



## **ALUMNI** FESTIVAL

30.11.2024

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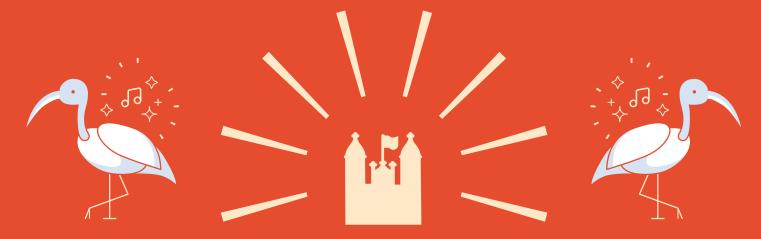
HIT MAMAMIA PODCAST 'CANCELLED!' RECORDING LIVE WITH JESSIE & CLARE STEPHENS

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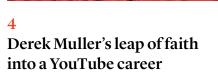


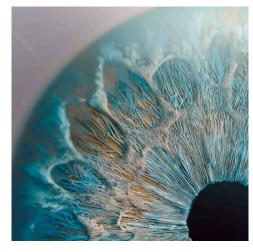
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We recognise and pay respect to		
the Elders and communities -		
past, present and emerging – of		
the lands that the University of		
Sydney's campuses stand on.		

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Produced by Marketing and Communications, the University of Sydney. Printing managed by Publish Partners.

Design: Dawn Leyland and Fábio Dias

> Cover: Derek Muller (PhD '08). Photo by Stefanie Zingsheim

Distributed to more than 80,000 members of our community.

24/9499 ISSN 1834-3929 ©2024 The University of Sydney



SAM DIGITAL

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#### **ENGINEERING**

#### Medical drone to bridge rural gap

An emissions-free medical drone with the ability to fly vast distances across Australia is under development at the University of Sydney. It's envisaged that the drone will be able to deliver blood tests, pathology samples and emergency medicine, improving access to essential health services for rural and remote areas, particularly First Nations communities. A partnership between the University and ASAC Consultancy, researchers are also designing the drone to enable early detection, prevention and treatment of common health conditions, such as sepsis. Associate Professor Dries Verstraete says his team will further develop the drone's triple-hybrid fuel-cell-based system to extend the lifetime of the fuel cell under Australia's challenging conditions.

## **EMBRACING A NEW CHAPTER**

Since I started as Chancellor in July, I have really enjoyed learning more and more about this remarkable community, and the impact of our University's innovative research and life-changing education. The University of Sydney has an exceptional history and an exciting future, and it is an honour to be part of it.

There have been so many highlights, including a showcase of the excellent research underway at Westmead Health Precinct, the launch of the new Australian Centre for Gender Equality and Inclusion at Work, welcoming international students on campus and meeting just some of you at alumni events in Canberra and Sydney.

As the University's 19th Chancellor, I am deeply aware that I am following in the steps of one of our most distinguished alumni, Belinda Hutchinson AC (BEc '76). Belinda was incredibly generous in sharing her insights and knowledge with me as she handed over the Chancellor's robes, and I was particularly struck by how enthusiastically she spoke of our students.

I've really enjoyed talking to our students during a number of visits to our campuses. With my own background in technology, I am particularly excited about the digital future of our University, and it's been interesting to hear what they think about the impact of Generative AI on how they learn and what they want from their University experience. I have been impressed with their insights and reflections on the responsible use of GenAI - to their great credit.

Australia's university sector is currently facing a number of headwinds, not least around the government's international student caps. But I want to be clear that international students are welcome at the University of Sydney. They have been an important part our community for more than 100 years, and I know they will remain so for many years to come. They enrich our campus life and the learning experience of all our students, and make significant social and economic contributions to the communities we serve.

Part of what attracted me to accept this role was the University's commitment to both academic excellence and cutting-edge research and innovation, and the profound influence our alumni and researchers have on the world around them. And this is reflected in this issue of SAM. Alumnus Derek Muller explores new ways of communicating science in a digital world (page 4), while researchers at the University's Save Sight Institute are making groundbreaking strides towards restoring sight (page 8). On page 13, we celebrate our illustrious 2024 Alumni Award winners, who each share a piece of advice they would give to their younger selves.

As we look towards the end of the year we hope to see you back on campus at our 2024 Alumni Festival on 30 November. I've been told that our inaugural festival last year was an incredible family celebration filled with fun activities and learning experiences, not to mention some nostalgic reunions.

All in all, it has been a busy start to my chancellorship. I look forward to working with the Vice-Chancellor and his leadership team and to meeting many more of you in the years to come. And, just for the record, my advice to my younger self would be: follow your passions and enjoy the journey!

David Thodey AO, FTSE,



#### **NANOTECHNOLOGY**

#### Needle-free insulin

Oral insulin delivered by nano-carriers could soon replace injections for diabetics. Researchers at the University of Sydney and Sydney Local Health District are using nanotechnology to create insulin that could be taken as a tablet or even embedded within a piece of chocolate. Usually only

a small amount of insulin reaches the bloodstream when taken in any form other than by injection. However, nano-carriers protect insulin from being degraded and significantly increase its absorbance in the gut when consumed orally. "Our oral insulin has the added benefit of greatly reducing the risk of hypoglycaemic episodes," says lead author Dr Nicholas Hunt. An adult trial of the insulin pill will begin next year, led by the spinout company Endo Axiom.

Research and development version of the oral insulin capsule. Photo: Stefanie Zingsheim



#### **RAJ SIGDEL**

**KAMAL** 



**MHRD '14** 

**Head of Communications. United Nations Development Programme Somalia** 

#### What motivated you to pursue this career?

I was a journalist reporting during Nepal's post-civil war peace process (1996-2006). This interest led me to study my master's degree at the University of Sydney, for which I received a scholarship. This experience was pivotal in getting a job in a peacebuilding project in Nepal, where my understanding of human rights and democratisation was invaluable.

#### How does your work help communities?

I've focused on highlighting UN projects which have had a strong impact on the ground, and many have moved me deeply. In 2015, while travelling in Nepal, I was particularly struck by a remote mountain village where women had to walk hours to fetch water. A small project provided \$1,000 for pipes to bring water to the village, dramatically improving their lives. Now I'm working in Somalia, learning the importance of understanding the local context and community perspectives. There's a vast difference between theory and practice.

#### Your greatest achievement?

We created a social media video campaign to change gender norms in Nepal. It went viral, sparking debates and raising awareness about gender issues. The campaign was even showcased at the UN Commission on the Status of Women.



With an aptitude for science and a passion for creativity, Derek Muller (PhD '08) was always destined to do something different. "I enjoyed performing on stage and making videos, but I was also very good at science," he says. "I had all this capability in certain areas, but being a creative felt like a roll of the dice." Rather than choosing one avenue over another, he combined his interests by taking an unconventional approach to both professions. As a science-based YouTuber, Derek brought his beloved subject to the masses in 2011 through his channel, Veritasium. The pioneering learning platform quickly found its audience, with students eager to learn, and educators and researchers inspired to teach their classes in a new and engaging way. Now, with more than 2.7 billion views, Veritasium is changing the way we learn about science, the world, and ourselves. "I never dreamt it would get this far," Derek says. "I just wanted to make videos that allowed me to be the good science teacher for those who never had a good science teacher."

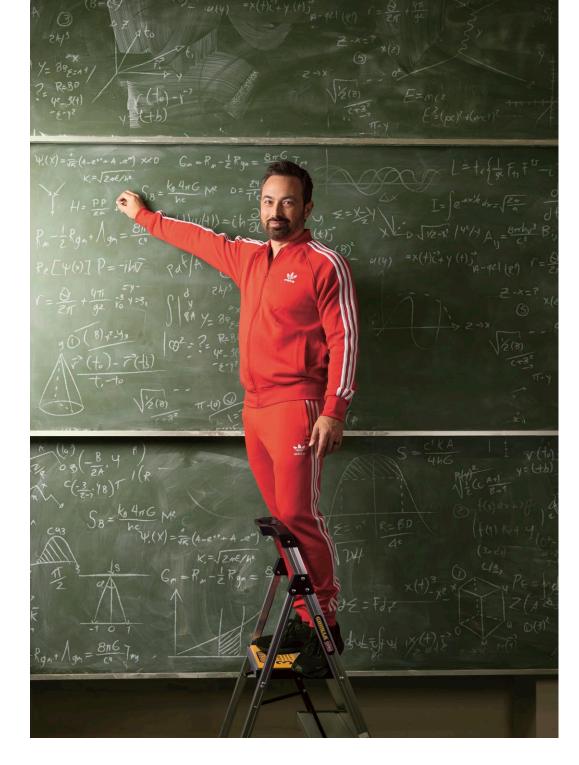
#### **SCIENCE ON SCREEN**

Born in Australia to South African parents, Derek moved with his family to Canada before his second birthday, where he completed his schooling and graduated from Queen's University in Ontario with a Bachelor of Applied Science in Engineering Physics. During this time, he also completed film production courses during summer breaks. "I bought a camera, and was making these comedy skits with my engineering buddies," Derek recalls. "We had a server that sat in the closet of our share house that enabled us to host our own website before the days of social media. We would go around campus putting up stickers about it."

Derek then moved back to Australia with the intention of studying filmmaking. "I had no industry experience, but wanted to create something that felt meaningful to me," he says. He began by enrolling in a PhD in physics at the University of Sydney.

Derek's thesis, titled Designing Effective Multimedia for Physics Education, saw him question the ways in which the medium of video can be used to transmit knowledge and educate people about science. Collaborating with first-year physics students, he studied how their test scores differed after watching his teaching videos. The techniques he used for these tests laid the groundwork for his future teaching methods on YouTube.

"No one had asked these fundamental questions about what you really need to make a video on physics effective for learning," Derek explains. "I wanted to satisfy both of my interests, and this led to a really positive outcome once the PhD was done. It influenced how I approached making videos for people on the internet."



Derek believes his PhD and science background gave his earliest videos a point of difference, enabling them to cut through to global audiences. "I was thinking about making films about science, and how to do that effectively," he explains. "Having that experience elevated the videos and made them different from what everyone else was doing."

#### **LEAP OF FAITH**

Following the completion of his PhD in 2008, Derek's understanding of film combined with his love of science led to a career pivot that would profoundly change his life and the lives of many others. "My whole life I'd said I want to be a filmmaker, but I'd been too terrified,"

#### **DEREK MULLER'S** CAREER-CHANGE TIPS

#### **LISTEN TO YOUR GUT**

If something doesn't feel like it's working for you, change do something else.

#### **EXPERIMENT**

Try lots of different things, and get a sense of where your efforts are resonating with the world. Where do you get positive feedback? Whatever it is, double down on that and play to your strengths.

#### **ALWAYS BE LEARNING STUFF**

Continue to learn new skills, and be prepared to implement them in the future.

he says. Driven by the desire to share his knowledge of science with a global audience, Derek put his fears aside and took a prescient first step towards online video creation. "YouTube was still nascent in those days, but it was clear something was happening," he says. "It was a real leap. I had a great job that I enjoyed, teaching physics at a tutoring company, and I gave it all up to make YouTube videos before that was a thing. My friends thought I was nuts!"

Derek's videos quickly garnered attention for their ability to transform science into an approachable and engaging subject for all audiences. Before long, his channel, Veritasium, had millions of subscribers throughout the world. "The numbers got unfathomable pretty fast," he says. "But it's more than just seeing the numbers - I've always found it most meaningful when people come up to me in the street and tell me they love what I'm doing. That's when it really hits home."

Derek believes that the key to success in his field is to pre-empt his viewers' thought processes. "One of the things that came out of the PhD was how important it is to think about the misconceptions people might have going in," he says. "If you don't tap in to them, it's easy for people to watch a video and think they're understanding

it but it's really just reinforcing what they thought beforehand." With this in mind, Derek's content focuses on the way in which science enables a search for the truth. "The world is subtle, and given the things we observe, it's easy to draw the wrong conclusions," he explains. "This insight allowed me to make videos that powerfully changed people's minds and got people talking."

#### TRUTH-SEEKING MISSION

While Derek's work has seen him host numerous award-winning documentaries and television series, including Catalyst and The Why Guy, and share the stage with the world's greatest minds, including Bill Gates, Chris Hatfield and Richard Dawkins, it is his ability to make a true impact that fills him with the greatest sense of accomplishment. "I have this core belief that people live better, happier lives if they're in accordance with the way the world works, rather than the way it appears," he explains. "If you know how things work, you'll make better decisions and have a better life experience." This is why, at its deepest level, Derek's work aims to provide every viewer with a truth-seeking compass that they can apply to their own lives. "There's an undercurrent in each video, which is the question, 'How do you go about figuring things out - what's true and what's not?" he says. "We jump to conclusions and misinterpret things all the time, and I really feel like it's this blanket rule - if you want to know anything about anything, including ourselves, you have to do it with science."

As for what inspires Derek's quest for truth, he shares a simple yet powerful guiding quote from fellow physicist Richard Feynman. "He says, 'The first principle is that you must not fool yourself, and you are the easiest person to fool'. That's the thing - science is the way of not fooling yourself."

#### Connect with your alumni community



**RECONNECT** WITH FRIENDS Rekindle old friendships, reunions, or start planning your

07



**FIND OUT** 

WHERE A

CONVERSATION

**Explore Quad** 

Conversations

our new global

mentoring and

networking

BE PART OF A **COULD TAKE YOU** gain priority access to alumn benefits by joining Sydney Alumni on LinkedIn

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## "Blindness in Australia is a fixable problem," says Professor Peter McCluskey AO, Director of the University of Sydney's Save Sight Institute at Sydney Eye Hospital and an inflammatory eye disease specialist of international standing. "About half a million Australians have severe vision impairment, and up to 90 percent is preventable or treatable."

Beyond the human cost of impaired vision, there are costs to the health system and to the broader economy. As just one example, inherited retinal diseases alone cost Australia an estimated \$780 million to \$1.56 billion per year.

New insights and technologies developed over the past few years have seen a dramatic expansion in the therapies available to the leading ophthalmologists, researchers and scientists of the Save Sight Institute. Their work has them rated sixth among eye research groups globally.

Peter started his career as an ophthalmologist on the frontline of the AIDS crisis, tackling a viral eye infection that often strikes people affected with HIV-AIDS. "I was part of a multidisciplinary team that made a couple of HIV treatment breakthroughs," he says. "It was an incredible learning journey, and the foundation of the work I do now."

Beyond his duties as director of the Save Sight Institute
– a flagship research centre within the Faculty of Medicine
and Health – Peter is also a researcher, an educator, and
a clinician working out of two Sydney eye clinics. He also
runs outreach clinics – one in Tasmania and another in the
Northern Territory – where he works to improve the services
available to Aboriginal people living in isolated locations.

While immunology was the new frontier early in Peter's career, genetic medicine is the new frontier today, having been supercharged by the mapping of the human genome. That process took thirteen painstaking years, but gave us the first complete picture of human DNA molecules and the genes they contain.

"Now it's a case of not being able to see the forest for the trees," Peter observes. "We can see all these genes, but there have to be some master pathways. We have to find those upstream regulators that control these pathways."

Genes guide how our bodies grow and behave, and malfunctioning genes are the cause of numerous conditions, including more than 350 that disrupt vision.



Written by George Dodd

Photography by Stefanie Zingsheim

Restoring

Image: Adobe Stoc

In the rapidly evolving discipline of genetic medicine, Professor Robyn Jamieson could be described as an early adopter, since she became interested in the potential of genetic medicine long before many others realised it had any value at all.

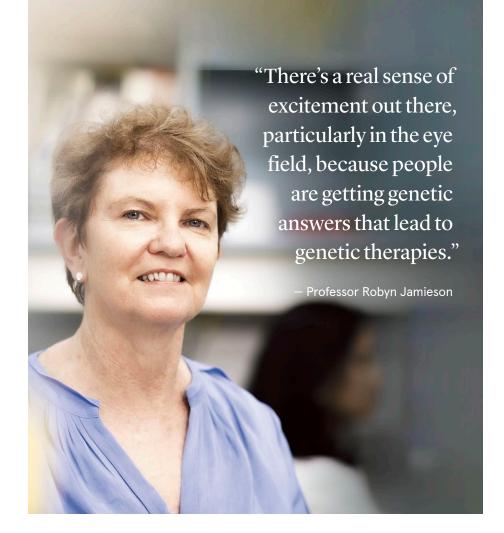
Robyn is Head of Genomic Medicine at the University of Sydney, as well as Head of the Eye Genetics Research Unit at the Children's Medical Research Institute, the Sydney Children's Hospitals Network and the Save Sight Institute. She began her career studying paediatrics, and was inexorably drawn towards clinical genetics, with extension through a basic science PhD in Sydney and then a genomics postdoctorate in the UK.

"I remember in the late '80s someone in a lecture theatre talking about the first disease-causing genes that had been identified," Robyn recalls. "Hearing that was a real lightbulb moment for me, because I was treating all these kids who had various symptoms, but we had no idea what was causing them."

A lot has changed, and is still changing. In what is a true triumph of genetic medicine, there are now various methods, both existing and in development, whereby a malfunctioning gene can be identified, located and replaced or edited to produce a healthy gene.

It's easily said, but tremendously difficult to achieve - though Robyn first did exactly that in 2020. She was managing a genomic investigation into people born with Leber congenital amaurosis (LCA), a type of retinitis pigmentosa that compromises the function of the retina as it converts light into electrical signals that our brains in turn convert into images. LCA causes vision impairment from an early age, so that some children may not be able to walk without a cane to guide them. The cause in some cases is a malfunctioning RPE65 gene, which provides instructions for making a vision-related protein. If it doesn't, it can trigger a range of retinal problems, including LCA.

Fortunately for the people affected, the only genetic treatment currently commercially available, Luxturna



(Novartis), specifically treats mutations of the RPE65 gene. And thanks to a longstanding collaboration between the Save Sight Institute, the Children's Medical Research Institute and the Sydney Children's Hospitals Network, Robyn was able to lead a team to begin the process of confirming people's suitability to receive the treatment and delivery of this gene therapy. This included laboratory research to undertake the months-long process for two young siblings, using their blood-derived stem cells to grow mini-retinas in a dish and observe the actions of the gene. The results showed that they were suitable for the treatment.

The mechanism used in RPE65 gene therapy involves a neutralised virus with a healthy replacement gene attached, which is injected into the eye so that the virus can carry the healthy gene to where it's needed. Once there, the healthy gene takes the place of the malfunctioning gene.

For the eight people treated so far, the results have been speedy and dramatic.

Though their eyesight will never be perfect, they are thrilled that for the first time in their lives they can see such wonders as stars in the night sky.

Part of the excitement of RPE65 gene therapy for researchers at the Save Sight Institute is that it might be the first, but it certainly won't be the only. "There are other companies with other medications and genetic therapies coming through," Robyn says. "They contact us all the time to ask if we have patients with particular gene issues, and would we be open to doing clinical trials with them. There's a real sense of excitement out there, particularly in the eye field, because people are getting genetic answers that lead to genetic therapies."

That said, and for reasons that aren't clear, gene therapies don't work for all people. There are times when the immune system attacks the neutralised virus, but other failures have no obvious explanation, so there's still a lot of work to be done.

"We now have more genetic answers for more people," Robyn says. "Our lab has identified novel disease genes and therapy approaches, and we've looked at what's been found internationally. We're looking for as many genetic answers and therapies for as many patients as we can."

As the work continues, the Save Sight Institute is preparing for possibly its biggest change since it was established in 1985. From 2027, it will have access to the new Sydney Biomedical Accelerator (SBA) ecosystem – a partnership between the University of Sydney, Sydney Local Health District and the NSW Government.

Central to this initiative is a new research complex that will span the University's Camperdown Campus and the district's Royal Prince Alfred Hospital campus, with the aim of supporting innovative research and fast-tracking scientific discovery. Researchers will share facilities with scientists with other biomedical skill sets, including biomedical engineers, bioinformatics experts and microscopy specialists, among others. The SBA will also enable easier access to resources and technologies that might currently be spread less conveniently across the University's campuses.

"Research is now a team sport,"
Peter reflects. "For Save Sight Institute
researchers, if they have a problem
that's outside their field, chances are
there'll be someone in the SBA who
can help them solve it – or, even better,
someone with another idea completely for
advancing the work."

Peter hopes that the SBA will facilitate the development of therapies for currently untreatable blinding eye diseases, slow the onset of age-related eye disease, and lead to the development of a collaborative, national network of eye research institutes.

"It'll be a place where collaborations and relationships can grow from something as simple as a conversation in the lunchroom," he says. "As the name says, it will accelerate progress across a number of fields, making so much more possible."



Support the work of the Save Sight Institute

"Research is now a team sport. For Save Sight Institute researchers, if they have a problem that's outside their field, chances are there'll be someone in the SBA who can help them solve it."

Professor Peter McCluskey AO



### TURNING BACK THE CLOCK

The Save Sight Institute is tackling some of the biggest vision-related issues facing the world today.

One of the most common causes of irreversible blindness is glaucoma, which affects around 80 million people worldwide. The risk of developing glaucoma only increases with age and family history.

Ophthalmologist Professor
Jonathan Crowston is working
on ways to increase resilience in
the optic nerve in order to slow
or even stop the loss of vision
caused by glaucoma. He has had
some recent success with a pilot
study into the use of vitamin B3 in
treating people with glaucoma. The
study showed positive short-term
visual improvement in participants,
and has now been expanded into
four large studies involving more
than 1,500 participants.

But Jonathan's long-term goal isn't just to reduce the impacts of glaucoma. He wants to unpack the condition even further, to understand how ageing makes the optic nerve more vulnerable to injury and degeneration. Early studies have shown that simple lifestyle and pharmacological interventions can help to slow the biological hallmarks of ageing.

"We can potentially render nerves resistant to glaucoma," Jonathan says. "These therapies could boost nerve resilience to the point where they're effectively turning back the clock."

## CLARE WHEELER'S OLYMPIC DREAM

Clare Wheeler (BCom '20) moved from Newcastle to Sydney to pursue a Bachelor of Commerce at the University of Sydney, with the support of a scholarship. This led to a job in financial services at Macquarie Group while she was building her professional football career. Fresh from the Paris 2024 Olympics, the talented Matildas midfielder also plays for the UK's Everton Football Club.

#### What does a typical day in your life

At Everton, my day starts with a team breakfast and a meeting to review past game footage or to discuss the day's training focus. We then prepare for our field training session in the gym or with the medical team. After the training session, we refuel with lunch and hit the gym for an afternoon workout. Post-gym, we have options for recovery if needed.

#### What motivates you? How do you continue to challenge yourself and set goals?

I set goals in both my academic and my athletic pursuits, understanding that achieving them demands ongoing self-improvement. I view challenging situations as key opportunities to enhance my skills and grow. Placing myself in challenging environments has pushed my limits and enabled me to identify areas of strength and improvement. I believe it's crucial to approach these situations with a growth mindset rather than striving for perfectionism.

#### What do you listen to to get pumped before a game?

Lenjoy watching recordings of *The X Factor* auditions on the way to games, because I find them inspiring.

#### What do you do for fun - to destress and relax?

To unwind, I love spending time with family and friends, plus visiting local markets or exploring new hikes around the Lake District in the UK.

#### How have your University of Sydney studies and experiences helped you on

Studying at the University of Sydney and playing for Sydney University Soccer Football Club allowed me to balance my academic pursuits with my passion for football. Being accepted into the University's E12 Scholarship Program was a game-changer; it connected me with St Andrew's College, where I lived while completing my studies.

#### What have you learned from football that stands you in good stead elsewhere?

Being a professional athlete entails a lot of discipline from training in the finer details these are skills and experiences I can apply elsewhere in my life. I think it's important to remind yourself that you don't always get instant gratification, and some things may take more time than others. The most important thing is that you just keep putting your best foot forward, and try to have fun while you do it.

#### What is your advice for others who might follow your path?

Never underestimate the power of consistent effort. Like compound interest, the discipline and hard work you invest in the details accumulate over time, making a significant difference in the long run.





Written by Alex Johnson Photography by Fiona Wolf and Stefanie Zingsheim

Our annual Alumni Awards are a chance to celebrate the profound influence our alumni community has at home and abroad. Having already achieved so much, our six winners share the piece of advice they would give their younger selves.

The 2024 Alumni Awards



Photo: Football Australia

**ALUMNI AWARD** 

Innovation and Entrepreneurship

#### George Peppou

BSc '12

CEO & Founder, Vow

be done better, it likely can, and it's a lot easier to prove that by doing it rather than to convince others to do things differently. Being relentlessly curious is a powerful tool for getting things done; hone and use this skill at every opportunity."

ALUMNI AWARD

International Achievement

#### Katherine Bennell-Pegg

BE (Aerospace)(Hons) '08, BSc (Adv) '08

Australian Astronaut, Australian Space Agency

66 Embrace not being the smartest or most qualified person in the room. This is how you learn the most and can add unexpected value by seeing things others can't. Anything can be learned with sufficient time and effort. Effort is more important than talent alone even on astronaut training!"

**ALUMNI AWARD** 

Cultural
Contribution

#### Kip Williams

BA '09

Artistic Director, Sydney Theatre Company

66 My most rewarding moments have come from taking a big creative leap of faith. Pursue the ideas that stretch you beyond what you think you are capable of. We can be guaranteed a level of success in doing things we already know well, but the greatest growth comes from pursuing the unknown."

**ALUMNI AWARD** 

Professional Achievement

#### Louise Herron AM

LLB '82, BA '86

CEO, Sydney Opera House

While the world is unpredictable and plans change, what matters is how we respond. I've always loved being thrown off course. It's exciting. So instead of worrying about far-off ambitions, I prefer to be ready for whatever challenges and opportunities arise and approach them with curiosity and joy."

**ALUMNI AWARD** 

Service to Humanity

#### Dr Richard Brennan AO

MBBS '84

Regional Emergency Director for the Eastern Mediterranean, World Health Organization

66 Do not neglect your spiritual life. As you get caught up in the pressures of study, work, family and social life, reserve some time each day to reflect, meditate or pray. Feeding your soul daily will be an enormous help in your personal and professional development, and your relationships."

ALUMNI AWARD

Outstanding Young Alumni

#### Phoebe Saintilan-Stocks

BA '15, LLB '17, MPACS '19

Founder, Missing Perspectives

One of the (many!) lessons
I have learned over the years
is to try new things that might
seem scary. The key thing to
remember is your dream job
might not exist yet, so just
follow your passion and gut
instincts, take the risks, and
see where it takes you."





## There's no place like *home*

Our experts explain the future of housing

58% are in housing stress

45% are avoiding the doctor and essential appointments

32% are skipping meals

Respondents to the People's Commission into Housing Crisis survey

Written by Alex Johnson Photography by Stefanie Zingsheim Sydney has long been known for its "latte line", an invisible thread of socioeconomic division running from the International Airport out to Paramatta, separating blue-collar and white-collar workers. Over the course of her career, Professor Nicole Gurran (BA '95, MURP '97, PhD '02, GradCertEdStudies '03) has seen how government action and inaction on housing policy have continued to reinforce this divide.

"In effect, high-income earners live behind an invisible 'neighbourhood exclusion barrier' that <u>displaces middle- and low-income</u> renters," she says.

According to research conducted by Nicole along with Associate Professor Somwrita Sarkar (PhD '09, GradCertEdStudies '18) and Rashi Shrivastava (MMgt '18), this pattern is replicated in most Australian capital cities.

"The most advantaged households benefit from their high access to employment opportunities," Nicole says. "This is reflected in high house prices and rents in those neighbourhoods. And that, in turn, reinforces patterns of household wealth, poverty and spatial segregation."

Now, with 13 rate rises in the past 15 months and rental affordability at a 17-year low, people on both sides of the latte line are feeling the squeeze. This situation is only serving to further entrench existing divisions and, according to Nicole, the proposal to simply continue building more homes does little to address the problem.

"In a good five years, 1.2 million homes should be business as usual," she says, referring to the federal government's proposed housing target. "We delivered close to that in the lead-up to the COVID-19 pandemic, which was followed by border closures and reversal of population growth. And housing prices continued to rise. Which tells us that even when we meet very ambitious housing supply targets, we don't magically produce an affordable outcome."



#### Is the algorithm preventing you from finding a home?

Online housing application platforms have been revolutionary for renters. Not only is the application process easier but, according to Dr Sophia Maalsen (PhD '14, GradCertEdStudies '23), it's given people the ability to create more safe and sustainable households by connecting with like-minded potential flatmates. But those same platforms are also used by real estate agents and landlords to collect massive amounts of data – with murky implications for tenants.

"We know some platforms make an algorithmic decision - if you put in a higher rent range, it might boost you higher up the rankings," she says. "It's impacting your chance of finding home, but you're unsure of how it's making decisions."

This means platforms may be discriminating in ways we can't see, based on the data we put into our profiles, and this has implications for our ability to find a place to live. With this in mind, Sophia and her collaborators have launched the Know Your Landlord app, a creative project that imagines a world where tenants can conduct the same background checks as landlords. The project aims to shift the perspective on data collection.

"It's a hypothetical, to illustrate the power imbalance on these

#### **HOW DID WE GET HERE?**

As politicians, policymakers and thought leaders propose, debate, knock back, reshape and reintroduce potential solutions to the housing crisis, the continued pressure on everyday renters and homeowners has made public discourse feel increasingly tense.

of Architecture, Design and Planning, Professor Robyn Dowling (BEc (Hons) '88), because Australian perceptions of housing are defined by our aspirations for home ownership and our affinity for the detached house.

"The place that provides security, a sense of belonging, of comfort, needs to be our 'owned' home," she says. "Australia is also quite distinctive in that we haven't historically had high-density family living and therefore, we don't see it as 'home'. We connect home with the detached house.

This idea means that Australians often baulk at potential solutions that might involve increasing housing density. Unpicking an attitude that is so embedded in our national psyche is incredibly difficult, but for the school's Head of Urbanism, Associate Professor Dallas Rogers, it is the key to reshaping the future.

"We invented this idea that land and individual property rights go together," he says, citing colonial expansion as the starting point for our conceptions of 'private property'. Once that property becomes 'private', he says, we can track what happens to it - how we apply monetary value to land, assign ownership and include or exclude different social groups. It's a useful thought exercise, according to Dallas, because it shows how our ideas about housing are social products which change over time and can be changed for the better.

"It's a tough conversation to have," he says. "We can't recalibrate overnight. But we can ask the question, 'What happens if we don't diversify the way we think about housing?' And that's a productive change."

#### WHAT ARE WE DOING?

As the housing crisis continues to worsen, Nicole has found herself asking how the national discussion of the housing crisis would change if we treated it with the sense of urgency we afford other crises.

In 2024, Everybody's Home, a coalition of housing, homelessness and welfare organisations, announced the first People's Commission into the housing crisis. It provided an opportunity for individuals and organisations across Australia to contribute to the national conversation about the housing crisis and suggest real-world solutions. The coalition approached Nicole to serve as independent Co-Commissioner, alongside former Federal Labor senator the Honourable Doug Cameron.

"I was honoured to be invited to do it," she says. "I thought it was overdue that we really centred on the people who are living through this crisis - not just their voices and experiences, but also their knowledge of what could be done to reform the system."

Over three days, submissions to the commission showed the human face of poor policy outcomes - from essential workers priced out of the housing market to older women facing homelessness following divorce. It was a powerful experience for Nicole.

"I've certainly known the data and written about it, but there's nothing like actually hearing the emotion in people's voices and seeing the trauma the housing crisis is inflicting on them to make you despair at the state of public policy in Australia," she says. "But the good thing is, things can be done."

affordable housing supply. Affordable housing in particular is something that Nicole calls a "no-brainer", requiring little in the way of government subsidy. It just requires a commitment to enforcing the policy.

"I think debate about housing tends to get obscured by these rehearsed statements, like, 'Oh it's very complex,'" she says. "It's a way of making people feel as though this problem is something that we

The evidence, according to Nicole, points to simple causes disinvestment in social housing over 30 years, investment in an unfair tax system which has overinflated the price of existing properties, and not meeting supply demands. She says the solutions are also simple.

"It's easy to unwind those things, once we acknowledge the problem. National leadership is needed to restore investment to social housing, fix the unfair and inefficient tax settings that fuel demand without delivering new supply, and ensure adequate rental subsidies and protections so that tenants in the private sector can access secure and decent homes.

"We need to think about housing not as investing in real estate, but rather as investing in community. We need both immediate interventions and a commitment to long-term systemic change."



feel at home studies. Find

#### Is mould damaging your home and your health?

Mould might not be the first thing you think of in a housing crisis, but if left untreated it can have dire implications for both the life of building materials and our physical health. Professor Arianna Brambilla (GradCertEdStudies '23) explains that the financial burden in either scenario can run into the millions.

When housing is in short supply, says Arianna, there is more chance people will be cornered into a living situation that could be detrimental to their health.

"For low-income populations, there isn't the luxury to say, 'No, this house is not providing a healthy environment for me," she says.

There is currently no standardised test for mould in Australia. Arianna and her colleagues are collecting data on how and where mould is growing across the country, in the hopes of allowing homeowners and policymakers to make earlier risk assessments.

"If mould is growing under the carpet, you don't see it until you see it," she says. "We want that awareness to come a little earlier, [so] you can begin moving from remediation to prediction. We can start to detect mould before it's visible."



### TRUE CRIME

THREE LIFE LESSONS WITH CRIMINOLOGIST SARAH ANDRUCHOW

#### Written by Cassandra Hill

While Sarah Andruchow (BA 'O1, MCrim 'O6) doesn't listen to true crime podcasts (too much like work), she has nearly two decades of real-life experience fighting crime and violent extremism. Passionate about fostering safe, inclusive communities, she runs her own consultancy – oh, and she also speaks Arabic and has volunteered as a zookeeper. Here, Sarah shares her version of 'success'.



Sarah Andruchow, working from the United Nations compound in Erbil, Iraq, investigating international crimes of the Islamic State (2023)

#### 1. Find out who you are, and do that on purpose

Sarah grew up reading Nancy Drew and Sherlock Holmes detective stories, and was drawn to studying law. When she didn't get the marks, she took a detour which led to a job investigating serious and organised crime. She says knowing her purpose keeps her on track.

"I had a fairly poor childhood and moved to university in the city, to set myself up," Sarah says. "I did an Arts degree, studied Middle East issues and humanitarian subjects — I was interested in how humans think and behave." When she returned to study criminology, a fellow student (now a lifelong friend) suggested she join them at the NSW Crime Commission.

"And it was the first time I contributed to something with a significant purpose for the community," Sarah says. "If you can find work that aligns with your values, it helps you to live your purpose. Online personality tests are useful for understanding what drives you. In the immortal words of Dolly Parton, 'Find out who you are, and do that on purpose."

#### 2. Grow to your full potential

Key moments of growth for Sarah have come from roles that initially seemed outside her comfort zone — such as investigating Islamic State crimes in Iraq and working for the United Nations Special Tribunal for Lebanon in the Hague.

"It was the first tribunal to investigate a post-terrorist incident — so it was unique, but fairly dangerous," Sarah says. "Then when I worked with the NSW Department of Justice, it was the first time that young Australians had been involved in terrorism, travelling to Iraq and Syria. I had to apply my practitioner's experience to government policy, and assess young people to explore how to intervene to help them.

"For me, a growth mindset is important. It's good to understand your strengths, and where you need to grow — then grow to your full potential."

In a highly challenging moment, Sarah led a team during the 2014 Lindt Cafe siege (for which she later received a NSW Police Commissioner's Unit Citation). "We wanted to resolve the situation peacefully,

but it wasn't going to happen in that case, and that was hard.

"Honestly, I feel like I'm living outside my comfort zone. But the secret is that nobody really knows what they're doing, and it's really all about us just trying to do this together."

#### 3. Sow seeds that help others

"To keep your 'stress bucket' from overflowing, it's important to learn what fills it up and what empties it," Sarah says. "I prioritise doing at least one thing a week that I enjoy. That's how I chose to volunteer at Taronga Zoo — to give back and spend time in nature.

"It's about making sure I put time in my diary for the important things first everything else will work itself out.

"If I can get these three things aligned, I can wake up happy about the job I'm doing — which is important because it makes up such a large part of our life."



≥ Barbara McGrady (BA '13) clearly remembers the first time she set eves on Indigenous actress Rosalie Kunoth-Monks.

At the then-segregated picture theatre in her tiny hometown of Mungindi, which straddles the Queensland - New South Wales border some 500 kilometres from Brisbane, Barbara watched Kunoth-Monks' starring performance in the 1955 movie *Jedda* – the first film to feature an Aboriginal woman in a leading role. From the hard seats at the front of the theatre, 10-year-old Barbara never imagined that one day years later she would photograph Kunoth-Monks in Redfern, at an event honouring the Stolen Generations. "Seeing a young black woman in a big role like that was unreal," Barbara reflects now. "It made a big impression on me."

Actress turned activist Kunoth-Monks is just one of countless celebrated Aboriginal figures whom Barbara has photographed in a career spanning close to six decades. As a photojournalist she has covered hundreds of sporting, social and cultural events, putting Aboriginal people front and centre in her work. She's worked for National Indigenous Television, the NRL, the AFL, Title Fight Boxing and a host of Aboriginal-led organisations. The opening of her 2022 exhibition Deadly Sports Heroes in Glebe was attended by Ash Barty, Anthony Mundine, Greg Inglis and Jonathan Thurston. The Australian Museum holds a collection of her works, and the University's Chau Chak Wing Museum showcased her archive in its exhibition Australia has a Black History.

The call of photography came to Barbara when she was a young girl. "My father worked for a white property owner who gave us magazines like Time, Life and National Geographic," she recalls. "I'd see these great images of African-American people and think, 'Where are the great images of Aboriginal people?' That planted a seed. I thought, 'I could do that.' And so I did."

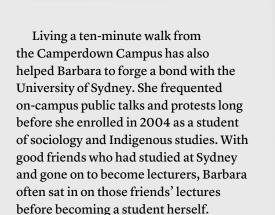
Barbara's lifelong pride as a Gomeroi-Gamilliray woman fuelled a need to show her people through a black lens. Growing up surrounded by a large, proud mob in the border town of Mungindi, she lived in two states

and learned that her people lived in two worlds. "We still practised our customs and traditions, and my parents spoke Gomeroi," she recalls, adding poignantly, "but not in public, of course, because we weren't allowed to."

Combined with a desire to see more images of her own people, Barbara's love of sport steered her to the camera. She was a runner, basketball player and sports captain at Mungindi Central School. "I saw sports photography, especially of contact sports, as an extension of that," she says. Rugby league is the sport she most enjoys photographing. "Just about every cousin, second cousin and brother [she has six] of mine played rugby league. Aboriginal men and women are very good at it, and that's what I love. I also love AFL and boxing."

Living in the Sydney suburb of Glebe since 1972 has allowed Barbara to comprehensively capture the recent history of nearby Redfern, a hub of Aboriginal activism in Australia. This work has brought her both joy and pain. She photographed a victorious Redfern All Blacks women's rugby team victory with the same passion as she captured the 2004 riots following the death of Aboriginal teenager TJ Hickey after an altercation with police. "I've always thought there was a need to tell our stories, covering things like the big marches and the bicentennial in '88, in our way," she says.





The University's Koori Centre, which provided assistance and support to Indigenous students at that time, was another drawcard. "The Koori Centre was a great meeting place, and the University has always been a place I've felt comfortable in," Barbara says. "I love the grounds."

Barbara continued working as a photojournalist both during and after her





- 1. Black Lives Matter rally, Sydney (2015)
- Indigenous Women's All Stars rugby league, Newcastle NSW (2016)
- Sand story dancers perform at the Cutaway, Barangaroo Reserve, Sydney (2017)
- Showing solidarity for Black Lives Matter at the Block,

to see the world more clearly, and after graduating she felt better able to articulate what she was trying to achieve through photography. "I looked at things in a different way by learning more about the world and how it operates," she reflects. "It's something I feel I need to do, for others to see the world the way I see it."

studies. Her degree, she says, helped her

It's a perspective Chau Chak Wing Museum director Michael Dagostino embraced when the museum asked Barbara if it could exhibit her work. "Barbara's unique perspective on historic events has empowered her communities, particularly Redfern," Michael says. "Her archive, spanning decades, is an astounding record, and her work as one of the country's first female Aboriginal documentary photographers has laid the groundwork for conversations now happening across Australia."

Barbara herself adds: "My photos are not just Indigenous photos of Indigenous people - they are images for all of Australia's historical peoples and events throughout history. As a longtime photojournalist, I see my images as stories of time and place, of culture and community in the public domain."

Chronic illness has slowed Barbara physically, but she still manages to photograph AFL games, and remains an "angry black woman". She speaks softly but with a fiery glint in her eye. She chooses her words with care, and laughs easily. "I'm more Malcolm X than Martin Luther King," she says. "But I love them both. I'm an old activist. I don't know how as a blackfella you can't be."

"I believe if you tell people your story and your cultural connections and the way you feel about who you are as a person and this land, their attitude changes, and they learn something," Barbara observes. "That's why I put my stories out there - because I'm proud of who we are as a people, and how we have survived and thrived regardless."



Explore art, theatre and music with exclusive alumni events and offers

#### A FRIENDSHIP FORGED IN CONTROVERSY

When Matchbox 20 lead singer Rob Thomas made an insensitive joke about black people and alcohol that was perceived as fuelling racist stereotypes at a 2016 Melbourne concert, Barbara McGrady joined those calling him out on social media.

"Want to really make amends for your hurtful, ignorant and derogatory comments to what I gather to be a mainly white audience?" she wrote. "Well then invite me to come photograph one of your Sydney shows."

The US rock musician, who was keen to apologise and learn more about Aboriginal culture and history, responded: "Please follow me on Twitter so that we can message each other and arrange to meet."

"We had a talk about it," Barbara recalls now, "and he told me to come and photograph his concert at the Sydney Opera House. From then on, he started reading up about Aboriginal people, we became good friends - and [now] he calls me Aunty Barb."

SAM RECOMMENDS



Jess Blanch, Publisher and Editor in Chief, RUSSH magazine

#### Book that changed me

I feel as if I'm made up of all the books I've read and loved. There are some words that stay with you forever. Suri Hustvedt's What *I Loved* is a book that had a profound impact on my lived experience of grief.

#### Fave podcast

I actually don't listen to many podcasts but I'm excited about the next chapter in our RUSSH podcast Conversations with Creative Minds, as I love stories about how artists have become artists.

#### What music are you listening to?

Bill Callahan has a great new album, Resuscitate. There's also a newer band called Fontaines DC with an album called Romance. It also has the most excellent art on its cover.

#### Where do you find inspiration?

In books, movies, art, poetry and in the idiosyncrasies of my friends.

#### Favourite way to de-stress

Being alone is my ultimate relaxation. It's the one thing I love about flying, and why I also love an early morning and a late night — they're the best hours for solitude.

#### You have 5 minutes to consume some content; where do you go?

I'm very careful with how I consume news, so I rely on apps such as The Business of Fashion or, for lighter content, Co-Star.

Iess Blanch is the Publisher and Editor in Chief of RUSSH magazine, leading the publication in its 20th year of independent publishing. She's grateful for the role she plays in helping creative minds bring their visions to life and in connecting with the broader culture on a deeper level.

# HOW THE FREEDOM RIDE SHAPED THE NATION

In 1965, a group of University of Sydney students embarked on a bus trip around country NSW. Known as the 'Freedom Ride', it aimed to challenge discrimination against Aboriginal people. Nearly sixty years on, three 'Freedom Riders' reflect on the enduring impacts of that journey.

#### Written by Cassandra Hill

Inspired by protests against racial segregation in the United States, around midnight on 12 February 1965, 29 University of Sydney students set off on a two-week bus trip.

It was a time when First Nations people were excluded from public pools, hotels, cinemas and Returned Services League (RSL) clubs — and often forced to live in reserves on the edge of country towns. Led by Aboriginal activist and fellow Sydney student the late Charles Perkins (BA '66), the group, which called itself Student Action for Aborigines (SAFA), wanted to see the reality of living conditions for themselves and to challenge racial segregation practices.

In Moree, the 'Freedom Riders' tried to take Aboriginal children to the local pool

but were denied entry due to a council by-law. They held a three-hour protest, confronted by a hostile local crowd.

Members of Student Action for Aborigines (SAFA) pose before boarding the bus during the

Image courtesy of Ann Curthovs/

1965 Freedom Ride.

Wendy Watson-Ekstein

One of the students, now a historian at the University of Sydney, Honorary Professor Ann Curthoys AM (BA '67, Grad DipEd '68), author of *Freedom Ride: A Freedom Rider Remembers*, recorded these events in her diary.

It was very hot and crowded and noisy that day. Police escorted the party, and they walked single file through the crowd who threw eggs, tomatoes, stones, and spat at us.

The students' journey began to capture the attention of the world's media, raising awareness of the injustices faced by Aboriginal people as journalists and TV crews descended to cover the story.

"It took six months before council rescinded the rule, but it did happen. It's still something I feel proud to have been involved in," Ann says.

The students were also confronted by the poor housing and health experienced by Aboriginal people. In each town, they conducted surveys to understand the situation. Some Aboriginal people were supportive; others greeted them with apprehension.

"I think the fact that we had a properly designed survey overcame some Aboriginal people's caution about what we were doing", says Brian Aarons (BSc '67), a 19-year-old second-year Science student at the time. "It said, 'Well, these people are actually interested in us."

"Having Charlie Perkins, who was ten years older than the rest of us, also made a huge difference," Brian says. "He was the undisputed leader, extremely articulate, a brilliant media performer. He was very good at talking to crowds at protests and meetings."

FOR ABORIGINES

Gumbaynggirr-Bundjalung man and second-year Arts student Gary Williams was one of only three First Nations students on the bus. He had been called home to the mid-North Coast for a family emergency, so he joined the bus in Bowraville.

Gary recalls being refused entry to Kempsey's public pool, amidst another protest. He was also thrust into the media spotlight when he defied the so-called 'colour bar' by walking into the Bowraville Hotel with Brian.

He believes the protests and media attention created an environment for change. "Australians were shocked by what they saw. They were forced to take a look at themselves," he says.

Two years later, Australians voted overwhelmingly 'Yes' in the 1967 Referendum which gave the Commonwealth power to make laws for Aboriginal and Torres Strait Islander people and removed discriminatory references from the Constitution, enabling them to be counted in the census. The Freedom Ride was also one of several precursors to increased land rights.

Gary believes the Ride had a mobilising effect on towns they visited.

"It gave Aboriginal people the strength to carry on and pass that onto the

children," he says. "For older people, it gave them somebody to talk to about issues — and the setting up of legal and medical services gave them hope. It gave the younger ones inspiration, something to aim for. Some young people who had seen Charlie and the Freedom Riders came to Sydney to further their education."

In the years since, many of the Freedom Riders continued to work for Aboriginal rights, and Dr Charles Perkins AO emerged as one of Australia's most prominent Aboriginal leaders.

"None of us had any idea how well-remembered this would be," Ann says, "Sleeping on church floors, eating endless baked beans — at the time, it didn't feel like a significant moment in history. Only as the debate rolled on, we slowly thought, 'Yes, this was something.' And it keeps getting rediscovered by new generations all the time."

Gary now works for the Muurrbay Aboriginal Language Centre, helping to preserve languages between the Queensland border and the Hawkesbury River.

"I'm in the Northern Rivers, working with a movement of people, enjoying language, enjoying Country," Gary says. "This is a little oasis, in a sense, which is benefiting from 60 years ago, and people are reminded of the Freedom Ride."

He says it was a way to shine a light on the situation — an event that people could see. "You could talk about land rights all day, but it's just words."

"We felt the need to take action about something that was wrong with society," Brian says, "The challenge now, both for First Nations people and the rest of us, is 'What are effective ways this can be challenged now?"

Gary reflects, "The 1960s was a time when non-Aboriginal people became involved with the Aboriginal movement. My hope after the Voice Referendum is for us to find our feet again — to pick ourselves up and find the way forward, both Aboriginal and non-Aboriginal — taking some little steps, however long it takes."

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your story

#### **ALUMNI SPOTLIGHT**

More stories of alumni at work around the world.



#### DR JESSICA TEOH

MD '21 Jessica is a clinical researcher and doctor who is passionate about improving health care for women and babies in Australia. She is a registrar specialising in obstetrics and gynaecology at Sydney's Royal Prince Alfred Hospital, as well as a Clinical Associate Lecturer at the University of Sydney. Jessica was recently awarded the prestigious Churchill Fellowship for a project that aims to uncover domestic violence prevalence and risk factors in early-pregnancy settings. She is also a recipient of the Avant Early Career Research

grant, and volunteers at

the Hornsby Ku-ring-gai

Women's Shelter.



#### WILLY CHAN BAppSc (HithInfMgt) '07

Willy brings over 17 years of experience to advancing health care in Australia. A member of the Golden Key International Honour Society, his work is at the intersection of technology and health care, specialising in Clinical Information Systems, automation and Al. At Sydney Local Health District, Willy leads teams in building consumer-centric systems. He played a pivotal role at NSW Health Vaccination Centre during the pandemic, winning the 2021 NSW Premier's Award. In 2022 he was honoured with the People's Choice Award, recognising his leadership and dedication. Internationally, through his work with the World Health Organization, Willy has enhanced digital literacy and shaped global health information management standards across the Western Pacific. Willy continues to drive innovative healthcare solutions nationally and globally.



#### LOU BILLETT

BAppSc (OT) '89 At 33, Lou embarked on a life-changing gap year in South Africa, which inspired her to stay on and establish African Angels, a charity which supports the community of Chintsa East in South Africa's Eastern Cape. In 2012 she founded a school there, which provides over 300 local children with a world-class primary education. African Angels also empowers local women through social enterprises, and has initiated community development projects such as streetlight installations, impacting thousands of lives. Lou's unwavering commitment to education and social change drives her to ensure all children have access to transformative learning opportunities, regardless of their circumstances.



#### WILLIAM DOUGLAS

BSc '78, MSc '83, GradDipEd (Secondary) '85, GradDipEdStudies (HIthEd) '91 William's career began with research on camouflage and nocturnal fish, which led him to become the first in his family to earn a university degree. His adventurous spirit took him on a six-month road trip across Australia. Seeking to satisfy his wanderlust further, he joined Qantas Airways as a long-haul flight attendant. Inspired by his travels and witnessing environmental decline, William founded a Wilderness Society branch in Wollongong. He also pursued a Graduate Diploma in Education Studies and taught casually at primary and secondary schools. Today, William continues his passion for travel and conservation, having recently worked with his son Liam, also an alumnus, at the Phnom Penh Animal Welfare Society in Cambodia. William credits the University of Sydney with instilling the rigour, discipline and resolve to make the world a better place.



#### FRANCESCA FUNAYAMA

BLAS '13, GradDipSc '14 Francesca has dedicated over a decade to online community management and moderation, specialising in the tech, video game, startup, and non-government organisation (NGO) spaces. She is currently the Community Manager and Marketing Technologist at ICMEC Australia, where she advocates against online child sexual exploitation. By supporting collaboration between public and private organisations, she works to keep children safe. Outside of work, Francesca mentors Dalyell Scholars and MySydney scholarship recipients at the University of Sydney, guiding new graduates through the transition from university to the workplace. In addition to being an avid foodie and gamer, she's also passionate about female representation in grassroots motorsports, having been a driver for several years.



#### MICHAEL BLACK

BCom '20 Inspired by his own experience with a tutor, Michael founded Success Tutoring in 2017 — starting out in a spare bedroom in his parent's home. Today, he describes it as Australia's fastest-growing education franchise. Michael's aim in tutoring is to motivate and uplift students to reach their full potential. He says his primary focus in education is to impact the broader community positively. He has shared his insights as a speaker at the Franchise Council of Australia and been recognised as a Top 30 Franchise Executive in Australia. Michael attributes his early-career courage to pursue entrepreneurial ventures to his studies at the University of Sydney Business School. Beyond his professional achievements, Michael has volunteered with the NSW Rural Fire Service.



#### MARIAM LATIFI

BEd (Primary) '12 Mariam is an educator, writer, and award-winning children's author dedicated to empowering and inspiring young children and creating positive change. With more than 13 years as a primary school teacher, Mariam is passionate about fostering learning and community impact. She is CEO of Gift of Knowledge, empowering student education. Named 2022 Londonderry Woman of the Year, Mariam spearheads initiatives like clothing drives for cancer patients, Clean Up Australia Day, Harmony Day, Australia's Biggest Morning Tea, and Walk for Autism. Her debut book, A to Z of Mini Muslims, celebrates children's faith and culture, winning accolades including the 2022 Readers' Choice Book Awards. Previously, Mariam has led educational programs for NSW's Afghan community and managed the Elara Playkiddies Playgroup.



#### DR MARTIN RAFFAELE BA '05. GradDipPsych '07.

MPhil '09, PhD '14 Martin is a researcher, advocate and educator on neurodiversity, committed to inclusivity in academic and professional settings. Driven by his personal experience with epilepsy, he redirected his studies and career towards understanding the brain, after initially studying opera singing at the University of Sydney. As a lecturer in the Faculty of Medicine and Health and the Sydney Business School, he champions understanding and acceptance of disabilities. Martin founded Inclusif in 2022 to combat stigma and foster supportive environments for those with neurodiversity. His efforts to reshape perceptions of disability extend to his role on the Steering Committee of the Disability at Work Network, where he works to create more inclusive workplaces.

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## JUST THE FACTS

This year marks five years of the Sydney Knowledge Hub — the University of Sydney's start-up incubator for research commercialisation. It supports researchers to progress new ventures, through co-working and programs such as the PERIscope Commercialisation Award, which funds researchers to validate the market for their invention. Here, we explore three projects each with potential to make a global impact.



#### ON REMOTE HEART MONITORING

Cardiovascular disease (CVD) remains the leading cause of death globally, with the burden disproportionately affecting rural and remote communities. These areas face significant disparities in hospitalisation rates and access to pathology services. Our solution is a user-friendly, portable device for rapid cardiac health monitoring. It identifies CVD risk biomarkers in minutes, which reduces cardiovascular disease and mortality, promotes more equitable health care and alleviates Australia's economic burden. Previously, it was proposed to design a device to be used at home, but the PERIscope Commercialisation Award helped us to identify that the device would be most effective at pharmacies and GPs. We're currently working on validation of the technology and with designers to develop the device and software interface.

Professor Fariba Dehghani and Dr Syamak Farajikhah, from the School of Chemical and Biomolecular Engineering, formed VitaGuard Innovations to harness this cutting-edge technology, drawing on their engineering expertise and entrepreneurial skills to promote equitable health care in remote and regional areas and for people with limited mobility.

PERIscope Commercialisation Award recipient

#### ON AGRICULTURAL PROVENENCE

We have developed a system to inform consumers about the origin, quality and sustainability of agricultural products through the supply chain. For example, when we shop for bread, we can know what kind of wheat it uses, where and how it was grown and the condition of the land. Our databased tool works by integrating information and reanalysing it to provide a unique, connected set of credentials, available via digital labelling. This reduces the risk of fraudulent products by providing verifiable information, and adds value by identifying the product's distinct taste, quality and sustainability. The PERIscope Commercialisation Award helped us to identify opportunities in high-value markets such as wine and cotton, and niche markets such as lemon myrtle.

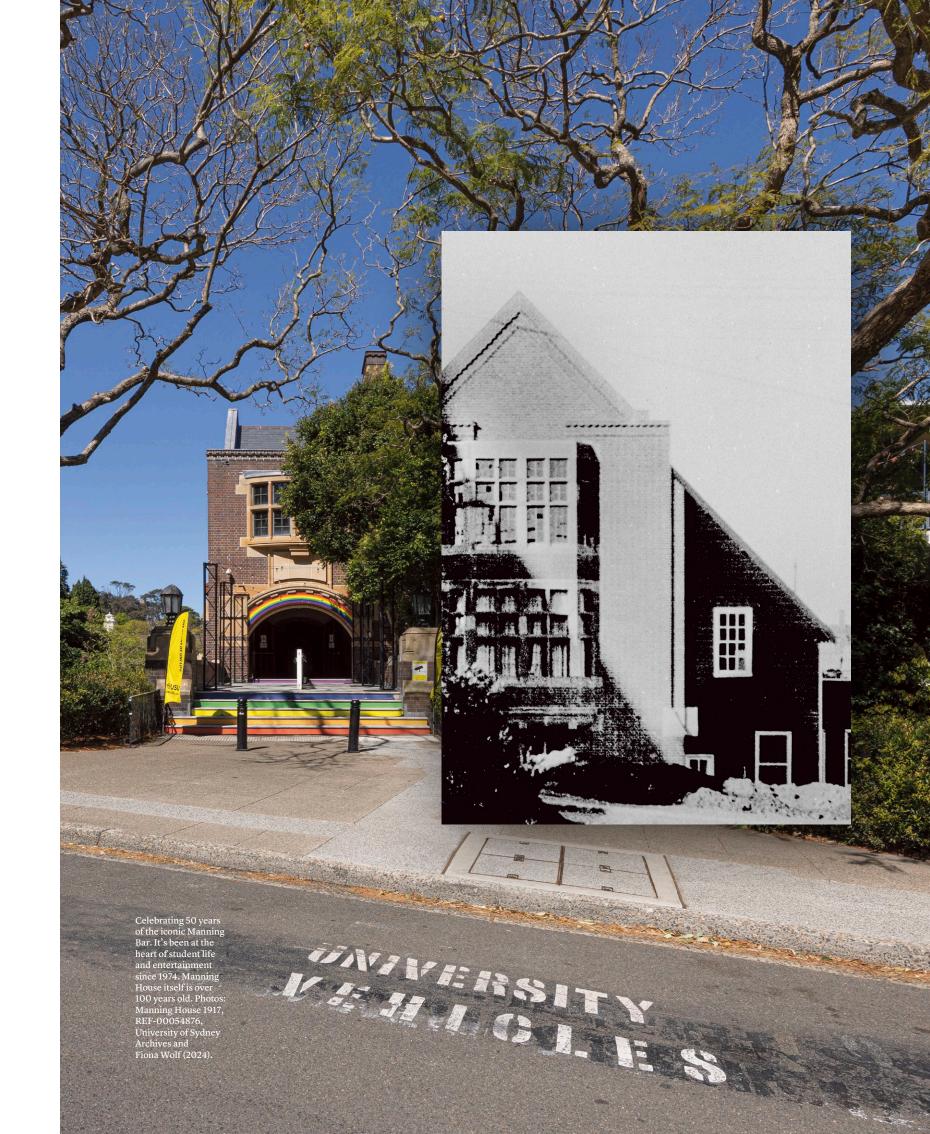
Professor Alex McBratney
(DScAgr '12) and Daniel Irving
(BSc (Advanced) (Hons) '24),
in the School of Life and
Environmental Sciences, started
Spequatrace to provide accurate
consumer information and to
'decommoditise' agricultural
products - moving from bulk
to niche products.

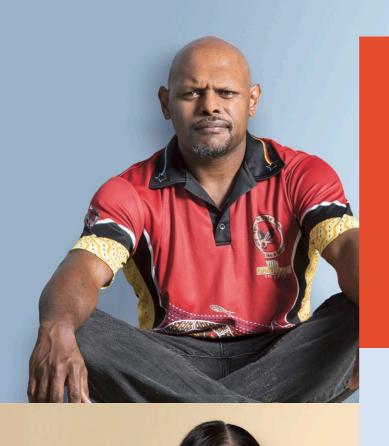
PERIscope Commercialisation Award recipient

#### ON CARBON FOOTPRINT DATA

FootprintLab is on a sustainability mission. In partnership with the Sydney Knowledge Hub, we provide current, credible, commercially ready carbon footprint data for anyone wanting to do carbon accounting. It is already being used by the Australian Government and the United Nations to measure and manage carbon footprints. We're partnering with organisations like CoGo and Trace, enabling reliable carbon footprinting for business, as well as working with Indian payment platform PayU. Using our data, PayU will measure the carbon footprint of online purchases, offering a one-click offset option. PayU handles 10 million transactions a day, and at that scale there's the opportunity to offset emissions equivalent to those of a small country.

Janet Salem and Tim Baynes co-founded FootprintLab to integrate sustainability data with the everyday transactions of people and business. They're bringing to light the hidden impacts of consumption and production to help consumers, producers and governments to make informed decisions.





## **AN ALUMNI PROGRAM** with community at its heart

Your feedback matters to us, which is why we have reimagined our alumni program to give you access to more offers, further learning, and opportunities to network and connect.

Learn more about your new Sydney Alumni Community and access the benefits available to you.

sydney.edu.au/alumni/benefits

in linkedin.com/groups/14408319



