergraduate degree in Linguistics at Stanford, and then for many years after that I worked in IT, helping to write the programmers' manuals for the original Macintosh, back when Apple was just a small company. I continued in IT for a while, but I was unsatisfied. I'd just fallen into it, it wasn't something I'd intended to do. What I loved was languages and archaeology, so eventually I decided just to quit, go back to school and do something I really loved. That's when I came to the University of Melbourne to do my PhD, which I did on Linear A.

I had first read about Linear A when I was about 18, and thought, wouldn't that be wonderful to study? Years later it turned out my PhD supervisor here in Melbourne was a specialist on the Minoans, so she greatly influenced my choices. The first great key to deciphering a script is to figure out which language it's encoding. Until you know that, you're kind of adrift. This is where the background in linguistics comes in. Being able to devise ways of looking at the script and comparing various sentences and intuiting things about the language behind the script – that's very valuable stuff, because we'll someday get a critical mass of those clues and we'll hopefully be able to identify what the language is. That's half the battle right there.

### 4 How niche is this line of work?

We specialists in undeciphered Aegean scripts are an international group of people, but a small one. I would say there are probably eight to 10 people around the world who are serious scholars of these scripts.

From top: An example of the undeciphered Linear A script; two samples of Linear B, deciphered in the 1950s; The Rosetta Stone, deciphered in 1822.



It's a very close club and we all know each other very well.

One of the things that really marked Michael Ventris's approach to the decipherment of Linear B was his willingness to share anything he found with everybody; he was completely open. That has become a great tradition now in Aegean scripts, and it's definitely something we're proud of. Anytime anyone discovers something new, they share it with everyone, because we need to work together on this, it's not a one-person job.

We email each other a lot. I'm involved in a collaboration right now on Cretan Hieroglyphic, which was a precursor to Linear A, and someone else is working on a Cypriot script called Cypro-Minoan, which (like Linear B) was based on Linear A.

Those are the three main undeciphered Aegean scripts: Linear A, Cretan Hieroglyphic and Cypro-Minoan. I actually work on all of them, though all of us tend to specialise in one.

### 5 What are the chances of deciphering Linear A?

When Michael Ventris deciphered Linear B, he had texts that amounted to a total of about 20,000 signs. That's only about three times the length of this article, if you were to type it out. It's not a lot. But that's kind of a critical mass – you have to have that much material in order to decipher a script without a bilingual. The Rosetta Stone is a great example of a bilingual: you've got Egyptian and Greek inscriptions, and they both say the same thing. You can read one of them, so you can intuit a lot about the other. We don't have a bilingual for Linear A, and when you don't have that, you need at least 20,000 signs of the script. Right now, we have about 8000 signs of Linear A, altogether.

But more is found every year. There has been one great Linear A archive in the past that's responsible for the majority of the signs we have. So, if someone were to find another archive, the total number of signs could go up substantially. They're excavating all the time in Crete; new Minoan palaces continue to be found, and palaces are where archives tend to be, so hope isn't lost.

To decipher any script, you have to keep your mind open and you have to go over and over and over it. That's how Ventris deciphered Linear B. He worked on it for ages, and then there came a day when he realised, this is Greek! Before that, he'd been absolutely certain it was Etruscan or some other ancient language. Once he'd correctly identified the language as Greek, though, his successful decipherment of the script was just a matter of time.

INTERVIEW BY LANI THORPE



# Gift adds up for next-gen maths education

BY KENDALL RICHMOND

A first-generation Australian whose parents were both wartime European refugees, Professor Kerry Landman keenly remembers a story her mother used to tell about the generosity she received when her family first came to Australia and couldn't afford her school fees.

"The headmistress said not to worry about it," Kerry says. "She gave my mother a full scholarship and said her parents could pay whatever they could afford once they had settled into their new lives."

"My mother went on to study dentistry at the University of Melbourne, and when she received her first pay packet as a dentist, she gave it to the school."

This story was instilled in Professor Landman from childhood.

"As children, we always knew that you give back," she says.

Through the establishment of a mathematics teaching scholarship and ensuring its long-term future through a gift in her Will – a 'living bequest' – she continues to promote her family's philanthropic values.

A living bequest is a special gift started during a person's life and finalised with a gift in their Will. In this way, donors and their families have the pleasure of seeing the impact of their giving during their lifetimes.

The Kerry Landman Scholarship supports high-achieving mathematics graduates who are passionate about education, and who have the potential to become leaders in a school setting. With the scholarship, she aims to address the shortage of trained teachers with a background in maths, who can inspire and empower their students – and their teaching peers.

"Having good maths teachers makes a huge difference," she says. "It's so important that teachers understand the importance of teaching foundational mathematics and

how mathematics can be used. Students can then appreciate the potential of what mathematics has to offer.

"Most people's reaction to my saying I am a mathematician is, 'Oh, I hated it', or 'I was hopeless at it' ... or they shut their mind to it. I mean, they just wouldn't say that if you'd said you liked reading!"

Professor Landman's own interest in mathematics started at an early age, and she still remembers vividly the thrill of encountering geometry for the first time with Mrs Kneebone in grade 6. There was never any question that she wouldn't pursue maths at university.

"It's my hope and vision that the recipients of my scholarship will go on to become leaders in the field of mathematics education."

PROFESSOR KERRY LANDMAN

Encountering the rigours of mathematics at the University of Melbourne, she thrived, believing that, "If you are studying a subject that you really love and have a passion for, you'll work at it and do well, and opportunities will arise."

That guiding belief led to the unfolding of many interesting, and unforeseen, opportunities in her career. After completing her PhD, she received a post-doctoral appointment in the US at Massachusetts Institute of Technology (MIT).

"That was when I really figured out what sort of mathematician I wanted to be," she says, attributing the

interdisciplinary approach of her colleague, Professor Harvey Greenspan, with her desire to pursue applied mathematics, maths within a real-world context – for example, biology, the environment or industry.

What mathematics can do, Professor Landman explains, is provide a fundamental understanding of how complex processes interact to produce experimentally observed behaviour – developing theories that may, at first, seem completely counter-intuitive.

"For example, in a developmental biology process, there's so much going on – relying on intuition doesn't work. A mathematical model can provide an overriding theory that explains experimental results."

"Even experimental results that don't seem to make any sense may be consistent with this theory. This approach can make a real difference in treatment or intervention options."

Professor Landman's distinguished contribution to research into real-world problems spans a range of fields, from colloidal fluid mechanics to developmental biology. She's a recipient of the ANZIAM (Australia and New Zealand Industrial and Applied Mathematics) Medal, as well as a Fellow of the Australian Academy of Sciences.

Professor Kerry Landman in the Old Geology Building.

PHOTO BY BEC WALTON

With her living bequest, Professor Kerry Landman – a leader in the field of applied mathematics – aims to share the beauty of maths by supporting future teachers in the field.

She has also been an outstanding role model for women mathematicians. Returning to the University in the mid-1980s, she was the only female lecturer in the maths department. In 2007, she became the first female professor in the School of Mathematics and Statistics.

"The first time I experienced a female professor – Nancy Kopell – was when I was at MIT," she says. "That was the first time I'd seen a woman mathematician in a senior role."

Things have changed, thankfully. "We slowly appointed more female lecturers in mathematics," Professor Landman adds, "and things have really changed at Melbourne in the last few years."

"But how can young women who want to become mathematicians or have a career in mathematics succeed if they don't see those role models?" she reflects, commenting that diversity is vital to any field, including maths.

Now retired, though still actively involved in the University, Professor Landman remains passionate about education.

"It's my hope and vision that the recipients of my scholarship will passionately communicate the beauty and

applications of mathematics to encourage, inspire and support their students to succeed," she says.

"Success and confidence with mathematics develops an incredible skill set, the ability to have an impact in solving problems in different fields," she adds. "You might do a PhD in fluid mechanics, for example, but end up doing risk analysis for a company. Because you can – because you have studied mathematics."

From Mrs Kneebone to her mentors at MIT and at the University, Professor Landman is deeply appreciative of the inspirational teachers and colleagues who shaped her career.

"I had many role models who supported me in so many ways," she says. "I'm hoping that my scholarship will develop teachers that have this kind of influence in their students' lives."





# At home with their collections

**Two distinctive art galleries built by alumni are drawing international audiences.**

BY **RAYMOND GILL**

(BA 1983, LLB 1984, ORMOND COLLEGE)

**H**ouse museums appear to be back in vogue. Once a 19th century extravagance favoured by robber barons (the Frick in New York) or eccentrics (the Musée Jacquemart-André in Paris), they now have far more focused intent.

Consider two of the new crop – the Lyon Housemuseum and galleries, and the Justin Art House Museum (JAHM) – both designed and lived in by collectors who happen to be architects and who live in Melbourne.

The other major difference is that visitors are welcomed into these two 21st century versions of a house museum to view their owners' collections while the owners still reside there.

In the case of the Justin Art House Museum, which opened in the city's Prahran neighbourhood in 2016, owners and University of Melbourne alumni Charles and Leah Justin welcome their guests right into their kitchen.

"That was one of the drivers for us," explains Leah. "We want people to feel they are guests in our house. People are very respectful, and I'm always touched by people saying how generous we are, when really we are just sharing our passion for art."

The striking three-storey house, situated on a busy corner, was built on the front of a block of 1940s flats that were reworked into the fabric of the new building and wrapped in a skin of zinc. It houses a garage that converts into a visitor welcoming area on viewing days, a gallery and art

storage spaces, and living rooms and bedrooms where visitors can wander at will and view the couple's collection of striking contemporary art.

Charles (BArch 1972) is now retired from the architecture and interiors practice he co-founded, Synman Justin Bialek (SJB), while Leah (BA 1971, GDipLib&InfoSt(Gen) 1986) works as Community Education Coordinator at the Jewish Museum of Australia. The couple were inspired by the Lyon Housemuseum, which was designed by its architect-owner Corbett Lyon.

Lyon (BArch 1979, DArch 2016) is one of the School of Design's most distinguished alumni. He and his wife Yueji built their 'Housemuseum' (a one-word term they coined) on the site of their old home in Kew which had been literally falling in on them.

Their idea for the new home that could also be a gallery was similarly inspired by the stately Frick Museum and Peggy Guggenheim's museum in Venice. However, they were the first collectors – possibly in the world – to share their art collection with the public while still in residence. They have done so since 2010, drawing international acclaim, cited by Larry's List as "one of the world's 10 most exciting buildings of private museums".

This year, Corbett and Yueji Lyon radically increased the size of their collectors' footprint by building the adjoining 'Housemuseum Galleries'.

This new space is also designed by Lyon and is made up of a forecourt, a courtyard and five galleries all under 5.5 metre ceilings. It's designed

for their larger scale artworks and installations. The couple began collecting contemporary Australian art 30 years ago with the collection now numbering around 350 pieces by 50 artists, including Brook Andrew, Howard Arkley, Patricia Piccinini, Callum Morton, Shaun Gladwell, Daniel von Sturmer and Daniel Crooks.

"Being an architect, I designed the new building so the original Housemuseum and the Housemuseum Galleries can be joined together," Lyon says. The couple plan to eventually gift the museum to the public through their foundation.

"We want people to feel they are guests in our house. People are very respectful, and I'm always touched by people saying how generous we are."

**LEAH JUSTIN**

**Charles and Leah Justin in their home, the Justin Art House Museum. PICTURE: STEPHEN MCKENZIE**

CONTINUED PAGE 30



FROM PAGE 29

In August 2019, Corbett and Yueji Lyon and the University's Faculty of Architecture announced they were teaming up as 'knowledge partners', in which they will collaborate on the exhibitions program of the Housemuseum Galleries for both Melbourne School of Design students and for the general public.

As well as taking a leaf from the Lyon Housemuseum book, the Justins were also inspired by the Maison Particuliere in Brussels, the Sammlung Hoffmann in Berlin and, for sheerchutzpah, the approach of billionaire gambler David Walsh to his Museum of Old and New Art (MONA) in Hobart.

The Justins' museum is on a much smaller scale than the Lyon Housemuseum and the JAHM building was not designed by Charles himself, but his daughter, Elisa Justin, who runs her own firm, Justin Architecture.

For the past three years, her parents have opened their home for weekly tours of the house and its collection, with the couple conducting the tours personally. These have become so popular that in 2018 Lonely Planet included JAHM in its Top 8 attractions for visitors to Melbourne.

The appeal might be sticky-beaking into someone's home and assessing their artistic taste, revealed through a private collection amassed over 40 years and which includes painting, sculpture, works on paper, and photography, with an emphasis on digital and video work.

"I think [digital art] is just part of the world we are experiencing here in the 21st century and if Rembrandt were alive today he'd probably be working as a video artist," says Charles.

But as the couple have discovered, the heart of the appeal is in the conversations they have with their visitors about why and how they collect, and invariably about the meaning of art. These free-wheeling discussions are conducted as the group of 20 or so wander through the rooms before settling in the open kitchen and living room to chat over ginger tea and refreshments.

Most visitors do not appear to have any professional expertise of contemporary art, according to the Justins, but what they do have is open curiosity.

"Most visitors are 'non-art' people," according to Leah, who says they come from all parts of Australia and overseas. "During the week, we mostly attract retirees and at weekends it tends to be younger people.

"Often people say, 'Oh, I know nothing about art', but they are always so insightful. We are learning from them all the time."

Adds Charles: "You get the best



ABOVE: Yueji and Corbett Lyon. TOP: An exhibition at the Lyon Housemuseum.

responses from people you least expect, whereas 'art people' are perhaps more inhibited to talk so openly."

The museum includes three permanent works that the couple commissioned for the house when it was built and which form part of its actual structure.

Tunni Kraus created a striped wall composition inspired by the striped canvas awnings of the Melbourne suburbs of the 1950s; Paul Snell has digitally 'decomposed' his photographs to create vibrant abstract images over a full wall; and Australian/Israeli artist Ilan El's *39 Steps* welcomes visitors at the entry as the staircase incorporates an "immersive lighting experience" as each step randomly changes colour as visitors climb it.

The JAHM exhibitions change annually and usually comprise about 40 pieces of art that the couple select from their own collection of 300 works or are drawn from other private collections.

The 2019 show *Let There Be Light* was drawn from their collection with a particular emphasis on their enthusiasm for immersive works that play with light, projections and optics.

The 2020 exhibition *Country* (running from late February to November) is from the private Arthur and Suzie Roe Collection of Contemporary Australian Art. It will include significant examples of Australian contemporary Indigenous and non-Indigenous art and fill the galleries and the private apartment.

Meanwhile, *In Full View: Works from the Lyon Collection*, featuring 60 artworks spanning 30 years, is on display in the Lyon Housemuseum Galleries until 26 January, 2020. For its upcoming exhibition program, the Housemuseum says it is partnering with one of the world's leading museums in art and design for a co-curated exhibition focusing on design and public life.

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## PROFESSOR SALLY SMART FORGING AN ARTISTIC PATH

(MA(Fine Art) 1991, PGDipFineArt 1988)



As one of Australia's leading contemporary artists, Professor Sally Smart is deeply familiar with both the delight that is intrinsic to making her large-scale assemblages, paintings and performance-video works, but also the committed labour that underpins art-making as a profession.

For much of her 35-year career exhibiting here and internationally, Professor Smart has been cutting things out — felt, fabrics and other materials — and re-assembling them in new, arresting forms that deal with identity politics, alternative cultural histories and the relationships between

the body and the world. Likewise, as an art professional, she combines and adapts many skills and experiences. These were forged, she says, during her student years at the Victorian College of the Arts.

The first woman artist to be appointed a Trustee for the National Gallery of Victoria (2001-08), Professor Smart was this year appointed to the council of the National Gallery of Australia; and, as well as being on the board of the National Association of Visual Arts, she is now a Vice-Chancellor's Fellow at the University of Melbourne in the Faculty of Fine Arts and Music. In this one-year, full-time role — which she has taken quarter-time over four years (beginning at the end of 2016) — she brings her own practice into focus as part of her mentorship in the Faculty.

The skills she shares, she says, flow directly from her VCA days when she learnt that there is "nothing like the lived experience of practising artists" to discuss those turning points and challenges with which all artists must grapple.

"Critical thinking, and a commitment to the relationship of theory and practice, is an approach that was strongly embedded, and formative during that period," she says. "To this day, it still informs the way I will discuss work with younger artists. I will always be referring

to texts and focusing on their work in context with the history of art and contemporary thought."

Developing a strong relationship with Indonesian art and artists through her work in the past decade, Professor Smart's dramatic inclusion of shadow puppetry, especially in her most recent body of work, *The Violet Ballet*, speaks eloquently. A mix of video projections, textiles, costume, performance and large-scale installation, *The Violet Ballet* has its roots in the dynamic, avant-garde Paris-based dance company the Ballets Russes (1909-29). Having realised how much hybridisation and multiple discourses were involved in the challenging Ballets Russes performances — they collaborated with visual artists

such as Pablo Picasso, Henri Matisse and Sonia Delaunay — Professor Smart also crossed many disciplines, with stunning, richly coloured results. She describes her own process as "digital cutting".

"For a long time, I have had an interest in the costumes visual artists created for the Ballets Russes, and I was interested to re-imagine the performance, presenting an opportunity to combine my increasingly

cross-disciplinary practice. What was also extraordinary was that most of my collaborating artists are graduates of the VCA. The filming was also done on campus at the Martin Myer Arena." The installation featured at the Adelaide Festival last March-April.

More recently, she has been working with a publisher on a coming book about her career and, as a result of reviewing her decades of practice, she has noted various consistent threads running throughout. "Often, you are moving through work and one body of work will come out of another body of work," she says. "But there will be something residual, so it is interesting to see how those strands have come together — over such a long time you don't set out, of course, to do that, but eventually there seems to be something created that appears decisive, manifest."

BY ANDREW STEPHENS

**"[There's] nothing  
like the lived  
experience of  
practising artists."**



## JACK ZHANG MAKING A BILLION IN REAL TIME

(BEng 2007)



**“You probably spend more than 60 or 70 per cent of your life at work. If you don’t enjoy it, that’s pretty sad.”**

Back on campus, alumnus Jack Zhang is fielding questions from students eager to grab some of his valuable time.

Zhang is in Melbourne at the invitation of the Faculty of Business and Economics, presenting to third-year Entrepreneurial Finance students and sharing the story of his very successful fintech startup, Airwallex.

This year the real-time payments platform firm made headlines for achieving ‘unicorn’ status – a valuation of more than \$US1 billion. As one of only three unicorns in Australia (300-plus worldwide), the rapidly expanding business also nabs the title of fastest-growing unicorn, reaching this milestone in only four years since its launch.

Having Zhang speak at the University is clearly a coup for the faculty. But the Airwallex co-founder and CEO is only too happy to get in front of an audience who will likely be thinking carefully about their own careers as they near completion of their studies.

“We are very interested in hiring University of Melbourne alumni and grads,” says Zhang. “We have 300 people now, we’re looking to be about 1000 next year. We’re hiring a massive amount of people.”

Airwallex is an ideal case study for those with dreams of fintech glory. But it wasn’t an easy route to success, says Zhang.

Arriving in Australia as a teenager from his hometown of Qingdao, China, Zhang went on to skip a year of high school and enrolled at the University of Melbourne, where he eventually graduated with a Bachelor of Computer Science. It was during his time at uni that he faced an unexpected hurdle.

“I lost most of my financial support, so I had to figure out how to survive and pay my fees,” he explains. “I worked three part-time jobs. I did everything you can think of – worked in petrol stations, factories, restaurants ...”

After uni, he remained driven. While working in investment banking in London, Hong Kong and Melbourne, Zhang started about 15 different businesses on the side, including a cafe, an import-export business, a project management firm, and a real estate development company. It was an attempt, he says, to find true career satisfaction.

“Every single one was making money but none of them really had a social impact and at some stage I didn’t feel like they were making me happy anymore.”

Deciding to devote all his attention to solving this “very large problem”, Zhang resigned from his job. In 2015 he found the solution, launching Airwallex

with its four other co-founders, three of whom are also University of Melbourne alumni.

“With Airwallex, which is such a long-term, bold, ambitious vision, I truly feel that I’m very happy and I’m able to enjoy day-to-day life,” says Zhang. “You probably spend more than 60 or 70 per cent of your life at work. If you don’t enjoy it, then that’s pretty sad.”

BY LANI THORPE

Lela McGregor is passionate about positive psychology. She graduated from the Master of Applied Positive Psychology (MAPP) in 2015, adding the discipline to the professional expertise that has seen her lead culture and engagement programs for more than 30 organisations across Australia and Asia.

“I think everyone should study positive psychology. It changes the lens of how you work, learn, parent and live,” she says.

“It’s not about being happy all the time because that is just not possible but it’s about having the wellbeing life skills that help us navigate through life’s many challenges, allowing us to be the best versions of ourselves.”

McGregor studied business at RMIT before training as an accountant. She worked in marketing overseas and undertook a Master of Marketing degree at Melbourne Business School.

But her subsequent studies in positive psychology – which has been described as ‘the scientific study of what makes life most worth living’ – have given her a fresh take on her work.

“Working in the corporate landscape, I felt I knew what drove human performance and wellbeing at work but learning about positive psychology gave it a name and more importantly substance through the scientific evidence,” she says.

“It is exciting to see that there is rigorous science that drives wellbeing and it is important to be able to show this as evidence to leaders to assist them to shape their business and employee strategies.”

McGregor studied the MAPP program while holding down a full-time job and raising three children. “I found I enjoyed MAPP so much that it actually helped me to be a better parent and leader.

“I felt I was learning from leaders in the field. Not only were they teaching but they were researchers too. Whatever I learnt was current and relevant.”

One of those leaders was Professor Lea Waters, the founding Director of the University’s Centre for Positive Psychology. McGregor and Waters collaborated on a wellbeing program called Positive Detective that has been rolled out to more than 300 schools in 11 countries.

While she was studying, McGregor set up her coaching and mentoring business Splendour Labs.

“My business is centred around getting people to uncover their ‘authentic self’ and distill what really drives their happiness. I use all the science I have learnt to help people achieve their authentic goals.”

She has also established a not-for-profit organisation to help coach underprivileged individuals and give local communities access to wellbeing resources and workshops.

And she was instrumental in bringing the 6th World Congress for Positive Psychology to Melbourne this year, which shone a light on the work of the Centre for Positive Psychology.

BY VAL MCFARLANE

## LELA MCGREGOR BEING THE BEST VERSION OF OURSELVES

(MMktg 2003, MAPP 2015)



**“... there is rigorous science that drives wellbeing and it is important to be able to show this as evidence to leaders.”**



## JOHN TASS-PARKER FROM WILD WEST TO 'DEMOCRACY SAUSAGE'

(BCom, BA(Media&Comm) 2012)

John Tass-Parker has already had his fair share of career highlights. He's worked for two Australian prime ministers, in the movie industry in Los Angeles, and as a wedding photographer. But for the past five years, Tass-Parker has worked for Instagram's Politics and Government team in New York, and he's recently been listed on the Forbes 30 Under 30.

What strings these seemingly disparate interests together, he says, is stories.

"I've always been attracted to stories," he says. "Originally I was really interested in production and Hollywood, but I wasn't quite clicking with that world. Gradually, I became attracted to the idea of working in government."

After graduating, Tass-Parker took a job as digital communications adviser in the Office of the Prime Minister of Australia.

He was responsible for shaping Julia Gillard's online presence when she was Prime Minister. "This meant working closely with the PM all the time, being her photographer day-to-day, producing videos, engaging with bloggers and shaping all of that into a cohesive strategy," Tass-Parker says.

"These days there are multiple people involved in the digital presence of most high-profile political leaders, but back then it was the wild west."

After the 2013 federal election, he moved to the US to work for Instagram. Having been on exchange to Georgetown University in Washington, DC while studying at Melbourne, he already had a network there.

Today, Tass-Parker's 'wild west' is no more. Social media is now a key communication channel for most of us – including politicians.

Tass-Parker takes this evolving role of social media seriously. "With Instagram's prominence comes a lot of responsibility to protect the integrity of elections and civic discourse," he says.

"Along with our work to promote civic engagement, Instagram is doing a lot of work to increase account transparency, improve efforts to detect bad actors, expand election information operations, and fight misinformation on Instagram."

His role as Instagram's head of politics and government gave him a "front row ticket and backstage pass" to the 2016 US presidential race, right when Instagram's potential in the political sphere was being realised.

Inspired by a partnership he developed with Fairfax Media in the 2013 Australian election to capture portraits of Australia's political leaders, he helped develop a similar partnership between Instagram and US broadcaster CNN.

Tass-Parker argues that social media can not only connect politicians and voters but help people with shared political interests find like-minded communities and give a voice to those traditionally underrepresented by mainstream media.

During the 2018 US midterm elections, Tass-Parker was part of the team that built a product to help voters access important voting information. At its peak, more than 1000 people – including celebrities – were using Instagram's 'I Voted' sticker per minute.

He helped bring similar features to Australia for the 2019 federal election. Instagram collaborated with artist Tony Albert to create four election-themed stickers for use in Instagram Stories, including, of course, a 'democracy sausage', something Tass-Parker had a lot of fun explaining to his US colleagues.

BY SUSANNA LING



**"I've always been attracted to stories ... Gradually, I became attracted to the idea of working in government."**

## DR ADA CHEUNG FIGHTING FOR EQUALITY IN MEDICINE

(MBBS(Hons) 2003, PhD 2017)

Since 2017, Dr Ada Cheung has focused her physician expertise and research skills on improving medical services for transgender Australians.

Dr Cheung began seeing transgender patients in 2016 after a lunch with Professor Jeffrey Zajac (MBBS 1977, PhD 1985), Director of Endocrinology and Head of the University of Melbourne Department of Medicine at Austin Health.

"Jeffrey was seeing more and more transgender people, but he couldn't find anybody else willing to see them. I was astounded that doctors could refuse to see patients," she says.

At the time, Dr Cheung was near to completing her PhD, exploring the long-term effects of hormone therapy for prostate cancer on muscle and bone. Her award-winning research provided many opportunities for career progression, but it had not been an easy road.

"As an Asian woman with two young children, I was used to fighting gender discrimination. I had endured racial abuse just before speaking with Jeffrey," she says.

"When I heard about discrimination in the transgender community, it really struck a chord with me."

She established the Trans Medical Research group to conduct research that would guide clinical care improvements for transgender people. First was a project that documented the 10-fold rise in transgender patients seeking medical services over five years, then a study with 1000 Australian transgender adults.

"I listened to hundreds of stories of difficulty accessing medical care and societal discrimination," she says.

"Our survey asked what members of the trans community thought the top priority for funding should be or what their biggest health issue was. It wasn't hormone therapy. It was better training for doctors in trans health."

Next, the group surveyed doctors and found that 96 per cent of them had never been taught about transgender health in medical school. Many lacked confidence and wanted more training.

"We took our research to the Department of Human Services and the Minister for Equality, the Hon Martin Foley MP (MCom 2001), and the government responded," she says.

In late 2018, the Victorian Government announced a \$3.4 million investment to better meet the health needs of trans and gender diverse Victorians. New multidisciplinary health clinics are being established, and a state-wide training program implemented for health professionals.

"It's been really satisfying to see our research translated into policy and now delivered on the ground," says Dr Cheung.

The Trans Medical Research group plans to launch a longitudinal Australian gender health study, a little like the Census.

"We want the study to empower the transgender community to guide policy makers into investing in health and wellbeing programs for the community," she says.

"Forty per cent of trans people have attempted suicide. We don't understand the long-term effects of hormone therapies, we don't know what happens with ageing, heart disease or cancer. Our team want to provide an evidence base for treatments and to see mental health outcomes improve. Societal culture needs to change, and we hope to contribute a little."

BY CECILIA DOWLING

**"It's been really satisfying to see our research translated into policy and delivered on the ground."**





## 2018 BERLINER INTERNATIONAL MUSIC COMPETITION

Malaysian classical soprano **Ang Mei Foong** (MMus 2007) received a gold medal at the 2018 Berliner International Music Competition, which is judged based on recordings of recent performances by the artist. Also a lecturer at Universiti Putra Malaysia, Foong has trained in Taiwan, Rome and Melbourne – where she obtained her Master's in Music Performance.



## APPOINTMENTS



**Adrian Collette AM** (MA 1980) was appointed chief executive officer of the Australia Council for the Arts after almost seven years as Vice-Principal Engagement at the University of Melbourne, with oversight of the University's museums and galleries and arts sector partnerships. Before that, Collette was Chief Executive of Opera Australia. He was made a member of the Order of Australia in 2008 for service to the performing arts.

**Professor Keith Nugent** (DSc 2014) was appointed Deputy Vice-Chancellor (Research and Innovation) at Australian National University (ANU). Professor Nugent's previous roles include Deputy Vice-Chancellor (Research) at La Trobe University, Laureate Professor of Physics at the University of Melbourne and advisory board member at the Australian Synchrotron.

## ARTS, BOOKS & ENTERTAINMENT

**Nam Le** (BA(Hons), LLB(Hons) 2003)'s debut novel *The Boat*, a collection of short stories, has received a number of awards including the Australian Prime Minister's Literary Award, the Dylan Thomas Prize, the Anisfield-Wolf Book Award and the Melbourne Prize for Literature. Le's collection encompasses a diverse geography and each story transports the reader to a different setting. The influence of his Vietnamese family heritage is reflected through the presence of the Vietnam War in his first and last stories.

**Dr Christina Thompson** (PhD 1990) has been awarded the General History Prize in the 2019 NSW Premier's History Awards for her book *Sea People: The Puzzle of Polynesia*. A 'detective story' questioning established narratives about who first settled the islands of the remote Pacific, *Sea People* was inspired by stories of the ancestors of Thompson's Maori husband. Since 2000, Thompson has been editor of Harvard University's *Harvard Review*.

**Peter Bell** (LLB 2002) stepped down as director of Fremantle Football Club to accept the club's newly created position of general manager. Bell is a former Fremantle captain and three-time Doig Medallist, past president of the AFL Players' Association, inaugural chairman of the AFL Players' Trust and Australian Football Hall of Fame inductee.

**Professor Carolyn Evans** (LLB(Hons), BA 1993), pictured right, has been appointed Vice Chancellor of Griffith University, and is the first female to hold this position. Professor Evans served as the Deputy Vice-Chancellor (Graduate and International) and Deputy Provost (2017-2018) at the University of Melbourne. Prior to this, she was Dean and Harrison Moore Professor of Law at the University of Melbourne Law School (2011-2017). Professor Evans is an internationally recognised expert on religious freedom and is a barrister and solicitor of the Supreme Court of Victoria. She holds a doctorate from Oxford University where she studied as a Rhodes Scholar.



Artist **Camille Hannah** (BFA(Hons) 2011, MFA 2013) held her latest solo exhibition *The Sixteen Pleasures* at the Olsen Gruin Gallery in New York. Hannah's paintings use fluid brushstrokes to create movement embedded in 21st century abstraction and digital screen technologies. Hannah was the recipient of an Australian Postgraduate Scholarship Award during her studies and was selected by an international jury in 2015 to win the T.I.N.A. Art Prize, Maurizio Caldirola Arte Contemporanea in Milan, Italy.



**Dr Juliet Flesch** (BA(Hons) 1964, PhD 2002) published her latest book, *Not just Profs & Toffs – Families living in the University of Melbourne Grounds*. The book tells the story of residents and families that lived on the grounds of the University of Melbourne's Parkville campus, during the University's first hundred years. Dr Flesch is an Honorary Fellow in the University's School of Historical and Philosophical Studies.

Artist **Kristin Headlam** (BA 1976, Trinity College, Janet Clarke Hall) exhibited a suite of etches, *The Universe Looks Down*, at Charles Nodrum Gallery, the Baillieu Library at University of Melbourne and at the Art Gallery of Ballarat. Headlam's etchings were created to accompany the epic poem of the same name by partner Professor Emeritus **Christopher Wallace-Crabbe** (BA 1957, MA 1964, Dlit 2006). She was awarded the Doug Moran Portrait Prize in 2000 and Wallace-Crabbe received the Centenary Medal in 2003 and was winner of the Melbourne Prize for Literature in 2015.

## AWARDS

At the 2018 Rio Tinto Women in Resources National Awards, mining manager **Melanie McCarthy** (BA 1997, BE(Hons) 1997) was named winner of the Exceptional Woman in Australian Resources award. The awards acknowledge the efforts and achievements of exceptional women and gender diversity champions in the Australian resources sector. McCarthy is a Fellow of the Australasian Institute of Mining & Metallurgy FAusIMM(CP).

**Associate Professor Enzo Porrello** (BBIomedSc 2003, BSc (Hons) 2004, PhD 2009) received one of two 2018 \$50,000 Metcalf Prizes from the National Stem Cell Foundation of Australia. Associate Professor Porrello is Group Leader of Cardiac Regeneration at the Murdoch Children's Research Institute (MCR) and a Senior Research Fellow at the University of Melbourne. The prize recognises his leadership in stem cell research, particularly in exploring the heart's ability to regenerate.



**Jack Banister** (MJourn 2018) has been awarded the highest honour in journalism in Australia, a Walkley award, as part of the Deaths Inside Project with the *Guardian Australia* team, profiling Indigenous deaths in custody in the past 10 years. Banister was also awarded an inaugural Melbourne Press Club Michael Gordon Fellowship, and the John Newfong Prize for Reporting on Indigenous Affairs.

**Nana Liu** (BSc 2008, MSc 2010) was announced as one of 10 winners of the 2019 MIT Technology Review's Innovators Under 35 Asia Pacific Competition. Liu is a quantum physicist focusing on employing quantum resources for both quantum computation and sensing. Her research lies at the interface between quantum computing and security and machine learning, which will be useful in building a future quantum internet. Liu is now based at the John Hopcroft Center for Computer Science, Shanghai Jiao Tong University.

**Mohamed Khairat** (BA 2014, JD 2016) is the founder of Egyptian Streets, one of the region's fastest growing media organisations and Egypt's leading independent English media organisation. In 2018, he was named among '30 under 30 in Media



**Yvonne Ginifer** (MPH 2006) has been awarded a Red Cross Florence Nightingale Medal, the highest international distinction a nurse can receive. This was in recognition of her work in responding to epidemics, natural disasters and armed conflicts in some of the most disadvantaged communities in the world. During her deployment overseas for the Australian Red Cross, Ginifer worked in Liberia during an Ebola epidemic, spent a year managing a health clinic in Pakistan that was destroyed during an earthquake and worked on a malnutrition program in Somalia.

and Marketing' by Forbes Europe and '30 Under 30 Arab' by Forbes Middle East. In 2019, he was awarded the Rising Star Award for Young Alumni by the University of Melbourne's Faculty of Arts.

**Gertrude Tamade Elai** (M. Commercial Law, 2016) has been awarded the Australian Alumni of the Year for Papua New Guinea. Elai has been recognised for her role in developing the first dictionary and children's book, *Songgoleng Kom Kumwa Nei* (Frog Where Are You), in her local language, Taemi (with UoM's Research Unit for Indigenous Language), spoken in her home town Taemigidu, a village of fewer than 5000 people.

**Anchuli Felicia King** (BA(Hons) 2015) won the 2019 American Shakespeare Center's New Contemporaries Prize for her play *Keene*. King's play was one of two selected for a \$25,000 award and a world premiere production in American Shakespeare Center's groundbreaking new play initiative. *Keene* is a playful riff on early-career academics, Shakespeare's *Othello*, and the power of American pop.

**Dr Joshua W Aleri** (PhD 2016) received a Research Award at the Ruminant Well-being Awards held in Japan last year. Dr Aleri is a lecturer and researcher in Production Animal Health and Management (Cattle Medicine) at Murdoch University

PICTURE: AUSTRALIAN RED CROSS

## BOARD DIRECTOR, BUSINESS COUNCIL OF SUSTAINABLE DEVELOPMENT AUSTRALIA

The Business Council of Sustainable Development Australia (previously Sustainable Business Australia) appointed **Professor Kate Auty** (BA(Hons) 1977, LLB 1979) as a board director. Professor Auty is currently the Commissioner for Sustainability and the Environment (ACT) and a Professorial Fellow at the University of Melbourne.



Do you know any Melbourne alumni who should be recognised? Email [alumni-office@unimelb.edu.au](mailto:alumni-office@unimelb.edu.au) with the subject line '3010 Milestones'.



# Marathon man

BY **HASSAN ESUFALLY** (BCom 2014, International House, Ormond College)

In 2014, I saw an ad in the paper for the Melbourne Marathon. It was just three months away. I was living at Ormond College, and spent my time playing tennis for the University and hiking. My friends said I wouldn't be able to do it given the time frame, which just made me determined to prove them wrong – and I did. Four years later, I had become the first Sri Lankan to have run a marathon on all seven continents.

I never really expected to do all of this. When I came to Melbourne my plan was to graduate, get some experience in Melbourne and come back and join my family business.

But when I ran the Melbourne Marathon, the feeling of achievement, satisfaction and fulfilment that I got from it was really amazing. By the time I crossed the finish line, I had a dream: I wanted to do the seven continents.

But first I wanted to do the Ironman, considered the world's hardest sporting event. It consists of a gruelling 3.86-kilometre swim, 180-kilometre bike ride, and a 42.2-kilometre full marathon run. Once I'd finished that I had a real mental transformation. I felt I could do anything I wanted to.

My favourite race was the one in Africa, the Big Five Marathon, because you are running in the Savannah with the wild animals. You could see elephants close by, rhino, zebra, giraffes ... they are almost within touching distance. Fortunately, they keep the lions 5 kilometres away from the runners.

The Inca Trail was probably the most challenging. It's the most difficult marathon in the world for a reason! Each step is infinitely more difficult at altitude. You run the first two hours in pitch blackness, by torchlight. You could easily get lost on the trail. It was extremely undulating. In the morning it would be raining, then it became really hot and humid and then at the highest point there was snow. On top of all that, it just kept getting tougher to breathe.

Usually it takes three nights and four days to hike 30 kilometres to Machu Picchu. We were only given 24 hours to complete the full marathon

distance, 42.2 kilometres. There were a couple of close calls. I rolled my ankle three or four times; I was in pain, but walking up through the Sun Gate. Seeing a world wonder in all its glory during golden hour at sunset was just incredible.

The last event was the Antarctic Ice Marathon. It is a truly formidable challenge where one is essentially running on ice with an average wind-chill temperature of -20C, and strong katabatic winds to contend with. When I crossed the finish line, it was incredible to know that I am part of the history of my country.

I never lost my motivation because I knew my reasons for doing it. The number one reason was that I wanted to

**Hassan Esufally proudly waves the Sri Lankan flag after the Antarctic Ice Marathon.**

bring glory and fame to my country.

I wanted a career in sports, health and fitness, and I thought this was a good way to build my brand.

I wanted to raise funds for victims of the Boston Marathon bombings, for whom I raised \$7500.

Finally, I thought it was a very interesting and unique way to travel and see the world.

Yes, I put a lot of effort and mileage in, but I had a lot of support: my wife Rashida, my family,

my coach Sean Foster, my sponsors and well-wishers.

At University and College, I surrounded myself with good people, people who were ambitious, focused and wanted to do good things with their lives. When you are surrounded by people like that you tend to be inspired back. I was very fortunate to be exposed to a variety of people who challenged my world view. I have to thank the University a lot for that experience.

My next goal is the World Marathon Majors, six of the 'biggest' city marathons in the world. This year, I'll be attempting the Chicago and New York marathon. Currently, I've been recruited as the Head Fitness Trainer at the Shangri La gym in Colombo, and I've started my own online fitness business. Hopefully, I'll do an MBA at some point, too. I'm proud of what I have achieved but I want to do more.

WITH VAL MCFARLANE

## THE MAGNIFICENT SEVEN

Hassan Esufally has completed marathons in:

**AUSTRALIA** Melbourne, 2014 and 2016

**EUROPE** Stockholm, 2017

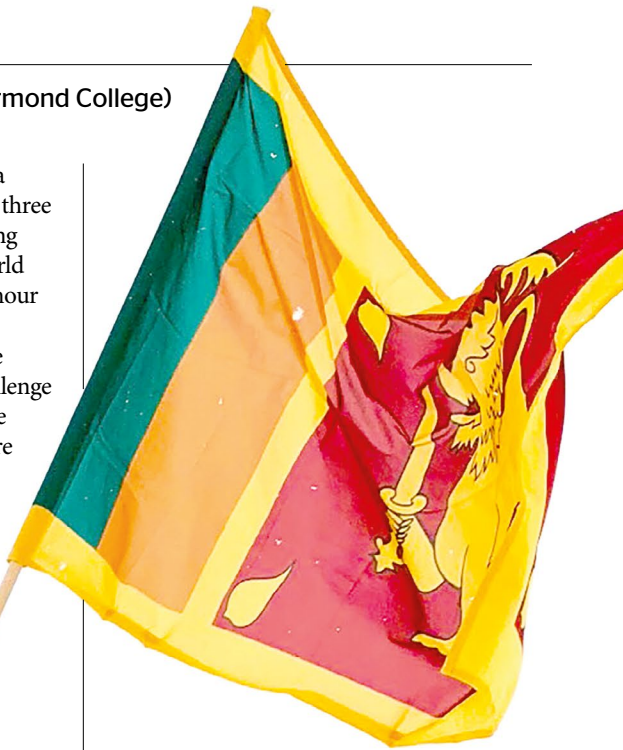
**ASIA** Colombo, 2017

**NORTH AMERICA** Boston, 2018

**AFRICA** The Big 5, South Africa, 2018

**SOUTH AMERICA** The Inca Trail, 2018

**ANTARCTICA** The Antarctic Ice, 2018



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