

# TOWER

A man in a light blue shirt and tie stands on a large rock on top of a red car. The car is parked on a street with trees in the background. The man is looking towards the camera with a slight smile.

UTS: ALUMNI / ISSUE 8 AUTUMN 2013



UNIVERSITY OF  
TECHNOLOGY SYDNEY

**THIS ISSUE:  
CREATING FUTURES**

## EVEREST AND BEYOND

The epic adventures  
of Annie Doyle

**JENNY'S SECRET**  
Jewellery designer  
to the stars,  
Jenny Mercian

CELEBRATING  
**25**  
YEARS

## ARTISTIC LICENCE

Luca Belgiorno-Nettis on business, politics,  
family and the transformations at UTS



# HAVE YOU SEEN THE *TOWER* APP?

The latest version is now available to download **FREE** from the App Store.

UTS turns 25 this year! To celebrate, this issue of *TOWER* pays homage to its past and to the future.

In the *TOWER* app, don't miss the video of Jenny Mercian, a UTS School of Design graduate whose couture jewellery has featured in seven annual Victoria's Secret shows – as well as Beyonce's latest world tour. Jenny shares the creative process of designing jewellery fit for supermodels and celebrities – and what goes on behind the scenes at the famous shows.

Plus, meet an award-winning Australian innovator who has 21 patents to his name, Peter Le Lievre. The Silicon Valley based industrial designer – and specialist in commercialising clean technology – shares his entrepreneurial experiences, lessons on risk, his memories of UTS in the late 1980s, and plenty more.

You can also view *TOWER* online at [www.utstower.com.au](http://www.utstower.com.au). If you reside in Australia, you can still receive your printed copy of *TOWER*. Simply enter your details at [www.alumni.uts.edu.au](http://www.alumni.uts.edu.au) to request the print edition, which will be mailed to your address.

## STAY IN TOUCH

As valued UTS alumni, you are part of a global network of professionals. We encourage you to stay connected, so for all the latest alumni news – and to ensure your details are up-to-date – visit [www.alumni.uts.edu.au](http://www.alumni.uts.edu.au)



Available on the  
**App Store**

# BUILDING BLOCKS OF THE FUTURE

The evolution of the UTS brand over the past 25 years has been astonishing. Since achieving university status in 1988, we have built a strong academic reputation and created wonderful community and alumni loyalty in a relatively short time.



Image by Jesse Taylor

“The Master Plan is the key to building a university campus of which UTS alumni can be proud. That, together with continuing to build our reputation through the delivery of innovative education and research, will see us meet the challenge of the rising research performance of universities in Asia.”

**PROFESSOR  
ROSS MILBOURNE**

This enviable growth has happened for myriad reasons. UTS is the collection of its antecedent institutions, forging a history which has been vital in determining our culture and the subject fields in which we teach. A very successful merger of former institutions gave us an ethos of transparency and a willingness to work as a team. These forces remain in play, allowing UTS to be a much more effective entity as a result.

I would like to pay tribute to the University's founding Vice-Chancellor, Emeritus Professor R.D. (Gus) Guthrie AO, who passed away on 12 January this year. He was instrumental in persuading the government of the day to turn what was then the NSW Institute of Technology into a university, and laying the groundwork for a successful merger. He piloted the old entity to a level of performance that deserved university status, and then went through the long and difficult bureaucratic process to secure that goal.

Gus was a remarkable person - not only did he oversee the entire amalgamation process, but he ensured it was completed with few of the petty jealousies that often accompany complex mergers of that type.

By the time he retired in 1996, UTS was well established and we would not have made such great inroads without the solid platform or the supportive culture he introduced.

Building on that legacy, our commitment to research efforts over the past decade has been responsible for ensuring UTS is now ranked highly on many international scales - an impressive achievement for such a young university. Our teaching and learning programs have always been very strong, making UTS the first choice for many students.

As a consequence, we now have two great opportunities. One is to continue to enhance our culture, with its can-do attitude and its entrepreneurial and innovative facets. The other great opening is our location. We are

right in the centre of a very vibrant city and precinct. The looming transformation of this end of town from a poor cousin into something quite remarkable is enormously exciting for UTS.

## A masterstroke

Our City Campus Master Plan is well on the way to being realised. This is a \$1 billion investment that, when complete, will deliver a state-of-the-art campus for students and staff and an ever stronger sense of community for UTS. It will be a campus where people will want to interact and, without question, will take its place as one of the most stunning inner-city campuses you will see anywhere in the world.

The Master Plan is the key to building a university campus of which UTS alumni can be proud. That, together with continuing to build our reputation through the delivery of innovative education and research, will see us meet the challenge of the rising research performance of universities in Asia.

I would invite our alumni to see themselves as champions of UTS and to talk about the University with pride. UTS does not spend a lot of money on marketing, instead relying very successfully on word-of-mouth promotion that encourages students to study here.

That is where every alumni of UTS can play a major role and, where they have the potential to do so, support the University in establishing partnerships or sponsoring students and scholarships or activities.

Such support, in tandem with our stellar brand, culture and outstanding redevelopment, will position UTS for a very bright future and continue to produce outcomes of which all of us in the UTS community can be justifiably proud. **T**

*Ross Milbourne*

**Professor Ross Milbourne  
Vice-Chancellor**

# TOWER

## CELEBRATING 25 YEARS

### ISSUE 8, AUTUMN 2013

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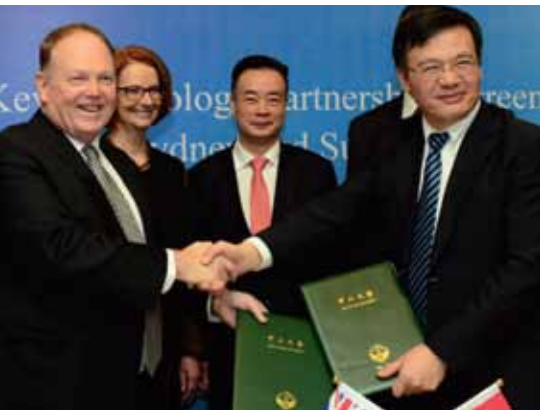
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**Left to right:** UTS Vice-Chancellor Professor Ross Milbourne, Prime Minister Julia Gillard, Dr Chau Chak Wing and SYSU Vice-President Professor Guangmei Yan.

## A NEW GLOBAL PARTNERSHIP

By Xavier Mayes

Close research collaboration and a new scholarship program are two key features of a formal partnership established in April between UTS and China's top-ranking Sun Yat-sen University (SYSU).

The Prime Minister of Australia, The Hon Julia Gillard, witnessed the signing of the Key Technology Partnership (KTP) agreement in Beijing by UTS Vice-Chancellor Professor Ross Milbourne and SYSU Vice-President Professor Guangmei Yan.

The two institutions will collaborate on a new dual doctoral degree program; institution-wide research, including the development of a joint research project; opportunities for undergraduate students to spend part of their studies at the partner university; and a scholarship program funded by UTS and Dr Chau Chak Wing for SYSU Master's students to undertake a coursework program at UTS.

Professor Ross Milbourne says the KTP has a value close to AUD \$2 million over five years.

"This agreement builds on a relationship between UTS and SYSU over many years, attributed in no small part to the generosity and support of UTS's key benefactor Dr Chau Chak Wing," he says.

UTS expects to sign 18 to 20 KTPs worldwide by the end of 2014.

*Reproduced with permission from UTS Newsroom.*

## ON THE BRINK

By Rosemary Ann Ogilvie

The effectiveness of UTS's research strategy is evidenced in the fact that over the past five years, it has moved up the ranks to become recognised by the government as a research-intensive university.

Sharing the stories behind this research, as well as the other important but often unnoticed work UTS undertakes, is *BRINK*, a new publication launched in February.

"Stories that typically make front-page news aren't necessarily the stories readers find worthy of investing their time in," says Jacqui Wise, Director, Marketing and Communication Unit at UTS.

"We believed these stories will be read if they're featured, as they're stories readers can identify or engage with, so we decided to tell them ourselves."

And that was the genesis of *BRINK*, which is distributed with the *Sydney Morning Herald* (*SMH*) on the third Thursday of every month from February to November. The underlying thread linking the articles – eight of which also appear on the iPad app and online – is that they illustrate the frontier thinking that stamps the University.

"The factors that drive our research also drive our learning strategy, and how we integrate our research findings into our learning strategy," says Wise. "Everything we do is about looking towards the future and the positive impact we can have, whether for students, or the lives of the people who will benefit from research outputs. It's all about impact and innovation, which we do quite creatively."

Editorial excellence is the publication's hallmark, and to this end they recruited former *SMH* journalist and chief-of-staff Wendy Frew as editor.

"We spend considerable time on subediting and on design," adds Wise. "We also have a real focus on the imagery to ensure *BRINK* is visually captivating."

Feedback to date has been excellent, and *SMH* readership numbers show the take-up is huge. "Five media interviews came out of our first issue alone, including a two-minute television news piece off the cover story, and the articles continue to be syndicated because they are newsworthy," says Wise, adding that she would love to hear what *TOWER* readers think.





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**Right:** University representatives at the Bridges to Higher Education Launch at Fairfield High School, a UTS U@Uni partner school.



## MEET THE NEW DEAN OF LAW

By Xavier Mayes

Equipping graduates to forge successful careers in a changing legal profession will be a key priority for newly appointed Dean of Law at UTS, Professor Lesley Hitchens.

Hitchens is nationally and internationally recognised as an expert in media and communications regulation, with her research influencing policy direction and media reform in Australia.

Hitchens joined UTS in 2008 and brings considerable leadership experience and knowledge to the role following four years as Associate Dean (Research) in the Faculty of Law. She is also the Chair of the management committee of the Communication Law Centre, UTS.

"The selection committee was unanimous in selecting Lesley and I am sure she will lead with distinction," says Vice-Chancellor and President of UTS, Professor Ross Milbourne.

"I hope my leadership over the next four years will see UTS:Law achieve the recognition it deserves as one of the top law schools in Australia," Hitchens says.

Hitchens took up her new post in the Faculty of Law on 4 February.

*Reproduced with permission from UTS Newsroom.*



Image by Jesse Taylor

## FIVE NSW UNIVERSITIES UNITE

By Rosemary Ann Ogilvie

UTS is playing a key role in breaking down barriers to higher education as part of a cohort of five universities in New South Wales that have joined forces to help encourage study beyond year 12.

Bridges to Higher Education, a collaboration between UTS, the Australian Catholic University, Macquarie University, the University of Sydney and the University of Western Sydney - is working with schools and communities to improve the participation of disadvantaged students in higher education.

March saw the launch of one of the collaboration's key projects, *Enquiring Minds* - the first of two documentary series with Television Sydney featuring UTS academics and staff.

Episode one features a fifth grader with an ambition to travel the world taking photographs, receiving tips and advice from a professional photographer. In the second episode, a creative young designer meets Jennifer Macdonald, Lecturer in the Built Environment at UTS, who explains some of the methods and materials used in building bridges.

Designed to link childhood interests with higher education and careers in an engaging way, the series will be screened in schools, supported by syllabus-linked lesson plans and an online game, as well as additional resources for teachers appropriate for the target seven-to-12 age group.

UTS will also receive \$3.2 million over three years from the total Bridges budget to extend its existing U@Uni schools outreach program, including development of the U@Uni Summer School Program. This program targets Year 11 students from partner U@Uni schools in South-Western Sydney, as well as Aboriginal and Torres Strait Islander students who have

academic potential, and who would be the first in their family to attend university. During January, the students attend an intensive two-week summer school in a range of subject areas such as making short films, engineering, information technology, design, nursing and midwifery, and science investigation. Follow-up workshops are held during Years 11 and 12.

"Our program is designed to boost enthusiasm for study to HSC level and beyond, to demystify university, build interpersonal skills and raise personal aspirations," says Lisa Aitken, UTS Widening Participation Coordinator.

"By studying on campus with university staff and students, high school students experience the university environment first hand, which helps build their confidence for learning and solving problems in a team environment."

Plans are afoot to ensure the future sustainability of this highly successful federally funded U@Uni outreach program: 72 of the 120 Summer School students who completed their HSC in 2012 were offered a place at university.

### Key goals of Bridges

The Bridges to Higher Education collaboration has four main objectives:

1. Improving academic outcomes
2. Raising education aspiration and engagement
3. Building teacher and community capacity
4. Increasing capacity to access higher education.

# CALIBRATED SLEDGEHAMMER HITS THE MARK

By Rosemary Ann Ogilvie



Image by Kasia Werstak

Imagine being able to test the safety and structural capacity of a wooden bridge with a sledgehammer. A partnership between UTS and the Institute of Public Works Engineering has achieved just that. After three years of research and testing,

the safety and load-carrying capacity of a wooden bridge can now be determined simply - but accurately - by hitting it with a sledgehammer, albeit beefed up with special software.

Considering that more than 70 per cent of the 20,000-plus bridges under the control of local governments are ageing timber bridges with impaired load capacity and structural adequacy, this is a huge breakthrough.

The concept grew from a discussion between Professor Keith Crews (pictured), Associate Dean of External Engagement at UTS, Emeritus Professor Stephen Bakoss, and Chris Champion, CEO of the Institute of Public Works Engineering Australia, about the hotspots local government was facing. Timber bridges ranked high on this list.

"During this discussion," explains Crews, "Professor Samali - a colleague whose

expertise lies in structural dynamics - suggested that instead of putting a static load on the bridge and measuring how far it deflected, using a small amount of weight and measuring the frequency of the bridge would, in theory, allow us to work out its stiffness and, subsequently, its strength.

"This is where the idea of the impact hammer came in. We bought the hammer, but developed software that allows us to estimate the bridge's load-carrying capacity."

Comparisons with traditional testing methods have confirmed the accuracy of both the Calibrated Sledgehammer, and a similar Drop Hammer developed for concrete bridges. The technology has been effectively commercialised through the UTS consulting arm, Access UTS, which operates as a specialised consulting service to councils and state governments.

## AWARD-WINNING ALUMNI OUT ON TOP

By Rosemary Ann Ogilvie

Two UTS alumni have received the Australian Alumni Excellence Award 2013 for Education in Sri Lanka. Ranishka Wimalasena (pictured, top) and Mohamed Mowjoon Atham Bawa (pictured, bottom) were both honoured at the awards ceremony, held in Colombo in February.

Organised by Austrade, the awards recognise and honour alumni who are either Sri Lankan citizens, or hold dual Australian-Sri Lankan citizenship, who have attained exemplary achievements in their field of specialisation at a national, regional or international level, as well as those who have contributed significantly to the betterment of Australian education and their institution or alumni community. Candidates must have been working in a professional capacity for the past four years, and have studied in Australia for at least 12 months and completed the program of study.

Wimalasena says winning the award was one of the best days in his life: recognition of his long-held goal to contribute to the betterment of underprivileged people in developing countries.

"This is one of the main reasons I returned to Sri Lanka after my studies in Australia," he says.

Wimalasena holds a Master's in Engineering Studies with Energy Policy and Planning Major from UTS, and a Bachelor of Science in Engineering with specialisation in Electrical Engineering from Sri Lanka's University of Moratuwa. He is Project Officer, Energy at Sri Lanka Resident Mission - part of the Asian Development Bank (ADB) - and handles all of ADB's energy-related activities in Sri Lanka.

"The award has increased my passion for this work, and for achieving my immediate goal of contributing to the development of the energy sector in Sri Lanka," says Wimalasena. "Most importantly, the reason I get this chance to work with a development partner like ADB is because of my studies in energy at UTS," he adds.

PhD candidate Bawa completed his Master's degree in Law and Dispute Resolution from UTS and has three other Master's attained from various universities.

"The award recognises the hard work that made these achievements possible, and encourages me towards further achievements," says Bawa. "It gives a positive signal to my career and research, which will lead to more significant contributions in future."

A former primary and secondary school teacher, Bawa has been working at UTS as Administrative Assistant, Associate Lecturer and Invigilator. In Sri Lanka, he is legal advisor to various departments and authorities, including the Sri Lanka Ports Authority. Bawa's future goal is to further his career as an academic at UTS after completing his PhD.





# What's been happening AT UTS?



Image by Josh Morris

## Gotye greets 2ser

By Xavier Mayes

The day after winning three Grammy Awards in LA, Melbourne artist Wally de Backer, AKA Gotye, was on a plane to honour a prearranged event with UTS-based community radio station 2ser.

The singer-songwriter answered questions from 2ser presenter Paris Pomopor and the audience about the worldwide success of his latest album *Making Mirrors*, what it was like to meet Prince on stage at The Grammys, as well as his experiences starting out as an independent artist.

De Backer explained the important role community radio had played when he first started promoting his music.

"I was really into the idea of total DIY and I got a lot of energy from realising I could do everything myself," he said.

"I called Andrew [Khedoori, 2ser's music director] quite a few times to make sure my homemade EPs had been distributed."

Khedoori said de Backer has come full circle, recounting his impression of the first Gotye album, *Boardface*. "It had a crudely painted cover that was on the verge of falling apart, but the music on it was the opposite; these beautiful, soulful electronic music pieces, so wonderfully realised.

"We made it our feature album on 2ser and not long after Wally was signed, the album got a wider release and Gotye was on the way to becoming one of this country's most well-known artists." Listen to the full interview at [www.2ser.com](http://www.2ser.com)

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UTS Newsroom.

## A matter of balance in the gender debate

Will Australia deliver on women in leadership? This was the evocative question posed at the UTSpeaks: Women at the Summit, held at the Great Hall in March. The Q&A forum explored female participation at the highest levels of endeavour and leadership.

Women are needed everywhere and across broad sectors, but also need to be where they're not at the moment - in the power structure, argued Elizabeth Bryan, Chair of Caltex Australia.

"The focus on boards is inappropriate because if you want women everywhere with influence and in the power structure, you must see them in the executive teams. The real dynamic is down in the companies so you get women across all companies and then boards naturally follow."

Christine Holgate, CEO and Managing Director of Blackmores, and Ten Network board member, revealed her observation coming from the UK to Australia was, "Wow, it's so blokey here".

"When I got to Channel 10, I thought, I'm going to get there and fight for the rights of women. And so we now have a diversity policy, I'm on the Remuneration Committee, I'm fighting for fair pay.

"If you have diversity in anything, if you have a better balance of men and women, you actually get a happy environment to work in - you get the opportunity to have a broader range of views and thoughts."

Verity Firth, Chief Executive of the Public Education Foundation, urged the audience to "teach your daughters not to consider themselves second rate".

"You've got to at least send your daughter out at age 18 thinking that she can do anything in the world, because if you don't send her out like that then she really is going to get knocked down."

For more details on upcoming UTSpeaks events, visit [www.newsroom.uts.edu.au/events\\_new/upcoming](http://www.newsroom.uts.edu.au/events_new/upcoming)

## A sell-out for Sir Tim Berners-Lee

The inventor of the World Wide Web, Sir Tim Berners-Lee, was the major drawcard of the first UTSpotlight in partnership with City Talks for 2013. Titled "Then, Now, Tomorrow: what's next for the World Wide Web?" the event sold out within a few hours.

According to Berners-Lee, an independent World Wide Web that also harnesses the power of open source capabilities is central to the future of the internet.

"The internet should allow you to do anything you want on it, we can simply use it as a tool to share and connect," he said.

"Perhaps the most important use of data that is produced is by somebody else or another organisation for some reason that was never initially imagined or considered.

"As more data is produced and connected together, the value of each piece of data goes up."

Fellow panellist Hael Kobayashi, Executive Director of Creative Intelligence at UTS, said Sydney is a hub for creative industries and innovation.

"There is already a connected community of incubators, accelerators and co-working spaces such as Fishburners working across industry, education and government and openly sharing knowledge.

"We are now seeing a critical mass of entrepreneurs coming together in a 'new Sydney model', marked by a high degree of open collaboration that has certainly been enabled by the web."

For information on upcoming UTSSpotlight events, visit [www.alumni.uts.edu.au/Page.aspx?pid=207](http://www.alumni.uts.edu.au/Page.aspx?pid=207)



Image by Tony Scarpetta

# IT'S THE NEXT FACEBOOK and it *doesn't even need you*

Concerned about the power social media organisations wield over your personal data? The real test in the struggle for control of your online reputation it seems is yet to come.

BY DR DANIELLE LOGUE



At first it was organising and selling user-generated content and data, now it seems 'they' don't even need you.

What if there was a company that scraped the web and mapped your connections, showing you how many 'degrees of separation' you were from other power players in your industry? Key decision makers? Policy makers? Unlike Facebook and LinkedIn, it doesn't require any input from you - as your data is already out there.

And to see these connections, it would cost say \$3000 a year. You could type in 'James Packer' and the search engine would scan for people you know and who also know James Packer, mapping secondary or tertiary connections.

It will then tell you how you are connected, maybe through friends or boards or organisations and even grade the quality of those connections (strong, average or weak).

And it's already here according to an article in the *New York Times* (NYT) by Andrew Ross Sorkin. It seems this is another technology that will be in play in the 'reputation economy'.

Neil Goldman is the founder of the start-up Relationship Science that is focusing on mapping the corporate elite of America. As Goldman comments in Sorkin's NYT article: "We live in a service economy... building relationships is the most important part for selling and growing."

Yet, there are limits, says Goldman; while the technology provides the map, you still need the 'art' of relationship building.

The way this technology provides a map of network ties relates to classic sociological ideas about networks; ideas that are increasingly important to articulate in entrepreneurship education. Beyond widely understood notions of six degrees of separation, sociologist Professor Mark Granovetter coined the now classic phrase "the strength of weak ties".

This refers to the value that comes from having access and connections to many diverse groups of people. These ties, while weak or casual, are indispensable for entrepreneurs in identifying opportunities, gathering knowledge across multiple industries or multiple levels in an organisation, creating and recognising market trends, and hopefully positioning yourself as a broker between these diverse groups.

This is important in our understandings of the entrepreneurial process as most new ideas don't come from the strike of a lightning bolt, they are often borrowed, adapted, or transplanted from one industry or sector to another. What might seem old fashioned in one industry is breakthrough in another.

## The science of persuasion

In addition to thinking more instrumentally about entrepreneurial networks (and your position in them), the issue then becomes the social skills you have to build meaningful relationships - both online and offline.

And this isn't just about personality. Sure, if you have a bit of charisma it might be less awkward in social settings. However, Professor of Psychology, Robert Cialdini has written extensively on the universal laws of persuasion, assembling much data to unpack the science of persuasion.

He has identified principles of persuasion that hold across social settings, industries and cultures - such as reciprocity,


commitment, social proof, liking, authority and scarcity. Importantly, these skills can be learnt and applied by anyone, regardless of personality.

## A question of ownership

So understanding the sociological and psychological underpinnings of networks and (some) social skills are helpful in navigating the reputation economy. But perhaps, the implications of working and succeeding in the reputation economy need to be grounded against bigger questions: who owns our online reputation? How will we, as individuals and organisations, create, curate, manage and recreate our online reputations and digital history? What start-ups will emerge offering such services? Who will you trust? What happens when two years of your online activity is stored and captured?

These concerns don't emanate only from observing the likes of new start-ups such as Relationship Science, that is building profiles and dossiers, but the actions of our own government. According to the founder of the World Wide Web, Sir Tim Berners-Lee, such storing and recording of data is the equivalent of dynamite.

At the moment it may seem novel to create reputation measures and to ask for these in job applications. The data that can be amassed - by a range of parties - positions the reputation economy at a centre of issues such as identity, privacy, security and ultimately freedom (to change).

Be alert and possibly alarmed at what will be required to be successful in the (digital and historically archived) reputation economy. 

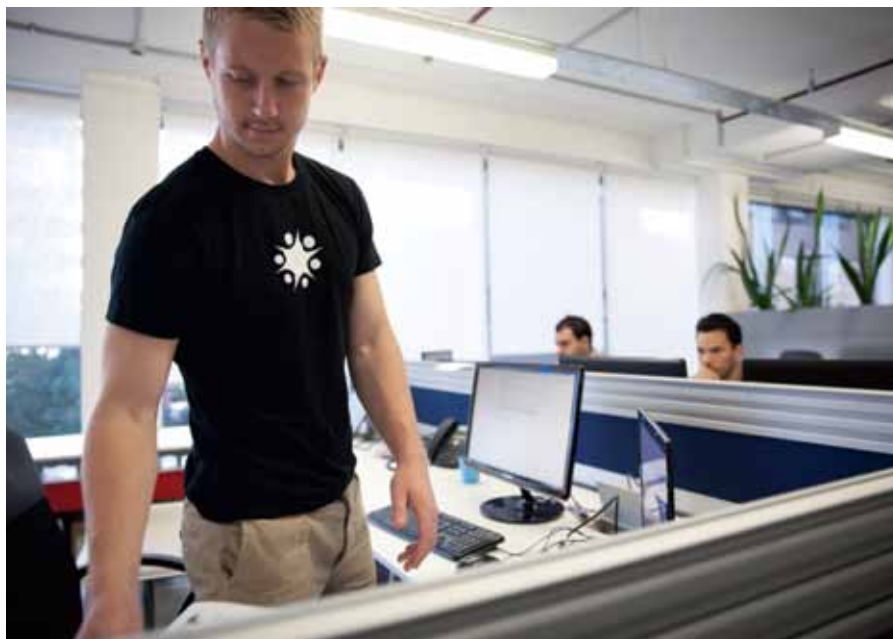
*This article was first published on The Conversation ([www.theconversation.edu.au](http://www.theconversation.edu.au)).*

Dr Danielle Logue recently joined the UTS Business School after completing a Doctorate of Philosophy (PhD) and Master of Science (MSc) at Saïd Business School, University of Oxford.

# The young TOWERING 10

## MEET 10 HIGH ACHIEVING ALUMNI UNDER 30

who prove that age is no barrier to achieving your dreams. They include a crowdsourcing entrepreneur, the first female Wiggle, an Olympic kayaker, the co-founder of a boardshort label making waves internationally, a fashion designer, and more.



Words by Renee Carl. Images by Kasia Werstak.

## 01 Alec Lynch

According to Alec Lynch, you know you've made it when you have a ping pong table. Lynch does indeed have a ping pong table at his office, and you can safely say he's made it.

Lynch, 29, co-founded crowdsourcing website DesignCrowd in 2007 with fellow UTS graduate Adam Arbolino. The business, an online marketplace for graphic design services, has since gone from strength to strength. But there were many uphill battles along the way.

"I started the business 'out of the garage' with \$10,000 in savings and three credit cards," Lynch says. "It took over a month to make my first sale and after 12 months I was making sales around the world, but had accumulated \$60,000 in debt."

In 2009, the business' fortunes started to change, thanks to the raising of \$300,000 from four angel investors. The hard work continued to pay off - in 2011, DesignCrowd received a further \$3 million in funding from Starfish Ventures, which "supercharged" the business.

"Since then we've grown from three staff to 20, acquired two US websites, launched in the UK, Canada, India, Singapore and the Philippines and are now approaching \$10 million in projects," Lynch reveals.

Lynch - who completed the Bachelor of Information Technology Co-operative Scholarship program, picking up the University Medal along the way - and Arbolino are proud UTS graduates. But the UTS connection doesn't end there.

"One of our angel investors Garry Visontay studied IT at UTS many years ago. We've also hired three IT graduates from UTS who've been able to learn quickly, hit the ground running and implement some of our most exciting innovations in their first year in the business."

In this coming year, Lynch hopes to open an office and hire a team in the US.

"The US has become our biggest source of sales (even though we don't have any staff there). I would also like to get a rock-climbing wall in our office. Hopefully they are not mutually exclusive."

And the five year-plan? "I'd like to grow DesignCrowd to a \$100 million, global business with staff around the world." Watch this space.



## 02 Samantha Brett

Samantha Brett is perhaps best known as the author of relationship blog 'Ask Sam', which enjoyed a six-year run in the *Sydney Morning Herald (SMH)*. After graduating from UTS with a Bachelor of Arts in Communication (Journalism), Brett not only forged a successful blogging career, she published her first book at 20, and has since added six more to her catalogue.

"I was always interested in becoming a reporter, but when I was offered a column with the *SMH* at such a young age, I put my news reporter dream aside for a few years," Brett, 29, reveals. "That column took on a life of its own, and it went viral. From there I got thousands of online readers and fans and was able to parlay that into an amazing career as a writer and author."

Yet Brett refuses to get caught up in the 'success' label. "I honestly never think of it as 'success' - it's just that I'm quite a passionate person. For a few years I was obsessed with writing. That's all I wanted to do. I would just sit for hours on end, sometimes till 3 or 4am,

and again starting from 7am, and I would just write. And that's how I got to write so many books and columns."

After a stint as a blogger and author, Brett has now gone back to her roots, as a reporter for Sky News - where she did work experience while at university - in Hobart. She concedes it took a while to get her foot in the door again. "I moved to the country to be a regional news reporter and soon after I landed a job with Sky News - back where I had started all those years ago."

While she thrives on the ever-changing nature of working for a 24-hour news channel, Brett admits the news game can be pretty tough. "I am really trying to be the best news reporter I can. That entails reading anything I can get my hands on, immersing myself in the world of news and politics, and always trying to improve my scripts and getting the best angles for stories and interviews."

Brett advises prospective journalists to work harder than anyone else. "Read, hustle, learn and be creative."

She is grateful for the grounding her education provided.

"UTS gave me the confidence to pursue my dreams and the know-how to jump into a journalism career with confidence."

"UTS gave me the confidence to pursue my dreams and the know-how to jump into a journalism career with confidence"

## SAMANTHA BRETT



Image by Marea Martlew

## 03 Kirralee Baker

Growing up in the 1990s, Kirralee Baker was a big fan of crime show *CSI*. Little did she know she would be pursuing a career in forensics later down the track. "Who would have thought there would actually be a degree that could appeal to both my childhood hobby and investigative nature?" she asks.

Baker graduated in 2011 with a Bachelor of Science in Environmental Forensics and with Honours in Environmental Science in 2012. This year, Baker commenced her PhD. "My project investigates the biogeochemical role of diatoms and other phytoplankton functional groups in Australia's coastal oceans," she explains.

In 2012, Baker received an Australia Day Award for outstanding academic recognition by the Soroptimist International (a worldwide organisation for women in management and the professions) Region of NSW, where Baker spoke on behalf of all award recipients to a room of 250 influential women.

After completing her PhD, Baker hopes to ignite people's passion for the preservation of oceans and coastlines. "So I can show future little Kirralees how to frolic and fossick in them like I do."



04

## Sean Venturi

Driving home from a swim at Bondi one afternoon, Sean Venturi and his friend Theo Smallbone had an epiphany.

"We started scheming about how we could take over the boardshort game and haven't stopped since," says Venturi.

The duo created their boardshort brand Venroy in the summer of 2010, launching in Sydney and LA simultaneously.

"Our LA office deals with our northern hemisphere distribution, but all design and IP is developed through our Sydney office."

In addition to LA and Australia, the brand is now stocked in respected boutiques in New York, Miami, Montreal and Tokyo, with the European market also on the radar.

"Our only European stockist is the W Hotel in Barcelona, Spain," says Venturi. "Europe is definitely a market that we will be gravitating to, but it will take time."

Venturi completed a Bachelor of Business at UTS. "I only really started to understand the skills that I developed from studying business on a theoretical level once I began to practice the theory."

He says there is a strong synergy in the skill sets between the two founders. "Theo's focus is design and mine is operational. So far we have gotten more calls right than wrong."

Nearly three years on, Venturi says they are still coming to terms with the workload involved in operating two businesses in two different countries at the same time. "We are very conscious about the amount of work we take on."



05

## Natalia Grzybowski

"Minimal in form - maximal in print," says Natalia Grzybowski, describing her design aesthetic. "Classic with a twist."

The 24-year-old designer has made a name for herself since graduating from UTS with a Bachelor of Design in Fashion and Textiles. She was awarded the 2011-2012 Australians in New York Fashion Foundation scholarship, which included a \$25,000 prize and a six-month internship with Calvin Klein.

"Both have given me years worth of career experience, life experience and invaluable connections," she says. "My career is simply on a whole new level, which wouldn't be accessible to someone fresh out of uni."



With plans to eventually develop her own brand, Grzybowski is currently honing her skills working full-time for a Sydney-based designer. "I was lucky enough to be placed in a quite advanced role so I'm hoping to learn a great deal."

When reflecting on her education at UTS, Grzybowski says it changed the way she sees and thinks about design.

"To me, anything designed needs a function and/or a meaning - otherwise what's the point?"



06

## Emma Watkins

Emma Watkins thought it was a practical joke when she was asked to be the first female Wiggle.

"Anthony [Field, AKA the blue Wiggle] approached me about it before we were about to do a show at the Enmore Theatre," she recalls. "All the guys on tour play jokes all the time." But when she realised the offer was serious, Watkins couldn't believe it. "It was so unexpected that I would be a Wiggle," she says. "And it is the best thing ever."

In 2010, while completing her Master in Media Arts and Production at UTS, Watkins successfully auditioned for a role in The Wiggles, performing a fairy dance and a screen test in a fairy outfit.

Watkins - who has been dancing since the age of four - was asked to tour regional Australia as Fairy Larissa for a couple of months. The rest is history and she took up her role as the Yellow Wiggle mid-last year.

"[At UTS] I took up a subject which was directing for camera which actually helped me direct the original Wiggles at the time in front of the camera on tour when I was organising 'behind the scenes' videos."

Watkins can't imagine doing anything but The Wiggles.

"If I can be still wiggling in five, 10, even 20 years, I'll be stoked!"

07

## Joshua Gum

Joshua Gum does not like the idea of having all his eggs in one basket. The Clinical Nurse Specialist at North Shore Private Hospital (NSP) started a production company, Live Wire Productions, with a friend at the age of 16. The business provides professional audio, lighting, video and communications equipment and services. "Nearly 10 years on, Live Wire is still a large part of my professional interests as we have built it up into a successful business."

Gum's interest in the medical profession began as a 10-year-old when he joined the St John Ambulance Cadets. At 19, he became a qualified Endorsed Enrolled Nurse after a year of training, and then a full-time employee at the Cardiothoracic and Acute Care unit at NSP.

"In 2010 I commenced at UTS as an undergraduate student [Bachelor of Nursing] completing an accelerated two-year conversion to Registered Nurse," Gum explains. "UTS has equipped me with the knowledge and opportunity to experience many of the diverse facets of clinical nursing."

In 2012, he graduated with distinction and commenced as a Registered Nurse. "Later the same year I was accepted to the designation of Clinical Nurse Specialist. At 25, it was an honour and a privilege."

Gum would like to branch out into other areas of the medical profession.

"I am currently studying to complete the GAMSAT [Graduate Medical School Admissions Test] examination to see if I have the potential to pursue a career in medicine."



08

## Codie Asimus

Securing a graduate role in London with prestigious international law firm Linklaters is no walk in the park. However, UTS law graduate Codie Asimus has done just that. "The process involved a series of HR and commercial awareness interviews, as well as a critical reasoning test," he explains.


At UTS, Asimus completed a double degree: Bachelor of Arts in Communication (Public Communication) and Bachelor of Laws. "I found the learning environment at UTS to be very encouraging," he says.

A qualified solicitor in New South Wales, Asimus takes up his role as legal advisor for Linklaters in March, and will become qualified in England and Wales after 18 months of further study.

"I will rotate across four different areas of law, each of six months' duration," he explains. "One of these rotations will be in an overseas office and I plan to go on secondment to the Hong Kong office. I am hoping to rotate through mergers and acquisitions, banking, projects and capital markets."



Image by Daniel Pertrov



“Competing at that level among the best athletes in the world from all different sports was very special.”

**JO BRIGDEN-JONES**

Image by Chris Benny

**09**

**Jo Bridgen-Jones**

“Everything at the Olympics was unbelievable and I don’t think I will experience anything like that until the next Olympic Games,” says Australian Olympic kayaker Jo Bridgen-Jones. “Walking into the stadium for the Opening Ceremony was one of the best moments of my life; I had goose bumps from head to toe.”

For Bridgen-Jones, representing Australia at the 2012 London Olympics - in the K-4 500-metre event, where the team just missed out on reaching the final - was the pinnacle of the hard work and dedication she had put in over the past 10 years. “Competing at that level among the best athletes in the world from all different sports was very special.”

While completing her Bachelor of Nursing degree at UTS, Bridgen-Jones continued to kayak - training three times a day - while studying full-time. “[It] didn’t leave me much time to do anything else!”

Outside of her kayaking commitments, Bridgen-Jones recently started part-time

work at a local private hospital. “It’s a great challenge to learn how to manage my time and to balance two completely different career paths,” she says of juggling the two.

Her longer-term goal is to qualify as a paramedic, her “dream job”.

“I have just started my third semester in my Graduate Diploma, so I’m well on my way to gaining the qualifications to become a paramedic.” She is set to finish the course at the end of 2014. “I study via distance education so it makes it a lot easier to complete my work while travelling internationally for kayaking.”

Looking forward, Bridgen-Jones has a four-year plan. “I would like to compete at the 2016 Rio Olympics, so I will keep training hard. After Rio, I will start working as a paramedic [with] lots of nursing experience behind me as I will continue to work part-time.”

While she has her work cut out, it seems Bridgen-Jones wouldn’t have it any other way. “I am inspired by the opportunity to gain something from every day - whether it be extra speed in my kayak, strength in the gym or helping someone back to health.”



**10**

**Tiffany-Anne  
Carroll-Macdonald**

The most challenging aspect of completing a PhD, says current UTS student Tiffany-Anne Carroll-Macdonald, is not losing sight of your bigger goals and what you are working towards.

“The most rewarding aspect,” she says, “is seeing your work come to fruition and making a difference.”

The 28-year-old’s Science PhD focuses on the impact of soil changes along flood inundation patterns, specifically, the Murray-Darling Basin.

“[While] completing a Certificate in Horticulture at TAFE, I realised I had a particular ability to read environments and loved problem solving.”

With the encouragement of her teachers, Carroll-Macdonald returned to university to learn more about soils and environmental systems, “and enhance my passion for preserving our natural environment”.

This passion and hard work was rewarded courtesy of a \$2000 grant through Layne Beachley’s Aim For the Stars Foundation - Carroll-Macdonald was the sole recipient in the environment category.

“Funnily enough it was my dad who saw an article on the Aim for the Stars Foundation and he thought of me. He urged me to find out more and it took off from there.”

Carroll-Macdonald was honoured to accept the grant, which has helped pay for essential resources needed for her PhD research. “It is very important to me as I believe passionately in my work, and these funds will assist me to answer some important questions that will help both the environment and those living on the land.”



# A CREATIVE FORCE

Artwork on wall: *You Yangs*, 1964 by Fred Williams. Steel sculpture in foreground: *Helix Nebula*, 2010 by John Seed. Steel sculpture in background: *Australian Flag No. 1*, by Geoff Ireland.

A love of the arts runs deep in the Belgiorno-Nettis DNA, so it is no surprise that Luca Belgiorno-Nettis champions the transformations taking place at UTS. He reflects on his education and another major passion – political reform.

WORDS **STEVE MEACHAM** PHOTOGRAPHY **NICK CUBBIN**

“Do you realise there is no fine/visual arts teaching at UTS, and yet they sponsor an art gallery?” asks Luca Belgiorno-Nettis – architect, businessman, patron of the arts, philanthropist and passionate political idealist. “I think that’s brilliant,” he continues. “The University sees the worth of having art on the campus for its own sake.”

Yes, the present gallery may be small but, he argues, its very existence demonstrates that the leadership of UTS recognise what the visual arts symbolise: creativity,

innovation and constantly refreshing thought patterns – qualities applicable to all forms of intellectual endeavour.

Belgiorno-Nettis, now a lean 58, is not an entirely independent witness. Sometimes described in the media as modern-day Medici, the closest thing contemporary Sydney has to a Renaissance Man (“That was more my father, not me”), the former student of UTS has chaired the University’s art advisory board for the past decade.

Today we’re talking at the Sydney headquarters of Transfield Holdings, the investment, construction and infrastructure company that his legendary father, the late Franco Belgiorno-Nettis, founded in 1956 with a fellow Italian migrant Carlo Salteri.

Unlike most anonymous corporate HQs, this one is a physical embodiment of the Belgiorno-Nettis family credo. The office occupies a section of a refurbished 19th century timber Finger Wharf at Walsh Bay –





“I’m very happy to be involved in the future of UTS. We’re in a very interesting phase.”

**LUCA BELGIORNO-NETTIS**



**Above:** *Artwork*, 2004 by Richard Tipping. **Right:** *Tsunami*, 2012, by Kay Allibrand.

once a hive of working class industry, now a precinct for web-based businesses and the performing arts.

The lobby is open, airy - and full of choice pieces of contemporary sculpture and paintings. One of the most prominent is Richard Goodwin’s sculpture, *Co-isolated slave*, which won the Art Gallery of New South Wales’ celebrated Wynne Prize in 2011. It features an upturned motorcycle lashed impotently on the back of an ancient butcher’s tricycle.

The sculptured lobby certainly sends a message to any new visitor: Transfield Holdings is not a conventional construction company. And Belgiorno-Nettis believes the radical metamorphosis now under way for Broadway in general, and UTS in particular, will also have a profound impact on how people view the institution.

Since it was built in the 1970s, the UTS Tower has had to live with the reputation of being one of Sydney’s ugliest and least-loved buildings. But the new Frank Gehry-designed Dr Chau Chak Wing Building will revolutionise the University’s public image. So too will the Goods Line, modelled on New York’s High Line, which will provide much better links between UTS, the ABC, the Powerhouse Museum and the new Darling Harbour facilities being planned by the Sydney Harbour Foreshore Authority.

Meanwhile the redevelopment of the old Carlton and United Breweries site, with the creation of Central Park, puts UTS at the very heart of an exciting technology-savvy community.

“The Gehry building is fantastic,” says the architect turned developer. “These things can transform the image of a place. Look what the Sydney Opera House has done for Sydney. We’re now in the process

of introducing an art plan for the entire UTS campus, and a new gallery is proposed to replace the little one we have now.

“I’ve very happy to be involved in the future of UTS. We’re in a very interesting phase.”

Belgiorno-Nettis was 26 when he attended UTS in 1980 to complete a Graduate Diploma of Urban Estate Management. “It was a mouthful,” he laughs. “But it was very useful for me. I felt I needed to do some business-type studies to complement the architecture degree I’d got from the University of NSW.”

Luca and his brothers, Marco and Guido, attended St Aloysius’ College in Kirribilli. He chose architecture because “like most people, I didn’t know what I wanted to do until it was too late”.

As an architect student, Luca had to study “structure, design, psychology, town planning... I found it intriguing and interesting, but I was all at sea. I didn’t understand where I should focus.”

His decision to continue his studies at UTS came down to a determination to learn the practicalities of architecture, “the language - how a cap rate worked or what a discounted cash flow was about”.

He studied at UTS three nights a week. “I really respected the other students. Everyone else was working too. Everyone was serious about their studies. There was no time wasting. The teaching was great because the people doing the teaching had all come from business. So I was learning things I needed. And in the town planning aspects of the course we got to be more creative.”

### **Artistic endeavours**

Both Luca and Guido have continued their father’s passion for the arts. Luca chairs the Biennale of Sydney, which Franco

founded in 1973. In 2007, the family donated \$4 million to the Art Gallery of New South Wales to finance the major reworking of the former basement into a contemporary arts floor. They are supporters of the city’s Art Gallery of New South Wales, the Museum of Contemporary Art, the annual Sculpture by the Sea, and they figure prominently among Sydney’s music and arts elite.

So why did Luca and Guido renounce their positions as co-managing directors of Transfield Holdings last year? Why appoint a new chief executive Roy McKelvie when things seem to be going so well?

“There was a sense that Transfield Holdings needed a bit of refreshing to be honest,” says Luca. “And Guido and I are interested in doing other things. But we are certainly not abandoning ship!”

In Luca’s case, his major passion these days is stimulating political reform. In 2005, he established the New Democracy Foundation with its motto: “We don’t need better politicians. We need a better system.”

At its heart lies Belgiorno-Nettis’ belief that elections have ruined democracy by reducing the concept to two opposing forces seeking power. When democracy was originally conceived, the Ancient Greeks hardly ever had elections.

“I’m interested in how we can improve the political landscape of Australia,” he explains. “Since the collapse of communism, the ideological differences in Australian politics have effectively evaporated. What we have now is a manufactured debate where the principal driver is the need to win and to hang on to power, increasingly to the detriment of good government.

“I’ve got a feeling that political reform is going to be my real abiding interest in life.”



# ALL EYES ON BROADWAY

The new UTS City Campus Master Plan is set to dramatically boost not only the wider Broadway precinct, but also create a dynamic and vibrant campus for students well into the future.

WORDS **CAMERON COOPER**  
IMAGES **COURTESY OF UTS AND DENTON CORKER MARSHALL**

Expect a thrilling vista. The scene that drivers and pedestrians are set to enjoy as they progress along Sydney's Broadway in 2018 will be a far cry from the hodgepodge collection of buildings today. Travelling from the west towards the CBD will provide the best vantage of the spectacular results of a redevelopment program now underway at UTS.

The Broadway Building, with its tilted sculptural panels peppered with intricate binary coding, will present a striking gateway to inner-city Sydney. The podium forecourt extension further along Broadway will welcome people to the UTS precinct, softening the dominance of the existing UTS Tower. There will be other gems within the precinct, including the Alumni Green, the dramatic Dr Chau Chak Wing Building - the first in Australia designed by legendary North American architect Frank Gehry - and the underground Library Retrieval System.

All are elements of the City Campus Master Plan, an ambitious UTS building and redevelopment program. The University is investing \$1 billion through the Master

Plan, creating new buildings and revitalising others to increase and improve learning spaces while delivering a campus that promotes social engagement. The entire project is on track for completion in 2018.

"It's exciting because it builds a campus that everyone can be proud, where they can engage with each other, and where they want to come to," says UTS Vice-Chancellor, Professor Ross Milbourne. "That will be very uplifting for the spirit."

When completed, the Broadway Building will house the Faculty of Engineering and Information Technology. The building itself will have 12 above-ground floor levels and four below. A crevasse - or linear atrium - will slice the internal building horizontally and vertically, opening the interior and allowing sight lines between floors, while large internal bridges will provide perfect congregation points.

The facade will capture the UTS technology brand, with skewed metal screens covering each side of the building and perforated with a pattern of '1s' and

'Os' used in binary coding; a reworking of the binary sequence for 'University of Technology Sydney Faculty of Engineering and Information Technology'.

"It brands the University in a very particular way - it says technology," Milbourne says. "It's going to be a defining characteristic not just for UTS but for this precinct and the City of Sydney. It's about the future, not the past."

### Revolutionary design

The architectural firm behind the Broadway Building is Denton Corker Marshall, which won the job through a two-stage international design competition.

Directors Ian White and Adrian FitzGerald say with just one more year of construction to go, the Broadway Building is set to revolutionise learning spaces in Australia.

On the outside, the practice has designed the binary screen to give the building expression and a sculptural appearance, with the binary code tying the project back to UTS. "You see a lot of screens on architecture nowadays and they're interesting, but little else," FitzGerald says. "We liked the idea of integrating an appropriate meaning into the screen pattern."

Additionally, he says, the designers were aware of large, strong apartment buildings currently being constructed across the road by Frasers Property, "so we had to come up with something that could stack up with the urban circumstance of Broadway".

Inside the building, White notes, the crevasse will allow daylight to stream through and symbolically foster interaction. "The design provides transparency, permeability and opportunities for interaction among all of the schools and research centres within the building."

Large lecture theatres will differ from traditional counterparts, with two rows of seating on each tier, allowing students to turn and face each other in the spirit of collaboration. "UTS has been working hard over past years to introduce a collaborative teaching model that grew from Harvard's Project Zero, an educational research group dedicated to understanding and enhancing learning and thinking," White says. "This is the first campus building that fully embraces all of those principles in a technology-rich environment."

FitzGerald adds that the robust, warehouse-style interior of the Broadway Building, featuring concrete floors and no formal ceilings, will allow for fluidity of internal design arrangements as needs change. "That invites the occupants to do



things to the spaces - we wouldn't mind if things get put on the walls. We think that's a healthy living and learning environment."

### Sustainable technology

Michael Jessett, Manager of Delivery for UTS's Facilities Management team, says the Broadway Building is on target to be completed in the first quarter of 2014, with the striking façade to start appearing above the footpath in May this year.

"The binary screen, which gives that very distinctive look, has a function - to reduce the solar load on the building and it should do that effectively," he says, adding that the University is expecting some significant energy saving benefits as a result.

The building also has "a heck of a lot of technology up on the roof," Jessett says.

"I've never been involved in a building that has as many initiatives all in one spot, with wind turbine technology, solar panel technology and solar trough technology linked to tri-gen power generators and chilling plants. That is highly innovative."

The largest building in the City Campus Master Plan, with a total gross floor area of about 44,000 square metres, the Broadway Building will also contain some other special features. Nigel Oliver, Director of the Program Management Office at UTS, says they include wireless sensors embedded in the concrete structure of the building; a data arena at ground level that can create specific environments for research; and recharging points for electric cars. "This is future-proofing the building in the event that the motor industry does fully embrace electric cars as an option. So we can adapt the building to cater to an extent for the changing future."

Oliver says with one-third of the UTS staff and student population to eventually be located in the Broadway Building and nearby Building 10, this will shift the focus of the campus.





## UTS Rowing builds on a proud tradition

Another UTS icon receiving a facelift is its Rowing Club facility in Haberfield. The Vice-Chancellor, Professor Ross Milbourne, says the existing club facility was falling down, so a new club with twice the capacity is under construction, which will attract elite rowers to UTS. The redevelopment, funded by the UTS Union, will include state-of-the-art rowing facilities and a licensed club.

"We've produced about a third of Australia's Olympic rowers over the last four Olympics, but we lost some key coaching personnel in the last few years as a result of the running down of the facility," Milbourne says.

"The first step in getting the club back to being Australia's pre-eminent rowing club is this wonderful new facility."

"That is good in a way because the Broadway Building overlooks the Alumni Green, which is itself the subject of fairly major upgrade works and will become the new greenhouse of the University," he says. "It's a very valuable green space which we're looking forward to enhancing and making it as attractive as possible as some quiet space for staff and students."

### Coordinated redevelopment

Bringing the City Campus Master Plan to life is a staged process and already some projects have been completed, including fit-outs of Building 10, the underground Multi-Purpose Sports Hall, the upgrade to the Great Hall and completion of Yura Mudang Student Housing. Projects under way are the Broadway Building; the Dr Chau Chak Wing Building; upgrades to Building 1 (the UTS Tower); the Alumni Green; the Thomas Street Building; and the Library Retrieval System. The latter will result in the library's 900,000-item physical collection being stored underground and retrieved as needed using a robotic crane. That system will be online from late next year.

The final piece of the Master Plan to be delivered by the end of 2018 will include relocating the UTS library to Building 2, along with the Building 1 and 2 podium extension that will transform the Broadway streetscape.

Jessett says construction has been designed to minimise disruption to normal university activities, and he acknowledges the patience of students and staff.

"We try to do a short sharp burst of activity and then the butterfly appears from the chrysalis - they've got their new campus."

### World-class campus

While many people believe the digital revolution and delivery of online university courses negate the need for attractive campuses, Milbourne thinks otherwise.

"Making a campus attractive and vibrant now is more important because you've got

to have a way of getting people to want to come on campus and get an experience they could not get via online or distance delivery," he says. "My vision for UTS is a wonderfully vibrant campus of close to 40,000 people where you can walk from one end of the campus to the other in 10 minutes. That is unique in the world and it's going to be a great brand for UTS."


The project has not been without its challenges: among them, finding more than 100,000 square metres of extra usable space on an already constrained campus; converting rundown buildings into statement pieces; and moving the library - the social centre of the University - to the physical middle of the campus along with most other student-related activities.

However, operating from the belief that a great university does not have poor buildings, Milbourne says a working party spent three years examining every possible scenario for a future campus. One big advantage was the University's building and land holdings, which opened opportunities for repurposing and creating buildings to meet the Master Plan requirements.

"So we had one chance to think if you were planning the campus from scratch where would you put people and how would you put people together in the maximum

synergies... This was a once in a lifetime opportunity to plan this whole thing."

Milbourne says the response to the Master Plan has been supportive from the City of Sydney, state government and the local community. "They like what we're doing in this space and are very keen to see it happen."

Seeing a number of projects already delivered is sparking excitement about the future UTS campus. "Every time there's a new building or a new facility opening it gives you a sense of pride that you were part of that history," Milbourne says. "This program will be a legacy that will last many generations of students and staff." 



# BEYOND BODIES: there's more to robots than a humanoid shape

What does the future hold for robotics? While pop culture fictionalised sci-fi style robots, is the reality falling short?

BY DR NATHAN KIRCHNER



If someone tells you to think of a robot, what springs to mind? Is it a humanoid shape made of metal, with glowing eyes, that speaks in a jerky voice?

Or is it a robotic factory arm, or a car that can park for you, or maybe a system that heats or cools your house?

For some time now, pop culture has painted a particular picture of robots. From Asimov's 'bots', to the Terminator - even the Transformers - the very concept of a robot has grown up next to these hugely popular sci-fi characters. So why aren't we seeing robots like these by now?

## Hollywood bots

On one hand we have the glamorised depictions of sci-fi robots. On the other we have the roboticists' more pragmatic view of robots as machines that perform functions in an autonomous way.

For these roboticists (myself included), robots are all around us - in our cars, our homes, on public transport and in buildings.

Part of the problem is that there are a number of research projects around the globe that seem to fit the 'Hollywood' robot image - Hiroshi Ishiguro's Intelligent Robotics Laboratories with their Geminoid and Robovie enabled research and our own RobotAssist to name just a couple.

This is one major source of the confusion surrounding the state of the art in robotics. In an attempt to make our research accessible to the wider world we, the roboticists, have leaned on pop culture's sci-fi robot and subsequently reinforced the stereotype.

Sure, the fundamental research questions we are probing are embedded in the project, so there's no harm done, right? Well, yes actually, there is.

## Great expectations

We've shaped the presentation of our research around this stereotype and the

actual science questions are less visible to the casual spectator of our work.

With robotics research and development presented in this manner, the tendency for the casual onlooker is to measure the gaps between the research on show and the benchmark of the sci-fi robot. This is not always a true indication of the state of the art.

I myself have been guilty of unintentionally obscuring my own research intentions by putting them in a sci-fi friendly wrapper with RobotAssist. While RobotAssist appears on the surface to be another somewhat human-like robot that can do some cool things (but is no T1000), this isn't its intended role.

RobotAssist is a research and development platform for core robotics technologies. It has provided a valuable platform for a number of important developments that have found their way into real-world realisations. These include robust people-detection and tracking techniques that are currently deployed in mining, construction and transport environments.

From a particular robotics perspective there is little difference between the RobotAssist incarnation of the technology and how it is used in a transport environment. What changes is the way the technology is embodied.

Your local train station, say, doesn't look anything like a robot. But in a sense, the entire building is a robot. Maybe the security cameras and embedded sensors are its eyes, maybe turning on and off exit signs and dynamically restricting and redirecting some passageways are the actuators. This kind of robot is invisible.

## Put your body into it

Roboticians have been guided by the 'sense-act-think' operational definition of a robot for more than 30 years now.

This definition states that a robot is a machine that can actively 'sense' the state of

the world, 'think' intelligently about its task in light of sensed information to form an action plan, and 'act' that plan upon the world.

Notice there is no mention of embodiment? This, I believe, drives another major source of the confusion surrounding the state of the art in robotics.

Society is conditioned by pop culture to recognise robots through the way they're embodied. Roboticists, however, often consider the embodiment superfluous, or at least tangential, to the robot.

This brings us back to the two viewpoints that I mentioned earlier. The reality is that disembodied robots are already prevalent throughout society.

Just think about our cars with their automatic parking and braking. We don't tend to acknowledge these machines as robots, partly due to the sci-fi stereotype and partly due to roboticists further encouraging this stereotype - but they do fit the operational definition of a robot.

Don't get me wrong, the sci-fi style robot entering society is inevitable. Too many people want it for it to not happen.

My point is that this is just one of the many forms a robot can take, and perhaps it will be one of the later ones to be realised.

If we want a true gauge of where we are at with robotics, we may need to re-calibrate our expectations of what a robot is. We are 'getting there' with our research. It just turns out that 'there' isn't exactly where pop culture told us where we should be. ■

*This article was first published on The Conversation ([www.theconversation.edu.au](http://www.theconversation.edu.au)).*

**Dr Nathan Kirchner** Lecturer, School of Electrical, Mechanical and Mechatronic Systems at UTS.

DISCLOSURE STATEMENT: Dr Nathan Kirchner receives funding from the Australian Research Council for robotics-related research.

# Show stopper

Couture jewellery designer Jenny Mercian honed her creative skills at UTS, and today her resume includes designing for the Victoria's Secret annual shows, adorning some of the world's most beautiful women.

WORDS **MARK ABERNETHY** PHOTOGRAPHY **KASIA WERSTAK**



When Jenny Mercian's jewellery creations are shown at the Paris and New York fashion shows this year, she'll be able to do better than simply claim they are genuine Aussie designs: they were actually designed and made in her parents' garage, in Sydney's western suburbs.

"Dad converted the garage to a design studio when I was at uni," says Mercian, a graduate of the UTS School of Design. "It's my oasis - it's where I can think and create."

Mercian, 33, is now married and lives in a home of her own. She has worked in London and New York and has designed for labels such as MAC and Jaeger London. Yet she is still designing and creating from that same garage.

"In this garage I know where all my stuff is," says the woman who can make a garment from hundreds of beads and jewels. "And believe me, I have a lot of stuff."

Mercian is one of the success stories of a UTS course that has produced many talents. Designing under the label Manik Mercian - a blend of her middle and last names - Mercian has been designing for Victoria's Secret annual show since 2005 and has worked in-house at Jaeger London. Originally known for her fashion garments either made of jewels or heavily embellished by them, she is now shifting her attention to pure jewellery for the European and Asian markets.

Her interest in design began early in her high school days at St Agnes, Rooty Hill, but not in fashion and jewellery.

"I studied drafting and art at school. Dad thought I'd be an architect and that's where my interest was: sketching buildings and making models of them."

As a sideline to her school studies, Mercian would sketch clothes but never seriously. "I became far more girly [heading into] the HSC," says Mercian of her Higher School Certificate years. "I started leaning towards fashion and I majored in art and design technology."

She excelled in her studies and her marks were strong enough to apply for and be accepted to the UTS Bachelor of Design in Fashion and Textiles.

"I really liked the practical skills the students were being taught when I went to orientation. I instantly wanted to be in that course."

### A fortuitous meeting

After four gruelling years Mercian passed with distinction, and by the time of the final year students' Showcase, her contribution was a high fashion men's collection,

distinguished by the use of beads and other jewellery embellishments on the fabrics.

The collection at Showcase caught the attention of Australian designer Gabrielle Scarvelli, who Mercian worked with for a year, embellishing designs with stitching and beading, further cementing her reputation in clothes made out of jewellery.

In 2005, with a few shows under her own name, Mercian - then aged 25 - decided on a bold move. Spending all her savings, she paid \$10,000 for a stand at the Australian Fashion Week and stocked it with a collection of her jewel-embellished clothing.

"A scout for Victoria's Secret came by my stand," says Mercian. "He told me I should be designing for their show and he took some photos. Two weeks later I had a call from the Victoria's Secret head stylist, asking if I would contribute to their show."

The underwear label wanted six signature looks from Mercian, developed around the underwear collections. Having sent the looks and had them accepted, she was whisked to New York for the November 2005 show.



"It was amazing," says Mercian. "It's a really big event, held in a big arena and screened on American TV."

Her looks consisted of detailed crystal couture pieces, using Swarovski crystals.

"I was nervous to begin with," says Mercian. "I was seeing people I'd only seen in the magazines: Tyra Banks, Heidi Klum and all the big fashion editors."

Her looks were a hit and she has now done seven Victoria's Secret shows, only taking off the 2012 show to concentrate on her summer wedding. That first lingerie show put the designer from western Sydney into a new league and led to design gigs with Swarovski, MAC Cosmetics and Jaeger London, as well as her signature designs being splashed in magazine spreads for British *GQ*, *Vogue UK* and French *Playboy*, which featured

Dutch model Lara Stone in Mercian's wearable jewellery.

"I've been very lucky," she says. "I get to do what I love and at a high level, with some really talented people."

### Where to next

However, Mercian is always looking to the future and her next step is to concentrate on her jewellery design, under 'Manik Mercian'.

And while she is currently selling via her website and a few selected boutiques, her appearance at the Paris and New York shows this year should seal some international distribution deals.

Mercian is a successful, self-assured young woman with the world at her feet and creative energy to burn. But she is always mindful of the grounding she got at UTS while completing her course.

"Some of the things we learned in the UTS degree seemed rather unglamorous at the time," says Mercian. "But everything I was taught has been useful."

She particularly singles out being able

to work under pressure as something all graduates of the degree have.

"Being a designer is never about waiting for the inspiration - you're asked to come up with ideas on Monday and you're presenting on Thursday."

"The UTS course put me under pressure, but it gave me the confidence to work to a brief and to present professionally."

And how has that love of pressure played out in her personal life? "Well, do you think I settled for a simple wedding dress and got someone else to make it?" she asks with a laugh. "That dress was one of the most complex things I've ever done - I finished it at 2.30am on the day of my wedding!"

Watch Jenny's video on the TOWER iPad app and online at [www.alumni.uts.edu.au](http://www.alumni.uts.edu.au)

# CALL OF *the WILD*

Meet UTS alumni Tim Levinson and Kenny Sabir: co-founders of the Elefant Traks record label, and members of one of Australia's most accomplished hip hop bands, The Herd.

WORDS **NICK GARDNER**

It's difficult to say what's more surprising: a member of one of Australia's top bands simultaneously starting a course in chromosome observation, or a Public Communication graduate becoming Australia's brightest hip hop star.

But UTS graduates Kenny Sabir (AKA Traksewt) and Tim Levinson (AKA Urthboy) - musicians, entrepreneurs and social commentators - are masters of reinvention. It's impossible to define either of them in a sentence. They are constantly learning and challenging themselves, both personally and professionally, and their appetites for personal development seem insatiable.

They are best known for creating the Elefant Traks record label - Australia's first and most successful outlet for new, independent electronic and hip hop music, and as founding members of Australia's biggest hip hop band, The Herd.

The pair met while studying at UTS in 1998 and hit it off instantly. "I loved Tim's attitude straight away," says Kenny. "He was always really positive, looking to develop and improve himself, and he wasn't jaded or negative like so many other people you meet."

The admiration is mutual. "Kenny is such a forward thinking person," Tim says. "Whether in science, writing a song, engineering technology or baking a cake. He thinks of the smartest way to do it and get the best outcome."

Forward thinking, precocious, ahead of his time. All apt ways of describing Kenny, who learned violin aged just three-and-a-half and was programming computers at four. "A System 80 from Dick Smith," he recalls. "Dad didn't have a clue but he bought me the books and I'd work out how to program the games into the computer. I could barely read so it was a slow process but it was great fun."

Given his obsession with technology it is no surprise that Kenny chose a six-year, "sandwich course" in computer engineering. "It was four years of study with two years of work placements in the middle," Kenny explains.

For Tim, the choice was less clear-cut. He had been DJ-ing for local station BluFM from the age of 15 and was looking for something to enhance that experience.

"I signed up for the Public Communication course, which is basically advertising and PR, but if I had thought about it properly I would have chosen journalism. Nevertheless, I was very excited to have arrived at UTS - I went straight to level 26, to 2ser, which is a huge community station at UTS, and asked about getting a show. I was devastated when they told me it would take 'years' to get my own slot."



## Planets aligned

The directions of their future careers began to take firm shape when they met in 1998, just as Kenny was forming his ideas around Elefant Traks.

"I was getting into electronic music and Tim was passionate about hip hop, which was nowhere near as big then as it is now, but there were just no avenues to get original local talent out in Australia at the time," Kenny says.

"So I had the idea for Elefant Traks as a distribution channel for new, original music that was hitting a dead end in conventional media. I started putting word out about it and friends would start telling me about other friends who were doing musical stuff. When I met Tim, he was busy forming a band called Explanetary. It was perfect timing."

The pair began performing gigs at music venues around Sydney with material garnered from the Elefant Traks label. And to Tim's delight, they were soon approached by 2ser to do a show. Their radio gem, the Peanut Spell, was born, which soon became compulsory listening for hip hop fans.

"You can't imagine how pleased I was when 2ser came to us with the offer," says Tim. "After telling me it would take years to get a show!"

"It was a perfect outlet for us," adds Kenny. "Elefant Traks was taking off, we were getting a lot of demos sent in from all over Australia and some of it was really good, so the radio show was a perfect way to get it out there," he says.

The Herd was essentially a collaboration between artists on the Elefant Traks label who decided to work together





**Above:** band members of The Herd. Kenny Sabir (AKA Traksewt) pictured in bottom middle box, at right. Tim Levinson (AKA Urthboy) in bottom box, far right. Image by Susannah Wimberley. **Page 24:** Tim Levinson. Image by Mari Ekkje.

instead of individually. Kenny played accordion and clarinet while Tim was the charismatic MC.

"Even in his early days when Tim was on stage he could command an audience," says Kenny. "When he starts speaking you can't help but want to hear what he has to say and that's a quality you can't teach - it's just natural."

The work Kenny did on his UTS thesis actually helped found the band. He produced a distributed audio sequencer, or DASE, an invention that allowed musicians to jam in near real-time from all over the world over the internet. Its first function, however, turned out to be helping to provide the foundation for The Herd's early gigs.

"My program works like a loop, and you keep adding parts like drum snares and bass lines, and those waves get sent across the net to other people and they can see those changes and add their own stuff in to the mix," said Kenny.


"When The Herd first started we used the software I wrote and had three or four laptops with operators on stage making the music; we'd have just one song that would keep on changing for an hour. Then Tim would come on and MC over the top - that's how The Herd got going."

The Herd - which performs with two MCs, two singers, an acoustic and an electric guitar, bass, piano accordion, clarinet, laptops and MPC 1000s - has released five albums; been nominated twice for an ARIA award (2008 and 2011) and their 2008 album *Summerland* won 'Best Independent Urban/Hip Hop Album' at the AIR (Australian Independent Record Labels Association) Awards that year.

Looking ahead, Kenny says he will continue his studies while doing "random" Herd gigs and producing music with Nooky, in addition to his course in Bioinformatics Visualisation.

"I can't imagine living without music or technology," says Kenny. "They are my two great passions."

Tim is currently on a solo around Australia performing his new album, *Smokey's Haunt* (which debuted at number 14 on the ARIA Album Chart), and is intent on growing Elephant Traks, writing and performing.

"Whether that's with Hermitude [another of his bands], on my own, or with The Herd, as long as I feel inspired I'll keep doing it," he says. As long as they do, the future of Australia's hip hop scene looks bright. 

## Reflections on UTS

Tim Levinson and Kenny Sabir's time at UTS continues to help them today. "I'd never have thought advertising and PR would help me in my life," says Tim. "But it has actually been really useful for running the label. I use the fundamentals of what I learned to promote the label and artists, and also in crisis management."

"Another big take away from my course was the attitude towards philanthropy, and ways in which PR can help companies become good corporate citizens. We studied the whole mentality of how it can help your standing in the community and I clearly remember the lecturers saying that this only really works if the company has a genuine commitment to the community causes that it is backing."

According to Tim, that message has definitely stuck. "I tried with Elephant Traks to make sure a genuine commitment to community was in place before anything else, and only then would I think about how our reputation travelled. I would never be involved in anything that didn't have a commitment to building a community and being part of that good story in society - I'd rather throw away Elephant Traks than betray that ethos."

Kenny says UTS gave him the confidence to tackle any problem. "When I was doing crazy all night engineering assignments it seemed so daunting and wasn't very exciting, but what it taught me was the process of tackling a big project - essentially breaking it up into pieces and tackling it bit by bit. I've applied that lesson right through my life."

# UTS ORIGINS



The completed Tower and Building 2.

As UTS celebrates its 25th anniversary, it is an apt time to reflect on its rich history, and the antecedent institutions that played a vital role in shaping the success and global standing the University enjoys today.

WORDS ANNETTE SALT, PAUL ASHTON AND DEBRA ADELAIDE

*At the ceremony for conferral of his honorary doctorate in 2008, former state member of NSW parliament Rod Cavalier noted that UTS 'has deep roots in the history of NSW education and training'. A person with a strong historical sensibility, Cavalier was the right person to refer to the institution's antecedents. He also chose the date for its declaration as a university on 26 January 1988. Cavalier traced the moment of inception from 'that night of 22 March 1833 when, at the urging of the Governor of NSW, Sir Richard Bourke, a public meeting was held with a view to establishing a mechanics' institute in Sydney'. Thus was formed the Sydney Mechanical School of Arts that preceded the Sydney Technical College which, in turn, said Cavalier with a rhetorical flourish, 'gave birth to the whole TAFE system and... provided generations of the architects and engineers, amongst others, who did so much to build our city and nation'.*

Here was a direct link - an ancestry - from the 1830s to Sydney Technical College which 'gave birth' in the 20th century to the New South Wales Institute of Technology (NSWIT) which came into being in 1965, by the simple expedient of the minister's initials on the bottom of a two-page memorandum as part of the Department of Technical Education.

NSWIT's purpose was clearly vocational and technical as it was 'to provide a wide range of tertiary courses for the training and education of professional technologists' and relieve pressure on universities when industry and commerce demanded 'technical preparation' of students. NSWIT later became the University of Technology, Sydney.

It is not surprising that Cavalier drew attention to what he saw as the noble past of UTS. For it is technical education which has been most closely involved with the education of the working man - mainly men until the mid-20th century - and that helped equip generations with the skills and knowledge to make their way in the world. Technical education, separate from universities, provided diploma courses that were the basis of the state's technical manpower.

Certain themes can be drawn from Cavalier's speech which underpin the early history of UTS.

First, that the vocational education context has had a vital role in shaping the future institution, its nature and purpose. Second, that politicians, state and federal, have been integral to the development of the national system of higher education. And finally, that these developments have

been inevitably subject to the politics of contemporary local circumstance.

### Then and now

Many people going to school and then on to higher education in the last few decades have assumed the system in which they are a participant and which has nurtured their way through to tertiary education was always there, in a timeless way. Few think about the massive revolution in education which occurred after the Second World War so that the four or five generations now living together in Australia in the new millennium have had very different experiences of education. Immediately after the war there were seven universities and for a population of around eight million. Only about 17 per cent of Australians completed high school and it was far more common for most to leave before or after the intermediate certificate.

By 1978 the system expanded to 19 universities and 160,000 students, so that the percentage of the 17-22-year-old age group enrolled in tertiary education more than doubled.

If the latter half of the 20th century witnessed something of an educational revolution in many western countries, Australia experienced one of the fastest growth rates of post-secondary enrolments within OECD countries, so that 'the system was transformed in less than one generation'. This was not simply about expansion of buildings, students and employees. It also meant the professionalisation of university teachers, a massive increase in scholarship, the rise of new disciplines and areas of research and investigation. All this affected the nature of curriculum and how it is taught.

This period of considerable change was largely funded by governments, so that the state became the heart of tertiary education from the 1950s until at least the mid-1980s and the generation of graduates who moved into the universities to become academics came to assume that this had always been the status quo and should continue in the future. In the increasing involvement of the state to fund this tertiary expansion, governments often saw universities as part of the 'nation building process'.

### The role of the CAEs

During this period, a binary system of higher education was also adopted. Universities were identified as research and teaching institutions, which would focus on 'pure' knowledge and the established professions. Colleges of Advanced Education (CAEs)



**Top:** New South Wales Institute of Technology (NSWIT). **Bottom:** A social function in the area of the Chancellor's office c1976 (courtesy UTS University Records).

would focus on applied arts and sciences and the emerging professions. The CAEs, being for the study of applied fields, were not explicitly funded for research. They allowed for flexible entry and study but could not offer degrees. In this way NSWIT, the Royal Melbourne Institute of Technology (RMIT), the South Australian Institute of Technology (SAIT) and the Western Australian Institute of Technology (WAIT) were set up, building on the technical education tradition with an emphasis on vocational training.

However, teacher education and nursing remained, for the time being, separate from the binary system.

In 1971, a report of the Commonwealth Committee of Inquiry into Academic Awards in Advanced Education, the Wiltshire Report, with Dr R.L. (Ron) Werner, NSWIT's founding president, as a member, recommended that in certain cases CAEs could award degrees. Students enrolled in diploma courses suddenly found themselves enrolled in a degree if they added an extra year to their period of study.

The Advanced Education Board initially had made CAEs present themselves every five years for course assessment. This became unwieldy and so the Board abolished it, thus removing a further characteristic which separated colleges from universities. Gradually the gap between CAEs and universities was closing.

The CAEs increased the push for recognition of their changing status and role. They were no longer satisfied with being praised as 'parallel and complementary' to universities. In September 1986, following the redesignation of the Western Australian Institute of Technology as Curtin University of Technology, NSWIT made a case for a reconsideration of its status. It claimed that it already resembled a university with very high admission standards and superior staff, 40 per cent of whom had doctorates and a commitment to quality research.

It stressed its differences as advantages, such as having good relations with employer and professional bodies through its system of 'occupational experience interleaved with study'.

In the following year, it awarded a total of 1257 degrees and diplomas for the year and had an operating income of \$52.17 million.

### The Dawkins reforms

Pressure for and acceptance of change was also related to a changing economic environment. In the 1980s, the federal government stressed the need for its industries to be more competitive. Many Australian secondary industries, now less protected, could not compete with cheaper imports. In 1983, fewer than 50 per cent of school pupils matriculated which was not competitive if Australia were to



**Top:** the Computer Centre in Building 4, c1974. **Bottom:** nursing students at the Kuring-gai campus c1980 (images courtesy UTS University Records).



be the 'clever country' described in Labor politicians' rhetoric.

The ensuing push to increase school retention rates in turn led to a renewed drive for the expansion of higher education. This resulted in the so-called 'Dawkins reforms' which had a significant impact on the direction of higher education in Australia. The most obvious change was the amalgamation of institutions in accordance with the efficiency mantra of 'bigger is better'. So the Unified National System (UNS) was instituted. Under this system, universities and CAEs were combined. The carrot and the stick were united by the requirement that an institution must have the equivalent of 2000 to 5000 full-time students in order to receive some of the highly sought-after research grants, and 8000 to receive a significant allocation of such grants.

The UNS also required flexibility in such matters as attendance patterns, means of entry and course offerings. While this

acknowledged the founding principles of NSWIT, over time it changed the student mix and culture as part-time mature-aged students were replaced by school leavers or young unemployed who needed full-time study. Additionally, the new institutions were expected to give priority to disciplines which aided 'national, social, economic and industrial development needs'. It was a case of combine or decline. The reforms provided a new set of challenges.

They made the dream of a higher education a reality for many people who would otherwise have missed out. But they also subjected higher education to market forces. Universities now had to compete with one another for funding which challenged academic collegiality. The new emphasis on preparation for careers, however, placed UTS, along with RMIT University, Queensland University of Technology, Curtin University and the University of South Australia, in a strong position. Their challenge was to prepare students for careers in an environment which still fostered enquiry and advanced knowledge.

### The new UTS is born

The establishment of the University of Technology, Sydney, somewhat anticipated these reforms when NSWIT, incorporating the School of Design (formerly part of the Sydney College of the Arts), became UTS on the same day as Australia celebrated its bicentenary on 26 January 1988.

But the Dawkins reforms led to its expansion to form the 'new' UTS, sometimes referred to as 'NUTS', through the amalgamation of the Institute of Technical and Adult Teacher Education (ITATE), Kuring-gai College of Advanced Education (KCAE) and the 'old' UTS - OUTS.

Many academics were drawn to UTS because it was open to innovative ideas and not limited by accepted conventions. This has led to an enthusiastic and creative approach to fulfilling all the roles of a university. UTS was one of the

first universities nationally to introduce communications degrees and to provide cultural studies courses. It has the oldest business school in the country, as distinct from schools and faculties of commerce and economics.

In 1988, it was the only university in New South Wales which offered a degree in design. In 1994, it offered the first forensic science course available in Australia. In 1999, the Faculty of Nursing, Midwifery and Health introduced a Doctorate of Midwifery, 'the first of its kind in Australia'.

In December 1987, about 10 days before the federal Labor government Green Paper on Higher Education, Gus Guthrie, the first vice-chancellor, officially informed the staff that NSWIT would become a university.

The first day of 1988 was to be the date for the Act to come into force but Guthrie had it deferred to coincide with Australia Day in the Bicentennial year. Thus UTS was the first institution to be created at the commencement of the third century of non-Indigenous presence in Australia. Between 3 and 4am that day, Guthrie had huge polystyrene letters glued to the front of the building proclaiming 'University of Technology Sydney'. The next day, he issued a broadcast memo to all staff: *At midnight on 25 January 1988 the New South Wales Institute of Technology vanished and in its place on 26 January 1988 rose the University of Technology, Sydney.*

On 29 January 1988, UTS joined the Association of Commonwealth Universities and in July became a full member of the Australian Vice-Chancellors' Committee (AVCC). Together with the renaming of the Western Australian Institute of Technology (WAIT) as Curtin University of Technology in 1986, the establishment of UTS heralded a new era in Australian higher education. ■

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## Going Back in Time

	Institute of Technical and Adult Education (ITATE) established.	Balmain was eventually renamed Kuring-gai College of Advanced Education (KCAE).	The College of Law at St Leonards affiliated with KCAE and became the School of Practical Legal Training.	KCAE amalgamates with UTS.
<b>1946</b>	<b>1952</b>	<b>1974</b>	<b>1977</b>	<b>1990</b>
Balmain Teachers' College held its first classes.	The New South Wales Institute of Technology (NSWIT) established.	Sydney College of the Arts established.	NSWIT, incorporating the School of Design, becomes UTS.	The College of Chinese Medicine opens.

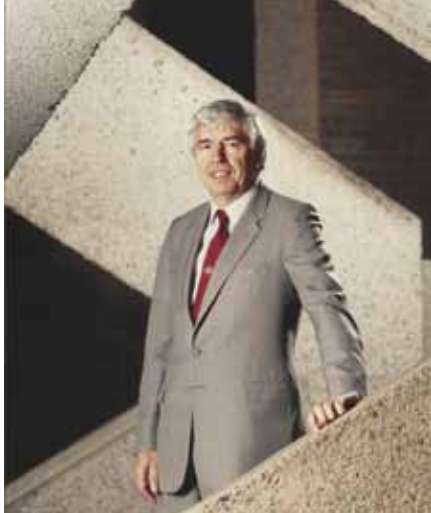


Photo supplied by Richard Guthrie, photographer unknown.

"It was our dear old friend, [university administrator] Stan Ashmore-Smith, who said to me one day, 'Why are you going for all these complicated names?' We had the Librarian digging up all these names, and all these histories of men and woman who were eminent Australians, and working out whether they could possibly have any connection... [Ashmore-Smith] said, 'You want the word 'University' in there, you want the word 'Technology' in there, you want the word 'Sydney' in there. Why don't you call it 'Sydney University of Technology?' Well eventually we turned it around, because I was very keen to have a name which I knew would be made into initials which actually flowed very easily off the tongue. And 'UTS' flows very easily..."

#### **FORMER VICE CHANCELLOR OF UTS, THE LATE PROFESSOR GUS GUTHRIE**

**Emeritus Professor Roy David (Gus) Guthrie AO was the founding Vice-Chancellor of UTS. Leading UTS in its transition to university status was Gus's greatest achievement. He lead the University through a period of great change, with strong academic leadership, professionalism, flair and dedication. Gus oversaw many innovations during his time at the helm of UTS, including the University's internationalisation, a focus on teaching, research and community services objectives and a broadening of the University's academic and cultural foundations. Gus retired from UTS in 1996, and sadly passed away in January 2013.**

## Staff and graduates reflect

### **Tony Moon**

Moon, a physics professor, has been working at UTS for almost 40 years. Moon was in favour of a UTS and KCAE amalgamation from the beginning and believes his view has been vindicated.

"They were a good fit," he says. "The old UTS was a bit blokey prior to the merger. After it happened, UTS became a much more friendly place."

Moon says Guthrie and Blake were committed to the smoothest amalgamation possible. "There was a lot of good will between the two," he says. "Since the amalgamation, UTS has gone from a low research profile to one of the world's best."

### **Cathy Lockhart**

Lockhart has come full circle. Lockhart graduated in industrial design from the Sydney College of the Arts in 1987. She now lectures in industrial design at UTS. There were 16 graduates in her year; now she has 95 first year students. As a student, Lockhart says her course was brilliant as it taught problem solving methodologies that were applicable and transferable to a lot of other disciplines.

The course also laid valuable networking foundations. She keeps in contact with past graduates, who she sometimes invites to be a guest lecturer.

"A highlight when I was doing the course was the people," she says. "We were a small close-knit community and encouraged each other."

"It was interesting to come back and work with the people who taught me. You see the other side of them. As a student, you can't see what an institute is doing, or how it operates."

"It's a different management of people and capabilities."

### **Jane Stein-Parbury**

Stein-Parbury began working as a lecturer at the KCAE's Department of Nursing on April 1, 1986. "No fooling," she says. "My fondest recollection from that time was the communal staff room, located behind the fish pond, where staff from every part of college would gather," she says. "The sense of community and camaraderie that flourished in this place always made KCAE feel like home."

### **Carole Matts**

Matts attended Balmain Teachers' College in 1958 and 1959. She successfully gained her qualification at BTC, majoring in infant teaching.

Matts reflects on a rewarding and satisfying experience. She says Balmain had an enviable reputation as one of the best teachers' colleges. "The education was thorough, so it was a lot of hard work," she recalls. "Successfully completing the course opened career opportunities. You were highly thought of by prospective employers if you came out of Balmain. The education at Balmain put me on a path to a good career."



**Above:** Building students in a classroom in the Anthony Hordern's building, c1975 (courtesy UTS University Records).

# Vertical limit

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If Annie Doyle is successful in her quest to climb Mount Everest, she will join an elite group of people who have scaled the Seven Summits of the world. While not for the faint-hearted, the CFO and part-time law student takes it all in her stride.

WORDS **ROSEMARY ANN OGILVIE** PHOTOGRAPHY **STEVE BROWN**



"I climb mountains because physically I have the attributes," says Annie Doyle. "People with disabilities have different mountains to climb - and often they're much harder than my mountains."

Doyle, who is CFO of NSW-based Sunnyfield, a state-wide not-for-profit organisation that provides care and support for people with intellectual disability, had recently returned from her January ascent of Mount Vinson in "stunning" Antarctica - as she describes it - when we spoke.

Accompanying her on that climb was New Zealand's Lydia Bradey, the first woman in the world to climb Everest without oxygen.

"I was blessed because I had this amazing company," says Doyle. "We had another three Australians with us, and we functioned really well together. And that's everything on a mountain. The weather was perfect and we reached the summit in beautiful conditions, so it was a really fun, good climb."

### Seven Summits

Doyle is currently preparing for the holy grail of mountaineering: Everest. This will place the final tick on her Seven Summits list; granting her membership of a select group who have climbed the tallest mountains on each of the seven continents: Kilimanjaro (Africa); Vinson Massif (Antarctica); Kosciusko (Australia); Carstensz Pyramid (Australasia/Oceania); Everest (Asia); Elbrus (Europe); Denali (North America) and Aconcagua (South America).

"I didn't set the goal to climb all Seven Summits until I had climbed a couple of the mountains and discovered the existence of this list," says Doyle. "Even when I started ticking them off, it wasn't firm in my mind that I was doing the Seven Summits, I was simply climbing these mountains. Then as I reached number four and five I decided, actually I can do this. And now only Everest remains, which is on the list for next year."

Doyle also studies law on a part-time basis, "Not because I want to become a lawyer, but to keep the grey cells ticking over," she says. "This actually enhances my role. There are more legal issues around accounting now: not a day goes by that I don't access some legal information or brief a lawyer, or need a contract reviewed."

### Putting back

After many years working in the corporate world in hotels and in new sustainable energy projects, Doyle says she's reached the point where she's more interested in what she can put back. "While my corporate roles were interesting, my current role is

much more satisfying as I can truly make a difference. It's also equally demanding, if not more so. I work longer hours than ever."

Sunnyfield looks after about 1600 clients, nearly 300 of which they employ.

"We operate factories, we have community services, and we have houses where some of our clients reside," says Doyle.

As CFO, turning over every cent is intrinsic to getting the best services for Sunnyfield clients. "And this is challenging," says Doyle. "We work within a sector where government funding is tightening and we need to become creative around how to make each dollar go further."

She continues: "People with a disability have challenges you and I can't imagine. They're sometimes locked in a body or a mind, but they have the same dreams and desires, so to be able to give them the opportunity to participate in a Zumba class, or learn how to take a bus ride, is really rewarding. And while I don't work personally with them, I know that by doing this work, I provide those opportunities. So I'm blessed that I get to do the work I do."

### Love of the outdoors

As a child growing up in New Zealand's lake country, Doyle spent many hours roaming the surrounding hills and - true to the NZ philosophy - was actively involved in sport. "So the passion for outdoor activities has always existed: I suppose I was destined to love the outdoors," she comments.

After completing her HSC, Doyle moved to Holland (her father is Dutch) where she studied technical nursing. Her love of the country kept her there for 10 years, during which time she cycled the whole of Europe.

On her return to Australia, Doyle decided to develop her love of numbers by studying for her Bachelor of Business at UTS, with a major in Accounting, and a sub-major in Computer Programming. She worked as a computer programmer before moving into accounting. Her education has been almost as important in preparing her for the demands of climbing as her physical activities.

"A university degree is the whole package: it's endurance, it's perseverance, it's torture. It's all of those things that get you to the end goal," she says. "My UTS experience built upon my life values of positive engagement and active participation, making the best out of every situation without regret. It provided a constant connection to the demands of the corporate community where adding value and making a difference is fundamental to survival."

It also hones organisational skills, and while any mountain climb demands

extensive preparation, an Everest climb takes this to extremes.

"To climb Everest is 10 weeks, so first you need the time to do it," says Doyle. "You have to be in peak health and fitness. You have to time it properly. You have to finance it - and Cochlear Limited recently came aboard as a major sponsor. The logistics are huge because you need all your gear, your food, everything ready and weighed to the ounce. Once you're on that plane, there's no opportunity to go to a mountaineering shop. So it's quite a major feat ensuring everything is lined up and perfect."

Because training means a lot of time away from family, communication is really important. "And obviously they're aware of the risks, so that's big," says Doyle. "My family have been great supporters, although they really don't know any different because I've been doing this all my life."

And of course work must be in sync. "Sunnyfield has always given me the time off for mountain climbing," says Doyle.

"I make sure I have a really good second-in-charge in my shoes when I leave.

However, I also support Sunnyfield on my climbs by wearing their logo because it's a great opportunity to fundraise for the organisation."

Sunnyfield's Cent-a-Metre campaign enables people to sponsor each step Doyle takes on a mountain. "This has generated quite a lot of publicity and a lot of dollars as well: we're around the \$50,000 mark.

"So it's been really positive - and it's really good for the people we support because they love following me on the mountain." ■

## A typical day

Training alone for Everest is a two-year goal. Annie Doyle's day starts at around 4am when she crosses Pittwater by boat from her home in Lovett Bay and joins a group of four women to train from 4.45am until 6.30am. Three days a week, a personal trainer pushes them hard through a balanced routine that incorporates everything from core to strength to running.

She's at her desk by 7am, enjoys a ritual coffee with one of the people Sunnyfield supports before starting work, and finally heads home at 6.30 to 7pm. A long day, and often there's more to come: depending on where Doyle is on her agenda, she may face another training session.

# UNIVERSITY OF THE FUTURE

What does the University of the Future look like? Discover how UTS is at the forefront of tertiary education in Australia, thanks to a vision that embraces innovation, technology and interactivity – as well as a revitalised campus that engenders a love of learning.

WORDS **BINA BROWN**



Image by Jesse Taylor

Professor Shirley Alexander recalls how, as an undergraduate student at another university in Sydney, her lecturer would walk into a huge theatre, open a textbook at the bookmark and start reading.

An hour later the lecturer would close the book, replace the bookmark, and walk out.

“What I can’t understand is why I kept going – I can actually read,” says the now Deputy Vice-Chancellor and Vice-President (Teaching, Learning and Equity) at UTS.

It is a scene that Alexander never wants to see at UTS. Nor does she wish to build a university based on students listening to, or watching, lectures online in a remote location with no-one to discuss the content.

In the quest to build a University of the Future, Alexander is promoting a campus that focuses on the seamless integration of online and face-to-face learning.

“Learning is about the interaction between people and content. If it was only about acquiring content, universities would simply build a library, point students at it and say go and get your degree,” says Alexander.

UTS lectures and tutorials will continue to be available online, as they have for several years, but it is the interaction between people in a stimulating and comfortable campus environment to question and discuss the course material that makes it cutting edge.

“At UTS we think some of the most important aspects of learning are the kinds of activities students carry out face-to-face; with each other and with academics,” says Alexander. “What we are going to do is look at what can be done online and harness the power of what can be done online, [complemented by] the best of face-to-face.

“Rather than drag students in to listen passively to a lecture, they can watch the lecture on a yodcast before they come into campus and when they are here they can engage in learning activities that really help them to understand the content of the lecture and do something to better understand that content and to get feedback,” she says.

Existing courses such as nursing or engineering may have the same learning outcomes as they have in the past, but the existing curriculum will be enriched by the use of technology as well as teamwork.



Image by Andrew Worssam



Image by Andrew Worssam

**Top:** Professor Shirley Alexander, Deputy Vice-Chancellor and Vice-President of Teaching, Learning and Equity. **Middle and bottom:** new learning spaces.



## A rich learning experience

A significant part of the future vision for UTS has been the redesign of the Broadway campus; lecture theatres are being replaced with large collaborative classrooms and comfortable individual and group workspaces are being built which embrace online learning and encourage students to spend time there.

"I see the University as a hive of activity - where people are engaged in really exciting innovative work in teams with academics being able to provide guidance, pose questions and provide critique," says Alexander.

By providing a rich and exciting learning experience, UTS also hopes to produce graduates with the kinds of contemporary skills needed for the future.

"The need for graduates who can memorise information and then regurgitate it in an exam are long gone, but we now need people with 21st century skills such as the capacity to work in groups and teams, across cultures and who are able to solve wicked problems, as well as being innovative and creative," says Alexander.

"Productivity is going to be a major issue for Australia going forward, and as we can't compete against other parts of the world on the cost of labour, we have got to be able to compete on the quality of labour. Graduates of the future require a different experience of learning, embedded in the learning of the content within the discipline," she says.

While large sections of the academic world are abuzz with the potential for Massive Open Online Courses (MOOCs), Alexander says MOOCs is one kind of online learning but not one that UTS is investing in developing itself on a large scale.

The vast numbers of people enrolling in MOOCs attests to people's thirst for knowledge and digital technology is an obvious way to deliver information to large numbers of people. But high drop out rates suggest online learning is not for everyone.

According to one of the main providers of MOOCs, Coursera, more than 1.3 million people have tried at least one of their MOOCs. However, between 85 to 90 per cent of people who enrol also withdraw before completion, citing lack of time, motivation, technical and cultural confusion.


If Alexander needed a sign that her vision for UTS was on the right track, it was feedback from a security guard that one of the collaborative learning areas on campus was full of chattering students at midnight on a warm summer's night. It ticks off one of the goals that UTS will be a "sticky campus" - one that students want to come to and stay around to discuss what they may or may not have learnt online. 



Image by Anna Zhu



Images by Steve Brown

## Integrated learning: the Virtual Tutor Project

Videos aimed at helping nursing and midwifery students learn clinical skills in a simulated environment before they enter a hospital have been given the thumbs up by early users.

UTS Lecturer in Midwifery Christine Catling-Paull says three trial videos demonstrating basic procedures, produced under the Virtual Tutor Program, were one of several strategies to ease the transition between university and the real world.

"Some students, particularly in their first year of university, can be overwhelmed and experience culture shock during their hospital placement and leave the course - consequently there are presently many strategies underway within the Faculty of Health to [assist]," says Catling-Paull.

Catling-Paull says the video evaluations will be completed at the end of the semester, after students return from their hospital placements, but that nursing summer school students had reacted positively to the videos.

Early feedback was that 88 per cent of students found the videos helpful, and 78 per cent stated they would access them in the future. Students generally watch the 'how to' videos in the state of the art labs before testing their skills on mannequins.

"Most of our students are familiar with using technology and the response to the videos has been very positive. As well as the practicalities of the procedure, students can get an idea of how to relate to patients before they do their hospital placements," says Catling-Paull. She adds the videos are used with equal success in the university labs as an initial learning tool for new students, as well as a 'refresher' for second and third year students.

"We found that nursing and midwifery students needed support when they were practising skills independently. Presently they can book themselves into the labs for extra practice after their lecturer has covered the skill within a formal lab session. The videos reassure students they are practising [what they have been taught] correctly. The aim is that the students will use the videos during their self-directed practice," says Catling-Paull.

The Virtual Tutor Project supports UTS's overall aim of integrating the best of face-to-face learning with digital technology.

"There are some areas where we will never replace face-to-face teaching but these 10-15 minute videos complement key elements of learning done in the Faculty," says Catling-Paull.

The three pilot videos demonstrate how to insert a urinary catheter, running through an intravenous line and adult resuscitation.



# MASTER OF INNOVATION

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This year's winner of the Advanced Manufacturing category in the prestigious Advance Global Australian Awards 2013, Peter Le Lievre, has spent decades commercialising world-leading Australian designs.

WORDS **PENNY PRYOR** PHOTOGRAPHY **KASIA WERSTAK**

A current resident of Silicon Valley, California, Peter Le Lievre graduated from UTS more than two decades ago with a degree in industrial design and was back in Australia in March to accept an Advance Global Australian Award in the Advanced Manufacturing category.

Le Lievre has been a pioneer in adapting technology since completing his degree in May 1987 at the Sydney College of the Arts (which became part of UTS in 1988), and has 21 patents to his name.

"My first job out of university was to build a heart pump for a North Shore surgeon and that came out of a patent we developed for a dishwasher. We developed this dishwasher pump and it also happened to work well for hearts," he says.

The dishwasher valve had a peristaltic design that could also be applied to a pump. Peristalsis refers to the wave of contractions of muscles in tubes in the body that promotes movement of items, such as food, through the tract. "This was used to pump blood as it had no sharp edges and no butterfly valve. It was therefore not prone to thrombosis [blood clots] like conventional pumps," Le Lievre says.

Since then Le Lievre has started a handful of companies, as well as being involved with what he calls the "dark side", or venture capitalism, raising funds to commercialise new technologies.

Le Lievre says that industrial design is a generalist profession but his degree taught him important aspects of manufacturing and commercialisation.

"It was a very good degree to have for someone getting into venture capitalism. It was a very good foundation," he says.

After a few frustrating years working on good Australian technologies that struggled to find proper funding, Le Lievre moved to venture capitalist fund Fairgill Investments in 1991.

"Over that period of time I had a few successes," he says.

### **Out on a limb**

In 2001 Le Lievre decided to quit his day job, or in his words, "I decided not to build companies for other people".

He left to co-found solar thermal renewable energy company Solar Heat and Power Pty Ltd, which was renamed Ausra when it was moved to the US in 2007.

"It was a hard slog," he says. "All start-ups are hard slogs. There is no such thing as an easy start-up. Ausra was my eighth start-up. It was the first one I did on my own, so you know the good and bad by then."

Ausra was sold to Areva in 2010.

Because of his background and expertise in the industry, Le Lievre made sure that the technology Ausra was commercialising, which resulted in the world's first direct steam generation solar steam plant, would work, something which he says is not always the case.

"It's very easy to take a company to market when the core idea is a good idea and I was lucky with Ausra that both my co-founders were long-term university academics who had been working on this technology for ages. So when we went to market, the technology worked as advertised."

Dr David Mills and Professor Graham Morrison were the company's co-founders and the three initially built the first plant in a garage in Sydney's Artarmon.

"I can't take credit for that, I need to recognise there was a team effort there," Le Lievre stresses.

That's another reason why Le Lievre is always involved in the registering of the technology and has his name on so many patents. If he is involved from the very beginning, he has a fair idea that the technology he is taking to market will work.

He calls himself very "hands-on" and likes to roll his sleeves up to get involved with projects. "That's a bit unique maybe for me personally, but I like to know that the core technology really has something unique about it."

### **Lean manufacturing**

Although many of us don't realise it, there are plenty of stories of Australian innovation besides the clichéd Hills Hoist and Victor lawnmower.

According to Le Lievre, Australia is a world leader in lean manufacturing, or being able to mass-produce goods for a low cost and with minimal resources.

"But we are hindered by our limited market size and we are hindered by a fairly underdeveloped capital market," he says.

Sometimes the best solution is to commercialise globally and look for capital across the seas, in order to attract not just Australian investment but also global interest.

"Now with the internet, it is easy to take a company global and Australian companies are becoming more and more successful at commercialising," Le Lievre says.

He would love to see a strong venture capital market in Australia but he is also pleased about the changes in the market since his graduation more than two decades ago.

## **A not-so-true believer**

Peter Le Lievre's chosen industry is clean technology but he doesn't call himself a "true believer", joking that he doesn't even drive an electric car.

He became involved in the industry because he identified it as a growth industry back in the 1990s and because he believed it was the right thing to do.

His latest start-up is Chromasun, a company that builds high-performance rooftop solar solutions (pictured below). "We've just commissioned probably the largest rooftop solar manufacturing plant in Adelaide," Le Lievre says.

Eventually he may make it back to Australian shores as our capital market matures and appetite for venture capital improves. He is optimistic for the future here and although he has been in the US for six years, is making more and more visits back to Australia.

"I've always kept my Australian passport," Le Lievre finishes with.

And that surely must be a good thing for the future of Australian innovation.



"One of the nice things since I've graduated is that most tertiary universities have very strong streams on innovation and commercialisation. That's made it a lot easier for young people coming through to grasp the opportunities of building new companies and to get a better skill set for building these technologies." 

Watch Peter's video on the TOWER iPad app and online at [www.alumni.uts.edu.au](http://www.alumni.uts.edu.au)

# NEW BEGINNINGS

Three Aboriginal women share how they overcame challenges to realise their dreams of being midwives, with the support of UTS's Jumbunna Indigenous House of Learning. They are inspiring other Indigenous people wanting to create better futures for themselves.

WORDS PAMELA WILSON PHOTOGRAPHY GRACE CASSIO

Sharon Donovan was a second-year midwifery student at UTS when she delivered a healthy baby in a traditional Aboriginal birth ceremony in her hometown of Taree.

It took place at a historic birthing tree in Saltwater Aboriginal Place and marked not only the first traditional birth on the site in 200 years, but also the fresh start the mother was desperate to provide for herself and her unborn child.

"I had two other midwives with me, but they sat back and let the [mother] and I do it together," says Donovan recalls.

As an Aboriginal woman, Donovan chose to study midwifery out of a desire to provide clinically and culturally appropriate care for Indigenous women.

"The best experience is being able to birth the Aboriginal women of my community," she says.

This was eight years ago and for Donovan - now Midwife and Service Manager of Maternal, Child and Family Health at the Biripi Aboriginal Corporation Medical Centre - the experience cemented her love for her new career.

## Pathways for Indigenous students

Donovan was in the second cohort of students to undertake the Bachelor of Midwifery after UTS became the first university in NSW to introduce the direct entry course, which was in 2005.

This has improved access to the vocation for students who don't want to take the traditional route of completing a nursing degree and then a graduate diploma in midwifery.

Professor of Midwifery Caroline Homer says UTS is committed to helping Indigenous students, and two to five midwifery places are dedicated to Indigenous students each year.



Aboriginal rock art at Nourlangie, Kakadu National Park, Northern Territory, Australia. Image courtesy istock.

Also smoothing the path for Indigenous women is the University's partnership with NSW Health's Aboriginal Maternal and Infant Health Strategy, which enables Aboriginal Health Workers to transition into the midwifery course.

"For many of the women, they are the first in their families to ever go to university," Homer says.

That is certainly true for Leona McGrath, Acting Manager for the Aboriginal Nursing and Midwifery Strategy, Nursing & Midwifery Office at the NSW Ministry of Health.

McGrath developed an interest in midwifery at just 16 after witnessing her niece's birth, but she didn't consider it a career option until many years later.

"I left school when I was 14 and had worked since then. I never had it in my mind that I would be smart enough to go to university," she says.

"But I heard about the direct entry course, after working for 11 years in the University of NSW's human resources department, and I thought, 'I can do it now!'"

Karen Kelly, a midwife at Sydney's Royal Prince Alfred Hospital (RPA), also had a long-held passion for midwifery. And like Donovan and McGrath, she enrolled as

a mature-age student. "I was one of the Aboriginal Health Education Officers for early childhood at the Central Sydney Area Health Service ... this was my next step," explains Kelly.

Having finished her degree in 2011, she now plans on spending the next five years gaining experience at RPA before moving home to Bowraville, on the NSW mid-north coast, to care for Indigenous families there.

## Powerful role models

Mothers and babies are not the only ones benefiting from the choices these three women have made.

All three are powerful role models for women and men who need inspiration and support to continue their education and etch out careers for themselves.

"I have spoken to a lot of young girls who are interested in doing nursing or midwifery," says Kelly.

"I give them my number and call every now and again to remind them that when they are ready I am here to help."

McGrath sells the message of personal and professional development to the young people she meets at career expos and schools.



Left and right: the new UTS:Jumbunna Indigenous House of Learning. Below right: Leona McGrath (image self-supplied).



And when Donovan cares for young pregnant Indigenous women she talks at length with them about their opportunities and reminds them they can still have a career even though they have a child.

Friends and family of McGrath and Kelly are now also studying at university, inspired by the notion that, 'if you can do it, I can do it too'.

### Overcoming challenges

Donovan understands the true value of the support she offers young mums, as she had a one-year-old herself when she began her degree. "I had to leave my family every week ... so my husband looked after my son," says Donovan, who was an Aboriginal Health Worker for 16 years prior.

She also encountered many other challenges along the way.

"Trying to read the textbooks: I found that hard because I wasn't that educated. There were so many times I felt like running away."

But she didn't quit. Instead she sought simpler explanations and received tutoring from another midwife.

McGrath, a single mum, started her degree in the same year her son began kindergarten. She, too, faced many challenges. "I hadn't done any kind of studies or finished high school. The financial aspect was difficult too, leaving a full-time paying job," she says. "I got a cadetship with NSW Health, I received tutoring through Jumbunna and had a lot of support from staff and students."

It is this kind of support that is reducing the many barriers to tertiary education that Indigenous students face, and helping them to not only improve their own prospects but to inspire others.

"I say to graduates that becoming a midwife will change your life and it's

not only becoming a midwife, it's being educated. People will look at you differently," says Homer. "They are huge role models, and that comes with enormous responsibility ... but many of them cope with it well."

This is certainly true of Donovan, McGrath and Kelly, who each agree that while it's a big responsibility being a role model, it is one they accept with immense pride and dedication.

McGrath sums it up simply: "I am very passionate about helping my people." 



## UTS:Jumbunna Indigenous House of Learning – playing a vital role

"If it wasn't for the support of Jumbunna I feel I wouldn't have got through," confesses Karen Kelly, a midwife at Sydney's Royal Prince Alfred Hospital.

"I was finding it really hard going to the classes. I connected with a few girls [but] didn't fit into the cliques ... because I was a mature-age student. But Jumbunna gave me a lot of emotional support."

Sometimes Kelly struggled financially, and sometimes she needed support with assignments and time extensions for assessments. Staff from UTS's Jumbunna Indigenous House of Learning always backed her up and connected her with university staff that could help.

As Lori Parish, Manager, Indigenous Student Services, explains, Jumbunna is a culturally safe place for Indigenous students to meet, talk, study, workshop and hang out.

"[It's] a home away from home. Some might say a 'belonging place,'" says Parish.

"We case manage each and every Indigenous student to build their capacity to succeed in their chosen profession. This involves packaging services tailored to the individual," says Parish.

Jumbunna has come a long way since 1987, when it was established by Francis Peters-Little and Ken Canning—the only two Indigenous students enrolled at the university at the time.

The most recent developments include state-of-the-art facilities; creative, individually focused learning development programs; a personalised case management approach; and collaborative programs with faculty academic staff.

However, Jumbunna's philosophy is the same today as it was 26 years ago.

"The ethos of what we do is to change lives and to create change for families and for Indigenous Australia," says Parish. "Every time we have a student graduating we know we have created a better future through education."

# CLEARING THE AIR

The scourge of asbestos was etched into people's consciousness courtesy of the high profile James Hardie case – but what impact does asbestos have today? A compensation lawyer and a researcher share their perspectives.

WORDS **LUCINDA SCHMIDT** PHOTOGRAPHY **KASIA WERSTAK AND GRACE CASSIO**

For the past 22 years, Theodora Ahilas has had her nose buried in the past. As one of Australia's leading asbestos compensation lawyers, she often has to dig back decades into her clients' history, to prove how and when they came into contact with the tiny, deadly asbestos fibres that cause mesothelioma cancer.

But Ahilas, who completed her law degree at UTS in 1988 and is a Principal at Maurice Blackburn, says her work is also about creating better futures for her often terminally ill clients.

"They will give almost their last breath so their families can be compensated," says Ahilas, who last year won the Law and Justice Foundation's Justice Medal for her compassion and commitment to obtaining justice for asbestos victims and their families. "The tenacity of the human spirit is extraordinary."

On a wall outside her office in Sydney are hundreds of cards from grateful clients, telling Ahilas how their successful compensation claim has brightened the time they have left. Perhaps it is the trip of a lifetime to Alaska, a diamond ring, an inheritance for their children, or - from a 90-year-old - their first-ever sports car. Ahilas also remembers the wife of one client asking if she thought it would be OK to buy a washing machine, after 15 years of handwashing her husband's clothes.

## No cure yet

Just one kilometre from Ahilas's Elizabeth Street office, UTS researcher Dr Tony George is also working to create a better future for asbestos victims, by moderating their symptoms and slowing the progression of the disease.

Associate Professor George, at the UTS School of Medical and Molecular Biosciences, is leading a team of six working to develop a puffer and nebuliser similar to those used by asthma sufferers to manage their condition. It's still early days, but if all goes well George hopes for a



**Pictured:** Theodora Ahilas, Principal, Maurice Blackburn.  
**Page 39:** Associate Professor Dr Tony George, UTS School of Medical and Molecular Biosciences.

pharmaceutical product within a decade. "There is no cure for asbestosis – once the fibres are in the lung you can't remove them," says George, explaining that asbestos fibres first attack the epithelial cells lining the inside of the lungs, causing lesions. The next layer down contains the mesothelial cells, where tumours develop and where the more aggressive mesothelioma cancer takes root.

"The whole idea is to slow down the progression of asbestosis and prevent the development of mesothelioma," George says. "We want to make the symptoms far less severe and improve the quality of life for sufferers."

George's work began in 2007, when a mature-age student came to him to discuss the student's research on

incurable diseases, including diabetes, asthma and asbestosis. The pair decided to focus on asbestosis, and the student – now a member of the project team – came up with a compound that he thought may short-circuit the effect of asbestos fibres in lung cells.

## Cautious optimism

Between 2010 and 2012 a generous grant from John T Reid Charitable Trusts allowed them to hire a research assistant to do pilot in vitro work, including in vitro cell cultures. Between 2012 and 2013 an anonymous donor provided \$250,000, which has funded early animal trials.

George describes the cell culture work so far as "very, very promising". Lab testing shows that asbestos fibres "chop up"

chromosomal DNA from epithelial cells, but this is almost negated when the compound is introduced.

At the gene expression level, too, lab results so far are encouraging. George estimates that between 10 and 40 genes are “switched on” by asbestos damage to cells, and they respond by expressing much more protein product, or becoming less well expressed, a global response that is typical under conditions of cellular stress to external signals. The team has tested one of those genes, and found a 100-fold increase in response to asbestos fibres. But add the new compound in to the mix and the gene returns to the normal level of expression.

The next step, due to begin in April, is testing in a mouse model trial. If the pilot trial shows that the compound reduces the incidence and progression of induced asbestosis in mice, the team will spend the next one to two years doing full animal testing. Then comes patent protection to protect the intellectual property, commercialisation, mouse or sheep lung trials and, in perhaps two to four years’ time, human trials on patients who have asbestosis.

George is cautiously optimistic, but also realistic about the many hurdles along the path to a treatment for asbestosis.

“Things that are promising in the laboratory don’t necessarily translate to animal and human trials,” he says. “For example, despite spectacular laboratory success with third generation anti-cancer drugs, the latest human clinical trial has recently been abandoned as a failure.”

### **An epidemic continues**

Despite the lengthy timeline, he points out that asbestosis and mesothelioma are still a major health issue and will continue to be so for several decades.

Although asbestos was phased out in Australia from 1967 (blue asbestos), through the mid-1980s (brown asbestos), and finally 2003 (white asbestos), many older buildings still harbour dangers when they are being demolished or renovated. And, because of the long gestation period of the disease, which typically takes up to 30 years to develop, there are still around 700 new cases every year in Australia.

Some countries, including China, Canada and Russia have not yet banned all asbestos use and the World Health Organization warns that mesothelioma deaths globally are on the rise.

“This is an epidemic,” says Theodora Ahilas, who expects to be running



**“We want to make the symptoms far less severe and improve the quality of life for sufferers.”**

## **ASSOCIATE PROFESSOR TONY GEORGE**

compensation cases for clients for at least another decade. She’s already clocked up 22 years representing asbestos victims, first at Turner Freeman Lawyers then, from 2004, at Maurice Blackburn.

Ahilas, who learned about asbestos from her wharfie father, says the work has been a passion “from day one”.

“I was always interested in doing law that involved dealing with people; I didn’t want to do commercial corporate work.”

### **Alleviating suffering**

She’s now representing what she calls the third wave, or “bystander” claimants. First it was the miners who were employed to dig asbestos from the ground at places like Wittenoom, in the Pilbara in Western Australia, followed by the builders who used asbestos sheets manufactured mostly by James Hardie Industries.

Now, she’s seeing a younger group of clients, in their forties and fifties, who were children when, for example, their parents built a shed from asbestos sheeting.

For this group, it’s much harder to show when they came into contact with asbestos, because it wasn’t part of their job. Ahilas spends hours sifting through photos from her clients’ past and talking to relatives and neighbours who may remember a house renovation, for example.

“Part of the excitement of this job is to be a busybody and ask lots of questions,” she says. “You always act with haste when dealing with mesothelioma. It’s an unpredictable disease – people can be OK then suddenly they’re at death’s door.”

Her UTS law degree, done at night while she worked as a paralegal, was good preparation for working fast and efficiently. When Ahilas began acting for asbestos victims, cases had to be completed before the plaintiff died. The law changed in 1998, but Ahilas still does her best to finish claims while her clients are alive.

“I like to see them get an outcome,” she says. “Just seeing their faces when you’ve resolved their claim. It’s a little bit of power for them at a very difficult time.” **T**

# From Sydney, *with love*



A stint as Events Director of the famed Shakespeare and Company bookshop in Paris held Jemma Birrell in good stead for her role today as Artistic Director of the Sydney Writers' Festival.

WORDS **ROGER BALCH**  
PHOTOGRAPHY **THOMAS PIREL**

When Jemma Birrell landed her dream job as Artistic Director of the Sydney Writers' Festival (SWF), it was the latest chapter in a book-centred career that has opened up since she graduated with a Bachelor of Arts in Communication (Hons) at UTS. However, Birrell is no retiring bookworm. Although she loves curling up with a good book, Birrell is as energetic and inspiring as the program of her inaugural festival (she commenced the role in September 2012), which runs from 20 May to 26 May 2013.

The SWF is a long way from Birrell's first days at UTS, which she remembers vividly and with great affection: "I came out of school and suddenly into UTS with people from so many different backgrounds, and with incredible knowledge and intelligence, and different lives and experiences. It was like the world opened up to me and I met some of the most fascinating people. I absolutely loved it. I actually felt that I was becoming myself for the first time.

"The teachers truly inspired me," she continues. "For the first time I felt I was among like-minded people, and the scope of learning and the course at UTS opened up different ways of thinking. I remember this one friend who would spout poetry dramatically. I'm still close friends with many of them."

There's also what Birrell calls "a random connection" between UTS and her role at the SWF: "I heard about the job at the SWF through one of my best friends, who I met



“[The Sydney Writers’ Festival] is a huge creature to pin down. It’s like a puzzle you are moving around, trying to find the best possible slots, venue, and combination of authors and interviewers.”

JEMMA BIRRELL

## The Sydney Writers’ Festival

Originally, there were Sydney Writers’ Festival (SWF) events for a number of years in the 1990s, as part of the Sydney Festival or other host organisations, based at the State Library. In 1997, the Sydney Writers’ Festival was created as an independent organisation, producing the first independent festival in 1998. The first chair of the board was the Australian journalist and broadcaster Geraldine Doogue.

In 2013 there are more than 340 events, half of which are free, attracting an audience of around 80,000 across venues from its hub at Walsh Bay to the Blue Mountains. It is now Australia’s largest annual celebration of literature and ideas.

For more information on the SWF, head to [www.swf.org.au](http://www.swf.org.au)

the first day I started the Comms course.” Her progression to the SWF similarly wasn’t the result of a carefully thought-out strategy. “I’m not one of those people who has a direct career path,” she says. “I’ve always been someone who takes one step at a time and follows what I love.”

While she had a love of writing, Birrell says there was no plan. “I write myself and I worked as [a bookseller] at Ariel bookshop which I loved; I had a short period in an ad agency; did my Honours at UTS in writing and I wrote an unpublished novella – a fictionalised account of [the late Australian modernist artist] Joy Hester’s life.”

After Ariel, Birrell worked at book publishers Allen & Unwin in Sydney where, in addition to “endlessly reading manuscripts” and working for inspirational senior executives as a publishing assistant, she managed the Vogel Literary Award for unpublished young authors (previous winners include *Cloudstreet* author Tim Winton).

### An enlightening time in Paris

In Birrell’s role today at SWF, she draws upon her past experience organising events in Paris. She first visited France as a 15-year-old on a school exchange and it made such an impression on her that she returned in late 2004 at the age of 28, desperate for “that saturation of the culture and the language”.

Birrell found a job at the legendary Shakespeare and Company bookshop in Paris, where young writers in residence live above the shop and where “Anais Nin and Henry Miller used to hang out and [Allen] Ginsberg researched *Naked Lunch* upstairs in the library.”

As Shakespeare and Company’s first Events Director, Birrell’s goal was to help revitalise the store’s literary festival, alongside its owner, Sylvia Whitman.

“She had done one festival before I came on board and started working with her on the Festival and Co literary festival that happens every two years. Then every week I started having writers, musicians and philosophers in there.”

One of her fondest memories of those times is of Sylvia’s father, the late George Whitman, who opened the shop on the Left Bank in 1951. “George was a wonderful eccentric, he used to burn his hair with fire in order to cut it – there’s a crazy YouTube video of him [doing this]!”

### All about the story

Birrell’s stroke of genius in putting together the 2013 SWF is in going back to the source of books, to storytelling, because she’s able to include the most up-to-date media on the basis that it doesn’t matter what the medium is, the story is everything.

“It’s not about the technology, it’s about telling an interesting story,” she says.

An example she gives is *The Silent History* by Eli Horowitz (one of the writers at the SWF), which is a serialised, exploratory novel written and designed specifically for iPads and iPhones. Birrell explains: “It’s all about what happens when writers and creatives take over that technology and it’s a great, really interesting story that he’s created from different writers around the world, who contribute and write pieces that can then be geolocated. So in particular areas you can download further information about the story – there’s all these accumulations of the story and that’s a kind of magic.”

Given Birrell’s intuitive nature and desire to follow her passion, how does she get to grips with something as complex and structured as organising the SWF with its multitude of writers and events?

“It’s not an easy thing,” she concedes. “I couldn’t do it alone, it’s a team effort. It’s a huge creature to pin down. It’s like a puzzle you are moving around, trying to find the best possible slots, venue, and combination of authors and interviewers.”

### Evolving industry

Having achieved so much in her career by the age of 36, what advice does Birrell have for tomorrow’s graduates seeking a successful and dynamic career in publishing?

After a long, thoughtful pause she says, “Because publishing is changing so dramatically, I think to be innovative and to actually think about where publishing is going and what is happening, and what they could bring to the changing landscape. Also reading as much as possible, speaking to a lot of people, working for free, getting work experience with people they admire; being really humble and being open to whatever job it is as an initial step in the door.

“And,” she adds, “working really hard at whatever it is that they are doing.”

When asked about her interests outside work – apart from reading books that is – Birrell neither laughs nor pauses but launches into her love of swimming in the ocean and running every day – and how she’d love to be riding her beloved orange Peugeot pushbike too, if it hadn’t suffered a mishap while being shipped from Paris to Sydney.

And what does the future for Birrell hold after her time at the SWF? “I don’t know, this is the thing about me,” she says, referring to the way she takes everything as it comes – although she wonders aloud whether that should continue to be the case. Instead, she reveals the authors she’d love to bring to Sydney for the festival: “How do I convince James Salter to come – I love his short story collection *Last Night* and novel *A Sport and a Pastime* – or Mark Danielewski, author of *House of Leaves*?”

If there’s anyone who can achieve this, surely it’s Birrell. 

# UTS'S 25TH ANNIVERSARY



Alumni at the 2012 Shanghai Reunion, The Peninsula Shanghai. Image by Anna Willet.



Image by FJ Gaylor

## STORIES FROM THE TOWER

To commemorate turning 25, UTS is publishing *Stories From the TOWER, UTS 1988-2013*.

This book was conceived as a celebration of UTS by showcasing the people and places that make up the university community. It is more lively and creative than the usual official university accounts, approaching history via the sidelines and the corners, the personal and the small moment.

In compiling this book, the editors - writer Debra Adelaide and historians Paul Ashton and Annette Salt - were especially keen to focus on the wide range of voices and narratives, from staff and students both current and former, and to include the people who are behind the scenes and sometimes overlooked. Also featured are some of our best people, and their most remarkable achievements, those student, graduate and academic leading lights whose contributions have resonated far beyond the University in so many ways.

*Stories From the TOWER, UTS 1988-2013* is available for purchase on campus from the Co-op bookshop or online at [www.coop.com.au](http://www.coop.com.au) with free postage within Australia. All Co-op members receive special member pricing.

## INTERNATIONAL ALUMNI ASIA REUNIONS

UTS invites all alumni based in Asia to celebrate our 25th anniversary. We are proud of our history but even more excited about how UTS is shaping the future, and we want to share our plans with you.

This June and July, UTS is holding seven reunion events across Asia. These are a great chance to catch up and network with friends, both old and new.

Reunions provide an opportunity to meet UTS Vice-Chancellor and President, Professor Ross Milbourne, who will outline the University's most recent developments, exciting plans for the future and key achievements.

Events are complimentary for all alumni and friends of UTS and you are welcome to attend wherever you happen to be on any of the below dates - we hope you can join us!

### REUNION CITIES AND DATES:

**Kuala Lumpur:** Saturday 22 June 2013

**Ho Chi Minh City:** Sunday 23 June 2013

**Jakarta:** Tuesday 25 June 2013

**Singapore:** Wednesday 26 June 2013

**Hong Kong:** Friday 28 June 2013

**Beijing:** Monday 1 July 2013

**Shanghai:** Wednesday 3 July 2013.

For more information or to register, visit [www.alumni.uts.edu.au](http://www.alumni.uts.edu.au) or email [alumni@uts.edu.au](mailto:alumni@uts.edu.au)

Information about alumni reunions in other countries will be announced later in the year.

## UTS: CREATING FUTURES EXHIBITION

18 June 2013 to June 2014, UTS Tower

The *Creating Futures* exhibition will showcase UTS's vibrant history, achievements, people and exciting future.

A major feature of the exhibition will be the City Campus Master Plan, which visitors can experience through images, photos and fly-through videos. People will also be able to learn how the Master Plan will not only shape the future of learning and teaching at UTS, but also help to shape an exciting new Southern Central Business District for Sydney.

*Creating Futures* is a free exhibition and will be located on level 4 of the UTS TOWER building, Broadway.



Do you know an inspirational or high achieving graduate?

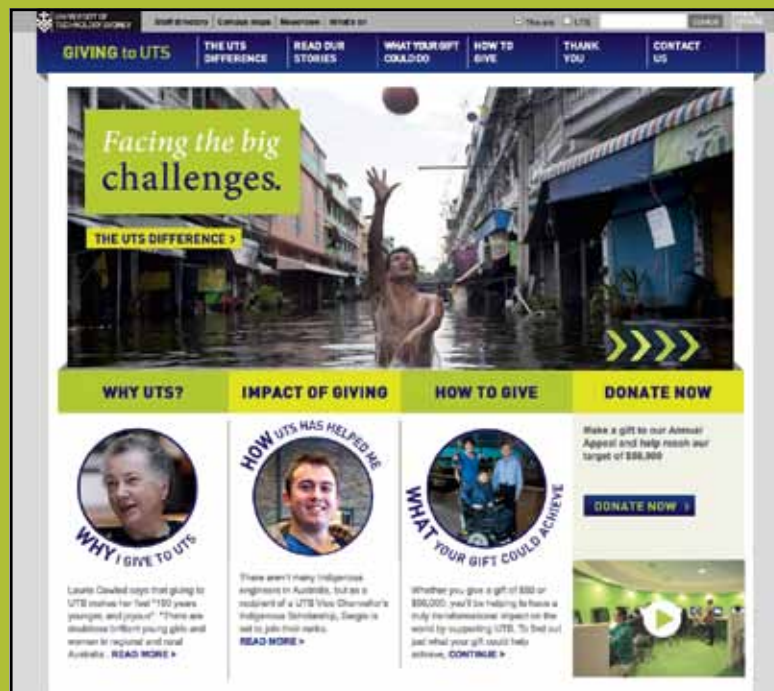
Nominations are now open for this year's Alumni Awards.

**NOMINATE NOW**

[www.alumni.uts.edu.au](http://www.alumni.uts.edu.au)  
Nominations close June 21



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You can help us achieve our goal. Visit the website UTS:Giving, to discover inspiring stories from our students, staff, alumni, donors and corporate partners. There are many ways you can support the work of UTS.

We've come a long way in just 25 years, and the next 25 years will see UTS transform into a world-leading university of technology. One thing is certain – now is the time to get on board!

[www.giving.uts.edu.au](http://www.giving.uts.edu.au)

# Need to find another way into UTS?

## Make it Happen.



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