THE NEXT STEP IN THE WAR ON PLASTIC
Plastic bags are our most iconic symbol of litter, but will banning them work?

MAJID IN THE MIDDLE
Discover the new technology set to revolutionise how we detect and treat disease

CREATING A KILLER CLASSROOM EXPERIENCE
5 ways to improve your teaching today
The other part is the enterprise part and the way we engage with industry to create value through collaboration. It could be around students, it could be around a startup. So, I’m looking at how we support them both in one place. We’ve hired on across the university and brought activities around entrepreneurship going together and there’s an organic growth from the bottom up.

The taskforce is charged with developing a vision for what this precinct will look like. We have to think about how we create spaces that are attractive to people to come and work. We have to think about green spaces, as well as all of the economic activity that we want to drive. And I think the vision, for Central to Eveleigh, is ultimately to have a world-class precinct with our university and a number of other organisations as anchor tenants – some big tech firms, a vibrant startup ecosystem, university and vocational education and, of course, an enormous depth in research.

Tell us about UTS Startups.

What’s your favourite piece of technology? My favourite piece, and we’re going into really nerdy territory now, is something called a Raspberry Pi which is a little $20 computer. I actually have a bunch of them embedded around my house. I measure all sorts of things – electricity usage, water usage, how much water’s in the tank. I even have a seismometer so I can detect earthquakes and a tree that’s connected to the internet. The tree sensor, called a dendrometer, which I borrowed from a colleague in the Faculty of Science, measures the daily variation in the diameter of one of my trees.

It’s kind of fun. It’s actually a good example of the challenge of the Internet of Things – bringing all this information together and trying to make sense of it. So, the next phase of my work is to actually build some machine learning algorithms to try and interpret that data and automate the management of my house.

Recently, you were appointed to the taskforce related to the Central to Eveleigh tech and innovation precinct. What’s involved in that?

The precinct has been emerging around UTS for the past 10 years and I think UTS has contributed enormously. When I think of precincts I think of places where capability, expertise and people are coming together and there’s an organic growth from the bottom up.

The taskforce is charged with developing a vision for what this precinct will look like. We have to think about how we create spaces that are attractive to people to come and work. We have to think about green spaces, as well as all of the economic activity that we want to drive. And I think the vision, for Central to Eveleigh, is ultimately to have a world-class precinct with our university and a number of other organisations as anchor tenants – some big tech firms, a vibrant startup ecosystem, university and vocational education and, of course, an enormous depth in research.

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Ask the exec: Glenn Wightwick

News: You little ripper!

Around U: Tail tales from a UTS giant

Staff profile: The art of work

Alumni profile: Proving his mettle

Two of U: Let’s talk about sex

Student profile: Starting up

U read it: UTS in print

Featured event: When code and design collide

What’s on: October

Art & U: UTS art collection

Creating a killer classroom experience

Casual tutor and current PhD candidate Alex Belli shares five things academics can do today to improve their students’ learning and engagement.

Majid in the middle

Imagine a chip that identifies, separates and eliminates an infection or abnormality from your body. Soon, you won’t have to.

The next issue will be released on Monday 5 November 2018

All U articles are available to read online via newsroom.uts.edu.au or follow us @UTSEngage

Send your story ideas, opinions and events to u@uts.edu.au

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Issue 07

U is published by the Marketing and Communication Unit and provides a voice for the university community. As such, the views in U are not necessarily the views of the university or the editorial team. U reserves the right to edit as it sees fit any material submitted for publication.

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Cover: The next step in the war on plastic

AUustralians use more than 10 million lightweight plastic bags everyday. So, will banning plastic bags actually work? It depends on the government.
The world-first software system allows you little ripper!

This automated system for detection and identification of sharks in particular, and marine life or objects more generally, uses cutting-edge deep learning neural networks and image processing techniques for object recognition and classification,” explains Senior Lecturer in the Centre for Artificial Intelligence Nabin Sharma.

The shark detection system was developed by UTS and industry partner The Ripper Group. Nabin was part of the UTS team, led by the School of Software’s Professor Michael Blumenstein, who developed SharkSpotter.

Nabin says, deep learning algorithms and image processing techniques examine live video feeds from the drones, hovering over the ocean, to detect the presence of sharks and their potential threat to water users. The system has 90 per cent accuracy in detecting sharks, distinguishing between them and 16 other categories of marine life, such as dolphins, rays and whales.

It can also identify surfers, swimmers, boats, humans and other objects in the water. This visual information is relayed immediately for interpretation to emergency services, beach lifeguards and water users.

“Information is sent to a control station on the beach where a human responder will have final say on what action to take – this could be continued monitoring of the shark to see if it moves away from swimmers or, if it appears to become a direct threat, sounding alarms and advising evacuation,” Nabin says.

“SharkSpotter is a great example of how an AI application can help humans, as it has significantly higher rates of visual accuracy in shark detection than we have. The drone will certainly help us to improve detection rates and to maintain safer conditions for those in the water,”

SharkSpotter is already deployed at dozens of beaches in Queensland and New South Wales, with interest continuing to grow.

GRAINNE MURPHY
Marketing and Communication Unit
Photographer: Ibrahim Rifath via unsplash.com

UTS may be celebrating its 30th birthday this year, but for the Tower, October actually marks anniversary number 39.

On Monday 15 October 1979, after eight years of construction, then-NSW Premier Neville Wran declared the Tower open.

The Tower, which is around 120 metres tall with 32 levels and unashamedly Brutalist in style (the term comes from the French béton brut, meaning raw concrete), divided opinions from the start. According to some, UTS stands for the ‘ugliest tower in Sydney’; others claimed it was giving Sydney the middle finger. As the university’s first Chancellor Gus Guthrie somewhat drily pointed out, however, “We have a tower, but no one could claim it’s an ivory one”.

The original plan called for seven tower-like buildings on the Broadway site, with the number later trimmed to four and then three. But, for financial reasons only one-and-a-half were competed, the half being building 2 – now demolished to make way for UTS Central.

One long-running myth has been that the high-set windows featured on each floor of the Tower were designed that way to avoid students being distracted by the view during class. Not true. The high windows were a requirement for wall-mounted engineering equipment accommodated in the Tower at the time.

Another myth that still lingers, decades after the end of the Cold War, is that of a nuclear fall-out bunker built into the Tower’s basement. While there is no evidence of this, recent excavations for the UTS Central project did uncover a pit unmarked on any plan.

Despite its singularity, or perhaps because of it, over time the Tower has captured imaginations and hearts. It has been celebrated in snow globes, as millinery and against Instagram-perfect blue skies on social media.

And despite three striking new buildings delivered by the City Campus Master Plan – and one more to come (UTS Central) – at 39 years young, the imposing UTS Tower remains the heart and soul of our re-imagined campus. And it begs the question: what stories will the UTS Tower have to tell in middle age?

Share your favourite Tower photos or tales on Instagram using #UTSlife

Newsroom
Creating a killer classroom experience

A casual tutor and a PhD candidate in consumer behaviour, Alex Belli is practicing what he preaches in his classroom. The result: fun and engaging tutorials for Alex and his students.

My background drives me to use the principles of marketing – including listening to the customer and staying current – to shape the experience my students have in class. Being a UTS student and a millennial, I’ve experienced first-hand what works in the classroom and what doesn’t. This helps me think of ways to maximise students’ learning and engagement.

When I’m shaping my lessons I try to understand where they are, not physically, but mentally. It’s like being an ethnographer of your own customers: Where are they online? What do they like? What’s happening in pop culture? Using this knowledge, I try to shape individual experiences for each of my lessons. Here’s five things I do to create a great learning experience:

1. Keeping it current
I source industry news, consumer news, recent events et cetera to engage students with the discipline and show them how close the content they’re learning is to their day-to-day life. For example, for our ‘customer experience’ tutorial we used a Coldplay concert to explore how all aspects of the event were catered to improve customer experience – from the merchandise to the entry bands that pulsed with the music.

2. Music to their ears
Sometimes, during group work, I play music in the background. But, rather than just putting on any playlist, I create a Spotify playlist for each class based on the topics of the day. The songs may not correlate directly to subject outcomes but they create an engaging experience. So, say for ‘services pricing’ the playlist includes songs like Bills, Bills, Bills by Destiny’s Child and Macklemore’s Thrift Shop. I find it connects with my students and relaxes them.

I’ve read that music brings us back to memories, so I’m hoping that if I create a connection for the students between these songs and the content, then they might retain the information better.

3. Go where your audience is
I use social media as a space to discuss current marketing problems, to source ideas, have polls and share information and tips on the subject. I create a Facebook group for each of my classes where my students can post interesting industry content they come across and interact with polls like, ‘What do you think of this advertising campaign?’ with the results of the poll then discussed in the next tutorial.

Currency is key, I want to be online in a space that seems less academic and is where the students are already engaged. The result has been much higher online engagement.

4. Get social
I also like to use memes and gifs so I can drive home a message pretty quickly. But I have to make sure they’re relevant and not already outdated. If not, you run the risk of being ’Buccamed’. It’s a term used to poke fun at people or groups who try, and fail, to use memes to connect with others. And, yes, as you’d suspect, the term itself comes from a meme – one that features Steve Buscemi from 30 Rock, dressed as a teenager as his character, a private detective, goes undercover in high school.

For one subject, Services Marketing, instead of asking students to sit through never-ending presentations, I asked them to submit a 10-minute video pitch. I found my students were more engaged and active as they’re working in a medium that they like to consume. Then, instead of everyone sitting passively in class watching the videos, we ran our own Oscars in class for the best-submitted pitches – think ‘best director’, ‘best concept’ et cetera. It encourages the students to actually watch the pitches and listen to the content so they can make an informed vote.

And for me, that’s key – creating and implementing tools that improve subject delivery and maximise student engagement.

This is an extract from an article originally published on the Futures blog, futures.uts.edu.au
You’re sick. You may have an infection, or cancer, or cardiovascular disease. Your doctor runs a quick diagnostic test in their office using a biochip which can identify the source of the infection or abnormality in your body. It sounds like science fiction, but thanks to Senior Lecturer Majid Warkiani, the technology is just around the corner. In fact, it’s already being used in hospitals around the world.

Majid in the middle

If your Coopers beer tastes better, you might have UTS researcher Majid Warkiani to thank.

While the biomedical engineer’s main focus is the fight against cancer, his innovative work in cell separation is helping the Adelaide brewer lift beer quality and taste by preventing the growth of spoilage and pathogenic micro-organisms through in-line separation in their yeast tanks.

It’s just one of the novel applications Majid has found for the ‘cancer dialysis’ system he’s developed that helps separate cancer cells in the bloodstream from healthy cells.

The 36-year-old’s work on cell separation sits neatly at the interface of engineering and medicine and could lead to more affordable early diagnosis and treatment of cancer.

While Majid’s journey to this middle ground is a long detour from his engineering studies at the prestigious Ferdowsi University of Mashhad in north-eastern Iran, it reflects his initial hope to study medicine. While that dream was thwarted by family expectations of the right career for a young man, Majid now sees the hand of fate at work in that decision.

“I feel like everything happened for a good reason and the path I went on was very rewarding. Now, I’m somewhere in the middle of engineering and medicine, which I really like. I understand the language of clinicians as well as the language of engineers. You can find lots of engineers, and lots of clinicians, but you rarely find people with both skills. And that’s where all the needs of the world are aligning.”

Learning these two languages took some time, but it was during his work as a doctoral student in Singapore using nanotechnology to improve water quality that Majid realised the wider potential of his research. “We were creating tools to identify bacteria in water and I started to get exposed to the world of micro- filtration. And I realised how much application you can find for these things.”

After completing his PhD, Majid moved to the Massachusetts Institute of Technology (MIT) in the US where he began to work closely with biologists and clinicians applying his micro- filtration techniques to rare cell sorting. His work with clinicians on cancer research reinforced his longing to work in the medical realm, but as his tenure in Boston came to an end Majid accepted an opportunity at the School of Mechanical Engineering at UNSW.

He admits being influenced by Sydney’s proximity to beautiful beaches and the heat. “I’m from the Middle East and Boston is cold,” he laughs by way of explanation. But, he admits he never felt quite at home in his new surroundings.

“I realised that most of my research was centred around biology and biomedical areas rather than pure mechanical, so I thought the environment at UNSW didn’t fit,” he says.

In July last year, he moved his research and team to UTS to be part of the new School of Biomedical Engineering.

A little more than a year later, Majid is embracing the opportunities on offer. “UTS gave me the freedom to build the laboratory that I want with all the equipment that I need, which was great. So now we have a world-class laboratory with all the necessary tools, and given we are in close proximity to the biologists and scientists in the Faculty of Science, we can jump across there and collaborate.”

Majid is convinced his collaborative approach is the key to real progress on disease prevention. “The big problems like cancer, like cardiovascular disease; these are not the type of problems that one group with one set of skills can solve. We will only tackle the problems if scientists, engineers and biologists talk together and chip in from different perspectives.”

At UTS, Majid is continuing to refine the cancer dialysis system that earned him a place in the 2016 MIT Technology Review Top 10 innovators under 35 in the Asia-Pacific. At the same time, he’s also developing microscale tumour models (so-called tumour-on-a-chip) that will eliminate the need to test drugs and treatments on animal models.

But, as his work with Coopers Brewery shows, Majid’s innovations are not confined to cancer treatment. He has applied the cell separation technique to algal research with C3 in the Faculty of Science and is also collaborating with peers in Adelaide on using the system in pre-natal screening for genetic disorders. It’s also being used to separate stem cells to better understand their therapeutic potential.

“All diseases come back to the cells – either a bacteria infection, a virus infection, or cell-related abnormalities. Then it just requires a mechanism to separate them.”

“Your disease is not always the same, and you have to change your treatment strategy. If you know the mechanism, you can cure that disease.”

“There are so many opportunities in this context, because all diseases come back to the cells – either a bacteria infection, a virus infection, or cell-related abnormalities,” he says. “Then it just requires a mechanism to separate them.”

While he makes it sound easy, Majid concedes there is a long path still to take before his research moves out of the laboratory into the real world. Yet he remains driven by his belief that his work will make a difference. “We are working on real-world problems and the technology we are developing is useful and patient orientated and can change the life of people that are diagnosed with cancer or other diseases.”

DANI COOPER
Marketing and Communication Unit
Photographer (3D microfluidic cell culture biochip) supplied by: Majid Warkiani
Photographer (M Warkiani and other lab images): Shane Lo
Photographer (now brewing): Karolina Szczur
via unsplash.com

View this article at UTS NEWSROOM or share it @UTSEngage
The next step in the war on plastic

But, litter is only one of the detrimental impacts made by plastic bags. And only one of the reasons why we must push for an end to single-use plastic bags.

For starters, they’re made out of fossil-fuels (yes, your trusty old grocery bags start out as petroleum or natural gas liquids like ethane and propane). As such, the investment of energy and resources to extract the oil and produce these bags is then wasted while they live out their extremely long lifespans in landfill (a single-use grocery bag can take 20 to 1000 years to break down).

And while plastic bags are technically recyclable (as long as they aren’t biodegradable or compostable), they can’t be recycled through your household kerbside recycling bin.

It’s why local councils still frequently cite these bags as one of the most problematic contaminants in kerbside bins. They’re often found loose or have been used to hold collected items within recycling bins.

To be recycled, plastic bags must be taken to special REDcycle collection points in supermarkets. REDcycle recovers more than 3 million soft plastic bags and pieces of plastic packaging every week in Australia. But, many of us do not use their service. So, reducing the number of single-use plastic bags in circulation can help. At the same time though, bag bans are not a silver bullet solution.

Plastic bags represent just one type of plastic pollution and just one of the main single-use items we rely so heavily on (think straws, coffee cups, takeaway containers, picnic-ware, tissues, paper towels, cotton buds, the list is seemingly endless). For plastic bag bans to really make a difference, they need to be the first step (or second for reusable coffee cup owners!) in reducing reliance on single-use and disposable goods. Kind of like a ‘training ground’ for people to think about reuse and repair, and for businesses to develop better systems and services.

Do bag bans actually work?

Plastic bag bans have been implemented in a number of states – South Australia (SA), the Northern Territory (NT) and the Australian Capital Territory (ACT) and have shown positive results.

For example, plastic bag litter fell by about 50 per cent in SA and NT after they introduced their ban. Similarly, the ACT saw a 36 per cent decrease in the number of plastic bags reaching landfill and reported improvements in kerbside contamination after their ban.

However, for bag bans to actually have an overall positive impact, they need to encourage the right sort of change in behaviour – which means switching to reusable bags, and actually reusing them! This is the critical part.

Alternatives to lightweight single-use bags include heavy plastic bags, paper bags, woven plastic bags and cotton/ fabric bags. However, individually each of these alternatives actually require greater investment of energy and resources to produce. They are only better when they are reused more than once.

Modelling suggests that heavy plastic bags must be reused four times, green woven bags around 11 times and cotton bags 131 times before they have a net positive impact. Why so many times for cotton bags? Well, cotton is very water-intensive to grow and also requires land, fertiliser and energy to transport, process and manufacture. The best bags to use are whichever ones you already own! Or the empty boxes at the store. If you do need more bags, jute or hessian are recommended by environmental groups.

The good news is research suggests reuse is actually happening. For example, in the NT, 12 months after the ban, 70 per cent of people surveyed reused their thick plastic bags at least four times, with half using them more than 10 times. In the ACT, they saw increased sales of green woven bags initially (along with plastic bin liners), but these both returned to pre-ban levels after about 12 months, suggesting that while people were not initially reusing plastic bags often enough, the right habits soon formed.

The evidence is compelling enough that this year the Queensland, Western Australia (WA) and Victorian governments have all followed suit in implementing a ban on single-use plastic bags.

Why the fuss with the recent supermarket ban?

Much of the coverage of the new supermarket bans has focused on the challenges faced in implementing them, particularly Codex ‘backflips’ on charging for thicker plastic bags.

But, we shouldn’t be too hard on them. It’s important to remember that, in the vacuum of government policy, they’re balancing their legal responsibility to make profit for shareholders with their corporate environmental responsibility.

Traditionally, governments have assumed the principal responsibility for environmental protection. But, even in the states newly implementing the ban (Queensland, Victoria and WA), retailers are not required to charge for heavier plastic bags, despite this being the key to changing behaviours towards reuse.

Regardless of their motives for charging or how long it took the big supermarkets to stick with charging for heavier plastic bags, it’s good they are now both doing so. It would be better, however, if all plastic bags were eventually ruled out altogether.

To affect real change, we need to further this switch from our current linear society – where we simply extract resources to make ‘stuff’ we use once and then sooner or later throw away – to a circular model – where resource use is minimised and products are kept in use as long as possible. The circular economy (as it’s known) requires redesigning packaging and products to use recycled and recyclable materials, reusing what we can, reselling, and sharing and using them more than once.

While supermarkets and (some) governments are starting to do their bit, we must all continue to push for change. (And remember to bring reusable bags when we shop!)

Visit uts.ac/wasteaderecycling to find out how UTS plays its part, and ways you can help while on campus.

JENNI DOWNES
Senior Research Consultant
Institute for Sustainable Futures

Photographer (bags): Tui Prichard
Photographer (bags): Tui Prichard

Remember: reuse your bags
This is how many times you need to use them before a net positive impact

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The next step in the war on plastic

Plastic bags: we see them lining our roadsides, floating down our waterways and drifting through the air on windy days. They are ubiquitous in life and have become our most iconic symbol of litter.

So, will banning plastic bags actually work? It depends on the government.

Australians use more than 10 million lightweight plastic bags every day. That’s 4 to 6 billion per year! An estimated two or two uses.

Based on this information alone, you’d surely think bag bans are a good thing. However, according to Keep Australia Beautiful’s National Litter Index, plastic bags make up only one per cent of total litter. Unsurprisingly, it’s a statistic that detractors of the move to ban single-use plastic bags have been keen to highlight.
The art of work

"Traditional museums will only have about 10 to 20 per cent of their collection on show, but at UTS we’re the opposite," explains Assistant Curator Janet Ollevou, as she leads the way to the UTS Art storage room.

"I don’t even call this a storage room – I call it the waiting room," she clarifies. "Most things are here because they’re managing new acquisitions and tracking existing artworks’ locations and condition.

But, it’s not always about the new. One of the best examples of how art can maintain a relevance to architecture, says Janet, comes from the Kuring-gai campus. "Before that campus closed, we found a couple of significant sculptures by Ken Unsworth which were quite corroded. As we researched them we learned they’d been specially commissioned for Kuring-gai by the art committee which was led by the architect."

"We ended up restoring them with Ken’s advice, and they look fabulous! We brought them back to the City campus and now they sit so well on level five in the Tower."

With success stories like this, and a near-decade long career at UTS, you’d think Janet would surely have a few favourite works on campus, instead, she insists, "My favourite is always going to be the one I placed most recently. I think part of running a collection is that you have to treat all artworks with an equal level of respect and care."

So, next time you’re in a meeting room, office or foyer, Janet says, stop and take a look at the art. "We want people to feel proud about the UTS collection, because it’s something wonderful to have. Art shapes ideas and in some cases can be an encounter that you carry with you for the rest of your life. If I can offer that experience to anyone, then I’ve done my job."

To find out more about the UTS Art Collection, or request artworks for your office, visit art.uts.edu.au or email Janet.Ollevou@uts.edu.au

HANNAH JENKINS
Marketing and Communication Unit
Photographer: Shane Lo

The act of discovery

"In 20 years’ time, Parkinson’s disease could be as treatable as diabetes. If research is adequately funded, that is." That’s the opinion of science alumni Dominic Hare.

Today, Dominic is a Visiting Fellow at UTS and the Head of the Florey Institute’s Atomic Pathology Laboratory. But, 10 years ago, Dominic was in the midst of a PhD at UTS, co-founding our Elemental Bio-Imaging Facility and developing a method to take pictures of metals in brains. The technique deconstructs the brain into its basic elements to reveal pictures of metal imbalances in areas affected by disease, such as increased iron in areas affected by Parkinson’s disease.

Dominic says, "The technology was really designed for the mining industry; it’s for measuring elements in rocks using lasers. But, it allows us to see how these fundamental building blocks of life – chemical elements – change in disease. We can look at very tiny changes in one element and how it relates to another and another and that gives you an ‘elemental signature’ of a disease."

In 2014, then aged 30, Dominic was made a fellow of the Royal Society of Chemistry and awarded a UTS Chancellor’s Postdoctoral Research Fellowship. He used the opportunity to partner with the Florey Institute of Neuroscience and Mental Health and use his imaging technology to answer pressing questions in medical research.

"Using technology to try and understand disease is what I’ve aspired to since I was at UTS," says Dominic. "I want to shorten the time it takes from understanding how a disease happens to actually using that information in a medical laboratory to develop new treatments."

Today, Dominic, who was recently named the UTS Young Alumni Award recipient for ‘phase two’ trial of a drug that’s expected to stall the Parkinson’s disease by targeting this reaction, Dominic hopes it can also be used as a preventative and is working on technology that determines a person’s risk of developing the disease. "With Parkinson’s, you don’t show symptoms until 50 per cent of the cells that die in the brain have already gone, so I’m trying to identify people who are at risk before those neurons begin to deteriorate."

Dominic is driven by his own experience of the disease; he was in the early years of his PhD when he lost his “surrogate grandmother” to Parkinson’s disease. He now travels around regional Australia as a scientific liaison for Parkinson’s Australia. "I think it’s important to provide information to people with the disease and their carers," he says, "And it’s amazing to see how much they care about the research being done."
Let’s talk about sex

Melissa Kang

When I think about it in retrospect, my whole purpose, from the very beginning, in wanting to take on Dolly Doctor came from a very feminist perspective. For girls and young women, even in a country like Australia, sexuality is highly taboo and highly stigmatised: we constantly ram negativity down their throats. But, I wanted to play at least a tiny part in changing the discourse. And I think Dolly Doctor allowed that.

Now, 25 years later, Georgia is coming to it from that same feminist perspective, and I think probably that’s what I’m most proud of. I’ve raised all my children, my three daughters and my son, to be feminists. But to have one of my own children want to pick up that mantel I carried with Dolly Doctor is really lovely. I think that’s probably what sums up the synergy between us so nicely – we both want to empower and create change.

For a long time I thought I would be a teacher, but I then discovered adolescent medicine could be, and was, so much more than looking after sick adolescents in hospital. It’s about health promotion, education, working with schools and understanding the importance of learning. The brain is developing so rapidly in adolescence it’s a really wonderful time to teach them life skills.

The Dolly Doctor position actually became available the year Georgia was born and I held that position until the end of 2016 when the magazine closed. Over the years though, that was really just a tiny part of my work. I also worked in general practice, I had a role in the department of adolescent medicine at the Children’s Hospital Westmead, then I finally moved into academia.

I worked at Sydney University for 14 years, but have been at UTS for two years now, since August 2016. I felt that what was on offer here – a promotion to Associate Professor and the chance of involved in creating a new course – was a really good fit and a nice opportunity to grow a new area of research.

As a medical academic, I have learned that adolescents as a patient group are not always the most popular. Health professionals often have trouble engaging with them, so focusing on that during university makes sense.

The subject Georgia and I have developed, which will be running in Autumn session 2019, is Adolescent Sexual and Reproductive Health and that will be an elective in the Master of Public Health. It’s a very broad and multifaceted subject that looks at adolescent development, psychology, social determinants of adolescent sexual and reproductive health, health promotion and the evidence behind sex education.

I would like to see UTS become a real hub for adolescent health teaching, beginning with this subject.

It’s been great working with Georgia. She’s young and when I talk about the boring stuff – learning objectives, headlines, statistics et cetera – she’ll go and find all this interesting content that young people will be able to relate to, things like YouTube videos and social media posts. That’s incredibly lucky for me.

I’m very, very, proud of her. She won the university medal at Sydney University last year, for her honours thesis where she linguistically analysed the Q and A’s to Dolly Doctor in 12 months of issues that were 10 years apart.

Even though I take zero credit, because her thesis is something that’s completely above my head, there’s a little part of me that it just warms, and I think, ‘Gosh this is about Dolly Doctor and that’s so cool’.

Georgia Carr

When I started university seven years ago, I became more and more interested in things like feminism and gender equality, and that ties in a lot with sex education. I mean, it’s not surprising considering my mum’s profession.

When I was growing up, sexual health and sexuality was a very open conversation, literally around the dinner table sometimes, so I definitely credit my mum for some of my interest in that.

My mum started as Dolly Doctor the year I was born – 1993. So, literally my entire life she has been the Dolly Doctor; but it was something I didn’t notice until I was an older teenager.

There was never really an ‘ah ha’ moment like ‘Oh, mum knows about sexuality’ or having ‘the talk’ as it was more of an ongoing open conversation. But, I do remember telling her I wanted to go on the pill when I was about 17.

She said, ‘Okay, when you go to the doctor, this is what they will ask …’ She offered to drive me and told me, from a medical perspective, about the sorts of questions the doctor would ask, there was no feeling from her, like ‘Oh my daughter’s sex is scared or concerned’, it was just not a big deal.

We have that same comfort working together, too. Even though Mum’s in health and I’m in linguistics, we have quite similar interests, as far as sex education, sexuality and academia, I’ve always liked studying and teaching, and academia combines the two. Although, I did want to be a doctor or a vet when I was very young. Pretty much the same mum!

It’s great working with mum – she runs the course and I’m assisting in bringing it all together. She gives me an outline or overview of how the course will look, or what a certain week will look like and I find content to populate that topic. Sometimes the directions are more specific, so she’ll know what reading she wants and I’ll write questions to go with it. Other times, it’s more open ended and I can find and suggest things that are interesting or important.

I have to learn a lot, but that’s kind of the case anywhere. There are some bits of the course that I know a bit better, for instance, there’s a week about gender and sexuality diversity. Then there are other weeks that are about STIs, epidemiology or things like the United Nations Declaration on the Rights of the Child, things like that, which I have no idea about. But, Mum’s a total expert. This is her research area; she’s been looking at adolescent health and sexual health for 30 years, so she can tell me specifically ‘you’ve got to read X, Y and Z to know what’s required for that week’.

So much of the way we talk about young people and sex is framed around fear or danger, when really there’s so much more to sex and sexuality than risk and safety. Hopefully, the students that take this subject see that, and over time I can help the broader society to understand that as well.

For millions of Australians, Melissa Kang was their go-to for adolescent health advice. They just didn’t know her by name. Today, the former ‘Dolly Doctor’ is an Associate Professor of Public Health at UTS. Melissa and her daughter, Research Assistant Georgia Carr, are working together to develop an elective subject called Adolescent Sexual and Reproductive Health. The proud feminists reveal what it’s like working together and how they hope to change the way we talk about sexuality and sexual health.
Vanouhi Nazarian

"I had always said I would never own a pram, but after having a baby, I realized there was a huge expense, and realized there was a huge hassle with travel gear and the school holidays and I used to think, 'This is so difficult, why would anyone do this?'"

That's when Vanouhi conceived the idea for Kindershare.

It was through this process that Vanouhi appreciated the difference – it requires a completely new range of skills.

Over the last Christmas period, for example, Kindershare helped 150 families save money by renting baby equipment rather than buying it new, with the number of products available on the site growing daily.

"We've had some families earn up to $1000 just from renting out their unused baby equipment," says Vanouhi. The startup is also collecting awards, including prizes in the Share SA – South Australian Sharing Economy Challenge, the IBISWorld 3P Innovation Competition and the Inner West Council Business Environment Awards. Kindershare is also a finalist in the NSW Government Green Globe Awards.

Vanouhi is also one of the latest startup founders to join the new UTS Startups community, where she says she's looking to help others with their own startups, whilst also tapping into their diverse skillsets.

Another challenge she faced was finding the insurance to make it work.

"I spent a lot of time talking to brokers who couldn't get their head around the concept – even though sharing platforms like Airbnb are so prevalent."

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Though if I Was Prime Minister is undoubtedly a children’s book (my kids loved imaging what they’d do as the Prime Minister, as much as they loved the illustrations of a hotdog with a moustache and a koala doing karate), it’s definitely not just for kids. Adults, too, will find themselves applauding the author’s and illustrator’s clever use of satire, imagining ‘what if’ and dreaming loudly. “Come on Canberra.”

In this biog, told from Sophie’s perspective, we learn how Sophie and her husband coped with the births and deaths of their triplets. We find out how, and why, they continued to honour their memories while raising two energetic sons. And we learn how, through excruciating grief, Sophie was able to find the strength to continue her charity work (which has seen her raise more than $25.2 million for the Royal Hospital for Women’s Newborn intensive Care Unit) even after the loss of her husband.

Sophie’s Boys is a story of heartache. But, it’s also a story of determination and hope. In 2007, Sophie Smith and her husband Ash lost their premature babies who were born at just 24 weeks. Henry lived for one hour, Evan for 10 days and Jasper for 58 days.

In an effort to turn such devastating losses into something positive, Sophie and Ash starting running. Running gave the couple a way to fundraise, but it also helped them to heal. For Sophie, it became her meditation. After the deaths of her precious boys, Sophie and Ash had two more sons, Owen and Harvey. But, tragedy struck the family again some eight years later when Ash lost his battle with brain cancer.

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When code and design collide

For many people, code and design are not complementary. But for Aaron Seymour, a designer and lecturer in the School of Design, they must certainly are.

Indeed, Aaron’s most recently curated exhibition, Hello World: Code and Design examines how code is escaping the black box of the computer and being materialised in the world in different ways.

“When people think of coding, they often think of someone sitting in front of a computer in a little office cubicle writing software. As a parent of two young kids who are both learning coding at school, there’s a lot of rhetoric around how coding is this essential literacy of the 21st century,” says Aaron. “But, I don’t think those conversations often conjure an image of what that might mean in the future beyond being a professional software engineer.”

That’s where Hello World comes in.

From a dress constructed entirely from laser cut acrylic, to a 3D printed gun, each of the 22 works displayed in the exhibition showcase objects and technologies from across design – fashion, textiles, moving images, graphics and the handmade. And each reveals the social, political and economic impact of code on the world.

As part of the exhibition, which ran in the UTS Gallery from 24 July to 14 September, there was a strong public program of events which included 21 curator talks and two panel discussions. Weekly high school workshops, in collaboration with UTS’s Women in Engineering and IT, were held for students from low socioeconomic backgrounds and young women interested in STEM. The students toured the exhibition before undertaking a 3D modelling and printing workshop in ProtoSpace, UTS’s new state-of-the-art digital fabrication facility. According to Aaron, these workshops give students a “taste” of the possibilities of design.

“It’s really important for people to realise that technology isn’t something that is bestowed upon them from on high. It’s something that they can work with, that they can rework and have some agency over.”

Aaron adds, “It’s about engaging with young people and switching them onto the creative and critical possibilities of how they can take technological systems and make them their own.”

If you missed out on Hello World: Code and Design, fear not! You can still purchase a copy of the exhibition catalogue.

SARAH KENT
Marketing and Communication Unit
Photographer: Jessica Maurer

October

Email your events for November 2018 to u@uts.edu.au by Friday 5 October

WHAT’S ON

EXHIBITION
In the UTS Gallery’s latest exhibition, Void: contemporary Indigenous artists are brought together to explore the multiple possibilities of the human condition.

FROM 01
UNTIL 16 NOVEMBER
UTS Gallery, building 6, level 4
art.uts.edu.au

PROFESSIONAL DEVELOPMENT
Take charge of your career and explore the support available to you at Career Conversations – a free workshop open to all staff.

9.30am-12pm
Tower, level 22, room 18
uts.ac/2H7uHP

FASHION SHOW
UTS FASHION 2018 builds on the reputation of our fashion and textiles degree – one of Australia’s most innovative fashion courses. Each show will feature up to 12 runway collections and showcase bold and experimental collections for a new generation of young design talent.

Show A: 7.45pm for an 8pm start
Show B: 8.45pm for a 9pm start
Great Hall, Tower, level 5
humanitix.com.au

LIVING OFF THE LAND
My Trip To Mars in 2015 survey exhibition by Sydney artist Adam Norton. The exhibition - the outcome of a residency at Broken Hill - transformed the gallery into a speculative replica of a habitation site on Mars, complete with an artist-engineered yurt and spacesuit.

LIVING OFF THE LAND was part of My Trip To Mars, a 2015 survey exhibition by Sydney artist Adam Norton, The exhibition - the outcome of a residency at Broken Hill - transformed the gallery into a speculative replica of a habitation site on Mars, complete with an artist-engineered yurt and spacesuit.

He’s not only interested in how technology has altered our physical landscape, but also how those changes have impacted on human behaviour. Living Off The Land is currently on display in the Information Technology Division’s offices, which were recently given a Mars-themed makeover.

JANET OLLEVOU
UTS Art

ART & U

Adam Norton, Living Off the Land, 2015, pigment print, 51cm x 83cm

The UTS Art Collection was formed in 1988 – the same year as the university itself. It continues to develop thanks to ongoing assessment and the focused purchase, commissioning and donation of artworks that relate to the university’s mission and the exhibition program of the UTS Gallery.

LIVING OFF THE LAND is an artwork that refers to plans, proposed by Mars exploration advocates, to extract materials from Mars in order to reduce flight costs and extend exploration duration times. In this work, Adam illustrates the process by which carbon dioxide could be extracted from the Martian atmosphere to produce methane, an effective fuel source.

It’s a familiar theme for Adam’s work – he is well-known for investigating the effects of technology on the human condition, and has made work about space travel, virtual warfare and nuclear weapons.
You probably won’t see it unless you attend an official UTS ceremony, but there’s not much the UTS mace hasn’t seen over the past 30 years, including the graduation of 200,000 students.

Fashioned by Helge Larsen and Darani Lewers (pictured), the mace blends traditional and modern, just like UTS. Traditionally, a mace was the weapon of choice by medieval bishops entering a battle. But, at UTS, it takes a symbolic role (and not just because of our lack of bishops or battles). It’s carried by a staff member in all ceremonies in which the Chancellor presides to represent the tradition and good name of the university.

A special thank you to Lyn Guthrie for donating her husband Gus Guthrie’s retirement gift back to UTS, and enabling us to share these images with you. Gus, who was UTS’s founding Vice-Chancellor, was presented three albums upon retirement that recorded photos and articles related to the NSW Institute of Technology and UTS during his leadership from 1986 to 1996.

Photographer (Hazel Hawke and Gus Guthrie, and Darani Lewers and Helge Larson): Sherran Evans
Photographer (Didar Zowghi): GFP Photography