SYDNEY ALUMNI MAGAZINE

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SAM

THE UNIVERSITY OF SYDNEY

Shaping the future

The 2023 Alumni Awards winners

THE UNIVERSITY OF SYDNEY

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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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SAM DIGITAL
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A NEW ERA FOR OUR ALUMNI COMMUNITY

As President of the Alumni Council, I am thrilled to extend a warm and heartfelt welcome to our alumni peers. It is with immense pride that we present to you the latest edition of *SAM* and celebrate the winners of the University of Sydney's 2023 Alumni Awards.

These annual awards honour the real-world impact of our alumni. We take the opportunity to hear about their past achievements and what drives them to pursue better – for themselves, their communities and our world.

This is a particularly exciting year for us on the Alumni Council as we launch a major new festival and prepare to deliver an alumni benefits program.

Join us on 2 December at the Alumni Festival for a unique opportunity to experience the magic of campus as you've never seen it before. *Explore* behind the scenes, *connect* with old classmates, and *discover* our world-leading research through hands-on experiences.

Our commitment to developing an enduring global community also comes in the form of a new suite of alumni benefits. In 2023, we have worked tirelessly to bring you benefits that will enrich you both professionally and personally. Visit sydney.edu.au/alumni to discover more.

In these pages, read of the outstanding contributions of our graduates and scholars – like Kristy Chong OAM, who is breaking down the barriers to period equity, and Dr Mike Seymour, who is helping to positively shape the world through digital humans and artificial intelligence (AI).

As you hold this magazine in your hands, the Alumni Council hopes it connects you to treasured moments of yesteryear and aspirations of what lies ahead.

Thank you for being an integral part of our story.

Ehssan Veiszadeh (BSc(MolecBiotech) '08)
on behalf of the Alumni Council

Learn more about the Alumni Council and its role in supporting the Alumni Awards.

Photo: Michael Amendolia

SCIENCE

Where have all the Christmas beetles gone?

An intrinsic part of Sydney summers past, Christmas beetle sightings have become rare in recent years, with habitat loss the likely cause. To investigate this anecdotal decline, the University of Sydney conducted a nationwide Christmas beetle count, with the support of citizen scientists. And it's revealed some exciting results – most notably the recording of several 'missing' species not seen for decades. All 35 known varieties were documented among 6592 sightings, including *Anoplognathus multiseriatus*, last seen in the 1970s. Entomologist Associate Professor Tanya Latty hopes this data will be the first step towards ensuring that future generations get to enjoy these uniquely Australian beetles.

BECOME A VOLUNTEER
Register your interest to become a citizen scientist

MEDICINE

Transforming melanoma treatment

Clinical trials of a personalised cancer vaccine have revealed promising results for preventing the recurrence of melanoma in high-risk patients. The vaccine uses an mRNA therapy – similar to COVID vaccine technology – based around the patient's personal melanoma. Early findings indicate that the chance of melanoma recurring was reduced by 44 percent, with a larger trial set to go ahead in 2024. Melanoma Institute Australia also has a team of clinician scientists at the University of Sydney's Charles Perkins Centre collecting melanoma tissue at diagnosis and working on novel drug therapies. In fact, Co-Medical Director Professor Georgina Long AO (BSc '93, PhD (Science) '96, MBBS '01) FRACP, FAHMS and the team are pushing the envelope in other cancers. They are using the learnings from trials of neoadjuvant immunotherapy (i.e. before complete surgical removal of cancer) and personalised cancer vaccines in melanoma to treat brain cancer in one of their own, Co-Medical Director and previous Alumni Award winner Professor Richard Scolyer AO (PhD (Medicine) '06).

DR CHRISTOPHER PEPIN-NEFF

(MPP '08, PhD (Arts) '14)

Social scientist and public policy lecturer Dr Pepin-Neff researches policymaking on heated topics, such as shark attacks.

What sparked your interest in sharks?

I saw *Jaws* when I was eight, then borrowed all the shark books in the library. It had me asking odd questions for my age, like, 'Are sharks really villains?' I didn't think so, so I made a 10-foot cut-out of a great white for above my bed.

What are common misperceptions?

In about 40 percent of reported shark attacks, there's no injury to the person. Because there are more people doing more things in the ocean, for longer, the number of bumps and close encounters are really quite high.

How did university help this career path?

The University of Sydney made an investment in this (rather odd) research, giving me a chance to carve a new niche in social science research, supporting my PhD in 'the politics of shark attacks' as a research question worth investigating.

How have you influenced policy?

I've worked to rename shark 'attacks' to more accurately capture what's actually going on in the ocean. I've worked in policymaking in Australia, Réunion Island, South Africa and the US, including on a public advisory about sharks, modelled on Cape Town, and the way they try to shift how the public sees the beach as a dynamic, wild ecosystem. As I say, 'We are in the way, not on the menu.'

Shaping the future: The 2023 Alumni Awards

As told to Alex Johnson

Photography by Stefanie Zingsheim, David Woolfall and Hailun Ma

Our annual Alumni Awards celebrate the extraordinary impact of our diverse, global community of graduates. Our six winners introduce themselves and explain what drives their courage, creativity and compassion, in their own words.

ALUMNI AWARD

Professional Achievement

Dr Elizabeth Elliott

AM FAHMS FRSN FRACP FRCPCH FRCP

MBBS ’80, MD ’92, MPhil (Public Health) ’09

Distinguished Professor, Paediatrics and Child Health, Faculty of Medicine and Health

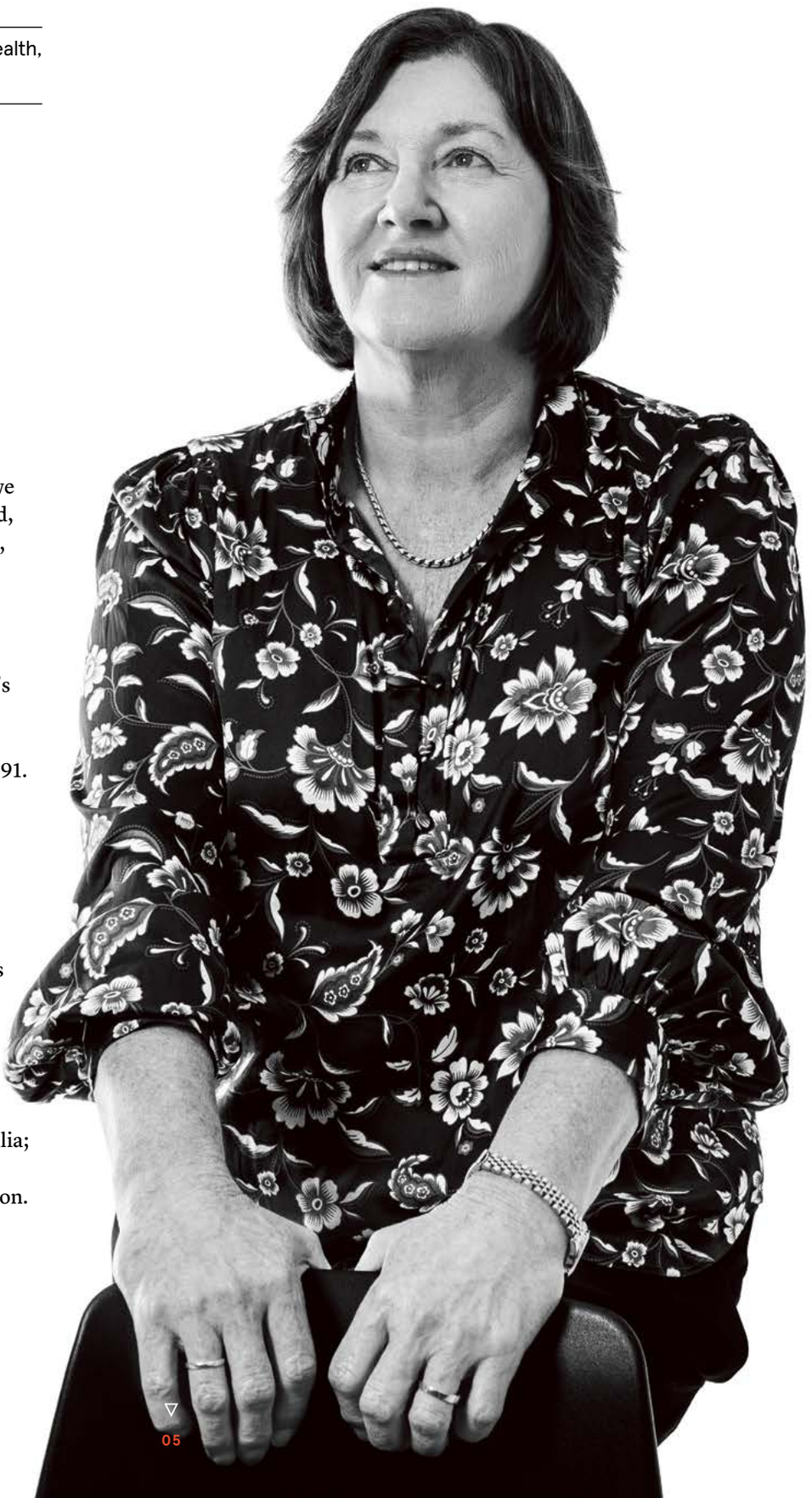
Professor Elizabeth Elliott’s professional career in paediatrics has spanned international borders and shaped public health policy.

“I have an intergenerational connection to medicine at the University of Sydney through my parents and grandfathers. My three children studied here too. My father worked in obstetrics at Royal Prince Alfred Hospital. On Saturdays, we accompanied him on his rounds. If we were good, he would take us to the nursery to see the babies, then to watch sport on the University oval.

I’ve always loved working with children. In paediatrics you’re not just treating the child; you’re managing the family. Although it’s distressing to see extremely sick children, there’s a real opportunity to have an impact for the rest of people’s lives.

I’ve been employed by the University since 1991. An academic job gives me more flexibility than I would have as a specialist constantly on call. I founded the Australian Paediatric Surveillance Unit in 1993, providing a national monthly snapshot of rare childhood conditions. My work with foetal alcohol spectrum disorder led to the development of a national strategic plan and has international impact. I’ve worked with remote Aboriginal communities in Western Australia, to give youth a voice in health services; in Vietnam, developing programs to improve the health of children with disability with the World Health Organisation and UNICEF Australia; and as a consultant with the Human Rights Commission on children in immigration detention.

Medicine offers so much variety, and we can be real advocates for our patients. Taking risks and embracing opportunities are often the most fulfilling parts of your work, and the most beneficial to others.”



ALUMNI AWARD

International Achievement

Georgia Dawson

BA ’98, LLB, ’00

Senior Partner, Freshfields Bruckhaus Deringer

An early role as a legal aide in Vietnam led Georgia Dawson to a groundbreaking international legal career – and her appointment as the first woman to lead Freshfields Bruckhaus Deringer.

“My current role, leading one of the world’s oldest law firms, is an incredible privilege and responsibility. I’m fortunate to be able to build on the work of many others in evolving our firm for the future, while continuing to have a positive impact on the development of the legal profession. It is rewarding to be part of reshaping approaches to accessibility, wellbeing and diversity, and I’m proud that my colleagues have an appetite to shift the balance and influence change in these areas.

Culture and customs, language and the business environment all play a role in influencing how you work when trying to support colleagues and clients around the globe. I am delighted to learn from many talented and passionate people every day, among colleagues, clients and in our communities. My studies at Sydney made an international career seem achievable and exciting. I have been lucky to live in Hanoi, London, Hong Kong, Canada and Vietnam, and work in many other jurisdictions. Working across borders provides many opportunities to learn new things and has taught me to never make assumptions about what someone means or how something ‘should’ be done.

International moves can be both daunting and exciting, and having a community around you makes a significant difference. In my experience, people always enjoy helping where they can – so ask questions and take up their offers of help.”

ALUMNI AWARD

Cultural Contribution

Imants Tillers

BSc (Architecture) ’73

Artist, curator and writer

An architecture degree allowed Imants Tillers to follow his natural artistic curiosity into a career as one of Australia’s leading contemporary artists.

“I was never going to be an architect. I got conscripted into the Army the first year and I was prepared to defer it by staying at university for a longer degree. We were encouraged to go to things at the Tin Sheds artspace and do some of our own work. It wasn’t an art school – they were just sheds at that stage. But there were a few would-be artists hanging around, and you need that when you’re a would-be artist.

When you look at great art, it inspires you. It reminds you that it’s worth being an artist. I’m quite influenced by Latvian-American artist Vija Celmins, who does very small paintings of the stars or the sea. Her work is painstaking and slow, and the work I’m doing now is quite slow. The key is really finding a process that fits you and gives you momentum to proceed.

Now I’ve got quite a large body of work, I have to think, ‘What am I going to do now?’ I don’t really want the current work to be the last thing I do. In the seventies I was trying to go from one brilliant idea to another. If you have an artistic process, you’re not trying to reinvent the wheel all the time. You’re not putting pressure on yourself to always be as clever as you once were. But I suppose change is funny like that. It’s not going to be dramatic – it’s subtle and incremental.”

ALUMNI AWARD

Innovation and Entrepreneurship

Dr Stephen Hicks

BSc ’99, PhD ’05

Neuroscientist turned tech entrepreneur

A mind for innovation led Dr Stephen Hicks to create revolutionary smart glasses that are changing the lives of people living with visual impairment.

“I was fascinated with the experience of sight and consciousness even before university. I remember getting distance glasses when I was about 10, and looking up to see the stars as pinpoints for the first time. I think I fell in love with vision and astronomy that same night. Over time I became interested in the puzzle of why we see the world as we do. The more I learned about it, the deeper the puzzle went.

My Bachelor of Science at Sydney gave me the opportunity to explore a range of sciences and philosophy, which eventually led me to a PhD in neuroscience. The openness of the academic community at Sydney showed me how easy it was to knock on doors and build connections, which was a superpower when I went abroad. After running a successful research lab in human and computer vision at Oxford, I started my first healthtech company in 2016 to commercialise smart glasses for low vision. Entrepreneurship has allowed my work to have more impact on people’s lives and continue innovating my research and design.

Innovation can be in any sphere, including art, music, society and technology. To me, innovation is about identifying an area that you are passionate about, being realistic about what can be achieved, and finding the team and resources that you need to make it happen.”

ALUMNI AWARD

Service to Humanity

Naomi Malone

BA ’94, LLB ’96

Historian, disability advocate and author

Naomi Malone’s love of history and her lived experience with a disability has made her a supportive advocate for inclusion and accessibility.

“Over the years there has been broad improvement in the societal living conditions of Australians with disability. However, systemic cultural change occurs at a glacial pace, and more needs to be done to shift towards the social model of disability, which centres on identifying the barriers that people with disability experience and addressing them.

The University of Sydney played a significant role in making education more accessible to me as a profoundly deaf person who uses lip-reading and speaking to communicate. Initially, after watching the lecturer speak, I would borrow my classmates’ written notes and race across the lawn of the Quadrangle to photocopy and return them quickly.

In my fourth year of Law, lectures became significantly more challenging without adequate access to the spoken word. Upon informing the equity co-ordinator of what was needed, I was loaned a laptop, and a typist. I gained complete access to the spoken word and, importantly, I now had the typed notes – at last, no more photocopying!

I was a History major, and the adage ‘Those who do not learn history are doomed to repeat it’ rings true. My advice for students in a similar position is to develop self-advocacy skills: specify clearly what the barriers are and the solutions you need to meet your access needs. For people without a disability – be an ally. Give support, adopt a positive understanding of people’s lived experience of disability, and gain a grounded understanding of disability etiquette and peoples’ needs. Where there is access, there is inclusion.”

ALUMNI AWARD

Outstanding Achievements of Young Alumni

Margaret Zhang

BCom ’17, LLB ’18

Editor-in-chief, Vogue China

Our Young Alumni Award celebrates all that our exceptional younger alumni have achieved so early in their careers. At 27, Margaret was the youngest person in *Vogue*’s history to be appointed Editor-in-chief. To celebrate her award, she shares her thoughts on creativity, careers and combining her love of fashion with cross-disciplinary insight.

What advice would you give to young creatives who are looking to evolve their passions into a career?

“Creative careers are about discovery – figuring out your strengths and what you enjoy by a process of elimination; connecting with like-minded creatives to collaborate and experiment; reaching out to people you admire for advice; finding the skill set that you want to hone and develop; setting goals for the level of work you want to be producing; and being open to unexpected opportunities. Clear, distinct, honest creatives will always be rewarded in the long run – thinking too much about commercialisation or commoditisation too early will push you off track.”

Read more of our Q&A with Margaret and our talks with other winners.

ARTIFICIAL INTELLIGENCE

FACING UP TO AI

Written by George Dodd

It is hard to know all the changes artificial intelligence (AI) will bring to the world, but they'll no doubt be dramatic. The enormity of it all means AI can seem cold and intimidating, but that might change when it has a human-like face.

Photo: Matthew Vasilescu

Just imagine. A photorealistic digital human underpinned by generative artificial intelligence (AI) communicating with an actual human in real time. Sooner than you think, you won't have to imagine. This science fiction idea is fast becoming part of our AI future – but what would it look like?

Think about existing digital assistants like Siri or Alexa. Instead of being disembodied voices parroting pre-packaged phrases, they are realistic digital people on a screen who literally converse with you, answering questions, flagging problems, giving suggestions, and making jokes. All done with appropriate facial expressions and tones of voice. You might even think they have emotions, warmth. It could easily feel that way. Humans are hardwired to engage with faces, even in random objects like clouds.

These digital humans could have many digital uses. You might find one in the home of a housebound person who needs a regular medical check-up; in a financial advice setting; as the knowledgeable face of an online ordering process that guides you, in your purchase and delivery. All this would happen much more efficiently for both the customer and the service provider, with less chance of human error.

There is little doubt this technology will be socially and economically transformative (there have been predictions that broader AI technology will add $15 trillion to the world economy by 2030 – but the technology is still evolving. One of the people driving the evolution is Dr Mike Seymour, who works out of the University of Sydney Business School.

"It might seem like the Information Technology school would be our natural home," says Seymour, who studied pure mathematics at the University with a sideline in fine arts just for pure fun. "But business is so closely entwined with technology these days, and the Business School has really embraced us."

Most of the work happens in what's called the Motus Lab, which also partners with local and international industry for advanced research projects. Seymour co-founded the lab six years ago with Kai Riemer, Professor of Information Technology and Organisation at the School. His expertise encompasses technology adoption and the philosophy of technology – both useful in the AI environment.

Where other labs might have beakers and 3D printers, Seymour's lab looks more like a hi-tech TV studio. As he talks online to *SAM*, he is surrounded by six cameras, including motion capture cameras that make the digital characters in films like *Avatar* possible.

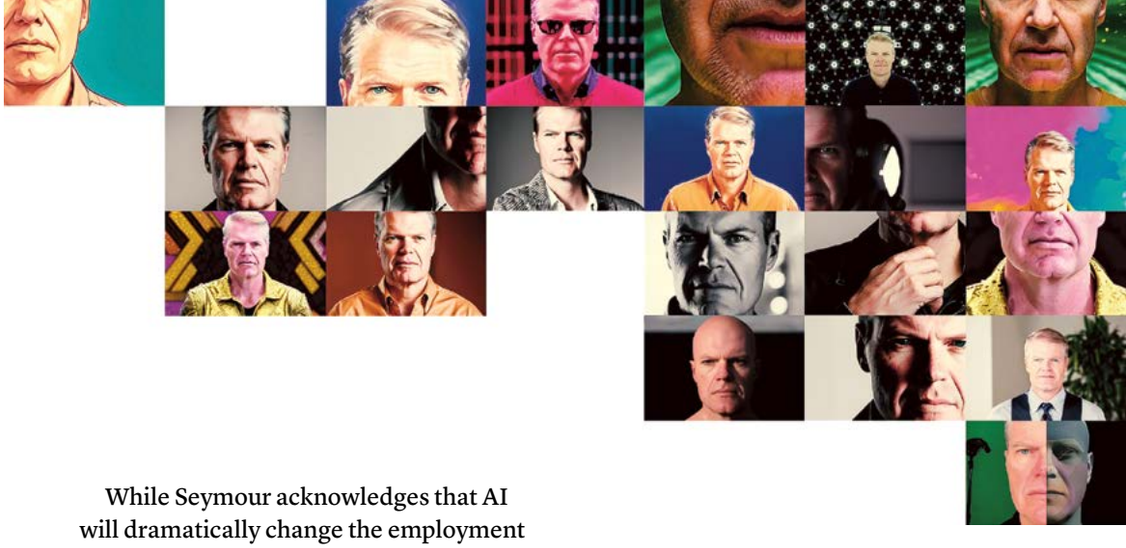
It's worth noting here that people like Seymour and his research partners rarely use the term AI in their work environments. It is too non-specific. The term most often used is 'machine learning', where a machine processes information in a more human way that recognises patterns in vast amounts of data, extrapolates plausible new ideas, and predicts possible outcomes.

This is the basis of one of Seymour's most important tools, neural rendering, which can fill in the gaps in 2D photographs and turn them into fully realised and dynamic 3D images that are currently transforming movie-making, video games, and yes, the creation of digital humans.

British science fiction writer and inventor Arthur C Clarke once said: "Any sufficiently advanced technology is indistinguishable from magic," and the world has certainly been awe-struck and even disquieted by the AI it has seen so far. It's still early days, as Seymour points out. "When fibre optics first came out in the '70s, it was used for novelty lamps. Now it underpins mass communication and the internet. AI is a much more powerful proposition."

The ethical side of the AI revolution is a key part of the research being done by Seymour and the University, as the media eagerly reports the damage that AI might do, like millions of jobs lost across areas as diverse as teaching, journalism and finance (apparently plumbers are pretty safe), and social and democratic instability through the easy production of text and video disinformation.

Dr Mike Seymour consulting on digital humans with a US engagement partner.



"Everyone here is taking this very seriously. We're onboarding new PhD students, specifically to research these issues," says Seymour. "But the number one protection we have from people who might misuse AI is an informed public. So we've done TEDx talks, two Vivid Sydney events, podcasts, TV and radio interviews and public forums.

"I'd also suggest that maybe decades of science fiction movies about dystopian futures have trained people to be suspicious of AI technology." In fact, Seymour himself helped make some of those movies during his previous career as a movie visual effects expert, with an Emmy nomination under his belt, an AFI win, and time spent running his own post-production company. Although, he seems particularly proud to have worked on the cult comedy *Red Dwarf*, in the United Kingdom.

When asked how he managed to tear himself away from Hollywood to become an academic, his answer is simple: "When I started giving talks to other people in the industry, I realised I loved teaching."

While Seymour acknowledges that AI will dramatically change the employment landscape, he can see that other jobs will emerge because of it.

An example comes from the 2020 Polish movie *The Champion*. It needed dubbing into English for the international version. Dubbing is always clunky, so Seymour helped to design a complex new technical pipeline to digitally change the mouths of all the actors so that it seemed they were actually speaking the English words.

"It worked really well," says Seymour. "And it's now spun out into a successful Australian startup with dozens of highly skilled professionals using Machine learning to create export income for Australia through the international film industry. I think it's something the University can be proud of."

This kind of skills creation is exactly what Australia needs if it is to get full benefit from the AI revolution, with a report recently released by the federal industry and science minister noting that Australia is "relatively weak" in emerging AI technology. To fully engage with it, we'll need more skilled workers and more computing power.

"In the last federal budget, there were three key strategic areas for the economy. One of them was advanced technology," says Seymour. "We're working with people across the University to see how this technology can work for them – health, education, psychology, even agriculture.

"Our mandate is to look at how AI can work for people, society, organisations – in fact, all the ways it can be used for good."

ALUMNI DISCOUNT

Learn more about our AI fluency microcredential at plus.sydney.edu.au

Dr Mike Seymour

DEGREES
BSc '87
MBA '00
PhD (Philosophy) '20

THE MOVIE YOU'VE SEEN MOST OFTEN
The Godfather Part 2

HIDDEN OR UNEXPECTED TALENT
I make a mean margarita

OCCUPATIONAL HAZARD
People asking me on Zoom, "Is that really you or Digital Mike?"

HAPPY PLACE
Coming home under sail, having just completed a race on Sydney Harbour, as the sun sets over Sydney

WHAT ELSE YOU MIGHT HAVE BEEN
A sailmaker

Kristy Chong OAM has revolutionised intimate hygiene products for people around the world, reshaping the long taboo conversation around menstruation and bodily leaks, driving positive change through the brand she founded, Modibodi. Now she's turning her focus to supporting other businesses founded by women.

Breaking with *taboo*

Written by Lauren Sams
Photography by Stefanie Zingsheim

Kristy Chong (BA '00) always knew she was meant to do something big. It just took her a while to figure out what that was.

Chong, founder of Modibodi, a brand of reusable underwear primarily designed for women to wear during menstruation or light incontinence, says she was "always searching" for her big idea from a young age.

"And when the idea for Modibodi came to me, I knew it was the one I'd been waiting for."

She was in a supermarket in Seattle, where she and her husband had relocated for his job, when it happened. Then a young mother, she had two toddlers in tow when she felt an urgent need to use the bathroom. At the time, she was training for a marathon, and so had been battling light incontinence. That bathroom visit was the final straw; Chong believed that she could make a product that was better than the underwear she was wearing. So she did.

That was 2010. Since then, Modibodi has become a global success story. It has expanded to new markets: teenagers, children, and men. It has invested deeply in philanthropy, donating more than 125,000 pairs of its underwear to those in need. And in 2022, it was sold to Swiss conglomerate Essity for $140 million, about 2.4 times Modibodi's revenue.

Chong didn't start with dreams of global domination, though. Her product was meant to service a need ("Solve problems and the money will come," she says), something instilled in her from a young age.

She grew up in Albury-Wodonga, on the border of New South Wales and Victoria, and her mother (who had become a mum at 16) was adamant that her four children complete higher education, get a great job and be self-reliant. Education was highly prized, and for Chong, there was only one choice when it came to university. "Living in the country, we held [the University of Sydney] in such high regard," she says. "I wanted to go to a university that offered more opportunities in terms of courses. I loved the reputation, the prestige." Studying a Bachelor of Arts, she says, allowed her "to explore who I was and gave me a great sense of learning and curiosity. I've taken that to the rest of my career."

Chong started out in corporate communications, including for global brands such as McDonald's. "It taught me how to pitch an idea to the media," she says. "A product is only part of the conversation; you have to know how to sell it too." Working in creative agencies taught her to be efficient with time and money. "And you must think outside the box. I was tasked with promoting a lot of products that were not exactly new, and coming up with a new spin on them was always a challenge."

After Chong had her lightbulb moment in Seattle, then it was a race to get the product into the market. "It was one foot in front of the other," she says of the journey from ideation to creation. "My husband urged me to follow the science, and I just knew in my heart that we needed the product." Countless hours of market research followed. "Usually the responses were either 'I need that now' or 'I don't get it'" – both of which compelled Chong to work harder to get the product to market, and to prove its worth. By 2011, Modibodi underwear was available for sale online, direct to the consumer. Chong did not pursue wholesale orders, knowing that she was likely to receive pushback from buyers who didn't understand the need for leak-proof underwear, or simply didn't want to sell it.

> "I felt passionate about diversity – size, ethnicity, age, ability, sexuality – so we represented diversity in our marketing from the very beginning, before the Black, Indigenous, People of Colour (BIPOC) movement when other brands finally caught on that diversity matters."
>
> — Kristy Chong

Though the conversation around periods has progressed since Modibodi was founded – and undoubtedly the business has been at least partially responsible for that shift – the topic is still sometimes seen as taboo. In 2020, Facebook banned an online Modibodi ad because it showed blood as red. It was her customer base that bolstered Chong and the company from the start. "There was so much positivity right away," she says, "and from all sorts of people who I'd never imagined. There was a mother whose daughter was autistic, and wearing period underwear was so much easier for her because it didn't cause sensory issues. There were women with endometriosis who said it was so helpful to manage the ongoing spotting." Men reached out too, asking for leak-proof products made for them, as well as the trans community.

"Initially I thought it would be just women," Chong says. "But it was amazing to see the extent of the customer base."

Sustainability, though important, was a secondary focus, says Chong. "I wanted people to choose the product because it was effective and convenient, but it was also sustainable." The company estimates that a woman using reusable leak-proof underwear will create just 12.8 kilograms of waste over a lifetime, compared with 259 kilograms using disposable hygiene products.

It was partly because of the stigma attached to periods and incontinence that Chong skipped venture capital and went to private equity for investment. She began with her own funds (from her mortgage, along with "many credit cards maxed out"), then later found an angel investor. And for the first two years,

she reinvested the money that came in instead of taking a salary. Chong says the company might have grown faster if she had pursued traditional venture capital financing, but "it wasn't a conversation I was ready to have. It's mainly men in the room, and I just didn't bother. They didn't understand it and I didn't want to waste my time explaining why it was important."

Chong believes Modibodi was key in reshaping the narrative around menstruation – but the time was also right. "The fourth wave of feminism was happening, with Me Too and the change in the GST on sanitary products." Chong wanted the conversation about periods to become truly mainstream and normalised. "I felt passionate about diversity – size, ethnicity, age, ability, sexuality – so we represented diversity in our marketing from the very beginning, before the Black, Indigenous, People of Colour (BIPOC) movement when other brands finally caught on that diversity matters," says Chong. Still, she says, "There's a long way to go. And you must keep having the conversation. It is a constant battle."

It's predicted that the leak-proof underwear market – currently accounting for about 7 percent of the global intimate hygiene market, and worth US$40 billion a year – will grow 20 percent year on year over the next five years. In other words, Chong created a product that people need.

By 2019 she felt that both she and the business were ready for its own next stage. "I always wanted the business to exist beyond me," she says of her decision to exit Modibodi.

Now, Chong is turning part of her time to investment and is unabashed about her aim to offer capital solely for female-founded businesses. "Yes, I have a conscious bias," she says plainly, "because I really want to see more female entrepreneurs. As Melinda Gates says, 'If you lift up women, you lift up humanity'."

So far, Chong has invested in Everty, which develops digital tech for electric vehicle charging; and Laronix, which develops tech for voice loss using artificial intelligence.

"I find that there are not enough women in finance or making decisions about giving out money," Chong says, "be that in private equity, venture capital or even angel investing." And she says there are not enough women coming up with innovative ideas. "I want women to look around and ask themselves, 'What can I develop to make the world better?' And then go and do it."

There was initially "a grief" to leaving Modibodi, and although Pilates and coffee with friends – things Chong can now indulge in – were helpful, they couldn't totally fill the loss. For now, Chong is using her extra time to be the main carer of her four kids, to roll out their family's philanthropic giving, and to invest in and advise a handful of female founders.

"It has allowed me to take time to self-reflect and find a sense of balance, but also to start to notice new things that make me annoyed, and I find myself asking the question, 'Do I want to fix that?'" Chong says. "If there are female founders out there, reach out to me on LinkedIn. I am still looking for businesses to invest in."

KRISTY CHONG'S BUSINESS TIPS

- Know all your numbers. Don't let anyone talk for you. Stand behind what you are saying, understand your business. Show confidence. It is a confidence game, all of it.
- It's not 'Fake it till you make it'; it's 'Face it till you make it'.
- When you're looking at your market and the product idea, ask yourself, 'How desperate are people for the product?'
- Are you passionate about the product or the business you're going to launch – and do you have a sense of conviction? Because if you don't have that, it won't get you through those hardest moments.
- Once you have the idea, you have the conviction, don't get stuck.
- Ask yourself, 'What is the worst thing that can happen if I try to build this business?' For most entrepreneurs, the worst thing that can happen is that you might fail. I recommend thinking about failing and keeping that feeling close to you. For me, that fear of failing made me even more determined to succeed.

His vision for a large-scale public art event sparked David Handley AM's leap from lawyer to social entrepreneur. As his signature event, Sculpture by the Sea, Bondi, marks its 25th year, he reflects on riding the wave of arts enterprise.

Art of the *sea*

Written by Steve Meacham
Photography by Michael Amendolia

David Handley (BA '87, LLB '89) has some advice for up-and-coming social entrepreneurs: "You need to have real passion for what you're doing, or you're not going to succeed," he says. "So, either keep it as a hobby or, if it's going to be a career, you need to jump in boots and all."

It's been more than two-and-a-half decades since Handley jumped in 'boots and all', founding Sculpture by the Sea, Bondi, aged 31. He had just 10 weeks to produce the first event "with a marketing budget of $400." And the rest is history. The first exhibition was held over one day in 1997 and attracted approximately 25,000 people. "In 2022, we had 465,000 visitors," Handley says.

This year marks the 25th year of the iconic Sydney event (two years were cancelled by you-know-what). Over that time, the exhibition has shown 2,691 sculptures by more than 1,000 artists from 51 countries. Handley's concept has also spread from Sydney's eastern suburbs to Cottesloe Beach in Western Australia and into the Snowy Valleys. He was even asked by Crown Prince Frederik and Crown Princess Mary to launch a version in Denmark.

Handley's inspiration was in part drawn from his fascination with Czech history. He was fascinated by the 1968 Prague Spring, when the then-Soviet Union sent in tanks to crush the liberalising reforms that were taking place in Czechoslovakia. "It was one of the most devastating moments of the 20th century. But the months before the invasion saw a flowering of creativity and freedom of expression there," Handley says. "Sculpture by the Sea is the type of event I like to think would have been spawned by the Prague Spring had it continued."

David Handley AM and *Life of the beach*, by Sasha Reid, 2007, now a permanent sculpture on the Bondi–Bronte coastal walk.

Following the fall of the Berlin Wall in 1989, he spent weeks touring cities that had been cloaked in darkness for decades, including making his first visit to Prague. Then in 1993, when he quit his job as a solicitor, he bought a one-way ticket there from Sydney, and it was among the ruins of a 13th-century Czech castle that Handley experienced "the power, drama and theatricality of sculpture" in an outdoor setting. He realised this was the art form for the large-scale, free public event he had wanted to produce since his early 20s.

Back in Sydney in early 1997, a friend suggested he should walk the coastal path at Bondi to see if it would be a fitting backdrop to his vision. It was. "I could just see where the sculptures would go – and that backdrop of the Tasman Sea is extraordinary," he says.

The eldest of four brothers, Handley could have been born to the Bar. His father, the Honorable Kenneth Handley AO (BA '55, LLB '58), was a prominent Sydney QC and a New South Wales Court of Appeal judge. However, the young David had no expectation of a legal career.

"I only practised law for two years so I could get some understanding of the commercial world," he says. "I always knew I wanted to go into business myself.

"University was a key foundation of my life, and what I learnt was fundamental to survive in the business world," Handley says. "Many of my year group who are lawyers are now donors to Sculptures by the Sea. I've been really touched by that. But their support is not just about our relationship, it's more to do with what the exhibition does for society."

Another key memory from his time at the University of Sydney in the mid-1980s is of rocking out with his band in their heyday. "We were a typical uni rock band," explains Handley, who was the band's lead singer. Among their gigs was a show for the resident doctors of St Vincent's Hospital. "We had fun. I think it's essential for anyone to make the best of their talents, which may not be what they are studying."

Although music did not turn out to be his shining talent, years later Handley went to watch Symphony Under the Stars, the annual event held in the Domain at Yuletide. "I was impressed with the free event, the community and humanity. With so many music events, I thought I would look for another art form which could be the foundation stone for a similar free-to-the-public event.

"Most days on my way to the law office, I walked past Brett Whiteley's *Big Matchsticks* sculpture outside the Art Gallery of NSW. The two matchsticks – one pristine, the other burnt to a cinder – were a mirror of my life, all of our lives," Handley says. "Each of us has a moment aflame, of brilliance, then we're burnt. That sculpture helped steel my courage."

He never looked back. In 2018, Oxford Economics estimated that Sculpture by the Sea had delivered $38.9 million to the NSW economy – $85.3 million indirectly – with 19 percent of visitors coming from Sydney's western suburbs and another 14 percent from regional NSW. It remains a free event, supported by sponsors and state government funding.

"Sculpture sales also just started to happen. I was quite thrown by this, at first," Handley says. "I didn't want this to be a major selling show, but the market does what the market does – and it's always a challenge to find the money each year."

So, after a quarter of a century, what are his favourite sculptures by the sea?

His all-time favourite is *The Ruin*, 2011, by Marcus Tatton. "It's the kind of ruin you might see as you drive through any part of Outback Australia – and looked stunning on Tamarama Beach made of firewood." Another favourite is Lucy Humphrey's *Horizon*, 2013, a giant water-filled ball overlooking the ocean – "an orb on the Tamarama headland that turned the world upside-down."

It was important for Handley also that the exhibition developed, from its early years, programs for schools and people with disabilities. And it was for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DAVID HANDLEY'S TIPS FOR SOCIAL ENTREPRENEURS

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Find a business mentor.

—

Be mindful of your strengths and recognise your weaknesses; when you don't know the answer, seek the advice of experts.

—

Know your limitations, but also take significant steps to achieve significant results.

—

You need to feel as though you're constantly biting off more than you can chew – but be the first to realise this, and be your own constructive critic.

—

If you want to be a social entrepreneur who makes money, maybe be an entrepreneur first, and come to your social side later in life. My life would have been a lot easier if I had taken this two-step approach.


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this that he received recognition by being made a Member of the Order of Australia in 2016. Handley says his aim was to make Sculpture by the Sea accessible for everyone.

"We wanted to make the exhibition available for people who are visually impaired or blind or with other needs regarding sensory processing. To feel the sculptures and to be talked through them by the guides is a really unique way of experiencing them."

Ahead, the Snowy Valleys Sculpture Trail continues to grow, along with the recovery of bushfire-devastated communities, working with Handley to evolve the project. "We currently have 35 sculptures at eight locations across 150 kilometres – and by December next year, it'll be over 50 sculptures in 11 locations." He is also approached every couple of weeks with proposals to create Sculptures by the Sea overseas, with some substantial plans in the pipeline.

"I wanted to create something free and long lasting," Handley says, "From the outset, I have been thinking of how it can continue after I die. I think a free event on the scale of Sculpture by the Sea does add something to our sense of community. It makes us feel good about ourselves and our world." ●

1. *Benoit*, 2022, by Bruno Catalano. Photo: Charlotte Curd.
2. *Horizon*, 2018, by Mu Boyan. Photo: Gareth Carr.
3. Who Left the Tap Running, 2011, by Simon McGrath. Photo: Samantha Burns.
4. *Oushi Zokei*, 2016, by Keizoe Ushio Photo: Jessica Wyld.
5. *Save Our Souls*, 2014, by Cave Urban. Photo: Gareth Carr.
6. *Dust*, 2015, by Norton Flavel. Photo: Jessica Wyld.
7. *Hot With A Chance Of A Late Storm*, 2006, by The Glue Society. Photo: Louise Beaumont.
8. *Horizon*, 2013, by Lucy Humphrey. Photo: Clyde Yee.
9. *Snake*, 2013, by Phil Price. Photo: W Patino.
10. *Big Drink*, 2009, by Justin Drape and Simone Brandse. Photo: Jamie Williams.
11. *The Ruin*, 2011, by Marcus Tatton. Photo: Samantha Burns

Dr Helen Cartledge's journey has taken her from Siberia to a leading role in the Royal Australian Navy. Photo: Stefanie Zingsheim.

Childhood curiosity about science led Dr Helen Cartledge from Siberia to a career as an engineering leader, working to modernise Australia's Navy – with a sideline as a green tech inventor. On a mission to use science to save the world, she's urging scientists to take responsibility for the future impacts of their innovations.

In our *defence*

Written by Eleanor Whitworth
Photography by Stefanie Zingsheim

As a child in Siberia, Dr Helen Cartledge (PhD (Engineering) '98) would trek 10 kilometres through the snow to school and back again every day, as temperatures plunged below minus 40 degrees Celsius, encountering the occasional steppe wolf along the way. At night, she and her three siblings would curl up on a bed made of river stones to do their homework by candlelight, and their mother would tell them, "If you don't study science, you won't understand the world."

"Life was hard, but Mum never let us forget that we had come to this world with a mission. She would say, 'Science can save the world'," Cartledge says.

For the oldest of four siblings, growing up in a mud and straw house in a mountain village in southern Siberia, without running water or electricity, 'the world' seemed a fairly remote concept. By comparison, opportunities to explore science were ever present.

When the family moved to a nearby city for school, they would conduct science experiments and build all kinds of devices – from crystal radios, to turning a bicycle into a doorbell, to making a transformer that could change the voltage from 110 AC to 12 DC. "We thought it was the first transformer ever built in the world," Cartledge laughs.

Life in the city, however, was marred by pollution, with strong chemicals blowing across from nearby Russian-built factories. "Some days, the washing would be covered with black particles. The river that used to be full of fish and crabs turned black and smelt of benzene," Cartledge recalls. Not long after they moved to the city, her mother died of lung cancer. She had neither smoked nor drunk alcohol.

Cartledge's early experiences would spark a life-long quest for scientific answers – and lead her to Australia and along a diverse career path from mining industry engineer to senior science adviser in the Department of the Prime Minister and Cabinet, and deployment to the Middle East with the Australian Defence Force. Her contribution and leadership in STEM (science, technology, engineering and mathematics) has also been recognised with accolades including 2019 Australian Professional Engineer of the Year and a 2017 Service Medal for her deployment.

Cartledge and her siblings moved to Sydney in the early '90s, all graduating with degrees from Australian universities. With the support of the federal government and University of Sydney scholarships, Cartledge attained a PhD in materials engineering, while her sister, Professor June Watzl, gained a PhD in Medicine with a focus on cancer research, inspired by the loss of her mother.

"I developed not only my foundational knowledge at university but also learnt about the Australian lifestyle, culture and people. And, most importantly, it taught me a desire for excellence," Cartledge says. "All throughout my professional career I have never let any work leave my office without giving it my very best effort. It gave me confidence, ambition and ability to serve this country and the world."

But the reality was tough. Cartledge says it was difficult to find a job after graduating. "I quickly learnt that no-one needed me to save the world. I couldn't even save myself," she says. "As a female engineer with an Asian appearance, people assumed I was incompetent." Cartledge's chance to prove herself came when she was offered a position at a small mining consulting company . She was given a problem they'd been trying to fix for years: why the 280 tonne caterpillar trucks kept breaking down in a high-altitude mine. Cartledge solved it within 10 days.

Her reputation grew. But she was also faced with a choice. An application she had made to Australian Defence had been accepted. Cartledge saw it as a way to repay Australia for the new life it had provided. Now in a head of engineering and logistics role within the Defence Force, delivering cutting-edge capabilities to the Royal Australian Navy, she says it is a dream job for any engineer.

"Technology is only one part of the job; it requires not only intellectual leadership but also people leadership to bring the best out of the people around you," Cartledge says. "When you give credit to the people working for you or with you, some amazing things will happen. And it's important to be positive, persevere, and to be flexible and adaptable. Engineers can tend to be rigid, but the world is not just black and white. There is a whole rainbow of colour in between."

She urges young engineers to take up the challenge. "Don't just make a living, make a life and make a difference! I have had many challenges and sleepless nights along the way, and I constantly ask myself and my team when we make decisions: 'Are we delivering the right capabilities to our Navy? Are we acting in the best interests of taxpayers?'"

Like her sister, Cartledge has always been strongly motivated by her mother's life – and death – and she has never stopped searching for answers, including the cause of her mother's cancer. "I'm determined to find solutions to fight pollution in air, land and sea," she says.

With her understanding of polymers, gained during her PhD, she worked after hours in her backyard laboratory to build machinery to convert human-made waste, such as packaging and cloth, into useful materials.

Dr Helen Cartledge

DEGREE
PhD (Engineering) '98

HIDDEN OR UNEXPECTED TALENT
Flying single-engine aircraft, performing stand-up comedy and dancing

MOST PRECIOUS POSSESSION
My health and happiness

QUALITY YOU MOST VALUE IN OTHERS
Loyalty and empathy

HAPPY PLACE
A world without war, hunger and the tears of mothers who have lost a child

WHAT ELSE MIGHT YOU HAVE BEEN
Astronaut or working in NASA

1. Dr Helen Cartledge with her sibling and their mother.
2. Cartledge during her time as a senior science advisor to the federal government.
3. Cartledge was named 2019 Australian Professional Engineer of the Year.
4. University of Sydney Chancellor Belinda Hutchinson AC awarding Cartledge a 2015 Alumni Award.
5. Cartledge in her first job out of university, as a mining industry engineer.

"Twenty-five years ago, people told me that my technology was worth a lot of money." Cartledge says. "I knew that if I had patented it, no-one would be able to afford to recycle the waste materials." Instead, she has shared her designs and her green composite technology freely with universities and factories in developing countries. And she spends her annual leave travelling around the world to teach people to use it.

She urges other inventors to be conscious of introducing new technology to improve lifestyles, while at the same time considering the risk of a longer-term catastrophe.

"Scientists are given funding by industry to search for solutions. It's important for researchers to maintain the bigger picture, to consider broader humanity and universal benefits, to ask the question: What are the consequences of science's side effects?"

All these years later, she's still pondering her mother's adage: 'Science can save the world.' "But I would like to ask, can the world save good science? I now realise that science alone cannot do this," she says. "It is not a simple matter for any individual scientist to influence research priorities. The right policies and leadership are needed at the government, corporate and academic level to nurture science and ensure that we have a healthy labour market. This is how we encourage younger generations to take up STEM."

A passionate advocate for STEM education, Cartledge has chaired Defence Science and Technology Scholarship panels to support female students to pursue their dreams, she is a PhD thesis examiner for numerous universities, and volunteer teacher in schools. Her classroom has stretched from Canberra to Sri Lanka and Tibet.

"We need to grow our country's STEM workforce and make it accessible to students from all walks of life. Research funding will repay the economy exponentially," Cartledge says.

"I went on my journey to save the world. The mission my mother gave us has not been accomplished yet and I'm still on that journey with people who have the same drive, including my sister, my colleagues and hopefully future generations." ●

> "Life was hard, but Mum never let us forget that we had come to this world with a mission. She would say, 'Science can save the world.'"
>
> — Dr Helen Cartledge

Modern science and First Nations Knowledge, handed down over generations, have long existed as separate entities. Now, geoscientist Dr Mitchell Gibbs is drawing on traditional practices in a bid to restore oyster reefs and to change ways of thinking within Western science.

Restoring *knowledge*

Written by Sophie Austin
Photography by Stefanie Zingsheim

So much more than just a culinary delicacy, oysters play a critical role in keeping estuaries clean and ecosystems thriving. A single adult oyster can purify over 200 litres of water per day, filtering toxins and microplastics, while natural oyster reefs provide food and shelter for fish, increase biodiversity and reduce erosion.

However, oyster reefs no longer provide the benefits they once did. Australia has already lost an estimated 99 percent of its Sydney rock oyster reefs and more than 92 percent of mud or flat oyster reefs.[1] It's believed that overharvesting for food and construction in the early days of European settlement, deforestation, and the impacts of our ever-changing climate have led to near extinction.

Meeting the challenge of reversing the oyster population's decline is Dr Mitchell Gibbs (PhD (Science) '21), a postdoctoral researcher at the University of Sydney's School of Geosciences. He spends many of his days speaking with Elders across Australia's eastern coast, sharing ecological research and his own understanding of oyster farming and coastal management.

"I primarily sit down with Elders and knowledge holders and listen to them talk about their oral and lived history – what they've done in their lives and what they've seen," Gibbs says. "Then I show the principles of science that are held within this. So this is driven by community – about what, where and how they want restoration to be done."

Dr Mitchell Gibbs is drawing on Elders' traditional knowledge to help rejuvenate oyster populations and restore reefs.

This exchange of Western science and First Nations Knowledge will allow community members to have a say in future reef restoration processes, which is what Gibbs is all about. "My interests lie in making sure that the knowledge Elders are sharing is being saved and passed down for the next generations. This knowledge is stored with the Australian Institute of Aboriginal and Torres Strait Islander Studies and in academia – for knowledge that has been approved to be shared in the academic space," Gibbs says. "While this helps the health of the oysters' environment, it also brings back places of practices, places of continued shared knowledge and places of sovereignty.

"We hope to be able to change the way restoration is done, ensuring that community members have a valid and meaningful say about what is happening, and hopefully to generate policy change."

When he lectures students at the University of Sydney, Gibbs emphasises the fact that First Nations Knowledge is deeply place-based. "Each nation possesses its own unique organisms, ecosystems and practices that cannot be universally applied to other communities," Gibbs says. "Modern science, by comparison, tends to adopt a one-size-fits-all approach, using the same cultivation and restoration techniques for every oyster bed."

Gibbs believes in bridging the gap between the two approaches and nurturing generational stories so that scientists can learn from First Nations histories.

Community has always played a significant role in Gibbs' life. A Dunghutti man through kinship, he grew up near Willawarrin, 30 kilometres west of Kempsey, in the Dunghutti nation. When Gibbs was a child, there were around 110 people in Willawarrin. They had a single main street, a post office and a pub. He spent a lot of his time with his father, who taught him and his twin brother about the ecosystems thriving in their backyard.

"We grew up on 100 acres just outside of Willawarrin," Gibbs recalls. "When we were young, we'd go up the back of our place, and then my dad would tell us to go home on our own, without his help. So he knew that we could get home without him at any time. When the kookaburras would start laughing in the afternoon, that would be the sign that we had to go home. That's when the sun's going down. And there were markers in the trees that would point us home."

After watching an episode of *Blue Heelers*, young Gibbs dreamt of becoming a police officer. His nan urged him to go to university instead, so he chose to study the closest thing to his enthusiasm for the force, forensic science. A stint in forensics, including an honours degree studying fluorescein (a blood test reagent used in crime scenes), opened a world of options in the science field.

The next step for Gibbs was pursuing a PhD in biochemistry and marine biology at the University of Sydney. But when his research grant ran dry and his father fell ill, he struggled to find a way to continue his candidature.

"I was travelling up home because my dad was going through chemo at the time, every three weeks," he says. "And so I'd apply for jobs, but then I'd have to tell them that I was going to be away for a week out of every three. And a lot of places weren't really happy with that."

He reached out to an organisation that provides educational scholarships to Aboriginal and Torres Strait Islander

"The whole point of doing my research is to benefit our people. That's what I'm going to do in the future, so that when we start looking at habitat restoration, we're looking at it in terms of ... what is beneficial for our community."

— Dr Mitchell Gibbs

Oyster reefs were devastated in the early days of European settlement. Gibbs' work aims to bring back these places of practices and to conserve traditional knowledge.

students, the GO Foundation, which supported him to be with his father and helped him through this challenging time.

Fast forward to 2023, and Gibbs' academic career is going from strength to strength. He has been granted a prestigious Fulbright Fellowship, awarded to select scholars for their commitment to fostering cross-cultural understanding, with funding for an international exchange opportunity.

Gibbs plans to collaborate with Western Washington University on a project that learns about successful habitat restoration projects from Coast Salish communities in the Pacific Northwest of the United States. These projects have started with community engagement and, as such, Gibbs says they have been tremendously successful. This includes exchanging knowledge of shellfish between cultures, such as their practice of cultivating and harvesting clams through clam gardens – purposefully constructed rock walls that create ideal conditions for clam growth.

Gibbs wants to bring back this systematic approach of restoration to better help Australian First Nations communities to be active members in restoration. This will ensure that communities have a meaningful say about what happens in their backyards.

In the United States, he will also examine how the Pacific Northwest region keeps open communication with its Indigenous groups. "They've got a very acknowledging and respectful relationship with Washington State, as well as with Western Washington University. That's something which we don't have in Australia," he says. "What I'll be doing is understanding the interactions between the community and the university and government, and making sure that when we do restoration here, we do it in a similar way to make sure that it is inclusive of communities and not just tokenistic."

Gibbs' ambition is to make sure First Nations storytelling scales beyond the research he is doing in the US. He hopes that Australia's future is one with a firm grasp on conserving First Nations practices relating to coastal management and beyond.

"In addition to learning from Elders and knowledge holders, this also means making space for the continued practice of traditional knowledge – allowing it to be taught in universities or schools (for information that has been approved by communities) so that we can all do our part to protect and help our environment.

"Universities are places of knowledge. They shouldn't be representative of only one type of knowledge. That means having a university that is completely open to having Indigenous Knowledge heard, and recognising Elders as knowledge holders," Gibbs says. "If you asked me what my greatest ambition is, I'd say to properly incorporate Indigenous Knowledge into university. This means to have meaningful input from community members into curriculums and to have community Elders recognised for being knowledge holders, including as lecturers or teachers, etcetera."

Gibbs hopes his expertise as a postdoctoral researcher will serve as a powerful catalyst. "I've been fortunate enough to go through university and learn a certain skill set. So the best thing I can do is make sure that it benefits our community.

"The whole point of doing my research is to benefit our people. That's what I'm going to do in the future, so that when we start looking at habitat restoration, we're looking at it in terms of what community wants and what is beneficial for our community." ●

Share our vision by supporting First Nations scholarships

1. NSW Govt

ALUMNI SPOTLIGHT

More stories of alumni at work around the world. We love hearing what our alumni are doing.

JAMES CASTRISSION

BCom ’04

James is an international keynote speaker, two-time Guinness World Record holder, bestselling author, and founder and CEO of MyAdventure Group. After starting his career at Deloitte, James pursued record-breaking feats – kayaking from Australia to New Zealand, and embarking on the longest unsupported ski expedition in Antarctica. He has led mountaineering expeditions to some of the globe’s most challenging peaks, run numerous ultramarathons and sailed to remote destinations across the globe. As a renowned speaker, he has addressed audiences in 36 countries, sharing insights on team authenticity and connection. In 2014, James founded MyAdventure Group, which draws extensively from his management consulting background and record-breaking explorations to provide corporate adventure-based development programs.

PASCALE HELYAR-MORAY

BA ’97, MCom ’02

Pascale is a seasoned entrepreneur and startup advisor with 25 years of financial services marketing and brand-building experience. Her latest venture, Super-Rewards, aims to help women close their super gap with everyday spending. Pascale is also the Director of Communications for the Australian Gender Equality Council, an independent national organisation dedicated to achieving gender equality. Previously she was the Head of Marketing for the Investment Trusts and WealthManager+ businesses of JPMorgan Asset Management in London, and has also held senior marketing roles at BT Financial Group and BNP Paribas. Her best piece of advice for making it in business is always to say ‘yes’ – you can figure out the ‘how’ later.

JOE ZHOU

BPharm ’10

Joe is a CEO, entrepreneur and angel investor who thrives on solving problems by combining business, health care and technology. Since graduating in 2009, Joe has built a dynamic business portfolio by dividing his time between running Ace Specialty Pharmacy and building ambitious health-tech startups. His successful ventures include Pocket Health, Chemist2U, and most recently Aceso Group, an AI chronic disease management platform for the management of specialised and complex diseases. His varied entrepreneurial experience in the startup world led him to author the book *The Startup Founder* in 2021, and placed him on the Business News Australia Top 100 Young Entrepreneurs list in 2023. Outside of work, Joe has recently invested in film production, directing Picture Lock Studios in the production of video and film projects.

XINYI YU

BCom ’22

Xinyi is the founder of international gender equality organisation Asian Women Development Plan International (Avoice), which aims to diminish discrimination and violence against Asian women overseas. Her commitment to social justice and her belief in the power of collective action drives her to promote a more equitable and violence-free world for all. She has represented youth on the global stage at various conferences and gained valuable experience interning at the European Parliament, the Chinese Academy of Sciences and the Philanthropreneur Foundation. In 2022 she was recognised as a member of the World Economic Forum’s Global Shapers Community, and in 2023 she was selected as an ambassador of the Antarctic Climate Epic Expedition. She is excited by a future where she can enhance support for Chinese women facing domestic violence globally.

Share your story with us

MICHAEL COLE

BSc ’85

Driven by a deep interest in plants, Michael’s career as a scientist began after more than 10 years working in traffic planning and engineering. After relocating from London to Sydney, his natural curiosity for plant ecology and physiology prompted him to pursue a science degree as a mature-age student. After completing his studies, Michael continued his research and teaching at the University of Sydney, specialising in mangrove physiology. He later joined the University of Newcastle where he established the Centre for Sustainable Ecosystem Restoration. In 2013, he retired from academia and established CSER Research Pty Ltd, a consultancy dedicated to restoring ecosystem function. His innovative approach to rehabilitating tailings dams recently gained industry recognition, culminating in the prestigious ACARP Research Excellence Award in 2022.

DR RUBY CAMPBELL

MSc (CoachPsyc) ’16

Ruby is the founder and Managing Director of ProVeritas Leadership, an executive coaching and consulting firm that helps organisations to develop responsible and sustainable leaders. Starting out as a scientist, Ruby’s career as an executive coach came after 25 years of working in business development, change management and organisational design roles for pharmaceutical and biotech organisations. Now she is using her practical knowledge and academic expertise to help business leaders to thrive in the 21st century, with a particular focus on STEMM (science, technology, engineering, mathematics and medicine) disciplines. Through her coaching programs and book, *Scientists in Every Boardroom: Harnessing the Power of STEMM Leaders in an Irrational World,* Ruby is revolutionising the way corporate business leaders and scientists think about leadership.

ALEXANDER YAU

BMus (Perf) (Hons) ’18

Alexander is an eminent pianist, conductor, composer and vocalist who has performed with esteemed orchestras including the Royal Philharmonic and Queensland Symphony. As an international award winner, Alexander has graced audiences around the world with his solo and chamber performances, including appearances in Australia, Italy, Germany, Norway, Japan, China and the USA. In 2020 he founded his own chamber orchestra, and this year he released his debut album in collaboration with clarinettist Deborah de Graaff. He currently holds positions at the Sydney Conservatorium of Music and Opera Australia, and recently served as an assistant conductor for *Madama Butterfly* with Handa Opera on Sydney Harbour.

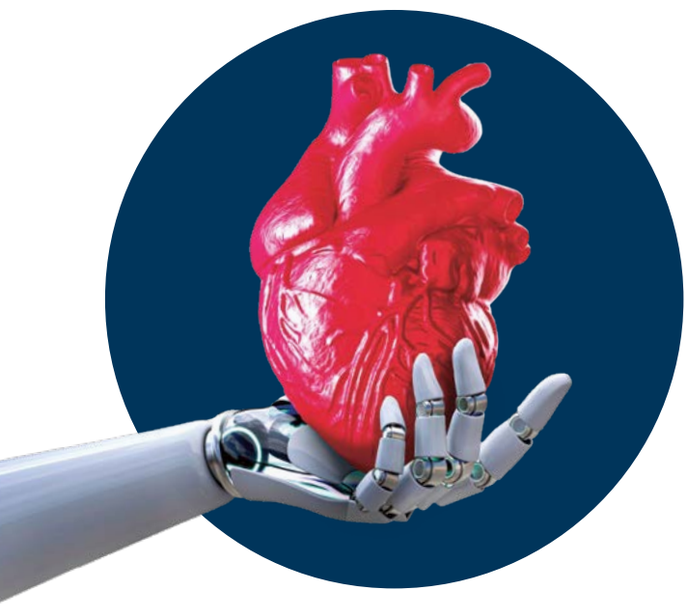
DR ROMINA SANTOS REYFTMANN

BMedSc (Hons) '03, PhD (Medicine) ’12

With a background in medicine and law, Romina has made significant contributions to the fields of fertility medicine and human rights law. During her PhD, she worked on a clinical trial that led to the world’s first baby being born using a novel technique, and went on to co-establish a thriving gynaecological surgery and fertility practice. Motivated by a passion for social justice, she then retrained as a human rights lawyer. She has since worked extensively with First Nations clients, dedicating her skills and expertise to pro bono work. Most recently, she led the establishment of an international pro bono department at global law firm Zeiler Floyd Zadkovich, aiming to empower women and culturally and linguistically diverse communities while championing equity and social mobility.

JUST THE FACTS

Dealing with vast amounts of information is just another day at the office for our researchers and academics. Here, three researchers from the Westmead Health Precinct each explain an idea at the centre of their current work, as we mark 45 years of its partnership with the University of Sydney.



ON MATTERS OF THE HEART

Cardiovascular disease (CVD) is the leading cause of morbidity and mortality in Australia. However, an estimated 50 to 80 percent of heart attacks and strokes can be prevented. Our research harnesses digital health, including artificial intelligence (AI), to develop solutions to prevent CVD. Digital health programs can help to modify behaviours, monitor risk factors, and provide timely tips and reminders to keep people on track in self-managing their own health. Trials have shown that these solutions improve cardiovascular health outcomes, with the potential to be scaled up to help the population at large, but we're still working on how we can change the health system so that more people can access them.

Professor Clara Chow AM

(MBBS '98, PhD (Epi/IntPH) '08), FRACP, FCSANZ, FESC, GAICD) Cardiologist and Academic Director of Westmead Applied Research Centre, Chow has been passionate about preventing heart disease her entire career. Inequity has always bugged her, and raising awareness about the gaps has been a goal of both her research and public life, including her recent role as the first female president of the Cardiac Society Australia and New Zealand.

ON CHILDHOOD CANCER

More children are surviving brain cancer and leukaemia, due to medical advances, but they can be left with issues that affect their long-term development. This can lead to difficulties developing communication skills or learning to read and write, and can affect relationships, schooling and career prospects. Some children also experience trouble with swallowing and eating that can be life-threatening. We have developed world-first guidelines aimed at improving quality of life, communication and swallowing outcomes for children who survive cancer. This includes providing follow-up care and education for affected families, and ensuring children receive timely intervention from diagnosis until the end of adolescence.

Associate Professor Kimberley Docking

(GradCertEd Studies '20) Docking is Head of the Discipline of Speech Pathology, Director of NeuroKids Research Laboratory, and a speech pathologist of two decades' experience in paediatric rehabilitation in children's hospitals, education and private practice. Her research has made important contributions to understanding acquired language disorders in cancer and brain injury.

ON NURSING IN AGED CARE

Registered Nurses play an essential role in residential aged care, where they are responsible for providing critical and timely care to residents with complex health needs. The importance of this role has been further underscored by the COVID-19 pandemic, which caused disproportionate harm to the older population. My research seeks to equip nurses with the evidence-based tools and skills they need to better assess and care for their patients. We are currently adapting the highly successful emergency nursing framework HIRAID™ for the aged care sector, which aims to improve resident outcomes by reducing rates of clinical deterioration and unnecessary hospital transfers.

Professor Ramon Z. Shaban

The recent pandemic placed tremendous pressures on the healthcare and aged care sectors. As the University's Clinical Chair of Communicable Diseases Control and Infection Prevention, Shaban aims to improve the quality and safety of care through bettering nursing assessment, and infection prevention and control practices.

Over a century ago, the University of Sydney welcomed its first international students. Now with students and alumni hailing from more than 135 countries, we celebrate this milestone in our history. Photo: Ivan Ives, 1953, State Library of NSW, File ID: gLWmyvLZM0eaq

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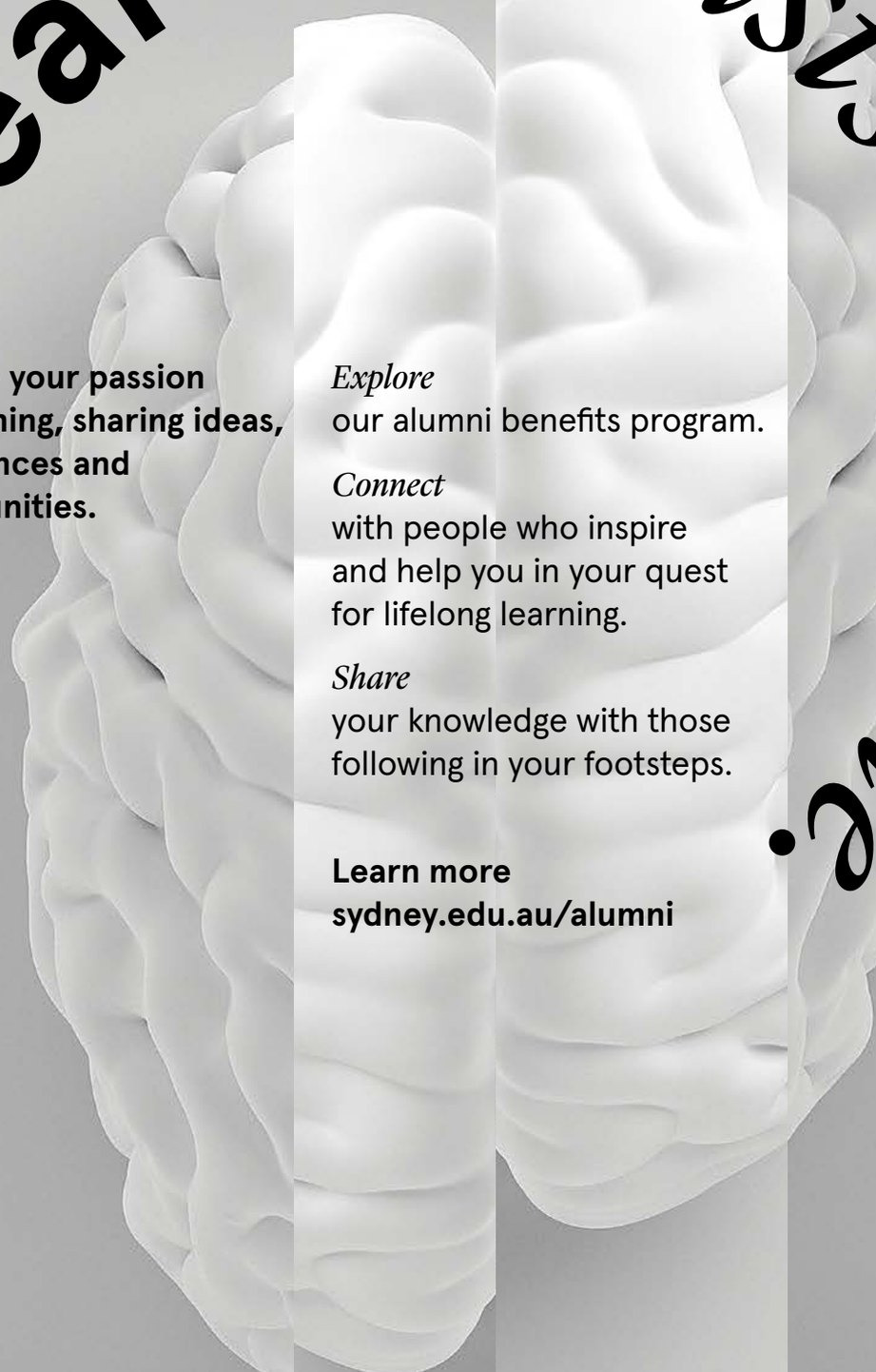

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