

# SAM



THE UNIVERSITY OF  
SYDNEY

Celebrating 175 years

In conversation

## *Changing the face of STEM*



—  
Nurturing  
diversity  
in science  
and maths

—  
Securing  
our food  
future

—  
Enriching  
society  
through  
philanthropy

Bells being transported to the University War Memorial Carillon in 1928, after arriving by boat from the United Kingdom. The carillon is housed in the Clocktower of the Quadrangle, University of Sydney Archives REF-00096869



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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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Distributed to more than 80,000 members  
of our community

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**SAM DIGITAL**  
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# THE FUTURE STARTS HERE

➤ At the University of Sydney, we've never been content to simply follow the path – we've helped carve it. As Australia's first university, we've spent 175 years not just marking time but making change. This anniversary isn't just a celebration; it's a springboard. A moment to reflect – but more importantly, a moment to act. Every day, through our students, research, teaching and our community, we're working toward a future in which everyone has the chance to thrive.

Our campuses – from Camperdown to Cobbity, Westmead to Narrabri, and as far as One Tree Island, are more than spots on a map. Whether it's climate resilience, education equity, or social justice and technology, our goal is the same: to improve lives.

That's the thinking behind the University's new philanthropic and engagement effort, For good: the Campaign for Sydney. It's a call to action – bringing together alumni, donors and the wider community to back research and education that delivers.

This edition of SAM highlights some of that work. We speak with Professor Eddie Woo (BEd(Sec)(Hons) '08) about why so many students give up on maths and what can be done to turn that around. We explore how ancient artefacts are helping researchers understand modern identity and belonging. And we meet Robin Khuda, founder and CEO of AirTrunk, whose \$100 million gift will fund a 20-year program to support young women from Western Sydney into STEM careers.

There's also a glimpse at how researchers are working with farmers to develop new agricultural technologies, robotic systems and smart tools to boost crop yields and help tackle global food shortages.

The 2025 Alumni Awards showcase graduates who are having an impact for good. Dr Luke Gordon (BE(Hons), BMedSoc '18, PhD '22) is developing brain-computer interfaces to help people with paralysis and neurodegenerative conditions. David Handley AM (BA '87, LLB '89) is expanding access to public art through Sculpture by the Sea. Their stories, and many others, show how Sydney alumni continue to drive change long after graduation.

None of this happens in isolation. It's powered by every student who walks through the Great Hall, every alum who gives back, and every supporter who believes in our mission.

As we celebrate 175 years, we look ahead to a future that's for good. Thank you for being part of our story.

Professor Mark Scott AO  
(BA, DipEd '84, MA '93, HonDLitt '15)  
Vice-Chancellor and President

David Thodey AO FTSE  
Chancellor



## ENGINEERING

## Sparking ideas

Scientists at the University of Sydney have discovered a way to use artificial lightning to produce ammonia out of thin air. Ammonia is one of the world's most important chemicals, and the main ingredient of fertilisers. However, the current method of generating it leaves a huge carbon footprint. A team led by Professor PJ Cullen from the School of Chemical and Biomolecular Engineering and the Net Zero Institute has developed a plasma-based method which splits nitrogen and oxygen from air using electricity, then runs them through an electrolyser to create ammonia gas. PJ says the process is one step closer to producing 'green ammonia' – which could



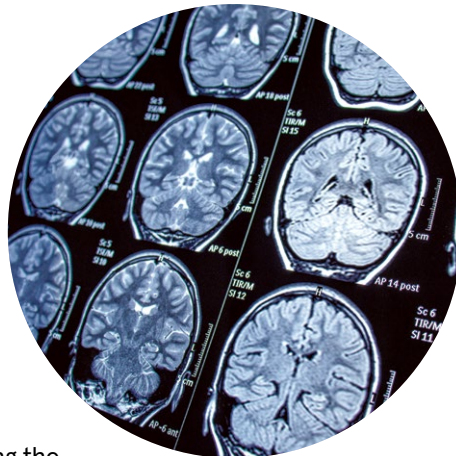
The electrolyser used as part of the new method to make 'green ammonia'  
Photo: PJ Cullen

revolutionise agriculture. It could also be key to transporting hydrogen fuel in the shipping industry. The team is now working on making the method more energy efficient and competitive.

## NEUROSCIENCE

## Brain boost

A promising development is bringing fresh hope to people living with Parkinson's disease. Researchers at the Brain and Mind Centre first identified the SOD1 protein in 2017. Usually, SOD1 provides protective benefits to the brain. However, in people with Parkinson's, it becomes faulty, causing it to clump and damage brain cells. Now the team has developed a way to modify it, paving the way for future treatments. This study, led by Professor Kay Double, found that targeting the faulty protein with a drug treatment improved motor function in mice with Parkinson's-like symptoms. The researchers say the results exceeded expectations. Their next goal is to refine this method for clinical trials, with the potential to develop a new therapy to slow Parkinson's progression.



Want more news?  
Make sure you're receiving our monthly e-newsletter, SAM Extra

## TALAL YASSINE AM



LLM '98

Business leader, academic, philanthropist

## What motivated you to pursue this career?

I didn't grow up knowing exactly what I would become. I've been a taxi driver, a rubbish collector, a real estate agent, a lawyer, a politician, a banker, an entrepreneur and a podcaster (*My Uncommon Ground*). But I knew I wanted to be useful, to serve people. My 'why' is about building institutions and opportunities for communities that have long been underserved.

## How did university help you get started?

Coming from Granville Boys was like another world. I discovered people from all walks of life; I met migrants like me. Education was my ticket – and it unlocked doors that would've stayed shut otherwise.

## What impact has your work had on the community?

My work is about financial inclusion and generational wealth. Creating Salaam Group, which includes Australia's first Islamic-focused superannuation company, is probably my most meaningful achievement. Not because it's a business, but because it meets a real community need, and it's building something that will hopefully outlast me. I hope my story – a kid from Guildford, the eldest of eight, with refugee roots – shows others what's possible when you don't self-select out. Don't be afraid to change lanes, as long as you know where you're headed.

# CHANGING THE FACE OF STEM



Written by  
Saman Shad

Photography by  
Fiona Wolf and  
Stefanie Zingsheim

Professor Alice  
Motion and  
philanthropist  
Robin Khuda in  
conversation  
on increasing  
diversity in STEM

For philanthropist Robin Khuda, change begins with opening doors early. For Professor Alice Motion, science thrives when all voices are heard. Together, they explore how philanthropy, representation and bold ideas can reshape STEM (science, technology, engineering and mathematics), creating a future where young women and other underrepresented groups don't just enter science – they lead it.



ROBIN KHUDA

## “TALENT IS EVERYWHERE. OPPORTUNITY NEEDS TO BE, TOO.”

*Founder and CEO of data centre provider AirTrunk; founder of the Khuda Family Foundation, which focuses on increasing STEM skills and the number of women in technology*

“After many years in the technology and digital infrastructure sectors, I’ve seen a persistent gap: too few women in technical and leadership roles. It’s a missed opportunity, not just for individuals but for innovation. The turning point for me came when I realised this wasn’t just a recruitment issue. The pipeline itself was broken. Too many young women never get the chance to imagine a future in STEM, because the support and the belief in their potential isn’t there from the start.

“That’s what inspired the Khuda Family Foundation’s \$100 million partnership with the University of Sydney. As someone who has lived and worked in Western Sydney, I saw the potential. What was missing was the pathway. This isn’t about one-off scholarships – it’s about early, consistent, and inclusive support. Starting from Year 7, we’re building a program that includes tutoring, mentoring, leadership development, and guaranteed university entry. It’s designed to change mindsets early and create a visible, supported pipeline of future women leaders in STEM.

“We’re focusing on students in Western Sydney, where systemic barriers often run deepest. If we can shift outcomes for even a fraction of the 40,000 students we aim to reach, the ripple effects will be transformative, not just for those individuals but for their families, their communities, and the industries they’ll help shape.

“But impact doesn’t stop at access. Retention and progression matter just as much. At AirTrunk, we’ve taken bold steps to address this, tying gender pay equity targets to one of the largest sustainability-linked loans in the global data centre industry. That kind of accountability drives real change. We’re also investing in women in STEM in Sydney and throughout the Asia-Pacific region through our Social Impact Program, alongside the launch of AirTrunk’s PlusOne Sponsorship Program, pairing women with senior leaders for six months of mentoring, advocacy and strategic exposure.

“To create lasting change, we need to embed inclusion into the system. In business, what gets measured gets managed. Science and academia can benefit from the same mindset: set bold goals, measure progress transparently, and align incentives to reward inclusive outcomes. Because innovation doesn’t thrive in echo chambers – it thrives when different perspectives are empowered and supported.

“We also need to change the conversation. Gender equity in STEM isn’t just a social justice issue, it’s an economic imperative. Australia needs 1.2 million additional tech workers by 2030. We won’t get there unless we unlock the full talent pool. That means making STEM careers visible, viable and welcoming to more women, more girls, and more people from other underrepresented backgrounds.

“What gives me hope is what happens when we do. Through the early stages of this program, I’ve already met students who, when given the opportunity and belief, are thriving. Their ambition is contagious. Some will become engineers, scientists and CEOs. Others will go on to inspire the next wave. That’s the power of structural change: when one door opens, many others follow.

“And that’s what we’re building – a smarter, fairer, more competitive Australia – one girl, one school, one community at a time.”



PROFESSOR ALICE MOTION

## “WE NEED TO REIMAGINE WHO GETS TO BELONG IN SCIENCE.”

*Professor of Science and Culture, School of Chemistry*

“Science shapes the world we live in, yet for too long it hasn’t reflected the full diversity of that world. When only certain voices are heard, the questions we ask, the discoveries we prioritise and the solutions we find are limited. That’s why diversity in STEM isn’t just a matter of fairness – it’s essential to better science. It means opening the doors to people from all backgrounds and experiences, and reimagining who gets to belong and lead in scientific discovery.

“Science improves when there is a greater diversity of minds working on its problems. The science itself becomes more interesting – and, crucially, the questions we choose to ask can change.

“There are areas of science and medicine – such as women’s health, and issues affecting marginalised communities – that have been historically overlooked. I can’t help but think that if we’d had more women and other underrepresented voices in research earlier, we’d know much more than we do now.

“When I first started studying chemistry, I was fortunate to feel supported. A fantastic teacher inspired me to pursue science over medicine, and that choice changed my life. But I now recognise that my experience isn’t the norm for everyone. As I progressed through my career and worked in different countries and contexts, I began to see more clearly how structures in science have been shaped by certain groups, and how hard it can be for those who don’t fit that mould to feel like they belong.

“That’s why representation matters. If students never see scientists who look or live like them, they may never consider STEM as a space in which they can thrive.

“And it’s not just about who enters the field, it’s about who rises through it. True impact means not only increasing the number of underrepresented students studying STEM but ensuring they’re supported into senior roles as professors, CEOs and research leaders. Otherwise, we risk reinforcing new forms of inequity.

“That’s what excites me about the Khuda Family Foundation’s support. A gift of this size enables long-term thinking. Twenty years of support means programs can be carefully designed, iterated and evaluated. It means we’re not just reacting – we’re building structures that can last. The promise of 300 women being supported to study STEM from their school years and throughout their studies at the University of Sydney is remarkable. But beyond the numbers, it’s the creation of a community of scholars, leaders and changemakers that will impact generations to come.

“Working with young people gives me huge hope. Their openness, their creativity, their sense of what’s fair – these qualities constantly inspire me. We don’t need to convince them that inclusion matters: they already know. What we need to do is build the systems and cultures that allow them to lead.

“I want science to feel as inviting as a concert or a gallery – places where you don’t need credentials to feel welcome, just curiosity. That’s why we need to bring science to unexpected spaces: music festivals, schools, community events.

It needs to come to people from many different angles. Because the more we meet people where they are, the more likely they are to see themselves in science, and the more powerful and inclusive that science will become.” ●



Learn about the Khuda Women in STEM Academy

# WHY SO MANY KIDS GIVE UP ON MATHS

## AND HOW WE CAN FIX IT

Maths doesn't 'belong' just to a certain type of person – it belongs to all of us. And with the right support, every student can find their place.

Written by  
Saman Shad

Photography by  
Stefanie Zingsheim

Student Loretta Payne, studying a double degree in civil engineering and architectural design, urges girls to stick with STEM

👉 For Loretta Payne, maths was never the enemy. “I always liked maths,” she says. “It made sense to me, and I enjoyed the satisfaction of solving problems.”

But even Loretta, now in her second year of a double degree in Civil Engineering and Design in Architecture at the University of Sydney, has had to push against the grain to stay in STEM. She remembers being the only girl in her high school physics class, and feeling like she didn’t belong there. “I just wasn’t friends with anyone in that class, and it felt like I stood out in a weird way. So I dropped it.”

In the end, she was the only female student from her graduating year to go on to the University of Sydney to pursue a STEM degree.

#### MATHS’ PROBLEM

Despite outperforming boys in maths in primary school, during high school Australian girls are turning away from advanced maths subjects in droves. And that drop-off has lasting consequences – including closing the door to future STEM careers before many even realise the breadth of options that exist.

Professor Eddie Woo (BEd(Sec) (Hons) ’08), a Professor of Practice at the University of Sydney and one of the country’s most recognised maths educators, calls it a cultural crisis.

“There’s a PR problem for maths,” he says. “We’ve developed this idea that maths is for a certain type of person – usually a boy with a so-called ‘maths brain’. If you don’t fit that mould, you’re out.”

The consequences are systemic. Maths is hierarchical, Eddie explains – each concept builds on the one before. “If you miss a step early on, it’s very hard to catch up later. And because we don’t have enough qualified maths teachers, especially in regional schools, we see students disengage quickly.”

That disengagement often starts with a lack of confidence. “I can’t tell you how many brilliant girls I’ve taught who were coming second or third in their class and still felt like they weren’t good at maths,” Eddie says. “Meanwhile, boys didn’t seem

to struggle as much with confidence in their abilities.”

Dr Bronwyn Reid O’Connor, a senior lecturer in secondary mathematics education at the University of Sydney’s School of Education and Social Work, says this confidence gap is deep-rooted and starts early. “Girls are just as capable,” she stresses, “but they’re less likely to be told they’re capable.”

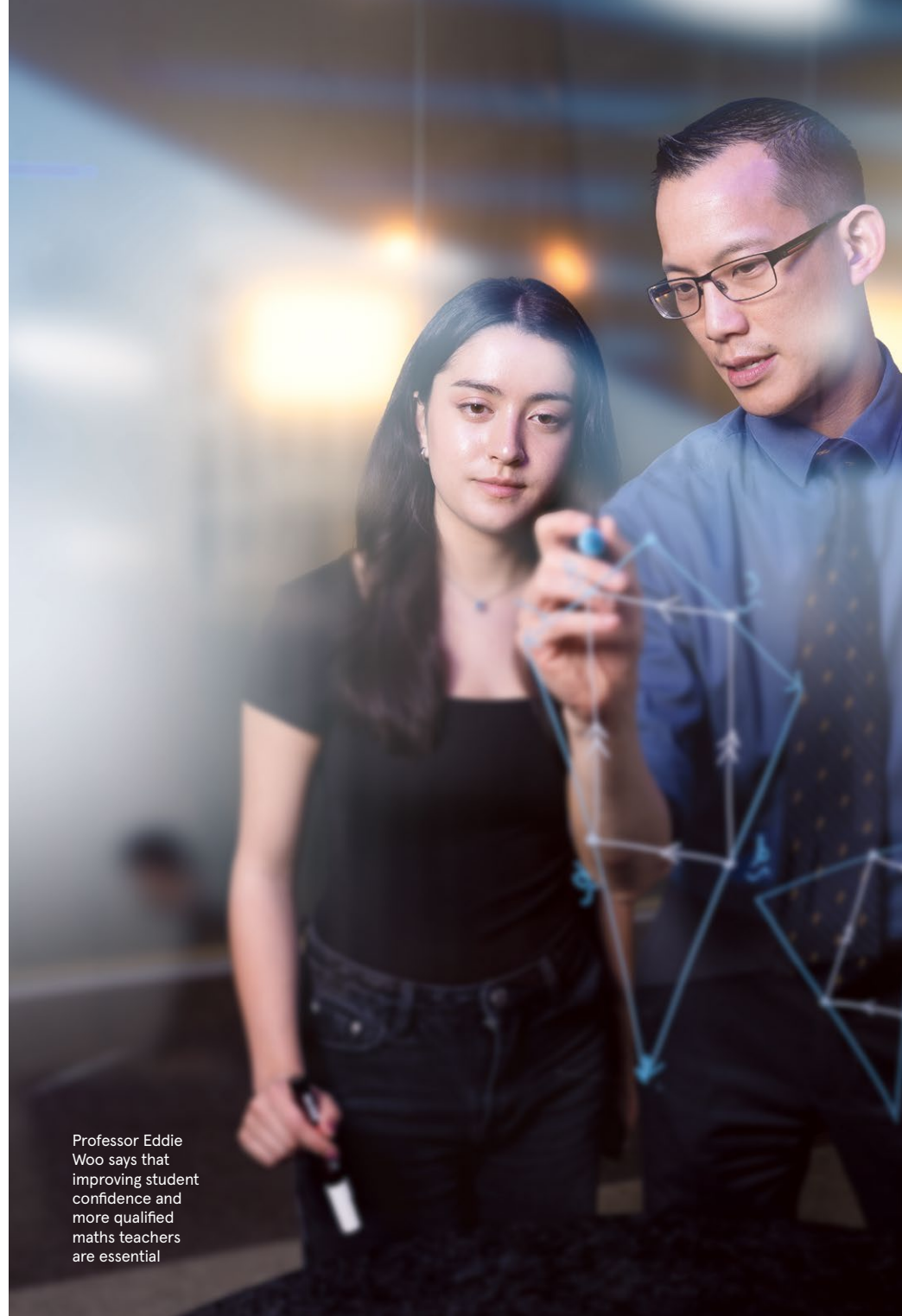
Even subtle signals – teachers calling on boys more often, or parents suggesting that girls are better at English or the

humanities – can send a message about who belongs in maths.

Maths, Bronwyn explains, is still often seen as a race to the right answer.

“Speed and accuracy get rewarded over deep thinking,” she observes. “That puts off students who might take a little longer but are just as capable – and often more interested in understanding the ‘why’.

“Maths should be about reasoning, collaboration and persistence. When those qualities are sidelined, students – especially girls – may lose interest.”



Professor Eddie Woo says that improving student confidence and more qualified maths teachers are essential



### **HOW A GOOD TEACHER AND A SENSE OF BELONGING CAN HELP**

Loretta knows the difference a good teacher can make. “My lecturer now is amazing,” she says. “He really cares about what he’s teaching and his students’ success. I’ve never felt more confident in my maths.”

Social belonging is another powerful factor. Loretta credits the University’s Women in Engineering Society with helping her to feel part of a community. “It’s really comforting,” she says. “When you see another girl in a STEM subject, you instantly feel like you’re friends. That network makes a big difference.”

### **TO REALLY MAKE A CHANGE, WE NEED TO SHAKE UP THE SYSTEM**

Bronwyn believes the change must start early. “Primary school teachers need more support and confidence in teaching maths,” she says.

In addition, we need to shift the way we currently teach and assess maths at school level. “The way we assess maths – especially in high school – tends to reward memory and speed rather than deep understanding,” she says. “That disadvantages a lot of students.”

Eddie agrees. “Significant problems can emerge when we stream students into ‘high’ and ‘low’ maths classes from Year 7. Once students are placed in the bottom stream, they often internalise that they’re just ‘not maths people’.”

Even top-performing students can be undermined by streaming. “Someone has to be the ‘worst’ in the top class,” Bronwyn points out. “And that can do just as much damage to confidence.”

Good maths teaching should also be about making space for mistakes. “We need error-friendly classrooms – where students feel safe to get it wrong,” Bronwyn says. “Because getting it wrong is how you learn.”

For Loretta, it’s also about visibility. “If

girls don’t see women thriving in STEM careers, it’s hard to picture themselves there. Having a role model – even just someone a few years ahead of you – can make you think, ‘Maybe I can do this too.’”

In Loretta’s case, her mum has been her role model right from the start. “My mum’s an engineer,” she explains. “She taught me maths from when I was little. It wasn’t always the most wholesome experience” – she laughs – “but she really instilled how important it was.”

### **SO HOW DO WE ACHIEVE LASTING CHANGE?**

Fixing the system takes time and investment. That’s where philanthropy comes in.

The University’s recent \$100 million gift from the Khuda Family Foundation (see page 4) is a case in point. While it’s focused on supporting women in STEM, its impact could reach much further.

“Philanthropy can open doors not just for students but for the people who teach them,” Eddie says. “It has the power to support teacher training, mentoring programs, and new approaches to curriculum. Real change happens when support follows students and their educators throughout the journey.”

Bronwyn agrees. “We need to show students – especially girls – where maths can take them. Whether it’s architecture, coding or farming, there’s maths in every future. But if they can’t see the pathway, why would they persist with a subject that feels hard and irrelevant?”

Loretta, for one, is glad she kept going. “I didn’t always know where I was headed,” she says, “but I stuck with the subjects I liked, and it’s led me somewhere really exciting.”

She has advice for any girl unsure about maths: “Stick with it. You don’t need to be top of the class to belong in STEM. Just keep building your understanding. You’ll get there.” ●

# *Little bits of good*

Written by  
Alex Johnson  
and Saman Shad

Illustrations by  
Sean Morris



*Aboriginal and  
Torres Strait  
Islander readers  
are advised that  
this story contains  
references to  
deceased people.*

Over the years, the University has received gifts in surprising shapes and sizes – from musical instruments and great works of art to archival treasures. Beyond the generosity of their donors, these unique contributions represent rich stories that have transformed the University and the wider community in often unexpected ways.

## *Legacy of music*

👉 Sometimes, try as we might, the University is unable to locate any additional information about a donor. This was the case with Oliver William Bedford's bequest of around 200 violins and violas to the Sydney Conservatorium of Music in 2024. The search for information about his background or connection to the University yielded nothing.

"I wish we had more information on Mr Bedford," says the University's Associate Professor Ole Bøhn, a violinist and former concertmaster of the Norwegian Opera. "His passion must have been to collect, but why?"

Ole enlisted the help of an award-winning local luthier (stringed instrument maker) Peter Goodfellow to determine the instruments' quality. Peter found that they were high-quality, contemporary and antique models from Italy and China.

Ole was thrilled. Instruments of that age and quality are highly valued for their sound, but can be prohibitively expensive for young musicians.

"A famous violinist can play beautifully on a 'cigar box' violin," says Ole. "But

when young violinists play a quality instrument, they advance very quickly. Suddenly, sounds they have been looking for are possible."

When Ole made his debut in 1969, he played what he calls a "nice" Italian violin. In 1971, on the advice of his mentors, he began playing a 1766 Giovanni Battista Guadagnini violin.

"It was like a whole new world," he says. "It was magic."

Ole's violin was purchased for \$125,000 (\$1.6 million today) by Nordea Bank of Norway. Globally, foundations exist to purchase instruments for music students and professionals. Australia has no such program, though Ole passionately believes it should.

Mr Bedford's bequest represents unleashed potential – 40 violins and 20 bows will be kept for loan to students. The sale of the remainder will pay for their ongoing maintenance, overseen by Ole.

"These instruments only grow in value," Ole says. "The philanthropic mission to get them to Australian musicians is an investment in culture."



## From masterpiece to medicine

👉 It began in 2010, with an unexpected visit from a woman holding a plastic bin bag. “I want you to sell this,” she said. “It will change many lives.”

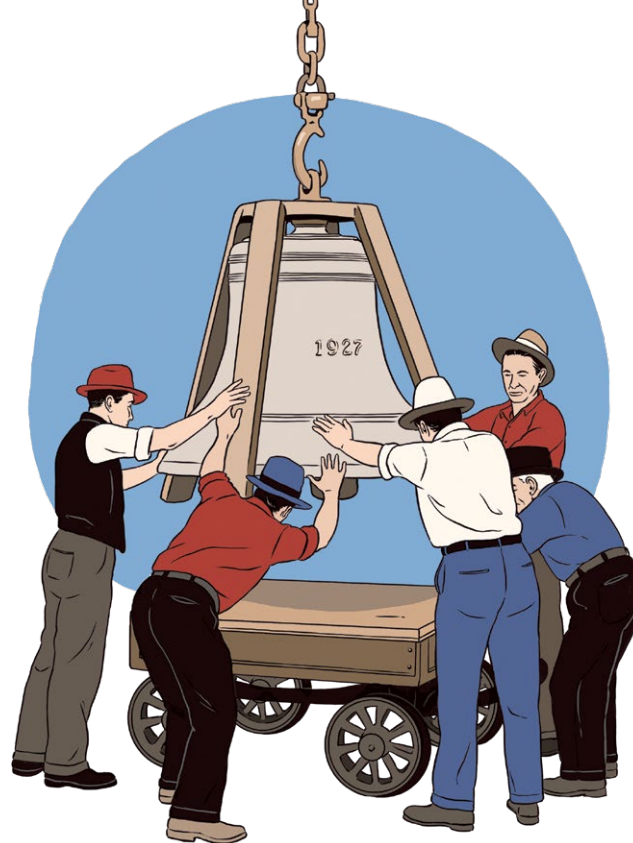
Inside, staff discovered a framed, amateur painting of a horse. They were somewhat underwhelmed, until the woman reached out to peel back the painting – underneath, there was a vibrant, cubist portrait of a woman sleeping. It was *Jeune Fille Endormie*, a 1935 Pablo Picasso portrait depicting his muse, Marie-Thérèse Walter, which had been unseen in public since 1939.

The woman had two requests – that funds from the painting’s sale be used for scientific and medical research, and that she remain anonymous.

Accompanied by Professor Steve Simpson, the painting fetched \$20.7 million at auction at Christie’s in London. It was an extraordinary sum that kickstarted the University’s Charles Perkins Centre (CPC) and its vision of a multidisciplinary approach to tackling chronic disease, with Professor Simpson at the helm.

“It was an act of kindness that ultimately did end up doing what she requested – to change many lives,” he reflects.

Despite her own anonymity, the donor’s generosity is anything but invisible. And fifteen years on, her gift continues to make an impact. The CPC’s interdisciplinary model has an ongoing influence across the University and beyond, as it brings together scientists, clinicians, engineers, economists and policy experts to solve the most pressing health challenges of our time.



## Music across time

👉 Murray Rainsford Smith was a promising 22-year-old Engineering student when war broke out in Europe in 1914. In November 1916, he wrote to his mother, wishing for peace, “and me home again”. He was killed in action on 1 December 1916.

Murray’s name is one of 197 inscribed into the bronze honour rolls at the entrance to the Sydney War Memorial Carillon – a musical instrument composed of bells – which commemorates students and staff lost in World War I. The list reveals the sheer scale of grief felt by the community. Plans for a University memorial began as the war ended. Working with the community, then-Chancellor Sir William Portus Cullen (BA 1880, MA 1882, LLB 1885, LLD 1887) wanted the memorial to reflect the same “public spirit” as the institution’s founders.

The idea of a carillon and its music reaching across Sydney captured hearts. More than £17,500 (\$1.7 million today) was raised in just six months.

“It is such an important presence throughout the University. It fills the space with music,” says Titus Grenyer (BMus(Perf)(Hons) ’20), Manager of the University Organ and Carillon. “That the music we play can be joyful is also a way of honouring the legacy of those who served.”

Following his death, Murray’s mother, Adelaide, quietly gifted his £76 in outstanding wages to the University. A century later, Architecture and Civil Engineering student Aakash Singh was the recipient of a \$200 prize bearing Murray’s name.

For Aakash, the story was deeply moving. “It’s inspired me to continue making the most of the opportunities available to me,” he says.

When he graduates at the end of 2025, the carillon bells will accompany him.

## Artefacts of understanding

👉 When the tiny but weighty metal bird arrived in the University's collection, it was labelled as an "opium weight".

"I believe it came to Justice Roderick (Roddy) Meagher's (BA '54, LLB '58) collection via Thailand, and the association with opium was used to increase its appeal for the tourist trade," says Dr Eve Guerry, one of the curators of the Object Based Learning (OBL) program at the Chau Chak Wing Museum.

Roddy, an eccentric jurist and judge, left his extensive art collection to the University following his death in 2011. Museum curators are drawn to the collection's big-ticket items, but Eve and her colleague, Jane Thogersen ensure that the smaller items also find new purpose through the OBL program.

OBL uses carefully chosen objects to spark critical thinking, communication and collaboration by prompting students to engage all their senses.

Participants examine pieces, observe their own reactions, ask questions and gain insights into their colleagues' strengths and ways of thinking. The program was such a popular part of students' courses that it was adapted for corporate groups as The Art of Teamwork.

"It's great for challenging assumptions, because you use the duck weight as a starting point for even broader discussions," Eve says.

It turns out, the weight is in the shape of Myanmar's royal insignia, the Brahminy duck, and was part of a set of standard market weights – no opium involved. The museum has updated its record, and the former "opium weight" label is now used as a discussion point for students. "These objects might have lost some of their story, but here they have connections to all these wonderful communities who visit us at the University," says Jane. "We get to build the catalogue and the story together."



## Living history

👉 "We get a lot of requests related to Elkin's papers," says Nyree Morrison, Senior Archivist at the University of Sydney Archives.

The personal papers of former Anthropology Department chair Professor AP Elkin (MA 1922) were donated to the University Archives in 1979 and 1983. The papers include fieldwork notes and photographs from Aboriginal communities, along with extensive correspondence, reports and research notes by fellow anthropologists.

They contain confronting documentation of colonisation, dispossession and violence. But they also represent a link to culture.

In 2007, Indigenous Research Fellow and Yolŋu Elder Dr Joseph Neparrnga Gumbula (DMus '07) assessed the collection, identifying the contemporary access needs of Yolŋu communities.

From Elkin's papers, Dr Gumbula unearthed photographs of Yolŋu people, taken in the Arnhem Land community of Milinjibi between 1927 and

1939. He reviewed and organised the images into family groups, then categorised them according to Yolŋu knowledge protocols.

In a lecture, Dr Gumbula explained the project as a way of returning culture: "What has been done before is now being given back. Tracing our roots is the *mali* – the shadow – to follow the footsteps of that generation."

The Archives receives regular requests from Aboriginal community organisations and individuals for the use of Elkin's papers in native title claims, language revival and genealogy. One request from community organisation, Yorgum Healing Services, led to the location of a genealogy by US linguist Gerhardt Laves, hidden in Elkin's letters. It's so large that Yorgum has since been able to use it to reconnect additional members of the Stolen Generations with family.

"Projects like Dr Gumbula's reflect the Archives' commitment to collaborating with Indigenous communities to support self-determination and ownership over their data," says Nyree. ●



# Leading for good

## THE 2025 ALUMNI AWARDS



ALUMNI AWARD

### *Professional Achievement*

## Professor Tanya Monro AC

BSc(Hons) '95, PhD '98

Chief Defence Scientist,  
Department of Defence

“Step out of the comfortable environments inhabited by others who share your expertise and background into spaces that jolt you into seeing different perspectives. Because it is in doing so that you can truly make the biggest difference – by creating bridges together to connect these worlds and teams that know how to traverse them for the benefit of all.”



ALUMNI AWARD

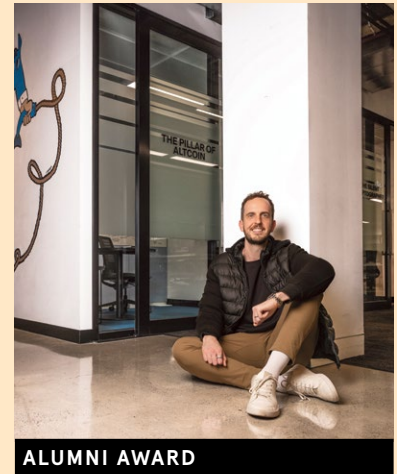
### *Service to Humanity*

## Kelly McJannett

MBA '19

CEO and Co-founder,  
Food Ladder

“I don't believe we should fear being 'counterintuitive'. When I left my PR job just six months into my career, to bring an ed-tech solution to remote Indigenous communities in Australia, many saw it as an illogical move. But to me, it never felt risky. That leap of faith gave me unique insights that eventually laid the foundation for Food Ladder. It was then that I developed my 'unreasonable' determination that every community on Earth deserves the infrastructure to grow its own food. In my experience, when something feels counterintuitive, it might just mean you're on the right track.”



ALUMNI AWARD

### *Innovation and Entrepreneurship*

## James Ferguson

BCom '14, LLB '17

CEO and Co-founder,  
Immutable

“Swapping an investment banking internship for a bunk bed in a sketchy San Francisco flat to learn software. Immersing myself in frontier tech and learning to code at the source felt reckless next to my friends' banking gigs, but the most value is often made at the intersection of areas rather than just maximising one, and that intersection of finance and technology became the basis for most of my professional life.”

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Our annual Alumni Awards celebrate the incredible impact of our alumni community on the world around them. We asked this year’s six winners to describe a counterintuitive decision they made that helped to shape their career for the better.

As told to Alex Johnson

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*Outstanding Young Alumni*

**Dr Luke Gordon**

BE(Hons), BMedSoc '18, PhD '22

Neuroscientist and Study Director, Neuralink

“After completing my PhD with publications and strong academic momentum, I intentionally stepped away from conventional postgrad opportunities. Instead, I chose to start fresh, applying for industry roles globally – a decision that felt risky at the time. Despite a steep learning curve, this shift has led me to work that I am passionate about. Now at Neuralink, I’m developing technologies that hold promise to restore autonomy to people with paralysis, creating immediate and meaningful change in their lives.”



*Cultural Contribution*

**David Handley AM**

BA '87, LLB '89

Founding Director, Sculpture by the Sea

“While some of my major decisions could be seen as counterintuitive by others – like starting Sculpture by the Sea as a free-to-the-public cultural event when I had no experience, contacts or funding in place – most of my major decisions have been based on intuition. Sculpture by the Sea was born from a strong sense that our overly commercial world needs more free things. Free-to-the-public community events add to our sense of community and social goodwill. So I do not think I have done anything counterintuitive – except for the mistakes I have made when I have not followed my gut instincts.”



*International Achievement*

**Dr Steven V. Zizzo**

MPH '05, MBBS '08

Obesity and Family Medicine Physician and Medical Director, Winterberry Family Medicine

“Not to follow status quo just because it’s popular or common.”



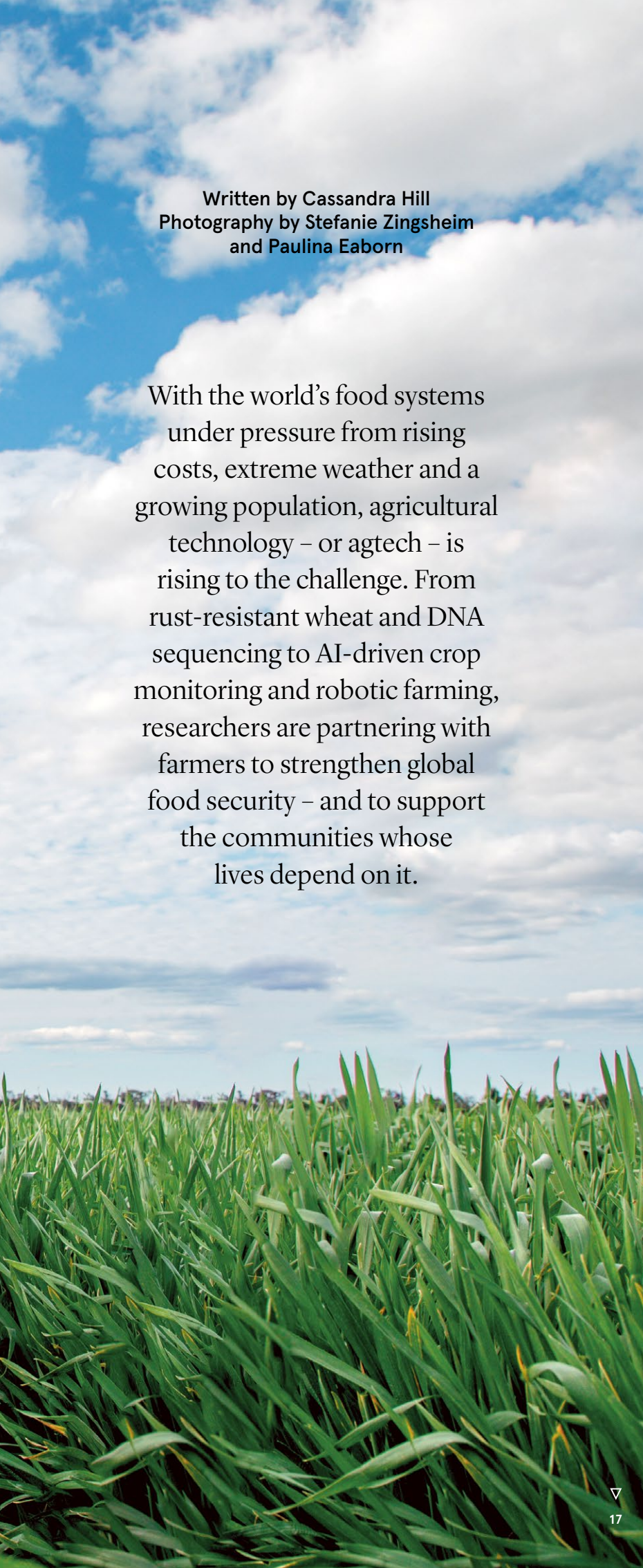
Hear more from our Alumni Award winners, and learn more about the awards

# *Reaping the benefits*

**The farm tech behind  
tomorrow's harvest**



Farmer Damien Scanlan contributes his expertise to University of Sydney research that's harnessing genetics to boost wheat's natural resistance to rust and heat



Written by Cassandra Hill  
Photography by Stefanie Zingsheim  
and Paulina Eaborn

With the world's food systems under pressure from rising costs, extreme weather and a growing population, agricultural technology – or agtech – is rising to the challenge. From rust-resistant wheat and DNA sequencing to AI-driven crop monitoring and robotic farming, researchers are partnering with farmers to strengthen global food security – and to support the communities whose lives depend on it.

➤ At the University of Sydney's Plant Breeding Institute on the semi-rural outskirts of southwestern Sydney, Associate Professor Peng Zhang and her colleagues move between shelves stacked with thousands of cardboard boxes. Inside are seeds – wheat, oats and barley – a kind of crop library.

In another area, seedlings grow in controlled conditions in more than 130 'microclimate rooms', and in yet another, wheat rust spores dating back to the 1950s are preserved in vats of liquid nitrogen.

"Rust is a bit like the COVID of the crop world," explains Peng, a lead researcher at the University's Australian Cereal Rust Control Program. "It attacks cereal crops, like wheat, and can evolve rapidly and travel vast distances, even crossing continents."

In fact, wheat rust – a group of three different fungal diseases – causes global losses of 15 million tonnes each year.<sup>1</sup> And with wheat providing around 20 percent of our daily calories and protein worldwide,<sup>2</sup> and nearly 900 million people currently facing severe food insecurity,<sup>3</sup> as one of the world's major wheat exporters the need to protect the health of Australia's wheat crop has never been more urgent.

"We get rust samples sent from farmers, pathologists and breeders all over the country, along with GPS locations," Peng says. "We trace the epidemiology, identify the rust strain, and analyse the risk level to crops, spotting new variants as they evolve."

While some of the groundwork might seem low-tech, it's working hand in hand with high-tech innovation.

In the lab, researchers extract DNA and map rust-resistant genes, developing molecular markers to find rust-resistant traits. "We're not using GMOs [genetically modified organisms]," Peng clarifies. "We're using genetics to find natural resistance in wheat and its wild relatives, and breeding those traits into commercial varieties to get them into farmers' fields."

These crops fight rust without relying on fungicides, which can harm the environment, lose their effectiveness over time and leave residues in grain that risk its rejection for export.

## TECHNOLOGY THAT TRANSFORMS THE FIELD

At the forefront of innovation, the University is using genomic prediction to forecast how plants will perform in specific environments – before they're even planted.

“Traditionally, you would plant, wait a season, then evaluate,” explains Professor Richard Trethowan (BSc (Agriculture) '84, PhD '89), Director of the Plant Breeding Institute and an expert in wheat breeding with genetics and international agriculture. “With genomic tools, much of that happens in the lab. It's faster, and more precise.”

The researchers pair this with high-tech ‘phenotyping’ – observing the interaction between a plant's genetic make-up and its environment – in real-world trials.

Instead of manual observations, drones and ‘phenomobiles’ – robotic vehicles equipped with cameras and sensors – can now capture high-resolution images in the field, enabling faster identification of stress-resistant varieties.

Developed by Professor Salah Sukkariéh and his team at the Australian Centre for Robotics in the Faculty of Engineering, phenomobiles measure how crops respond to diseases like rust, as well as to drought and heat. This data can then be used to predict which varieties will thrive under different environmental stressors.

“So it's ensuring we get the right genetics in the right place,” Richard says. “We're on the cutting edge here. The tools we're developing today will become standard in the future.”

## FROM THE LAB TO THE LAND

All this research isn't happening in a vacuum. Wheat and chickpea farmer Damien Scanlan, who farms near Goondiwindi on the NSW–Queensland border, is among the growers playing a key role in the development of this research.

Every few months he makes the 200 kilometre trip south to the University's state-of-the-art facility in Narrabri, on the northwestern plains of NSW.

“We go there with all kinds of questions,” Damien says. “We talk with Richard, with the University wheat people, pathologists and other breeders.



Professor Richard Trethowan and Associate Professor Peng Zhang examine wheat growing at the University's Plant Breeding Institute

We toss around sometimes a few wild ideas. And they'll tell us, ‘That's tricky,’ or, ‘That's doable.’”

Damien and three other farmers formed their own company, Rebel Seeds, to deliver new, high-yielding seeds specifically suited to their region.

“Stripe rust is a big issue affecting wheat crops at the moment,” Damien says, “and as springs get hotter and arrive later, many varieties are struggling to cope.

“We want a wheat that handles the changing circumstances we farmers find ourselves in. We're aiming for low-carbon, low-cost, high-yield, resilient systems. When you don't have to spray for rust, you save money, burn less fuel, and it's better for the environment. That's a win all around.

“So it's not just blue-sky research – it's almost immediate. The University has turned out a lot of work that is immediately usable to growers, in a very user-friendly format.”

## BUILDING RESILIENCE OVER 100 YEARS

Scientists at the University of Sydney have been working to identify emerging wheat rust strains for more than 100 years. Building on the work of pioneering

agricultural scientist William Farrer, in 1921 Walter Lawry Waterhouse (BSc (Agriculture) 1914) identified the first wheat rust strain in Australia.

Today, Professor Robert Park has led the Australian Cereal Rust Program since 2003, as the Judith and David Coffey Chair in Sustainable Agriculture, supported by a \$4 million philanthropic gift. He says the program has played an instrumental role in protecting Australia's wheat industry – thereby making a significant contribution to feeding the world.

## ROBOTS ARE COMING TO A FARM NEAR YOU

ROBOTIC FARMING IS NO LONGER IN THE REALM OF SCIENCE FICTION – IT'S HAPPENING RIGHT NOW.



1. Associate Professor Peng Zhang examines seeds stored at the University's Plant Breeding Institute.
2. Professor Robert Park has led the way in identifying wheat strains at the Australian Cereal Rust Control Program for two decades.
3. Professor Richard Trethowan and Associate Professor Peng Zhang with the 'phenomobile' at work in the fields.
4. Wheat seeds on file.



about \$1 billion every year by preventing rust epidemics – and it's estimated that the University's research group contributes to around 60 percent of this.<sup>4</sup>

### GAME-CHANGING HYBRID WHEAT

In 2025, the Plant Breeding Institute continues to push boundaries. Richard says its latest innovation – hybrid wheat – is set to increase yields and change how we supply wheat to the world.

"Hybrid wheat has been the 'holy grail' of wheat breeding for many years," he explains, "and we're now at the point of commercialising our system globally – to produce it on a really large scale."

After 30 years of research, the team has created a genetic system that prevents wheat from self-fertilising. This enables it to be cross-bred for desired traits, such as rust, heat and drought resistance.

"Hybrids are more stable – less impacted by the vagaries of climate," Richard says. "It's a breakthrough

for genetic technology, using natural diversity, so there's a lot of excitement around this."

He adds that while it's great news for Australian farmers, the biggest impact will be for people in countries facing increasing food insecurity.

"We're working to make our technology freely available in the developing world, by engaging with local governments, scientists and farmers in Pakistan, Ethiopia and Bangladesh."

The future of farming, it seems, is rooted in centuries-old seeds and rust spores, cutting-edge innovation, and growing collaboration between researchers and communities around the world.

"What's happening in Australian paddocks today has global implications, and the University's work is part of a larger solution," Richard says. "It's a kind of arms race against evolving threats. But with technology, we're staying one step ahead." ●

"Researchers have so far mapped around 240 resistance genes to three wheat rusts [leaf, stem and stripe rust], and cloned about 40 genes," Robert says, "all of which have enabled scientists to introduce desirable traits more quickly.

"Australia sells around 70 percent of its wheat overseas, so if we have problems with rust, that impacts through reduced exports and less grain for people to buy and to eat."

Robert says that rust-resistant wheat varieties are saving Australian agriculture

Professor Salah Sukkarieh (BE '97, PhD '00, GradCertEdStudies '03) at the University's Australian Centre for Robotics is leading the charge, developing AI-powered, self-driving farmbots that can autonomously monitor crops, detect pests, locate livestock – and support agricultural and environmental research.

"We need smarter, greener solutions – and that means putting the right technology in the farmers' hands," Salah says.

Designed to run 24/7, these energy-efficient machines are helping farmers to do more with less – boosting productivity and overcoming labour shortages. Equipped with specialised sensors and real-time data-gathering tools, bots with names such as the Digital Farmhand, Swagbot, RIPPA and Ladybird, run on electricity and solar. Their development is supported

through industry partnerships and by the philanthropy of individual donors.

"The aim is to make robotics practical and affordable – even for small operations," Salah explains. That includes growers around the world. "We're now working with women and youth farmers in Cambodia, trialling smart mechanisation, AI and robotic tools to improve yields and resilience in the face of climate and resource challenges."

With the global population now over 8 billion, innovative, sustainable farming solutions have never been more urgent. This work is helping farmers to grow the food the world needs while protecting the planet for future generations.



2. Erenstein et al., "Global Trends in Wheat Production, Consumption and Trade," in *Wheat Improvement*, Springer, 2022.

3. The State of Food Security and Nutrition in the World 2024, United Nations, 2024.

4. Grains Research and Development Corporation, *Groundcover*, Issue 177, July-Aug 2025.

**How Australia's  
Aboriginal and  
Torres Strait Islander  
communities are  
ensuring food  
security for the  
next generations**

Caroline Deen (left)  
and Dr Simone Sherriff  
(right) are exploring  
community-led solutions  
to address food insecurity  
in Aboriginal and Torres  
Strait Islander communities

# *Feeding the future*

Written by  
Cassandra Hill

Photography by  
Renee Nowytarger

Amid the cost-of-living crisis, food insecurity is on the rise for many Australians. But for Aboriginal and Torres Strait Islander communities, accessing healthy, affordable food can be even more challenging. Two early-career researchers are exploring ways to tackle this inequity in Australia's food systems.

👉 Imagine paying \$10 a kilo for apples. Or \$7 for soup. For Aboriginal and Torres Strait Islander families living in remote communities, it's a daily reality. Many are paying more than double capital-city prices for groceries, which are often also in limited supply.<sup>1</sup>

But Dr Simone Sherriff (GradDipIndigHProm '13, MPH '17, PhD '24) says that food insecurity in remote Indigenous communities is about a lot more than just high prices and added freight costs. She also cites low incomes, lack of job opportunities, poor infrastructure, unsafe housing and systemic inequality – related to colonisation and disrupted cultural practices – which together limit access to affordable, nutritious food.

And it's not just a remote issue – similar inequities exist in regional towns and urban centres across Australia.

As part of her PhD, Simone collected data from Aboriginal families in the NSW Riverina region and in Campbelltown, on Sydney's outskirts, to build evidence of their experiences of food insecurity in non-remote settings. Believed to be one of the first qualitative studies of its kind, it aimed to ensure that Aboriginal voices were heard in food security discussions.

“A lot of Aboriginal families live in suburbs where they don't have any supermarkets, and they have to travel to major shops,” Simone explains. “Many families don't have a car, or can't afford rego or petrol. So they're having to get public transport and are walking to the bus and back with all their kids and groceries.”

Some people she interviewed had experienced racism on public transport, leaving them fearful. In urban settings there is also easier access to unhealthy foods and takeaway, and exposure to marketing particularly aimed at children.

Another study Simone worked on found that 96 percent of Aboriginal households in NSW struggled to afford food, triggering other health issues. This led to the development of a food planning tool to assist communities in discussing food security to help to identify solutions.

A proud Wotjobaluk woman, Simone started out as an apprentice chef, transitioning to the role of researcher through her work at a local Aboriginal health service. This inspired her to enrol at university – the first person in her family to do so. After completing a Graduate Diploma in Indigenous Health Promotion and a Master of Public Health at the University of Sydney, Simone was awarded the Turner PhD scholarship, made possible through the generosity of alumna Margaret Turner (MHS '94, BA '21).

### BREASTFEEDING AND BEYOND

Simone's PhD studies led to her current role as a Research Fellow at the University's Poche Centre for Indigenous Health, and initially to work on food security of a different kind – a breastfeeding pilot program back in regional Wagga Wagga on Wiradjuri Country, where she grew up.

Working with local Aboriginal mothers, she led the development of the Yalbilinya Miya ('learn together' in Wiradjuri) project, in collaboration with the Riverina Medical and Dental Aboriginal Corporation, the Poche Centre, and the Lowitja and Sax Institutes.

“The community had noticed that many Aboriginal mothers were starting to breastfeed in hospital but stopping soon after they were discharged, due to a lack of support,” Simone says. “For 65,000 years, Aboriginal and Torres Strait Islander women have sustained our babies through breastfeeding for the first four years and beyond of the baby's life. So we spoke with local mothers and Elders to understand recent experiences and what support actually helps.”

— **“A lot of Aboriginal families live in suburbs where they don't have any supermarkets, and they have to travel to major shops”**

— Dr Simone Sherriff



The World Health Organization (WHO) recommends exclusive breastfeeding for babies up to six months, and continued breastfeeding, along with complementary foods, for up to two years and beyond.<sup>2</sup> However, fewer than 87 percent of Aboriginal and Torres Strait Islander mothers initiate breastfeeding, with that rate reducing sharply to 30 percent between one and six months of age, due to a lack of culturally appropriate support.<sup>3</sup>

Simone says the women’s feedback revealed that their breastfeeding challenges were believed to be tied to the impacts of colonisation and historically high rates of child removals, which had contributed to the disruption of passing down of breastfeeding knowledge across generations.

“Some mums had never seen anyone in their family breastfeed, and felt isolated,” Simone says. “Others feared judgement or even child removal if they admitted struggling. There is also currently no Aboriginal-specific lactation training in Australia, and existing services are often expensive or considered culturally unsafe.”

In response, Simone worked with the community to develop a holistic breastfeeding program. It included weekly mums’ groups, Aboriginal health worker support, lactation-trained GPs, free pumps with breastmilk education, and a Facebook group plus after-hours phone support.



Support essential research like Simone’s. Give now to the University’s research priorities.

“We also held an on-Country breastfeeding photoshoot and exhibition to inspire more mums, and to bring visibility back to the practice of breastfeeding,” Simone says.

“In a few months, around 87 percent of the mums had reached their breastfeeding goals – which were usually to breastfeed for between six and 12 months – by being surrounded with the right care and support.”

The team has also received requests from other communities across NSW to share these initiatives.

### CLOSING THE FOOD GAP

Simone is now working with PhD candidate Caroline Deen to address the lack of food security data for Aboriginal and Torres Strait Islander communities, with funding from the University of Sydney’s Charles Perkins Centre.

Caroline, a proud Kamilaroi woman, has a background in nutrition and dietetics. “I’m visiting communities whose voices haven’t been heard in food security literature,” she says, “asking what they think should be measured.”

The pair are also collaborating with Māori researchers in New Zealand and are hoping to connect with Canadian First Nations researchers.

One issue they have come up against is what Caroline describes as the “highly inappropriate” application of a US-developed food security measurement tool – the USDA’s Household Food Security Survey Module – to the Australian context.

“It doesn’t capture the nuanced experiences of Indigenous peoples,” she explains. “It raised concerns, because it asks questions around not being able to feed your children, and that’s related to reasons that First Nations children were taken away in the past, so a lot of people didn’t feel safe answering those questions.”

Simone adds: “A key issue is we don’t even collect proper food security data in these communities. There’s a saying, ‘No data, no problem.’ But food insecurity has been a very big problem for a long time.

“I hope our work will inform monitoring and evaluation of food security – and, hopefully, the development of appropriate strategies and targets – to contribute to building more reliable food systems across Australia.” ●

## SAM RECOMMENDS



**Rob Harding-Smith**  
(Bec '99, LLB '02)

### Book that changed me

*How Brands Grow*, by Byron Sharp, was the first book I read that challenged the conventional wisdom of marketing, using the scientific method.

### Fave podcast

The closest thing I’ve found to some of my undergrad history lectures is *Empire* by William Dalrymple and Anita Anand. They’re brilliant storytellers, unpacking some of the worst (and most fascinating) chapters in modern history with wit and clarity.

### What music are you listening to?

I’m deep in my millennial dad phase of life. My preferences are The Strokes, The Chemical Brothers, and King Stingray. But let’s be honest, The Wiggles are almost certain to top my Spotify Wrapped for 2025.

### Biggest inspiration

Perhaps it’s no surprise, given my job, but for me it’s travel. It’s the greatest gift you can give yourself. It pushes your boundaries, forces reflection, and reminds you just how big and wonderfully strange the world (and Australia) is. And may I suggest your next holiday be somewhere in Australia?

### Best way to de-stress

Running, especially around Sydney Harbour. There’s something about the rhythm of movement against that extraordinary backdrop that clears the mind. When the light hits the water and the Opera House reflects the colours of the sky, it’s impossible not to feel lucky. I’m not thinking about work or to-do lists. It’s the closest thing I’ve found to a reset button. ●

**Rob Harding-Smith is the General Manager of Strategy and Analysis at Tourism Australia and a marketing, data and politics nerd who (naturally!) loves travelling around Australia.**

1. CHOICE media release, 31/10/24  
2. World Health Organisation, 2025  
3. National Aboriginal and Torres Strait Islander Health Survey 2022–23

# THE FUTURE OF UNIVERSITIES

As the University's inaugural Vice-Chancellor's Fellow, Associate Professor Sophie Gee (BA '96) seeks to deepen public conversations about the purpose of universities. Drawing on 25 years' experience as a writer, researcher and educator at Harvard and Princeton universities, Sophie shares her insights for a renewed vision.

## 1. Why do universities matter in a changing world?

"Universities bring different voices, disciplines, perspectives and ways of understanding the world into one place – and they teach students how to become rigorous and brave problem solvers. Historically, universities have been communities where knowledge is created collaboratively through respectful debate and unguarded discussion. In these times of overlapping crises – economic, political, environmental and social – these methods for making knowledge have huge value. And it's critical that universities keep doing this.

"Universities can teach people to discover deep values through learning and to make a positive impact. They can strengthen civic life by teaching students how to disagree productively.

"Recently I was involved in selecting the writer-in-residence for the Charles Perkins Centre, which works on combatting chronic disease and improving global health. That sounds like a task for scientists and doctors. But we've learned that being creative, telling stories and hearing imaginative ideas is crucial to making knowledge breakthroughs and to compassionate human care.

"Universities bring scientists, creative artists, engineers and conflict experts, etcetera, together – and students learn from this. That doesn't happen in other places."

## 2. What is the value of the humanities?

"Solving challenges like climate change, AI or global inequality isn't just about STEM (science, technology, engineering and mathematics). Human-centred thinking also matters more than ever. In short, if we want humans to survive, we need the humanities to make it happen.

"History, literature, law and philosophy teach us to pay deep attention, to make good arguments with incomplete information, and to understand how emotions work. The arts show us that care and compassion should be at the heart of any real change. They remind us that even though our emotions can be tough, they connect us, and they're how we move forward together.

"Bold initiatives like the University's Net Zero Institute and Biomedical Accelerator are also opportunities for STEM and the humanities to create trust and hope, so that we can take the big leaps needed to address big problems courageously."

## 3. How can universities and communities build meaningful relationships?

"Some of the most exciting university research today involves students and teachers partnering with communities to tackle real-world issues. I'm learning about collaborations with schools, hospitals, advocacy organisations, First Nations and

rural communities, where new ideas about co-design are making a difference.

"Campus Collaboration, the project I co-lead, is working from the idea that research and teaching across the entire University can answer the challenges of building trust and a reinvigorated sense of purpose.

"This presents powerful opportunities for philanthropy, helping universities to pursue long-term civic goals and to rethink our social landscapes. It's about redefining what it means to be human in a technological age.

"The superficial perception that universities are vending machines for degrees or places where researchers patent discoveries to 'fix' things is a very thin understanding of their depth and richness. Universities are really a community of communities.

"To me, community-engaged research is how universities will sustain purpose and connection going forward. This doesn't mean we throw away historically important disciplines, like ancient history or literature. It means that we rethink how we use our knowledge of the past to make a difference in the present." ●

## How a son's tribute to his father revived a tennis legacy

# FROM MEMORY TO MATCH POINT

When John Colvin came across a photo of his father, Dr Clifford Stirling Colvin, pictured at the University of Sydney's tennis pavilion in 1924, it brought back memories. It also inspired a heartfelt donation.

Written by Cassandra Hill

👉 John Colvin AM (BEc(Hons) '73) had been searching for a way to honour his late father.

A champion tennis player and internationally recognised eye surgeon, Dr Clifford Stirling Colvin MBE (MB, ChM '26, DOMS, FRCS, FRACS) studied ophthalmology at Birmingham Hospital in England and worked with leading surgeons in Vienna, pioneering new treatments and operations. He served as a major in the army during most of World War II, in the Middle East, Crete and New Guinea. He also raised his three children after his wife, Jean, passed away.

"As I got older, I realised what a wonderful person and father he was," John says. "And I don't think I really thanked him enough."

Clifford was the captain and president of the Sydney University Lawn Tennis Club from 1922 to 1926, and a committee member for nine years. He played in the winning NSW Linton Cup team, and at the Australian Open in 1925 and 1928, then at Wimbledon in 1929, making it through to the second round. He also won the Northern Ireland singles competition that year.

### AN ENDURING IMPACT

In recent years, John had found a photo of his late father from 1924. Clifford

and his team were pictured outside the University's lawn tennis pavilion, after having won the Intervarsity Niall Cup.

Later, while visiting his engineering student son, Alistair, on campus one day, John walked past the tennis courts and went to take a look at the pavilion.

Built in the 1920s, the University's tennis courts are located in a heritage-protected area of the Camperdown campus. The club has been one of the cornerstones of the University's sporting culture and excellence since 1885. However, the pavilion had become rundown and was unsuitable for players' use and guest events.

When John saw the place where his father had spent so much time in its heyday, he suddenly knew how he wanted to create a lasting tribute to him.

The Colvin family's donation has allowed for the complete refurbishment of the pavilion's kitchen and clubhouse, including restoring its floor to its original beauty. Completed over two years, the renewed tennis pavilion was opened as the 'Clifford Colvin Room' in April. It's now a vibrant hub for players – including those in our Elite Athletes Program for tennis – and for connection and community.

### A TENNIS TRADITION

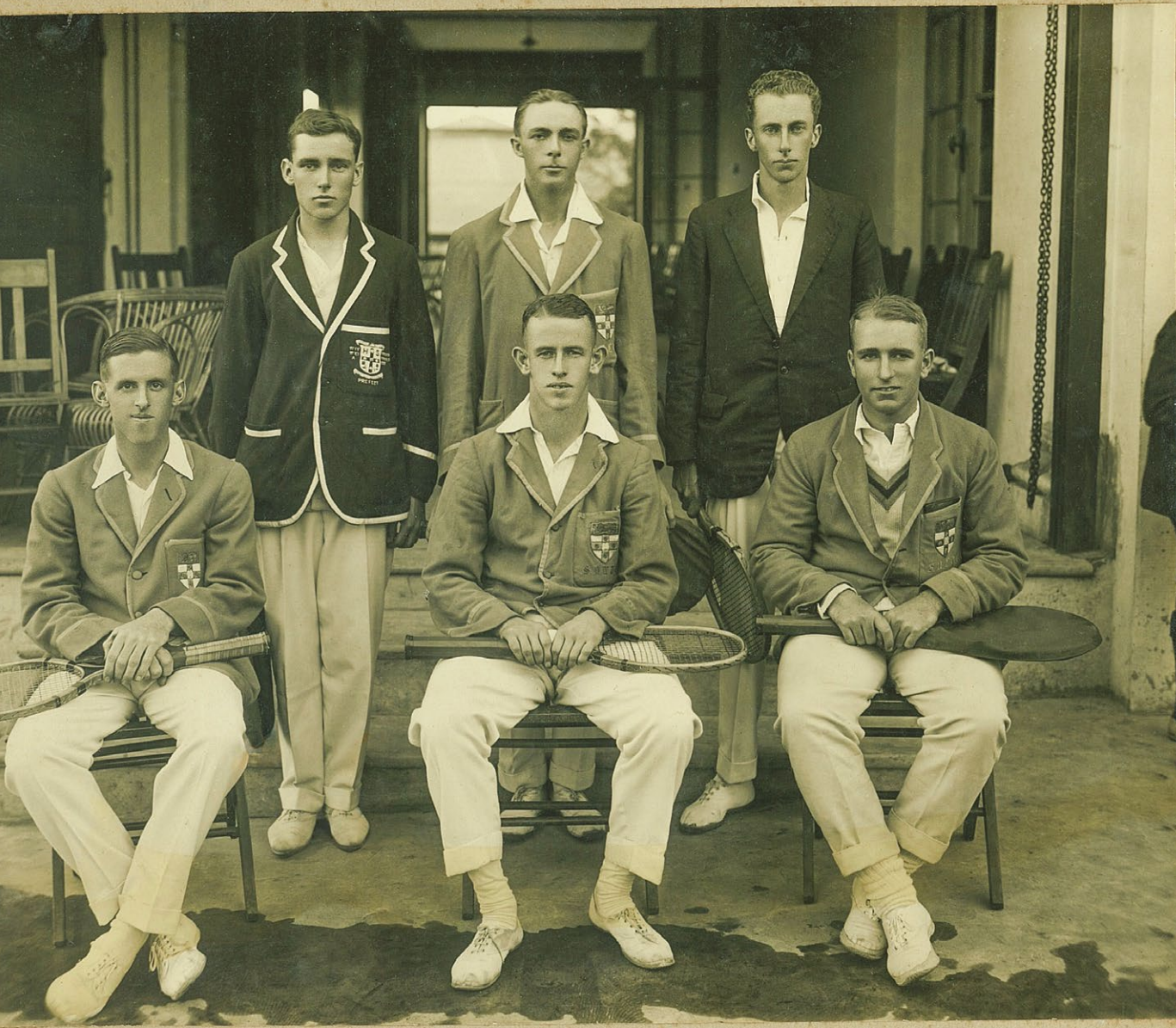
Following in his father's footsteps, John also studied at the University of Sydney and

Clifford Stirling Colvin (back left) and his team, after winning the 1924 Niall Cup. Photo: University of Sydney Lawn Tennis Club

played tennis in the Wesley College Rawson Cup team for four years. While studying law at the University of Oxford, he also competed in that university's Blues tennis team. On returning to Australia, he forged an illustrious career as one of Australia's leading industrial and employment lawyers, later becoming the managing director of the Australian Institute of Company Directors. He was also an Adjunct Professor



Inter - University Tennis. 1924.  
 Sydney University Team, Winners of Niall Cup.



C.S. Colvin ..... J. Garvin ..... R. Hughes.  
 G. Todd ..... G. Halliday (cap<sup>t</sup>) ..... L.S. Aitken.

*Melba Studios*

in the Executive MBA at the University's Business School between 2015 and 2020.

The family's love for tennis continues in the younger generation, including through John's daughter Emily and son Alistair, who now represents Wesley College himself in the Rawson Cup tennis team – and is part of our Elite Athletes Program for soccer. John's wife, Dr Robyn Smiles (MBBS '89) also studied medicine at

the University of Sydney.

"University life is about more than academics," John says. "And being involved in sport really enriches student life and creates a sense of being part of the University community."

For John, the revitalised pavilion is not only a 'living' tribute to his father, but also a place where future generations can gather, learn, play tennis and enjoy themselves.

"It's important for people to know that when they come to the University of Sydney, they're part of a history which is really precious," he notes. "Clifford Colvin is a great example of that history and of the alumni that come through this university and go on to achieve incredible things.

"Clifford has always been a role model for me – and hopefully his story, and this place, will be a role model for others." ●

# ALUMNI SPOTLIGHT

More stories of alumni at work around the world.



**DR DARRYL HODGKINSON**  
MBBS '72

Darryl is a plastic and reconstructive surgeon with more than 30 years' experience, practising in both the United States and Australia. In 1993, he founded Operation Restore Hope, a charity providing life-changing surgeries for children in the Philippines with cleft lip, cleft palate and other craniofacial conditions. To date, the charity has performed more than 4000 surgeries, combining Darryl's medical expertise with a lifelong commitment to giving back. The 2013 winner of the Sydney Hobart Yacht Race, Darryl also has a passion for sailing, skiing, scuba diving and underwater photography. His special interests include collecting Japanese lacquerware, Lalique car mascots and rare books on anatomy and surgery. He and his wife Katherine have recently donated their collection of books to the Rare Books and Special Collections at Fisher Library in hopes of benefiting academics for generations to come.



**GREER BANYER**  
BSc '01, BTeach '07,  
MTeach '10

Driven by a desire to make a difference, Greer has built a diverse career in research, education and public service. As a manager in road safety technology at Transport for NSW, she helps to improve safety outcomes for road users across the state. Having received a bursary from the University of Sydney to assist with her undergraduate studies, Greer is keen to support students who need financial help to complete their studies. Greer swims year-round off Sydney's southern beaches and, as a mother of two daughters, is committed to encouraging more girls into STEM. She also serves on the Board of Trustees for the Lizard Island Reef Research Foundation, supporting research on the Great Barrier Reef.



**PROFESSOR RICHARD**  
**'RICK' LECOUTEUR**  
BVSc '75, DVSc '21

Rick's childhood in Australia sparked a love of animals that grew into a lifelong career as a specialist veterinary neurologist, neurosurgeon and educator. He has held academic roles including Associate Professor at Colorado State University and Professor at the University of California. In retirement, as Director of Education for Veterinary Expeditions, he shares the wonders of wildlife and photography in remote regions. In 2024, he published *Nasty Names Are Hurtful*, a children's picture book exploring the impact of human-induced environmental changes on the Australian white ibis. Rick is a proud supporter of the University of Sydney School of Veterinary Science, because he admires the dedication, intellect and passion of the faculty that shaped his education and inspired his career.



**PIADORA RAHME**  
BSc '22, LLB '24

Growing up as an only child raised by a single mother, Piadora saw firsthand the challenges of navigating the family courts system during a custody battle. Her experience inspired her to help others to work through similar difficulties. She recently completed an associateship at the Federal Court of Australia, and is currently a lawyer at Corrs Chambers Westgarth. In 2023, Piadora was a finalist for the Lawyers Weekly Law Student of the Year Award. As a scholarship recipient, she is passionate about ensuring equal access to education for all, supporting equity scholarships, volunteering as an English language tutor for refugees and asylum seekers, and mentoring law students at the University.



Share  
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story  
with us



**CHRISTOPHER FONG**  
BA, BCom '03

As co-founder of Key, a Silicon Valley venture-backed start-up harnessing artificial intelligence to redefine professional networking, Christopher connects alumni from organisations including Amazon, Meta and Microsoft. Prior to launching Key, he spent eight years at Google in New York and California, focusing on partnerships and sales, and founded Xogler, a global Google alumni platform that has more than 35,000 members, and Xogler Ventures, which has invested in 100 start-ups. A transformative year abroad at Cornell University during his studies at the University of Sydney deepened Christopher's appreciation for global connections – a value that continues to shape his work. He is passionate about helping others to access the life-changing opportunities of international exchange, and actively supports the University's study abroad program.



**ISABELLE TOLAND**  
BSc(Arch)(Hons) '02, BArch '04

As the co-director and co-founder of Aileen Sage Architects, Isabelle leads innovative design strategies for projects ranging from complex urban precincts and remote regional sites to large-scale public art installations. The vibrant student life at the University of Sydney fostered Isabelle's curiosity and, prior to co-establishing her firm in 2013, she broadened her knowledge through research, residencies and internships in Paris, Beijing and Berlin. She is passionate about helping others to access the same opportunities for research, creative and critical thinking, and open and supportive dialogue with peers. Alongside her practice, Isabelle also teaches at architectural schools across Sydney, and serves on advisory panels for the University of Newcastle, the Museum of History NSW, and Infrastructure NSW.



**NEIL SMITH**  
BA '73, MTM '95

Neil is an entrepreneur focused on urban transportation and energy transition. His master's degree in transport management at the University of Sydney Business School's Institute of Transport and Logistics Studies paved the way for the formation of a partnership in the 1990s dedicated to outsourcing Australian public transport services. Over the next two decades, his company expanded nationwide and to the United Kingdom and Singapore. Alongside this, Neil founded the Relay Trust, a charity delivering leadership training in sub-Saharan Africa. Recognising the role that education has played in his journey, Neil has partnered with the University to support research, education and advocacy around transport's sustainable energy transition, as well as to empower Indigenous entrepreneurs.



**DR ELAINE YEE-SING WONG**

**MHlthSc(Ed) '05**  
A passionate health professional and educator, Elaine has spent more than two decades inspiring healthier and more sustainable communities. She has mentored future healthcare leaders, led health initiatives worldwide, and championed wellbeing through education and advocacy. Her work spans delivering community health projects across the Asia-Pacific, building partnerships, and empowering people to live better lives. Now a Senior Lecturer in the School of Sports and Health at Republic Polytechnic in Singapore, and convenor of the University of Sydney's Singapore Alumni Network, Elaine continues to shape the next generation of changemakers. An avid traveller and scuba diver, she honours the guidance of her own mentors and believes education is a powerful gift that should be used to create lasting impact worldwide.

# ASK SAM

Have a question that's been keeping you up at night? We have experts at the University who can answer it for you. No question is too obscure. Email yours to [sam@sydney.edu.au](mailto:sam@sydney.edu.au)

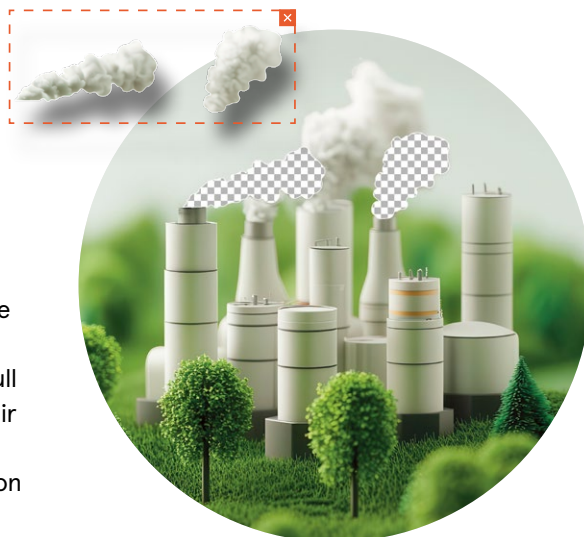
**Q.** Can we really remove carbon dioxide from the air, and will it make any difference?

**A.** "There's now more than one trillion tonnes of excess carbon dioxide (CO<sub>2</sub>) in the atmosphere, and this can remain in the air for up to 1000 years. Imagine if we could pull billions of tonnes of CO<sub>2</sub> directly from the air and transform it into sustainable fuels and slow climate change. This isn't science fiction – it's what we're building right now.

Direct air capture (DAC) is a technology that extracts CO<sub>2</sub> directly from the atmosphere. In simple terms, we move air through a chemical solution that reacts with the CO<sub>2</sub> in the air. In this way we obtain CO<sub>2</sub> as a pure gas that can then be either stored or used to produce carbon-based products, including jet fuels, carbon-neutral building materials such as concrete and plastics, carbonation for beverages, and 'green' chemicals.

DAC involves removing CO<sub>2</sub> from the air that surrounds us, which means extraction modules can be built anywhere – unlike the perhaps better-known 'point-source carbon capture', which needs to happen at the site where the unwanted carbon is generated, such as at a fossil-fuel power station or factory, before it reaches the atmosphere. So DAC can also address CO<sub>2</sub> emissions from more dispersed sources, such as cars and planes.

Right now, capturing CO<sub>2</sub> uses huge amounts of energy, making it expensive, slow, and not scalable. What's unique about our approach is that it's not energy intensive. By the end of the year, we want to be able to pull in 10 tonnes, then continue scaling up until we're pulling in megatonnes of CO<sub>2</sub> from the air, every year.



We're essentially building the equivalent of an enormous forest, but a forest that doesn't burn, can't be chopped down, and can pull in more CO<sub>2</sub> per square metre than any forest on earth.

As a deep tech start-up it can be difficult to secure seed funding from industry, so the University of Sydney has been vital in helping us to raise the funds needed to get going and bring our innovation to market.

We're building an industry that's on par size-wise with the oil industry, but in reverse – taking carbon from the air instead of putting it there.

What keeps me going is knowing we can solve this problem within my lifetime – and that I can be part of that history."



*Dr Sam Wenger (PhD '25) is the founder and CEO of Dac Labs, a University of Sydney spin-out company. His research focuses on developing low-cost, scalable, energy-efficient systems to remove CO<sub>2</sub> from the atmosphere, turning pollution into sustainable new products and helping to improve Australia's energy and economic resilience.*

## Connect with your alumni community



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Explore the first comprehensive survey of JW Power's art, Australia's leading avant-gardist of the interwar years



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Professor Eddie Woo,  
(BEd(Sec)(Hons) '08),  
YouTube maths tutor  
and Professor of  
Practice in the School of  
Education, with student  
Loretta Payne, the only  
female student from her  
high-school graduating  
year to pursue a STEM  
degree at university

