

THE UNIVERSITY OF AUCKLAND ALUMNI MAGAZINE | SPRING 2016

# Ingenio 10

## GEORGE MASON

A life of many layers

FOR ALL  
OUR FUTURES

Can we do it together?

LIGHT FORCE

Driving scientific advances



THE UNIVERSITY OF  
AUCKLAND  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

## Ingenio

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## Ingenio website

Check out our website [www.ingenio-magazine.com](http://www.ingenio-magazine.com)

If you're as happy to read *Ingenio* online as in print, we'll stop sending you the magazine and instead you'll receive an email each time the website is refreshed with the latest *Ingenio* content. You can search articles, browse by topic, view videos and leave comments on the *Ingenio* website.

# FOR ALL OUR FUTURES

**At no time in human history has the world been as complex and rapidly-changing as it is today.**

We face challenges to our traditional way of doing things and opportunities to create for ourselves, our children and our communities exciting, new and as-yet-unimagined futures.

Research universities have a unique role to play in creating the future. Only they both generate new knowledge and provide the highest levels of formal education. This creates opportunities for our society to adapt to the technological revolution and the changing nature of work, to give all our young people access to high-quality education, to respond to disturbing new diseases and intractable old ones, to address the needs of an ageing population and to limit and adapt to climate change and environmental pressures.

As New Zealand's leading research university, we are ideally placed to serve our national and international communities in this way. Our students are among the best in the country, our entry standards the highest. We have scholars and scientists who are true world leaders. We have translated discovery and radical innovation into products and processes for the benefit of the health, social services, commercial, cultural, environmental and community sectors.

However, those capabilities and more will be needed if we are to fulfil our role in creating the future we all wish for our children and grandchildren. Finding solutions to these critical issues will require partnerships – between academics, communities and industry, and between nations. We have already developed many such relationships and we are well positioned to build many more, seeking collaborative expertise wherever it may be found.



The other partnerships vital to success are the ones we have with you, our alumni, donors and friends. They are partnerships of great value and impact, powerful catalysts for creating academic excellence, intellectual leadership and outstanding research. They are partnerships that can touch and transform all our communities in ways we cannot achieve alone. That is why we, like all the world's leading universities, give them such value and importance.

The past decade has demonstrated that power. Support from donors has enabled us to explore new avenues of research that would not be funded through conventional research grants. We have made progress: from induction power for electric cars and robots that help the elderly to cancer breakthroughs, the restoration of our natural environment and the development of young New Zealanders who are truly international in their outlook.

Now we want to build on that progress. We have launched a major

philanthropic campaign to raise the funds that will enable the University to increase the impact of its contribution to society, to change lives for the better and to ensure a strong, successful and confident future for New Zealand.

Alan Kay, computer scientist and Adjunct Professor at University of California Los Angeles and previously at MIT, has said, "The best way to predict the future is to invent it."

I hope we can count on your support to take what has been achieved so far and build on it together, for all our futures.

Professor Stuart McCutcheon  
University Vice-Chancellor

CAN WE CHANGE THE  
FUTURE TOGETHER?





## UNEXPECTED OUTREACH

I am writing to thank you for the inspiring article on Professor Karen Willcox ("To Boldly Go"). As you will recall, Professor Willcox is an Auckland alumnus who has gone on to work for Boeing, NASA and MIT, and who has been involved in myriad areas of fascinating research.

As your article mentioned, she is also involved in various science outreach activities, especially those with a focus on encouraging girls to pursue science careers.

I am a parent volunteer at a local primary school on Waiheke Island, and one of our aims is to arrange for real scientists to come in and talk to the students. After reading your article, a colleague and I contacted Professor Willcox to see if there was any chance that she might be able to come and visit our school. Extraordinarily generously, she agreed immediately.

As it turned out, Professor Willcox ended up spending an entire day with students from all three schools on Waiheke Island, including a two-hour rocket-building workshop, during which she got covered in mud from kneeling on the boggy school field, launching rocket after rocket.



The kids were incredibly engaged and inspired. They (and we) are all grateful for the experience, which would never have taken place but for your article.

Kind regards, Jane Glover

## 'R' AND BEYOND

*Several readers who read the story "R – the ultimate virus", published in the last issue of Ingenio, were fascinated and went on to seek further knowledge – which led them to query the relationship between "R" (the software package developed at the University of Auckland) and "S", another software package that preceded "R". Professor Ross Ihaka's response is summarised below. (For his full text, see the Ingenio website).*



Robert Gentleman and I were originally interested in purely academic questions about statistical computing (scoping and memory management were particular interests) and we built a small system in which to try out ideas.

This was a very stripped-down system which could be regarded as a minimal Lisp interpreter with some basic statistical capabilities [Lisp was a programming language Ross had encountered while working at Massachusetts Institute of Technology].

We felt reasonably happy with what we achieved in our experiments and felt we should "try it out" on students, so we decided to make it look a little more like a "standard" programming language. S was the closest fit. (S itself is similar to an earlier Bell Labs' language called Awk.)

Once the superficial similarity was established, it was inevitable that the resulting language would become more S-like (though the similarity remains at a superficial level) ... Interestingly enough the convergence happened in the other direction as well. Seeing the technical advantages that R had, the S developers

incorporated features from R into S and even began advertising "R compatibility".

As well as the technical differences between S and R, there was a major social difference. S was a closed commercial system whereas R was open and "free". The openness of R attracted academic researchers (including the original S developers) and their willingness to contribute quite quickly made R the most fully-featured statistics software available.

Of course, R is by no means the end of the story. It has some technical flaws that limit the kinds of problem it is useful for. For the past ten years I have been working on developing new technology to form the base of next-generation statistical computing systems. With luck this will mean R itself will end up an all-but-forgotten historical footnote in descriptions of those newer systems.

## PERILS OF PREDICTIVE TEXT

Just because *Ingenio* is the publication for the alumni of a distinguished university I don't expect it to be written in impeccable prose. I anticipate some journalese and worse; and I think most of that is acceptable, if only marginally so. However I expect some respect to be paid to logic. How could Tess Redgrave write (page 22): "We watch sails fanning out towards the wind on the water below"? I'm no physicist but I venture to suggest that most things can be expected to fan away from the wind. I could say more but why blow into a full sale?

Peter Newfield

**And an afterthought:** I hope you will forgive my momentary lapse and let me sail towards the sunset whilst the wind is fair (or is that fare?).

## REFUGEE SOLUTIONS

*One reader's suggestion (abbreviated):*

Refugees and asylum-seekers: give them jobs! Should Kaikohe be developed as a tourist centre by starting with a modern tourist hotel? The labour could be supplied by [refugees from] a nearby refugee centre, with proper training offered as well. Another scheme [would be] to develop a music and dance centre on the south bank of the river at Dargaville, also staffed by refugees. Northland needs more people. Both towns are there.

Yours faithfully, Ross Dawson

## CAMPAIGN KICKS OFF

**"Can we change the future together? We certainly can!"**

These empowering words were from Auckland Medical Research Foundation (AMRF) President Jeff Todd, who was interviewed by ONE News about his organisation's support for the University of Auckland Campaign For All Our Futures, which was launched on 23 September.

Vice-Chancellor Professor Stuart McCutcheon spoke at the launch event and in media interviews, including with ONE News, the New Zealand Herald and Radio NZ, about the vision for the Campaign. The aim is to build partnerships with alumni, funders and other supporters so that we can address the biggest questions facing New Zealand, such as: Can we dramatically improve cancer survival rates? And, can we restore our unique natural environment?

Donations from a number of major donors were highlighted at the launch event: \$23.7 million to medicine including \$2.5 million from the AMRF for a "scholars fund" to recruit talented medical academics globally; \$9 million to business and innovation including \$1million donations from PwC and Chau Hoi Sheun Foundation from Hong Kong, together with a substantial donation from Beca, to drive innovation including the establishment of the "PotentiaLab", where students can prototype their ideas before taking them to market; \$7 million for the environment including \$5 million from long-standing supporter George Mason and his Trust to establish a Centre for the

Natural Environment, whose aim will be to restore our iconic natural environment; \$2.6 million to education including \$1.6 million from the Woolf Fisher Trust to improve maths teaching in primary schools; and a substantial donation from the Chartwell Trust to support creativity in business and society.

For a large proportion of our donors the reason for giving is to help a student who has the ability and drive to excel but who is experiencing severe financial hardship, the idea being that modest gifts from many sources are pulled together to provide scholarships.

If anyone was questioning whether this type of giving really can make a difference, Rez Gardi was at the launch event to tell them otherwise. Rez was born in a United Nations Refugee Camp in Pakistan where she saw struggle, persecution and injustice. She came to New Zealand as a six-year-old and was later a recipient of a scholarship funded by University alumni. Although Rez has only just completed her BA LLB(Hons), she is already giving back – volunteering her time and her story to encourage others to give to scholarships for refugees.

The launch event for the new campaign took place off campus, at the Auckland Viaduct Events Centre, a fitting way to launch a campaign that is aimed at increasing the University's impact on the wider community.

The figure for total fundraising to date – accomplished through partnerships with major donors prior to the public launch – is \$152 million. The goal is to raise \$300 million to support life-changing work at the University by 2020.



NEWS

## NEW ICT LAW CENTRE

**A New Zealand Centre for Information and Communications Technology (ICT) Law has been launched at the University.**

Led by retired District Court Judge, Dr David Harvey, the new centre forms part of the Law School at the University of Auckland.

The centre has been established to study and consider the implications of ICT within the context of the law, technological development, and its impact on society.

"The centre is a specialist hub," says David. "Information and communications technologies are becoming more and more a part of the everyday life of New Zealanders. The impact of these new technologies on the law and vice versa need to be examined.

The centre has three main strands of activity. The first is the development of teaching programmes in the ICT field for students and law practitioners, to keep them up to date with new legal developments in the ICT field.

The second strand is in the field of research and the development of ICT policy based on a solid evidential foundation. Projects include the use of technology to assist with access to the law as well as an examination of the operation of the Harmful Digital Communications Act.

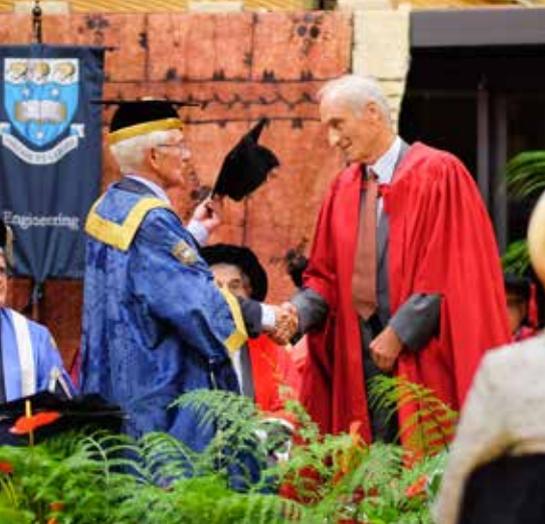
The third strand is to design and develop an on-line electronic moot courtroom as a teaching facility for students, as an advocacy training centre, and as a place where lawyers, judges and court staff can familiarise themselves with new technologies for use in the courtroom before "going live."



Photo: Rez Gardi speaks at the launch

CAN WE CHANGE LIVES  
FOR THE BETTER?





## TWO NEW DOCTORS

Two leading businessmen who have contributed much to the University have been awarded honorary doctorates, conferred in a special ceremony at the University's Fale Pasifika.

Internationally successful entrepreneur and founding donor to the Business School's Entrepreneurial challenge Charles Bidwill (below) was awarded a Doctorate of Laws for his philanthropy towards the University.

Richard Aitken (above), alumnus of the University and chairman of the Beca Group, was awarded a Doctorate of Engineering in recognition of Beca's exceptionally strong relationship with the University on his watch.

In response to a tribute delivered by Professor Paul Rishworth QC, the University's Public Orator, Charles Bidwill stressed that "Entrepreneurism is about having a go and taking a risk. If the economy doesn't have people taking risks then the economy doesn't progress. Have an idea," he told his audience at the Fale Pasifika. "Take a risk and have a go."

Richard Aitken spoke of engineering as "an exciting profession, an opportunity to solve problems and create outcomes".

Above: Richard Aitken. Below: Charles Bidwill



Heidi North-Bailey

## POSSIBILITY OF FLIGHT

Heidi North-Bailey (BA Hons, Screen Production 2015) is now on a residency in Shanghai, having been selected as the second New Zealand writer to join the Shanghai Writers' Association's International Writing Programme. Heidi is spending September and October in an inner-city apartment in Shanghai with nine other writers from Argentina, Spain, Israel, Russia and Poland.

The poem (right) is recommended by Dr Paula Morris, who convenes the Master of Creative Writing programme at the University of Auckland. Paula describes it as "beautifully lyrical, exquisitely layered, the gaps large and resonant, the line of women vital; the hidden stories pull you back for another look, and then another."

"The Women" appears in *Possibility of Flight*, a thoughtful and intimate first collection published by Mākarō Press. It is reprinted with permission from the author and publisher.

## THE WOMEN

At twenty-five my grandmother  
wore her hair  
As memory

Rosary braids sliced  
her back,  
tendrils strayed  
and burned her eyes,  
she dreamed of princes  
but got her sister's children

gawky squawky babies  
desperate for their mother,  
who was lost  
for her own safety  
behind quietly medicated walls.

My other grandmother, her beauty  
strung like a broken guitar,  
tended two children  
ten months apart. Her despair  
cut shapes in the darkness.

At twenty-five my mother was married  
to the wind, her dress billowing  
out at her calves, tiny roses  
struggled over the brown fabric.

I was behind her smile,  
dark and budding  
quiet and slippery as the ring  
on her finger.

## OUR OLYMPIANS

The University community was delighted at the performance of our nine Olympian alumni, who competed in hockey, the rugby sevens, golf, canoe and rowing – and especially with the phenomenal efforts of our medallists Mahe Drysdale (Business) who took gold in rowing, and Shakira Baker (Education and Social Work) who brought home silver for her part in the rugby sevens.

Seven current students were also in competition, combining their rigorous training with their University studies. Among them were Theresa Fitzpatrick, a medical student who helped win silver in the rugby sevens, and physiology student, Eliza McCartney, who pole-vaulted into the hearts and

minds of New Zealanders. Eliza (19) became our youngest female medallist at an Olympic Games when she gave a thrilling performance to win bronze. Commerce student Dylan Schmidt (also 19) came in seventh in the trampolines.



Photo: Eliza McCartney

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# A LIFE OF MANY LAYERS

STORY **TESS REDGRAVE**

Alumnus Dr George Mason has gifted \$5 million to establish a research centre for the natural environment in the Faculty of Science. Tess Redgrave talks to George about his life, work and love of the outdoors.

At the top of the drive to George Mason's home on the sea-facing slopes of New Plymouth's Omata are two small Māori carvings.

The left panel depicts a Māori warrior defending Kaipopo Pa, which once occupied the surrounding area known as Waireka ("sweet water"). Below are carved tools such as a "ko" that were used by pre-European Māori for cultivating crops, including kumara.

The carving on the right shows the modern-day agricultural activities of Waireka Field Station – part of Dow AgroSciences, the descendant of Ivon Watkins Dow Limited, where George was once the research manager. This carving shows the sun supplying energy for photosynthesis and depicts the land's geology and volcanic ash soil. On the panel beneath, the carver has etched a six-sided benzene-ring structure, used as a pre-cursor for plant protection chemicals that were tested at the research station.

"I asked a local carver to create the

carvings because I wanted to tell the story of the land here," George tells me, as we walk together down his long drive. "It gives much more meaning to a landscape when you are able to find ways of interpreting it." Behind us Mt Taranaki stubbornly hides behind cloud, while in front we have a sweeping view of the Tasman Sea and the Sugar Loaf Islands.

As I spend the day with George at his 1960s architecturally-designed home, lined with native timber and boasting a magnificent fireplace of Mt Aspiring mica schist, I sense that his deep desire to understand and tell the stories of the environment he finds himself in is at the heart of his life.

As a young Auckland University College botany and geology student, George learnt how to interpret the landscape on wide-ranging field trips to places like Te Urewera, the then-called Mt Egmont and Bay of Plenty's Mayor Island, returning home to write up his findings in the University Field Club's journal *Tāne*.

George Mason at the University.  
Photo Dean Curruthers.

Since then he has combined a stellar career as a research scientist and leading innovator in New Zealand's agrichemical business with an active interest in botany and geology, particularly in Taranaki – his home for 60 years. Among the many accolades he has earned is the New Zealand Plant Protection Medal, a rare "Old Blue" award from the New Zealand Forest and Bird Society, and a life membership of Pukeiti Rhododendron Trust.

"George's interest, combined with his scientific knowledge, has made a huge difference to Taranaki's environment," says former New Plymouth Deputy Mayor, Lyn Bublitz. "At Pukeiti his expertise in weed and pest control has helped enormously to conserve and re-establish the original forest."

Even now, at 86 years of age, George keeps a close watch on his beloved Mt Taranaki, which he first described on a field trip in 1950 as "offering the most perfect example in New Zealand of an altitudinal zonation of vegetation".

When I ask if he has been to the summit, his reply is swift. "Over 100 times. We'd climb up there and then find a way to ski down. But I can't do it anymore." His voice softens.. "I've had four knee replacements and my shoulder's not good. But I can keep an eye on what's happening up there through the webcams."

George has funded a couple of the cameras that are constantly filming the changing mountainscape for the website of the Taranaki Alpine Club, of which he is a life member. (He also chaired the Egmont National Park Board's Scientific Committee for many years.) "I check out what's happening on the mountain every day," he says.

Just as Auckland University College's Field Club borrowed the Māori name *Tāne* (God of the Forests) for their journal, so George Mason follows the traditions of *Tāne* in his efforts to conserve the health of our environment. It is fitting then that the University's new initiative within the Faculty of Science to foster novel sustainable strategies for our environment and our native species should be named after him as "The George Mason Centre for the Natural Environment".

"His gift will be transformational," says Dean of Science, Professor John Hosking. "It will allow us to address some of the country's significant conservation and environmental issues in a multi-disciplinary manner. Recently the government announced a goal to be

predator-free by 2050. Achieving this relies explicitly on basic science that is yet to be developed – the sort of difficult, multi-disciplinary science that the George Mason Centre will enable."

"My feeling now is to share what I have got," George tells me, as we sit in his living room. Paintings of some of the hundreds of New Zealand and overseas outdoor regions he has visited, tramped and skied through hang on the walls, while his bookshelves are bursting with tomes on plants, trees, travel and wine.

In 1995 George, who is a bachelor, set up the George Mason Charitable Trust with a focus on funding education and research in the natural sciences. Through Puke Arika Museum he supports students with links to Taranaki or undertaking environmental research in the region. He has already supported 30-plus, mainly postgraduate, students in their studies at Auckland, Massey, Lincoln, Otago and Victoria Universities. Scholarships for exchanges between Auckland and the University of California (UC) Davis where he did a PhD, have also been supported. A plaque at UC Davis Arboretum describing New Zealand plants in their Gondwana collection bears George's name.

"But my alma mater [Auckland] will continue to be the main recipient of my funds," he confides in me. Earlier he mused that putting his name to the University's centre for the natural environment was "like coming full circle back to my roots".

George grew up the youngest of four children, at Bayswater on Auckland's North Shore. His home bordered Ngataranga Bay where his father, the foreman of a Freeman's Bay Engineering Company, had floated an old ammonia tank close to shore and turned it into a swimming pool.

George's father died when he was 11, and during World War Two it was his responsibility to look after the family's "Victory Gardens", growing flowers and vegetables on a vacant section next door. "I got interested in collecting and sowing seed," he remembers. "I was working as a grocer's delivery boy and when I dropped purchases off at people's homes on my push bike, I would sample some of the plants in seed and pinch some seed for my own purposes."

In 1944 he went on a scholarship to King's College in Otahuhu. After four years, he enrolled at Auckland University College to do a BSc, with botany as his major. He also studied chemistry, geology, physics and finally geography, while working part-time.

They were "exciting days". In particular he remembers the University's Field Club and the wonderful "after-degree" field trips science students went on each summer: "There wasn't strict management over places as there is now. We'd be dropped off by a fishing trawler on somewhere like the Poor Knights Islands and left to camp free for ten days or more."

Putting his name to the University's Centre for the Natural Environment was "like coming full circle back to my roots".

Another trip took them into Te Urewera to Lake Waikaremoana. "A bus was hired from Auckland Bus Co," reads the report in *Tāne* of the 1949 trip, "and throughout the holiday it bore the designation sign 'Cemetery Gates'". Further on, the report records an "evening passed in a riot of dancing, singing 'Stripping the Willow' and general confusion, punctuated spasmodically by sippers and eventually fading out with a game of winks. That night 3 hardy souls slept under the stars."

"Exams were over and it was a great high time to have fun," chuckles George. But the trips had a serious side and always there were reports published later in *Tāne* of an area's botany, geology and zoology. "They were really student scientific articles," says George, who was secretary of the club and editor of *Tāne* in 1950.

In 1952 George graduated with his BSc and began on a Master of Botany and Plant Ecology, working part-time as a chemist at the Auckland Metropolitan Drainage Board. His thesis on the Salt Marsh Plant Ecology of Shoal Bay was supervised by renowned botanist Professor Val Chapman. "After that my mother said: 'You'd better start earning a living.' But it was pretty difficult to find work for a graduate botanist."

Instead, in 1954, George got a job in New Plymouth as an assistant chemist with Ivon Watkins Limited, a firm pioneering hormone-type herbicides like Weedone. His role was field-testing plant protection chemicals. In his spare time he was out climbing, botanising and skiing on Mt Egmont.

In 1956, Ivon Watkins helped George go to the US to UC Davis to study the



mode of action of certain herbicides on the physiology of plants for his PhD. “I was looking at how we could selectively control certain types of weeds and yet not harm a crop.”

Despite offers to stay in the US, George returned in 1960 to Taranaki as chief research officer to Ivon Watkins, which morphed into Ivon Watkins-Dow soon after. George’s job title changed along with it to research manager as he developed a reputation “as an inventor, problem solver and innovator” able to formulate the best of pesticides with the greatest efficacy and minimal loss. He has 12 international and 10 local patents.

“The judicious use of herbicides is critical in the restoration and maintenance of the New Zealand conservation estate.” He gives the example of Little Barrier Island, where herbicides are used in an ongoing campaign to remove introduced

pampas grass and climbing asparagus.

George remained with Ivon Watkins-Dow until 1986 but when the parent company wanted to cut back to core business, he decided to take a retirement package at age 56. Two years later he and one of his research staff, Dr Peter Hayward, set up their own development company called Taranaki Nuchem Limited (now Zelam). They were soon producing a portfolio of new crop protection products for local and overseas markets. One of Zelam’s most successful inventions and resulting technology is for wood preservation, leading the industry away from arsenic-based preservatives.

“New Zealand is a highly efficient producer of *Pinus radiata*,” says George. “But the wood is susceptible to stains, rot and insect borers so we wanted to work out how we could increase its value and protect the wood by using fungicides and insecticides that were already recognised as plant protection chemicals. Our innovation has now led to Taratek” – one of Zelam’s successful products, sold internationally.

When George set up his charitable trust in 1995, he put two thirds of his Zelam shares into its philanthropic funding base. When Zelam was sold in July last year, funding became available to set up the University’s Centre for the Natural Environment.

“Delighted doesn’t begin to describe it,” says the University’s Vice-Chancellor, Professor Stuart McCutcheon, of George’s gift. “This will give us the flexibility to attract world-class researchers to New Zealand.”

“It’s a wonderful legacy for George,” adds Trust Chair, John Auld. “He is an applied scientist with a thirst for knowledge and a thirst to pass it on.”

Mt Taranaki comes into full view now, clear of cloud, its white winter coat shining in the afternoon light.

George is curious, but unattached, as to how exactly University researchers will use his funds, although he does have one little retirement project that could do with some help. He has been developing a selective insecticide application for varroa mite control at his three-acre hobby orchard near where he has some beehives. He also grows three varieties of tamarillos and has patented one called Goldmine. “It has orangey red skin and is golden in the centre,” he enthuses. “I’ve picked a bag for you to take home.”

As my day at George’s lengthens, we move to sit in his bespoke sunroom overlooking the sea. I worry that he will be getting tired of my questions. “No, no,” he says. “I love to talk.”

George has traced his early ancestry to Naseby – a gold-mining town in Central Otago where he has funded the naming of plaques on trees planted by settlers. He spent his 80th birthday on one of many rhododendron-collecting trips to China. He has worked with Indian peasant farmers in the Himalayan border region and explored Namibia’s Skeleton Coast. He loves classical music and is a wine connoisseur. “It’s simply a part of dining,” he says of his daily imbibe of a light pinot or a range of whites.

George could talk for hours and I would happily listen – he is warm and easy to be with – but it is time to go. At the top of his drive Mt Taranaki comes into full view, clear of cloud, its white winter coat shining in the afternoon light. My thoughts turn back to *Tāne* magazine and George’s 1950 entry on Mount Egmont vegetation.

“Higher up still the mountain is wholly encompassed by rock and shingle which appear even from a short distance to be quite devoid of life. But on the summit of Fantham’s Peak (6,240ft) more than a dozen species of flowering plants survive the intense cold of winter under a blanket of a feet of snow.”

Below: Mount Taranaki. Photo Steve Molloy. Above: George Mason at the summit.



CAN WE RESTORE OUR UNIQUE  
NATURAL ENVIRONMENT?





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# ALIVE TO CHANGE

Sally Nicholas, who is just completing her PhD in Linguistics/Māori Studies, says her ground-breaking work describing Cook Islands Māori is “preposterous” – but she does so with a smile. Julie Middleton finds out why.

Sally Nicholas’s love for linguistics was born, she reckons, when she was six.

She had just started at a Taranaki primary school after her family’s move from Rarotonga, where she had spoken Cook Islands Māori: Te Reo Māori Kūki 'Airani. Sally clearly remembers the teacher who took her aside and asked, in New Zealand Māori, to say the Cook Islands words for various everyday items. “I remember being very relieved that someone was speaking Māori to me,” recalls Sally, “and I think that was my introduction to comparative linguistics. Ever since, I have been interested in the language in a meta sense, as opposed to just using it.”

Now 39, Sally, of the Ngāti Te'akatauirā tribe from Ma'uoke in the southern Cook Islands, is completing her doctorate, which describes the mechanics of Cook Islands Māori – in particular, the variety spoken in the southern Cooks – for the first time. It is, she says, a “preposterous” project, but she’s grinning as she says so. “Preposterous because a human language is inherently indescribable. As long as a language is alive and being spoken, it’s changing every day, and it’s absolutely impossible

to capture the entirety of a language. It’s logistically impossible even to get close.”

But you can capture enough of a language’s grammar and sound to create an accurate record – and that’s critical, given the precarious state of Cook Islands Māori. The language has been swamped by English and is now endangered. There are 12,000 people in the Cooks and 65,000 Cook Islanders here: just 12 percent of each group can speak their ancestral language, a proportion that is falling. Most native speakers are over 65, and there is no longer enough inter-generational transmission to nourish the language.

To lose a language is to “lose access to a really important signifier of cultural identity,” Sally says, worry etched on her face. “We lose access to ways of understanding the world, and ways of expressing ideas. Take the word *mana*, for instance, which is used across the Pacific. When we try to translate that into English, it’s quite difficult, and you’re losing some of the detail.”

And detail is critical when describing a language. Sally started her work by gathering material written by native speakers, opting initially for digitised

narratives such as those from the 120-year-old *Journal of the Polynesian Society*, produced by the University of Auckland. She hunted for newspapers, children’s books, Facebook posts and newsletters in Cook Islands Māori.

The second step was to film native speakers in conversation. Sally had 46 linguistic guinea pigs in both the Cooks and New Zealand, their ages ranging from 11 to 82; she captured them chatting away as well as praying, giving speeches, reading aloud and singing. (Not all of Sally’s subjects entirely understand what she’s doing, she says, “but they are happy that someone is paying formal attention to the language”.) She also hunted down podcasts and videos in Cook Islands Māori. Everything was transcribed, tagged, and entered into a searchable digital database that now holds more than a million words.

The third step was to draw on the database to formulate hypotheses about how the nuts and bolts of Cook Islands Māori fit together. Sally learned the Taranaki dialect of te reo Māori at school and drew on her knowledge of both as she developed model sentences.

Then she sat down with native speakers of Cook Islands Māori to test her assumptions. Linguists call this quest for detail “elicitation” or “grammaticality judgements”. “You change variables in the sentence until it seems wrong to them, and then wind it back to see where the limit is,” Sally explains.

Her research has thrown up some interesting oddities. For example, “kupu” means “word” in the Māori language of both New Zealand and the Cooks – but in the Cooks, it fell out of use sometime in the mid-twentieth century and is making a slow comeback among native speakers only now.

But will Cook Islands Māori as a whole be able to stage a comeback? Sally believes that Cook Islanders in general “are not as afraid as they should be” about the dire state of their language. “They know that there is a problem, but I don’t think that most people understand how critical that problem is.” She adds, “There’s a tendency for people to blame the kids for not speaking Cook Islands Māori, but that’s profoundly illogical – babies don’t choose what language is spoken to them.” There are nine Cook Islands pre-school centres, all in the North Island, but most of them are English-language with some basic Cook Islands Māori. “They are good for strengthening cultural identity,” says Sally, “but they’re not sufficient for language acquisition.”

The struggle to revive te reo Māori shows “how hard it can be to claw a language back”, and this is compounded by the fact that many Cook Islanders are not tightly knitted into their heritage culture: “They don’t have any access back to the cultural infrastructure and those people who are grounded in



te reo.” A complicating factor is that those who do live their reo and culture every day find it hard to perceive a problem at all. However, Sally is seeing heartening evidence of a “growing grass roots movement in New Zealand, where people are becoming much more proactive about language revitalisation”.

As long as a language is alive and being spoken, it’s changing every day

But it bugs her that New Zealand doesn’t protect all its indigenous languages like it does te reo Māori. Hang on – what other indigenous languages? Constitutionally, Sally says, the Cook Islands, Niue and Tokelau are all part of New Zealand, but none of their languages receive support and funding. “These are all languages of

the realm of New Zealand, but they get nothing. And no one knows that! There’s no protection, even though the Government is obligated, as a signatory to the United Nations Declaration on the Rights of Indigenous Peoples, to look after languages like Cook Islands Māori, Niuean and Tokelauan,” explains Sally. It is, she says, an issue about which “I make a fuss whenever I can. Most people don’t conceive of the concept of New Zealand as including these places. Most people don’t understand the constitutional relationship. It’s not that they don’t care – they just don’t know.”

But people need to know, she says, that just as biodiversity is necessary for the health of the planet, so linguistic diversity is essential for social wellbeing. There’s evidence that Pacific peoples in New Zealand whose language maintenance remains strong, such as in the Tongan and Samoan communities, have lower rates of diabetes and smoking, and lower rates of imprisonment – areas where the largely monolingual Cook Islands population fares comparatively poorly. It’s a subject Sally’s keen to explore now the description of her beloved language is complete.

*Facing page: Sally Nicholas, at a conference held recently in Auckland during Cook Islands language week. Photo from the Kia Rangatira Cook Islands Māori Tertiary Advisory Committee. Above: Sally, third from left, with Peter Nicholas (left), Reverend Bobby Matapo, Tiki Matapo, Mii Matapo and Reverend Mere Nicholas at a family kaikai in Titikaveko, Rarotonga. Left: Griffith Robati and Niotangi Heather, at her home in Arorangi, Rarotonga, discussing children’s songs. All of these people have contributed to the project.*



CAN WE SAFEGUARD THE CULTURAL HERITAGE OF MĀORI AND PACIFIC PEOPLE IN NEW ZEALAND?





# COLLATERAL DAMAGE

Dr Tom Gregory from Politics and International Relations speaks with Judy Wilford about the uses and misuses of the language of the law and the dangers they pose for the future.

“Language can create a population that is killable,” says Tom Gregory.

These are chilling words, but true.

Under international law, within a conflict zone, combatants are killable. Non-combatants are unkillable, even in a declared war, except under stringently stated conditions.

But in wars such as those that are raging within and around civilian populations in Iraq and Afghanistan, the distinction between the two is becoming blurred – and the legal rules and regulations put in place to protect civilians are being interpreted in ways that are disturbingly elastic.

Supported by a prestigious three-year Marsden Fund grant, Tom is conducting research on counter-insurgency in Iraq and Afghanistan, focusing on how civilian casualties are defined, justified and excused.

International law comprises a complex assemblage of different treaties and documents along with customs and norms that have evolved over a significant period, certainly since the signing of the first Geneva Convention in 1864.

“These laws are not a static body and don’t cover everything,” says Tom, “so there is a constant process of interpreting

and reinterpreting the law, and what we’re seeing is the stretching of these concepts and attempts to massage definitions to create new realities.

“The Obama administration was saying for a while that a drone strike in Afghanistan would not take place if there was any possibility of civilian casualties – even though NGOs tracking the numbers at the time were reporting a great many civilian deaths.”

Just one explanation for this discrepancy was the categorisation (commonly used by the US military) of all “military-aged males” as combatants. And even the concept of military age is elastic – is it 18 to 45 or 12 to 65?

“It can be difficult to identify who’s a legitimate target and who isn’t,” says Tom. “People talk about this person who is ‘a farmer by day, a fighter by night’.” Added to this, you’ve got all these other actors on the battlefield – private security consultants, where do they fit? Even academics are a part of it. In Afghanistan you have anthropologists, social scientists, who’ve been deployed alongside the troops to learn about the local culture. Do they count as combatants? Can they be lawfully targeted?”

There is much talk about “precision

bombings” with clearly identified targets right in the eye of the operator as the drone descends, but Tom’s research has shown that only two percent of drone strikes are launched against what is called “high value targets”. The majority are “signature strikes”, which attempt to distinguish likely targets through their appearance or behaviour. And there are times when the judgement is wrong – as in a case in Afghanistan where (even with prior information supplied) a community meeting was mistaken for a Taliban gathering.

“What is often missed,” says Tom, “is the horrifying effects on those who are killed and injured. The bodies of the dead are so badly damaged that it is impossible to identify them. Families are left to pick up bits of flesh and bone for the burial, uncertain if they even belong to the same person. In one case, the bodies were so badly damaged that the local doctor was unable to differentiate human tissue from the remains of dead cattle.”

Civilian deaths (even if foreseeable) can occur within the law, provided the civilians are not deliberately fired upon but lose their lives in the context of an attack on a “legitimate” military target. Even so, the violence must not be

disproportionate: it cannot kill too many non-combatants.

“But how many deaths are too many?” asks Tom. “In the end it’s often up to the military – or to military lawyers – to determine what qualifies as proportionate. It’s those responsible for the strike who are judging what’s acceptable.”

Cutting to the heart of the questions Tom is asking is the notion of the boundaries that delimit war.

“Whether we are actually at war with the people we’re killing is a major issue because it effectively determines what legal regime is in place. So you could have a situation where, for example in Afghanistan, there is a clearly-defined war, so drone attacks against the Taliban fall under the laws of armed conflict.

“However, America is not at war with Pakistan – so it’s not immediately clear that the laws of armed conflict should even apply. Instead, it’s human rights law, which would demand a police operation rather than a military one. You should be arresting and prosecuting the perpetrators, as you would in New Zealand or the UK.

“But this is where things get tricky and quite political,” he adds. “The Obama administration argues that there is no geographical limit on this war: that the authorisation signed by Congress after 9/11, which paved the way for the invasion of Afghanistan, effectively gives them the right to wage war against Al-Qaeda and affiliate groups all over the world.”

This goes against the interpretation of the United Nations special rapporteur, who defines fatal strikes that are not in a war zone as extra-judicial killings. And, as one of Bush’s advisers warned just after 9/11, the declaration of the “war on terror” has ushered in an era of war without end and without geographical boundaries.

The concept of “imminence”, authorising police to open fire if the person they intend to arrest threatens their safety or the safety of others, is also being stretched beyond recognition, says Tom. “Is someone an imminent threat when they’re just about to detonate a suicide bomb in a crowded market place? Do they pose an imminent threat when they’re driving to the market? Or when they’re putting together a suicide vest two weeks in advance? Or when they’re – perhaps – planning an attack some months or years in the future?”

In the course of his research, Tom is speaking to a broad selection of those affected by violence, including the families of those killed, the military



Above: Dr Tom Gregory

lawyers who make decisions on strikes and the pilots or drone operatives who carry them out.

His focus is on the human cost of casualties. “We talk about deaths of civilians using the horrible term of collateral damage. It’s a very dehumanising way of talking about human beings with a life to lead, with family and friends.

## The declaration of the “war on terror” has ushered in an era of war without end and without geographical boundaries

“When we talk about proportionality – slightly changing the trajectory of a weapon might mean you kill ten instead of 25 – it’s still ten human beings whose lives are being lost, whose families are going to be grieving.”

Tom’s research has confronted him with two strong realisations. One is how little protection there really is for civilians in war: “International law is very forgiving of the military. Those targeted are often weak and easily exploited.”

The other is that the laws of conflict, rather than restraining wars, enable them to take place: “Wars are waged not in violation of the laws of armed conflict but

with the full force of the law. I’m curious about how it is that the law can be used to legitimise civilian deaths: how it comes to constitute some populations as being profoundly disposable.”

While the figures on deaths caused by drones are shrouded in secrecy, as are their rules of operation, the technology is now available to build algorithms into them so they can make decisions for themselves. Says Tom: “There’s even talk about programming these weapons with a kind of ‘ethical governor’ that allows them to select a target, weigh up the extent of collateral damage, judge the political fallout, and then act or refrain from acting.”

Tom has no doubt that his work has profound implications. Precedents now being set for the use of drones inside and outside conflict zones are likely to present enormous dangers later.

“Violence is being used by the US on a daily basis,” he says. “But the US is not the only country with drones. We need to be asking what will happen later, when other countries – for example Russia and China – will be using drones. As drones proliferate and as non-state actors obtain them, that will generate new problems.”

“We don’t want a situation like with nuclear weapons, where we create the monster that we later regret. The legal architecture we put in place now will be crucial for the future.”

# LIGHT FORCE

Cather Simpson speaks with Margo White about the excitement of her life in science and how it connects with the world of business.

**“I have a passion for sperm” is the way Associate Professor Cather Simpson often prefaces her presentations on her novel bovine sperm-sorting technology.**

“When I was first learning to talk to the business community, everyone told me, ‘show your passion!’ Well, we work with sperm – and when I start with ‘I can’t believe I’m up here saying this, but I have a passion for sperm,’ that certainly captures the interest of potential investors.”

She laughs. “Then it’s easier to convince them our technology is game-changing, and worth investing in.”

Cather is an associate professor for the School of Chemical Sciences and the Department of Physics, and directs the Photon Factory, a high-tech laser spectroscopy and micro-machining facility at the University of Auckland.

She’s also the founding scientist of Engender Technologies, a spin-off company commercialising a process she

and her team have developed, which uses proprietary microfluidic and photonic technology to separate female (X) and male (Y) bearing sperm cells.

It’s been quite a year for Cather and co. In June, she won the BNZ Supreme Award at the KiwiNet Research Commercialisation Awards, and the Baldwins Researcher Entrepreneur Award. In the same month, she won the AgTech sector of the annual World Cup Tech Challenge in Silicon Valley. This year she was also named a “Primary Industries Champion” by the Ministry of Primary Industries (MPI) and found it “quite a nice surprise to find myself in a video with Richie McCaw on the MPI YouTube channel!”

Engender was the only New Zealand company to make the finals at the World Cup Tech Challenge in a competition attracting 150 innovative tech startups from 30 countries.

Says Cather, when asked what might

have made a New Zealand company stand out against the international competition: “I think there is something compelling about how earthy and practical it is.

“People in Silicon Valley tend to think about artificial insemination in terms of couples trying to get pregnant rather than as a 1.5 billion dollar industry for dairy. And that’s just including the OECD countries. If you start talking about India and China, the growth potential is really exciting. India has 45 million cattle, but it takes three Indian cattle to produce as much milk as one New Zealand cow, and that’s because of the genetic gain that has come from artificial insemination in the developed world. We’re also talking about the greater good – reducing environmental impact by allowing farmers to breed for more productive dairy herds with fewer cows.”

The origin of Engender goes back to a meeting Cather had with a dairy investor, who outlined five problems



facing the industry. One was the cost and inefficiency of current sperm-sorting techniques. Cather gave her students 24 hours to come up with possible solutions. “They came up with six,” she says. “Four were old wives’ tales, a couple had legs, and one we worked with – that’s now the idea that underpins Engender.”

Engender technology uses light to sort the X-bearing cells from the Y-bearing ones, in a process less expensive than existing sperm-sorting technology. Crucially, it is less damaging to the sperm. The current approach stresses the cells during the sorting process, which means the insemination failure rate is higher than it should be.

“Farmers might go through two or three cycles before getting a cow in calf which, in New Zealand, is a big economic hit. Our dairy is seasonal, so if your cow doesn’t come into calf early enough you’ve missed out on a lot of the milking cycle.”

Shifting and sorting the sperm cells around with light, or more specifically, the force of light, is a far gentler approach. “The cells are put onto a microfluidic chip. We use light to orient the cells, as they’re disc shaped. A different laser is used to measure whether each cell carries an X- or Y- chromosome. Finally, we use a third beam to nudge the cells into the separate output channels.”

Cather could be described as an ambassador for photonics, that is, the creation and control of light. Last year she co-chaired the NZ Committee for the International Year of Light, which highlighted the potential of light-based technologies to provide solutions to global problems in energy, education, agriculture and health. Photonics, says Cather, are changing the twenty-first century as electronics changed the last century, and underpin many twenty-first century technologies such as smartphones, laptops, the internet and so on.

Understanding light, or how to generate and control particles of light, means thinking about what most of us don’t see and can’t begin to imagine. “I don’t know if it’s an intrinsic personality, hard-wired kind of thing, but I am obsessed with how behaviour in the microscopic world leads to the everyday things we see in our macroscopic world,” says Cather.

“To study these things, we use laser pulses that have the same timescale as the motions of atoms in molecules and materials. The haemoglobin in your blood absorbs light and turns it into heat in 50 millionths of a billionth of a second, and

that lets you go in the sunlight and not ‘cook’. The light that hits the back of my eye is converted to mechanical motion in 700 millionths of a billionth of a second and that allows me to see. I think it’s the coolest and most fabulous thing in the world.”

Cather and her team seem poised to have a broad impact on the dairy industry. She is also co-founding scientist and director of Orbis Diagnostics, a recently established start-up based on technology she co-developed with Professor David Williams from Chemical Sciences. By measuring the vibrational spectrum of milk, the technology collects information on its protein and fat content and has the potential to assess the cow’s nutritional status and if she is pregnant or has mastitis. This aims to increase New Zealand dairy productivity and herd health at the farm-by-farm level. Orbis is drilling down to the ‘point of cow’ diagnostics,” says Cather.

Cather is comfortable straddling the commercial and academic sectors, combining fundamental and applied science. It’s a pragmatic approach. “The equipment I use to do my fundamental research, which I still do a lot of, is very expensive. I need to support that equipment and in New Zealand you can’t do that with just fundamental research.”

But it took some getting used to. “Before I moved to New Zealand, I had never done a single bit of applied science. I’d never considered it. I’d never spoken to an industry representative, let alone imagined having a spinoff company. Never. It took three years before I was able to see that as an opportunity, and something that I found enjoyable and rewarding.”

“I think the main reason we’re succeeding is that we’re doing a lot of fundamental research underneath the applied stuff. Engender has succeeded

not because we’re sperm scientists or artificial insemination scientists, but because we have considerable expertise on the interaction of light with matter. We hadn’t done cell research in the Photon Factory before, but we looked at the problem and thought, they’re basically just particles, right? So we need to make sure New Zealand is not just focusing on applied research, but building expertise underneath that – in the fundamental areas – so that our innovation is

We’re talking about the greater good – reducing environmental impact.

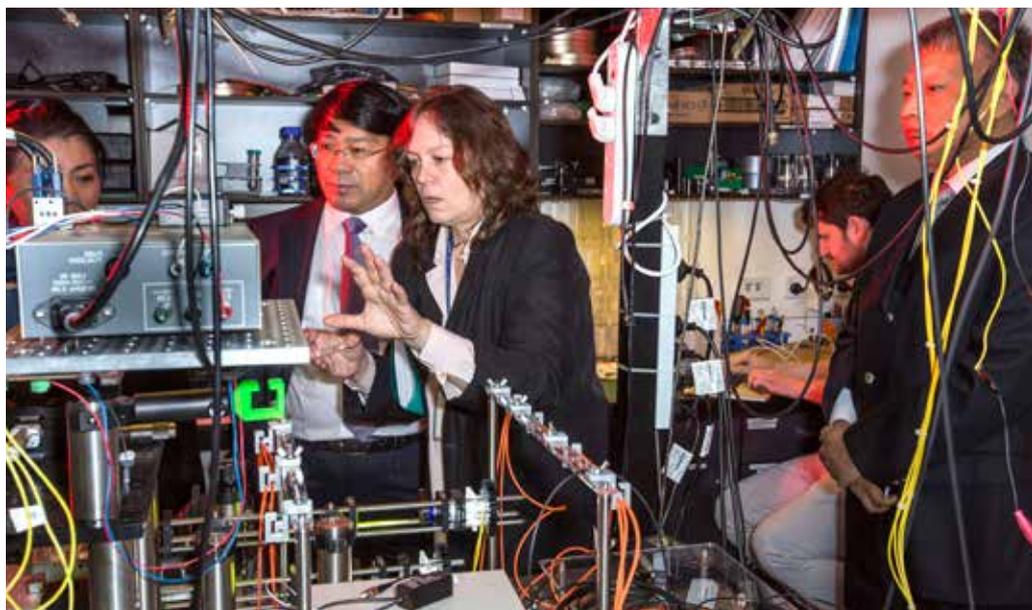
sustainable.”

Could she be tempted to work in industry full-time, given the pay is likely to be better, the hours shorter?

“No, although I get asked that question more and more because we’re doing well in that industry-facing space. I’m in the university because I value very highly the opportunity to help students achieve their goals. The biggest impact I can have as a scientist, as a person, is on the 1,000-plus students that I teach each year. At that rate, I’ll have taught one percent of the New Zealand population by the time I retire! Most of those students aren’t going to be scientists ... but they’re going to be people who need to make smart decisions that are based on good science, critical thinking ... Add that to what we’re doing in the Photon Factory, and I can’t imagine anything better.

“We’re training the next generation of high-tech, creative innovators and spinning off the companies to create the jobs for them in New Zealand.

“The reward in that is every bit as exciting as the potential commercial success for Engender.”





the course content will be delivered by top year two and three students in the Faculty of Education and Social Work, with a focus on Māori and Pacific role models.

“There is a wealth of evidence to show that students will become interested in and engage in learning if they find that learning relevant to their everyday lives,” says Graeme, “and if they’re taught by someone with whom they can identify as coming from the same community, culture and background as they do.”

Forget dull and dry:  
think fantasy quests  
and game-based  
explanations of concepts  
like motion, forces,  
pressure and energy.

He believes we need to be smarter with technology and use it to its best effect to compensate for the shortage.

Working alongside Graeme will be the project manager Andrea Lamb, programme manager Tom Donaldson and e-learning designer Adrienne Moyle, who will manage the project design team and lead curriculum-mapping with

learning designers.

A private investor who believes in the value of the project has already contributed \$1 million and development manager Sharon Roux is leading the charge for further funding.

Educators at the faculty will be involved in a continuous process of course evaluation as each unit is rolled out.

So why not save all this trouble and just train up more teachers? Because there are simply too many more attractive and better-paid options for graduates in those fields.

Even the well-resourced Teach First NZ programme, run in conjunction with the University’s Faculty of Education and Social Work, can’t attract significant numbers of maths and science graduates to quickly turn around the shortage – and this in spite of the fact that students in the programme pay no fees and are paid a salary while training.

So meanwhile the first unit of online work, Year 11 Physics (mechanics), has already been completed, thanks to \$150,000 from the University’s Vice-Chancellor’s Fund. But as each unit is estimated to cost around \$100,000, there’s still a long road ahead.

The plan is to have four or five more finished by 2017 and the same number in 2018, which will see all NCEA externally-assessed physics and most of maths

completed. The resource will initially be rolled out in Northland schools, with the eventual aim of making it free and available to every high school in the country.

And that will be an exciting day, says Graeme.



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THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

# GOING FROM GOOD TO GREAT

The newly-launched University of Auckland Campaign For All Our Futures is ambitious and inspiring. It's a Campaign to achieve great things for New Zealand and the world. And it's a Campaign to bring together our largest stakeholder group – alumni and friends. Through partnerships with supporters the University aims to address some of the biggest questions facing our communities, questions like:

## Can we

- ... prevent adult disease before birth?
- ... have the best school system in the world?
- ... stop wasting talent?
- ... build a modern robust economy?
- ... prepare young New Zealanders to be global citizens and influencers?
- ... transform lives with creativity?
- ... maximise the potential of "big data" while avoiding its misuse?
- ... restore our unique natural environment?
- ... earthquake-proof New Zealand?
- ... create a safer future?
- ... dramatically improve cancer survival rates?
- ... redefine old age?

And many more.

We talked to the Director of Alumni Relations and Development, Mark Bentley, to find out more.

## A fundraising campaign at a university – why?

It has been said that philanthropy is the venture capital of social change.

What we're looking to do through this Campaign is work with our alumni and other supporters to make a positive commitment to some of the issues that are facing New Zealand. We want the ability to do things we wouldn't normally be able to do.

This University has a unique capacity through its two main areas of activity to make a major contribution. Through our teaching we are creating the next generation of leaders for our communities and our companies. If potential students are smart enough and committed enough we cannot allow lack of money to lead to lack of opportunity. The generosity of our supporters to fund student scholarships is really pivotal here.

And through our research agenda, we're generating new ideas that will have the potential to change the future. For instance our world leading cancer researchers are trialling personalised treatments that are tailored specifically to a patient's genetic makeup. Another really exciting development is immunotherapy, where drugs are used to harness the patient's own immune system to recognise and kill cancer cells. We need to back our researchers so they can help to revolutionise the treatment of cancer.

## Don't we get all the funding we need from the Government and student fees?

We are running a very good university on what we receive from Government funding, student fees and external research revenue, in fact one that consistently performs in the top 100 in the world. But if we're truly going to deliver on our potential to answer the big questions facing our country then it is philanthropy that provides the opportunity to go from "good" to "great".

Universities all around the world are operating under financial constraints. In the US, the UK and Australia especially, they have been able to use the power of philanthropy to make a major contribution, through attracting support ranging from small gifts through to very large gifts.



In the US in particular alumni often feel a huge connection with their institutions that transcends generations and often their children will follow them in supporting those institutions and they have a life-long commitment.

## Is this a first for our University?

Philanthropy is not new at our University. In the last 20 years it has become a more important part of our activities, starting with relatively small campaigns, then our first major campaign - the World Class Business School Campaign. The last Campaign, Leading the Way, succeeded beyond expectations thanks to the support of over 3,000 donors who came together behind the vision.

Most importantly, these Campaigns allowed us to move the dial in some key areas that matter to our country, especially in business and medical science.

## Can any university have all the answers to such big questions?

We know we can't do this alone. We fully realise that as an institution we need to work with others if we're going to achieve our audacious goals. This will include funders but it will also include engagement with businesses, the community, politicians, and our alumni.

We also firmly believe that all our faculties have important contributions that they can make, unique areas of excellence, and committed communities that will support them. The aim of this Campaign is to bring that all together. Our faculties and large scale research institutes have each

Right: Head of the University's Dance Programme, Associate Professor Ralph Buck, with Isobel Cuning at the Selwyn Retirement Village.

set their own objectives, based on their strengths and where they can make the biggest impact on the world around them.

**This sounds very inspiring. How can alumni get involved?**

We are asking our alumni if they can help us increase the contribution our community makes to the world and are looking to them to support us both financially where they can and by engaging with us.

Every dollar that's contributed makes a difference. When you consider we have 180,000 alumni, if every single one made a small contribution then those figures soon start to add up to something very substantial indeed, creating great opportunities for researchers and for scholars.

And whilst giving money is the most obvious way, there are countless other ways that alumni can get involved to support the campaign.

If you think about the amazing number of connections that alumni have, all the experiences they have, their insights and skills, then imagine those assets applied for the benefit and advancement of our students and our research, just how incredibly powerful that could be. And many alumni are already doing so: giving formal presentations on campus, word of mouth advocacy, hosting get-togethers and sharing career stories with new students...there are so many ways that individual alumni are helping the University to make a difference.

We are keen to expand the opportunities



for alumni involvement, particularly in the area of mentorship, where alumni can share their expertise and knowledge with students in a formal way

**What will the outcomes of the Campaign be?**

The outcomes we're aiming for are very tangible and directly related to the big questions that are facing the country.

Thinking ahead to the close of the Campaign, I would like to look down that list of audacious challenges and mentally tick off the contributions that we have made that have really changed people's lives.

Also I really do hope we will have engaged the University's largest stakeholder group, our alumni, in a more fundamental and extensive way. Our aim is that more than half of our alumni will be actively engaging with us and looking for ways in which we can help each other.

**What is your message to alumni?**

Get involved!

Find something that inspires you – whether it's the idea of helping a student, the affiliation you feel for your department or faculty, or a specific area of research related to a personal passion – and give your support.

At the heart of the word "university" is the word "universe"... and we really do teach and research in so many areas. Chances are, if you're interested in something, there will be a student or a staff member who is too.

We're committed to keeping you

informed of opportunities as they develop. Please, look for opportunities to engage with us too. Throughout the Campaign we will be posting ideas on how alumni can engage with us through our newsletters and social media, and on our websites:

[www.giving.auckland.ac.nz](http://www.giving.auckland.ac.nz)

[www.alumni.auckland.ac.nz](http://www.alumni.auckland.ac.nz)

But if you have comments, ideas or questions, please do email us at: [giving@auckland.ac.nz](mailto:giving@auckland.ac.nz)

[www.giving.auckland.ac.nz](http://www.giving.auckland.ac.nz)

[www.alumni.auckland.ac.nz](http://www.alumni.auckland.ac.nz)

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Left: LLM student Stephanie Philcox volunteering at the Waitemata Law Centre.



Photo Patrick Garvey

CAN WE CHANGE THE FUTURE TOGETHER?



# KLARA'S STORY

## New Zealand needs more great doctors.

Klara Kissova is determined to be one of them and she knows she wouldn't be a Health Science student now if she hadn't received a scholarship – funded by a large number of University of Auckland alumni.

Klara is originally from Slovakia and has lived in New Zealand since she was eight years old. She went to school in Wellington and always loved science subjects. At the end of Year 10, she and her siblings accidentally caused their mother to sprain her ankle badly. The experience of seeing the x-rays of her mother's foot turned out to be a pivotal moment in deciding on her goals for the future.

"I saw only the foot. I couldn't find anything wrong with it at all and it

frustrated me. I wanted to learn more."

She decided that she would combine her interest in science with wanting to work one-to-one to help other people. She would aim towards a medical degree and a career in a hospital setting, probably in radiology or surgery.

it felt like one of those life changing moments you only see on TV

Becoming a doctor was always going to be difficult financially, especially as it meant moving away from her home in Wellington. But it became a lot more difficult than Klara could ever have imagined.

"My father passed away in mid-

November 2014 after battling cancer for three years. I have two older siblings who are also attending University and put together with the needed healthcare costs, money gradually became a big problem."

Even with a summer job, Studylink allowances and a loan, Klara would not have been able to cover her costs.

"I was faced with either receiving a finance-helping scholarship or not being able to go to University at all."

Help did come – in the form of a scholarship provided through the University, sourced from many gifts of "modest" sums from alumni through the annual appeal.

"I don't think I will ever forget the moment I was awarded the scholarship – it felt like one of those life changing moments you only see on TV. I checked the email several times to see if I had misread it."

Klara says that receiving the scholarship changed the course of her life.

"To all the generous donors, I wish you could see how much of a difference you are making in my life as well as to any student who has or will receive a financial scholarship in the future. You are what ultimately enabled us to study here in Auckland and in my case even allowed the next step of my life to be possible. Thank you, thank you, forever

STORY **HELEN BORNE**



CAN WE STOP WASTING  
TALENT?



# BEING WHO YOU ARE

**Recent celebrations marking the thirtieth anniversary of the passage of the Homosexual Law Reform Bill remind us all what was achieved when LGBTI communities and their allies worked together to overcome longstanding social and legal inequality.**

However, the campaign for reform all too often surfaced deep-seated ignorance of, and hostility towards, gay people – and for some the scars from that period remain. I'm of the generation of gay men who clearly remember life before law reform: what it was like to be legally vulnerable and to be marginalised in many important aspects of our lives, including in employment and, often, within our own families.

Much has been achieved since law reform. While in some countries homosexuality can still incur punishment by death, since 1986 in New Zealand it is much more possible than it once was to “be who you are” and to assume and express a wide range of gender and sexual identities. The freedom to do this – to realise the fundamental human right to one’s own identity and to achieve emotional and physical security – has enriched not only the lives of gay men but also those of the clear majority of New Zealanders who value diversity.

For me, law reform made it possible to think of myself in new and more positive ways. The new climate made it easier to live as an “out” gay man and to live more authentically than had usually been possible in the earlier part of my life. In turn, these changes encouraged in me new aspirations around, finally, pursuing tertiary education at the University of Auckland and, later, a rewarding career



Photos: At the Auckland Pride Parade 2016

path. Most importantly perhaps, the new political and legal climate provided the context within which the strong relationship with my partner – now approaching its own 30-year anniversary – could develop and thrive and, over time, have the same legal recognition and protections which had previously been confined to heterosexual couples.

However, and despite many advances, challenges remain. Many gay people still experience negative emotional and physical health outcomes, and continued homophobia and discrimination, indicating that the societal and cultural changes initiated by the law reformers are far from over. Growing up gay can still be a huge challenge for many young people.

Here at the University we’ve made a strong commitment to providing a safe, inclusive and equitable work and study environment for all LGBTI students and staff. This commitment, demonstrated by the designation of LGBTI students and staff as an equity group within the University’s Equity Policy, can be seen in a range of recent initiatives. These include the University’s LGBTI student and staff network and the vibrant Rainbow Groups are now active in every faculty. The University also supports a highly visible presence at both the Big Gay Out and Pride Parade and soon the University will adopt the world’s first voluntary standard relating specifically to LGBTI study and employment, “Rainbow-inclusive workplaces: A standard for gender and sexual diversity in employment”. These commitments strongly support the University’s reputation as being safe, inclusive and equitable and also demonstrate to prospective and current students and

staff and their families and communities, that every LGBTI person is valued and respected.

As a gay teenager, pre-reform, I often assumed – and was also told – that my choices, my aspirations and my relationships would be limited and would be somehow less valuable, and valued, than those of heterosexual people. Thanks in large part to the law reformers, and to the many advocates and campaigners who followed I now know that gay people can, and do, achieve the amazing.

**Dr Terence O’Neill**  
**Director, Student Equity.**

If you would like to know more, or to join the LGBTI student and staff network, contact Terry on [t.oneill@uckland.ac.nz](mailto:t.oneill@uckland.ac.nz) or see [www.equity.auckland.ac.nz](http://www.equity.auckland.ac.nz)





## SHARING THE MUSIC

**Three young women from the School of Music speak to Margo White about what they do in the evenings when they dash across town at dusk.**

Most evenings, if you walk down a busy road in an industrial area of Mt Roskill, Auckland, you will likely hear the sound of music.

Someone will be playing the piano, or the cornet, or a trumpet. Sometimes

you'll hear a violin ensemble. Some nights you might hear a brass band.

The sounds will be coming from a warehouse tucked in behind a car repair workshop. This is the location of a music academy set staffed by three sisters, Linda, Anne and Caroline Filimoehala, all students or former students at the School of Music. Here, music lessons are provided free. Musical instruments, most

of them donated, are provided on loan, also free of charge.

Their father, Fakasiieiki, who plays the cornet, had recognised that there were many children out there who wanted to learn an instrument, but often didn't have the means. "He would often talk about how we needed a school for kids, who didn't have to pay for the lessons. So now that we all play at least two instruments,



we thought we should just start it," says Linda.

Other members of the clearly very musical family have been roped in to help. Their cousin, Taunoa Filimoehala, a University of Auckland graduate and an opera singer, teaches vocal. Another cousin, Tipiloma Filimoehala, who is in his final school year, teaches drums. Their uncle, Richard Haunga, a final-year composition and conducting student at the School of Music, teaches theory.

Most of the teachers are also members of the Central Auckland Brass band, which was founded by Fakasiieiki over a decade ago and which usually practises at the same premises. Young academy students are sometimes invited to play with the senior band. "It gives them a better understanding of what it's like to play in a band," says Linda. "And motivates them to go and practise."

The Filimoehala family grew up playing in brass bands. Linda plays the euphonium, and was one of three finalists in the University of Auckland's 2013 Graduation Gala Concerto Competition, where she performed the Euphonium Concerto by Joseph Horowitz. She first picked up the instrument when she was seven, having watched her father teach others how to play it. "So I just figured it out by watching and listening rather than theoretically. And I picked one up and played the scale, which I think quite shocked my Dad. Although I didn't start learning it till I was 12."

"You only have one euphonium in a brass band," she says, asked what attracted her to the instrument. "You have the cornets that do the melody, the horns that are the back up, the bass is the solid foundation, the baritone provides the harmony for the back up, you have the trombones ... The cornet leads the whole band, but the euphonium provides the

decoration for the band and takes the lead at certain points." She laughs. "I didn't want to be the leader, where all the pressure would be on me, but I wanted the spotlight!"

Linda teaches brass instruments at the academy, and also at several schools across Auckland. Anne plays the tenor horn, is majoring in violin at the University, and teaches violin at the academy. Caroline plays the principal cornet, is a musicology student and teaches piano. She has around 34 piano students, the youngest aged only three. "I have to try and make her lessons really fun, so she can sit still."

Caroline was initially reluctant to teach in the school, she says, but her father persuaded her. "I'm honestly glad that he did. It's amazing what you can teach kids, and what they understand. And they don't take advantage of the fact that we're giving lessons for free. They see that we're giving up our time, so they'll go home and practise and make sure they get something out of it. That motivates me."

Students were initially alerted to the existence of the academy through their local church. The school has, in less than two years, grown from 12 pupils to over 60. But popularity has its consequences. Many of the instruments provided by the academy have been donated by band members, or by the teachers. (Caroline gave her old piano to one of her star pupils, Linda gave one of her students her old euphonium.) But they're fast running out of instruments, particularly brass instruments. At the time of writing, Central Auckland Brass was preparing for a fund-raising concert for the school. Appeals were also being made to the community to donate instruments they no longer needed. "So if people have instruments out there that are gathering

dust, we would love to be able to match them up to a young musician," says Linda.

How do they find the time for it all? Linda, for instance, plays not only with the Central Auckland Brass band, but also the Royal New Zealand Artillery Band, the Waitakere Brass band, and teaches a brass band she set up at the Ponsonby Methodist church. Then there's her paid job, working as a teacher at various schools around Auckland. "Busy, busy, busy you can never be too busy!"

Yet she and her sisters give up most evenings and most of their Saturday to teach those who may not otherwise have access to music lessons. "We want the academy to be a place where people can come, have fun, relax, learn something," says Caroline. "I've had some students come to me and say, the academy is their happy place ... so that's a good feeling."

Linda agrees. "One of the best thing about this academy are the end of year concerts. Seeing the progress of the kids. And their parents see how much their kids have progressed, which motivates them to keep bringing them along. And that keeps us going too. It's all for a good cause; it helps the kids, especially on Friday and Saturdays, it keeps them busy, off the streets, out of trouble." She laughs. "I mean, who can turn down a free music lesson, right?"

If you have a musical instrument to donate, email Linda at [Euphonium\\_1@outlook.com](mailto:Euphonium_1@outlook.com).

▶ Hear and see the musicians on video: [www.youtube.com/watch/?v=UWCX37fNMns](http://www.youtube.com/watch/?v=UWCX37fNMns)

*Linda (below) teaches a class. Her euphonium can be seen beside her. Opposite page: Richard Seau with his baritone. Above: Vaikona Finau, who plays the violin. Photos Miranda Playfair.*



## HAS THE GLASS CEILING REALLY BEEN CRACKED?

Female students outnumber male students in most disciplines in tertiary education. Yet women are still underrepresented in the top jobs in most sectors - including in tertiary education.

*Helen Borne asked three of our academics for their views.*



## TOXIC CULTURE

The glass ceiling is a myth. Recently I conducted a survey of 300 corporate crossover (women who leave their corporate jobs and start their own business) in the UK and US, and asked them why did they leave to pursue their own business? The answers were surprising and gave more insight into the culture of today's workplaces than into the burning entrepreneurial ambition of these women. In fact only six percent said they left because they had a passion to start their own business/be an entrepreneur.

Expecting frustration at not being able to smash the glass ceiling, a tiny one percent gave this as their reason for leaving. It became evident that the real reason is much more endemic than an intangible ceiling. It is the toxic culture that propels these women to consider other ways to make money. They realise

that working in corporate environments doesn't work for them anymore. Frustrated, they start to disengage, valuing their time and autonomy above their salary and job. This is the catalyst for them to leave and set up their own enterprises.

The toxic culture was described as a combination of poor leadership, opaque decision making, not being heard or having their opinions valued. Ultimately they came to a point where they think "I'm worth more than this".

What has surprised me about these results is how strongly this theme has played out. Even if they were offered more money to get a corporate job again, most of them would not accept, preferring control of their future, their time and their environment over the cash. So the opportunity to change this lies at all levels in an organisation, not just at the top when selecting candidates for senior roles. It is not enough to send women on yet another "women in

leadership" programme. These outdated initiatives are based on the premise that "fixing" the women will solve the problem.

It isn't the women that need to be fixed, but rather the organisation as a whole needs to shift in a way that encourages an integration between the genders. The organisations must cease insisting that women assimilate into a corporate culture designed by men which is now outdated and vulnerable as the future of work changes exponentially.

**Wendy Kerr** is Director of the Centre for Innovation and Entrepreneurship at the University of Auckland, where she aims to grow business-savvy, entrepreneurially-minded students. She is also a speaker in demand and a best-selling author, having written two books on female-led start-ups.

## AN ECONOMIC ISSUE

No, the glass ceiling has not been cracked. As I tell my students in *The Practice of Politics*, whilst there might not be a glass door, it's towards the top we see the inequality most glaringly. The more senior we get, the bigger the headache we face from constantly bumping our head on it. Often the barriers are subtle and thus hard (if not impossible) to fight. But they are there all right. Whilst it is wonderful to see the first woman presidential nominee in the US and Theresa May become Prime Minister of the UK, I grew up in the UK under Margaret Thatcher and the four other prime ministers in between were all men (Major, Blair, Brown, Cameron).

And this is an economic issue. We need to get the best and brightest in the decision-making positions, and biases during recruitment and assessment on gender but also on ethnicity mean we don't get the best people in the top positions. So then we don't get the best decisions made. Diversity is economically valuable: it enables people to speak up, to think outside the box and create more innovative policy solutions. A wider range of behaviours, skills, leadership styles, and perspectives always leads to the highest level of performance.

So I teach my students doing *The Practice of Politics* to be aware of this problem and to reflect on their own unconscious bias in the hope it makes them do better when they get into work. But this is just a drop in the ocean – a two-hour classes in one course in one subject. We need to train all our students thoroughly to support diversity to enable the next generation of recruiters, managers and leaders to do things better. All of us should be trained to be aware of unconscious bias and to be supportive of diversity. Not just because discrimination hurts those who come up against it, but because supporting diversity is the key to success for the organisation and society at large.

**Associate Professor Jennifer Lees-Marshment** *from Politics and International Relations in the Faculty of Arts is a world expert in political marketing and management.*  
See [www.lees-marshment.org](http://www.lees-marshment.org)

## UNCONSCIOUS BIASES

I've seen a generation of change as I've gone from being an engineering student to becoming an engineering professor. As an undergraduate student I was never lectured by a female academic from the Faculty of Engineering – though we did have two female academics from the Stats Department (in the Faculty of Science) teaching into a couple of courses. The environment for undergraduates in my Department is quite different. I am the first woman to become a Head of Department in the Faculty of Engineering, and 15 percent of the Department's academic staff are female. I also hold a non-executive directorship in the corporate world (as a board member of NZ Oil & Gas Ltd). I have received heart-felt comments from our female students as they graduate, showing how much they value having seen an example of a woman in the discipline who has taken her career to the highest levels.

How many of my department's talented female graduates will reach the "top" of the career ladder in industry or academia? Does that depend on the life choices they make? My career started with many 80-hour work weeks while on tenure track at a well-regarded US institution. Would things look different for me if I had had care-giving responsibilities at that time? Or if my career had been secondary to that of my spouse?

The future of the young women I lecture relies on those a step ahead

of them doing their best to avoid the unconscious biases we all have when it comes to questions of hiring, roles in key projects and promotions. While mentoring women is helpful, I believe ultimately it helps women to navigate the status quo without necessarily changing it. For the glass ceiling to truly shatter we need to see more conscious acts of sponsorship – where those above the glass ceiling reach out to actively and deliberately support the career trajectories of people of diverse backgrounds. That may take some bravery and trust – but in my opinion any organisation where senior people act as "sponsors" is better for it.

**Professor Rosalind Archer** *is Head of Department – Engineering Science, Director of the Geothermal Institute, and Mercury Chair in Geothermal Reservoir Engineering, graduated with a BE in 1994 and returned to the University as a lecturer after completing a PhD at Stanford University. Rosalind was recently named winner of the Energy Engineer of the Year Award.*

### What do you think?

Our contributors' views are intended as the beginning of a discussion. Visit [www.ingenio-magazine.com](http://www.ingenio-magazine.com) to continue the discussion – or send a letter (or an email) to the editor. You can also comment on Taking Issue topics from previous issues, including charter schools, euthanasia and refugees.

Email [ingenio@auckland.ac.nz](mailto:ingenio@auckland.ac.nz) or post to *Ingenio*, Communications and Marketing, Private Bag 92019, Auckland Mail Centre, Auckland 1142.

The views expressed above reflect personal opinions and are not those of the University of Auckland.



# DOING WHAT'S NEEDED

Robyn Scott talks with  
Nikki Mandow about  
finding ways of making the  
world a better place.

**"If you want to build a disruptive business," says social entrepreneur Robyn Scott, "it's useful to have had a disrupted childhood."**

Robyn has plenty of experience with both. She is the oldest child of unconventional parents, who didn't believe in old-school formal education and decamped from New Zealand to rural Botswana when Robyn was nine.

In fact, Robyn didn't go to school until she was 15, but still managed to take two degrees - a BSc in Bioinformatics at the University of Auckland and then an MPhil in Bioscience Enterprise (with distinction) from Cambridge University. From there she's been on a mission to make a difference in the world.

In the last decade, Robyn has co-founded a London-based business and two social enterprises in Southern Africa: Mothers for All, which provides education and training for women caring for Aids orphans in Botswana and Brothers for All, a programme teaching computer coding, technology and life skills to South African prisoners, ex-prisoners and at-risk youth, offering transformative job opportunities – and an alternative to crime. Robyn is also a World Economic Forum Young Global Leader, and was named in 2012 as one

of *Wired Magazine's* "50 people about to change the world".

So can someone's achievements be attributed to a childhood on the edge of the Kalahari desert, with an unorthodox flying doctor father trying to cope with an out-of-control AIDS epidemic and a mother who saw playing, reading and exploring as more important than going to school? It was certainly a big influence, Robyn says.

"The older I get, the more I'm deeply appreciative of my unusual upbringing. In a world that's changing, uncertain and evolving, I'm grateful I had a childhood that was like that too. Whenever things got stable, we'd move to a new place, and that meant taking on new challenges. Sometimes that was hard; every kid wants to be normal. But it's made me pretty resilient."

To get a better idea of Robyn's life in Botswana (a landlocked former British protectorate with an enviable reputation for stable democratic government, but (for a time) the world's highest rate of HIV infection), it's worth reading her first book *Twenty Chickens for a Saddle* – a gentle memoir full of anecdotes about an unusual life.

"Botswana was a remarkable place to grow up," she says "because it's in many ways a huge success story in terms of the region,

but it's also a place of incredible societal challenges. On the one hand I grew up with a sense of optimism about the world and the power of business, development and ideas to lift people out of poverty and change lives. But on the other hand, I had a huge awareness of the scale of jeopardy so many people are in."

Robyn is now finishing a second book, documenting the true story of a group of murderers and armed robbers in South Africa's most violent maximum security prison who "adopted" local AIDS orphans, growing food for them, raising money for clothes and schooling, even hosting regular visits and parties for them in the prison. Think of it as a true-life version of the Shawshank Redemption story, set in a South African prison, she says.

Robyn came across the prisoners through her mother, who was studying HIV in prison populations, and promised to tell their story as a way to support what they are doing. But truth to tell, she doesn't particularly like writing books; it's a solitary profession and she'd rather be working with other people, founding organisations as a way to make a difference. Her latest venture, Apolitical, is a for-profit company aiming to foster best practice in local, city, and national governments by creating a network of innovative public servants, and sharing solutions to society's hardest challenges.

Governments get a bad rap, Robyn says, with many people associating politics with corrupt bureaucrats. Actually, governments all round the world contain committed, mission-driven individuals trying to change things for the better.

In fact, government is, by definition, trying to make the world a better place. And successful projects that emerge from the leadership of a country can achieve significantly greater scale in terms of improving people's lives than the best-organised not-for-profit.

The trouble is, there isn't really a way for innovative ideas that work in one country to be identified, collected and disseminated elsewhere: "You wouldn't book a holiday without looking at TripAdvisor, but in government there's almost nothing that's comparable. It's crazy that you've got people deciding policies that will affect millions of lives and there's no easy way to look at what's working elsewhere and for public servants to find people with experience to talk to before their project is implemented.

"[At Apolitical], we are interested sharing ideas, particularly around wicked problems like climate change, refugees, or artificial intelligence. One of the things we



Hear Robyn speak on Leadership lessons behind bars: Robyn Scott at TEDx Oxbridge

create is a free weekly briefing of the best of what governments are doing to solve the world's most urgent problems. We also have a private online network of innovative public servants from 19 countries. We only started last October, but we've already seen exciting ideas taking off across different geographical boundaries."

In a world that's changing, uncertain and evolving, I'm grateful I had a childhood that was like that too

For example, a ground-breaking phone-based anti-corruption programme in Pakistan is now being worked on for adaption in Sri Lanka. And an American system which brings high-flying technologists and entrepreneurs into government is being studied for replication in Australia and Singapore.

There are even a few innovative New Zealand projects highlighted on the Apolitical website, including the Givealittle crowdfunding campaign that raised more than \$2 million to buy Awaroa Beach for the Abel Tasman National Park.

Although Robyn hasn't lived in New Zealand since the early 2000s, she says her time at the University of Auckland was pivotal for what she's achieved since. She studied bioinformatics, partly because of a love of science and maths, and partly because she was told it was the newest and most difficult science course available.

"I had a bit of a chip on my shoulder

about getting a serious education."

After finishing her degree she applied to do an MPhil at Cambridge, but was told she couldn't do postgraduate work there because she hadn't done honours. Undaunted, she persuaded her favourite Auckland lecturers to write letters asking Cambridge to give her a chance; "I wasn't qualified for the course I wanted to do, so they wouldn't process my application, but I sent them a package of testimonials and I told them I'd keep phoning until they opened it. Eventually I got an interview." And she got the prestigious Gates Cambridge scholarship, awarded to "intellectually outstanding postgraduate students with a capacity for leadership and a commitment to improving the lives of others".

Ten years later and Robyn - now based in London - is still convincing people to do the right thing. As well as her other roles she is now an ambassador for the Access to Medicine Index, a Bill and Melinda Gates Foundation-funded organisation that ranks pharmaceutical companies' efforts to improve access to medicine in developing countries. To fill any free hours, she is on the advisory board of the Responsible Mining Index, and an investor in several tech and social enterprise start-ups.

An impossible schedule? Robyn admits she's a bit of a workaholic, and "not that good at holidays".

"My parents drilled into us that we are so lucky to have what we have, and that if you care about problems, you should do something to solve them.

"One of the nightmares I had as a kid was not doing enough in life. I still have that nightmare."



## DRAGONFLY WITH FLIGHT POTENTIAL

Futuristic dragonflies are flapping their wings in the Biomimetics Lab at the University's Bioengineering Institute.

Soon they may be lifting off their perches and taking to the air.

The research to create and develop them is led by Dr EF Markus Henke, a graduate in mechatronics from TU Dresden in Germany and Marie Curie Fellow of the European Union, who has come to Auckland to work with biomimetics expert and Biomimetics Lab director, Professor Iain Anderson.

Markus explains that the necessary high-voltage driving signals to make the dragonfly flap its wings can be generated by a type of oscillator (a dielectric elastomer oscillator, invented in the Biomimetics Laboratory) which mimics the central pattern generators that control muscles.

"They transform a DC input voltage into an oscillation high-voltage signal that drives the dragonfly's artificial muscles."

Although the dragonfly is not able to fly yet, it shows the high potential

of this technology. "There is no need for moving mechanical parts or conventional stiff electronics in the soft robots of the future," says Markus. "The only things we need are strain, charge, carbon and polymers."

The dragonfly at its present stage is the outcome of a year-long continuous development of the technology in the Biomimetics Lab. The experience in dielectric elastomers and biomimetic structures put the team into the position to combine both technologies to demonstrate the potential of soft electronics-free robots.

"The next step will be to investigate the aerodynamics of the dragonfly's wings, so that we can produce thrust and some lift too, and to simplify the power supply, so that the dragonfly will only need a single DC input voltage to flap its wings," he says.

"It will not fly as designed now, but our little soft robot will teach us a lot about how to make autonomous flapping structures for lift and propulsion; the road to the development of winged micro-vehicles," he says.

 To learn more of the dragonfly and its motion, see *Jule Dragonfly* on Youtube.

## SNIFFING OUT THE ENEMY

**Odour could be the next weapon in the arsenal against some of New Zealand's worst predators including the stoat, the major killer of young kiwi chicks in New Zealand's native forests.**

Like many mammals, stoats have an "olfactory communication system" which detects threats in their environment, helping them increase their chance of survival.

A new study by researchers at the University of Auckland and Landcare Research tested the response of stoats to the scent of two of their dominant enemies – cats and ferrets. In previous trials by doctoral student Patrick Garvey of the School of Biological Sciences, stoats had exhibited strong fear and avoidance behaviour when detecting the presence of more dominant species. The surprise findings in this latest study were that, far from being deterred, stoats were attracted by the scent of these larger predators – and to food placed in locations where the scent of a cat or ferret was present. "We don't know for sure why stoats consume food at the 'high risk' area first, but stoats may actively scavenge the remains of prey left over by more dominant predators or it could be a fortuitous discovery," Patrick says. He believes this could be the beginning of a search to develop odour "lures" to trap pests.





## THE ULTIMATE ELEVATOR PITCH

**Dance Studies doctoral student, Kate Riegle van West, is conducting the first research study to measure the effects of International Poi on physical and cognitive function in healthy older adults. (International Poi is an overarching term which**

**refers to poi practised outside of Māoridom.)**

Kate is also this year's winner of the doctoral category of the University's Three-Minute-Thesis (3MT) competition, which set her the task of explaining what she was working on in just three minutes – with the help of a single static PowerPoint slide.

Explaining your research to others can be tough. In front of a judging panel and a live audience, it's an even bigger challenge. However, Kate easily overcame the restrictions to beat five other finalists with her clear, concise account.

An ex-circus performer, Kate noticed that the physical action of twirling a poi seemed to be beneficial, so she decided to conduct a randomised controlled trial with healthy adults over 60 to measure the effects of poi on physical and cognitive function.

As she pointed out we are all getting older, with the population over 60 expected to double in 30 years. And we are not necessarily enjoying a good quality of life in our later years.

So how can poi help? Participants in Kate's study were randomly allocated to either the poi group or a comparison

group and after only a month of training those in the poi group showed trends in improvement in their upper limb range of motion, grip strength and manual dexterity.

"Keeping these parts of the body fit can be the difference between independence and a nursing home," she told her audience. "This is because loss of flexibility in the upper limb can make it hard to get dressed or reach for objects; loss of dexterity and strength in your hand makes it hard to carry bags or hold on to a railing, which in turn can leave you more prone to a serious fall."

Kate outlined how poi has a cognitive dimension, with the participants reporting improved focus, concentration and a clearer mind after poi practice. She also revealed that not only does poi training engage both the body and mind, it's also inexpensive and fun.

Kate is now heading off for Australia to take part in the Asia-Pacific 3MT Competition, as well as the Universitas 21 3MT Virtual Competition.

She is still looking for participants to take part in the next round of her poi research study. If you would like to find out more or participate visit [www.spinpoi.com](http://www.spinpoi.com)

## ACTUALLY, IT IS ROCKET SCIENCE

**Space is the new frontier at the University of Auckland with the launch of a space systems project where students will design and build a satellite that will be sent into orbit.**

The Auckland Program for Space Systems takes an innovative approach that will see multi-disciplinary student teams from across different Faculties working together.

"This project is about creating a culture of cross-faculty team-work that will see students from Arts for example working with students from Science or Engineering," says Faculty of Engineering professional teaching fellow Jim Hefkey.

"It is critical that the approach we take within the University reflects the real world where space missions might include everything from astrophysics to

archaeology. Complex future problem-solving in all fields, not just space, will require inter-disciplinary teamwork."

Almost two dozen student teams have entered the space CHALLENGE competition to design and build their own CubeSat-sized satellite. Students have volunteered for the project which is over and above their courses of study.

"We've had a very enthusiastic response which is great because as space technologies are developing rapidly and decreasing significantly in cost, New Zealand will have a space industry and we need the human resources to help it develop," Jim says.

Each student team will come up with an idea for the mission and the functions they want the satellite to perform. The winning team will qualify to build their satellite and prepare it for flight. Entries will be judged by a panel of academics and industry representatives.

Peter Beck, founder of Rocket Lab, has undertaken to help launch the winning satellite on one of his company's Electron rockets. The launch will occur from the private orbital launch site Rocket Lab has nearing completion on the Mahia Peninsula, south of Gisborne.

The Electron vehicle was designed specifically with the small satellite market in mind - the size of satellite technologies has reduced rapidly in recent years and CubeSats have increased in capability and performance.

Once launched, students will be able to operate the mission from a control centre at the University.





Kathy Waghorn and Charles Walker

# SPACE TO EXPLORE

**Kathy Waghorn is a senior lecturer in Architecture and Planning at the University of Auckland, and an alumna (BFA 1994, BAS 2002, BArch 2007).**

**You've been to Venice several times this year. What took you there?**

I was there for the Venice Architecture Biennale. This is only the third time New Zealand has exhibited officially. Our team was chosen by the New Zealand Institute of Architects after an open competition involving architects, designers, academics and artists. The teams were whittled down to five, who were asked to develop their ideas further and present them to a jury. We were thrilled the jury chose ours.

Charles Walker (pictured above with me) – a former University staff member – is our team's creative director, I'm the associate creative director, and the team comprises eight people, including esteemed architect Rewi Thompson. All but two of us have strong connections with the University of Auckland as former or present staff or alumni.

Our exhibit comprises 22 "islands"

floating in space at various heights. On the islands are scale models of 55 buildings that exist in New Zealand – or that have no existence yet, but have been created in the mind. These show the divergent nature of architectural practice in New Zealand. In the centre are structures from a project conceived for the City Mission. On the periphery are eight models of award-winning beach houses. Those in between include a replica of Rewi Thompson's house, and of the structure created by Jasmax Architects for the Tuhoe people, documented in the movie *Ever the Land*, which screened in Venice to coincide with the biennale. At the biennale with our team were representatives of the Tuhoe, who were incredibly moved to see models of their place in this prominent international space.

The replicas were chosen to explore related ideas about the future of New Zealand and its cities; the islands point to the importance of space as a lived reality in the Pacific while also emphasising affinities between New Zealand and Venice – the city of islands.

The exhibition had no prescribed place of entry and allowed for free exploration and navigation around the islands. Viewers commented frequently on the feeling of openness and space.

**What was most exciting about being there?**

Most extraordinary was the enormous scale of the event, with architects and designers from all over the world, all exceptionally talented and eager to tell you about the most progressive and fascinating architectural concepts and projects from their countries.

It was also exciting to know we had a really good story to tell. Our official opening was just one among 63, but people were enthralled by the Māori welcome and by the unusual nature of the exhibition. One magical moment was the arrival of the dignitaries – including the New Zealand and Australian ambassadors – in a gondola.

The theme was "Reporting from the front", which focused interest on how architects are dealing with real issues such as climate change, sustainability and internationalisation.

While other exhibitors relied much more on text and photos to bring their concepts to life, we were more interested in communicating directly through the visitors' personal experience as they explored their own responses to the objects in space.

# LIFE THROUGH A DIFFERENT LENS

**Professor Bernadette Luciano, Deputy Dean of the Faculty of Arts, has also spent time in Italy this year.**

## **Where did you go and what did you do there?**

I went to Italy with a group of students who were studying a second-year course entitled “Italy on Screen”. The course was held in Prato, a short train ride from Florence, at the Monash University’s Prato Campus, which is housed in a majestic eighteenth-century palace in the centre of the old town. The students were ecstatic about the whole experience, which left them feeling enriched and inspired. The films were a springboard for studying a whole range of issues in Italian culture and society.

## **What were the highlights?**

The master class by Alina Marazzi, the award-winning young director of three of the films studied in the course, was

a definite highlight for the students and an additional bonus offered by the course being taught in Italy. I was very impressed (as was she) by the level of their questions and the range – from very technical questions about film techniques to questions about gender, aesthetics etc.

The other highlight was the final group trip at the end of the course to Chioggia, the location and “protagonist” of one of the films we studied, *Io sono Li/Shun Li and the Poet*. The visit was coordinated by the town’s ex-mayor, who revelled in showing off his city and its colourful maritime history, introducing us to local legends and opening the doors to some of the city’s most precious monuments (such as the clock tower with the oldest clock tower clock in the world). He also escorted us out to the traditional fish-hut on the water – which plays an important role in the film.

Chioggia’s past and present are linked to its extraordinary geographic location on the Venetian lagoon. This mini-Venice is a very “closed” city where people cling tightly to their seafaring traditions and their local dialect. The film is about current migration and the challenges and tensions of the co-existence of local and migrant communities: specifically the Chioggian and the Chinese. The students

heard contradicting opinions on the representation of the community and on the film itself first-hand from the locals and the Chinese owners of the osteria/bar where most of the film was shot. We were also fortunate enough to witness the special atmospheric phenomenon which makes the mountains appear to be emerging from the sea and very close to the land: the film’s cinematographer had waited days to capture it.

## **Did you learn new things as well as your students?**

I was reminded of the value of this kind of experiential learning: living and breathing what you study allows students to answer questions and to think about themselves and their world through a completely different lens. Watching the students do that while helping them come to terms with challenges and obstacles and seeing them reflecting on their own lives in the context of another culture was a learning experience for me as well.

I was especially moved by one of the international students, who thanked me and said she would never forget this experience as long as she lived.

*Photo: Master class with Alina Marazzi at the Monash Prato Campus*





## ARTIST IN METAL

**Tom Ferrero came to New Zealand in 2003 on a Fulbright scholarship and studied in the Metalwork and Jewellery Design Programme at Manukau Institute of Technology.**

**Where are you living and what are you doing?**

I returned to the US, completed my Master of Fine Arts at Indiana University and taken two jobs; one as part time assistant professor of jewellery and metalsmithing at NSCAD University in Halifax, Canada, and another, seasonal position as the department head of metalsmithing at Camp Laurel in Maine.

**What do you find exciting about living and working there?**

Being in Nova Scotia, Canada, has been a wonderful adventure. Professionally, it has given me the opportunity to teach multiple metalworking courses and develop curriculum, as well as ample time to produce new metal sculptures and develop a body of paintings. My most recent sculpture, "Mace"

(pictured) won first place in the Saul Bell International Design Competition for Hollowware and was shown in an exhibition in Las Vegas. My paintings –predominantly acrylic on canvas – are also an exciting shift in my creative trajectory. ]My position at Camp Laurel and summers in Maine have been a highlight. I couldn't ask for a more beautiful location to spend my time teaching metalworking to a passionate group of young artists. When tramping in the moss covered forests of Maine my mind often drifts back to New Zealand and its magical landscapes.

**Is the study you did at Auckland important to what you do?**

It empowered me to make work I didn't realise I was capable of, and has since helped me produce pieces I may not have made otherwise. I also utilised some of the traditional techniques of bone and stone carving I learned there in my current artwork and I teach my Camp students the cultural significance of Māori carvings and the techniques associated with them.

*"Mace." Silver, gold plate, copper, amber, citrine, garnet, diamonds, zircon, topaz, enamel, resin and Italian acetate. Approximately 2 feet tall and 8 inches wide/deep.*

## TURBULENT TIMES

**Han Niu is an alumnus who completed a BA in Film, Television and Media Studies in 2009, a Bachelor of Fine Arts in 2009 and an MA in Screen Production in 2014.**



**Where are you living and what are you doing?**

I am a practising artist and filmmaker currently based in Beijing, China, while completing my PhD in contemporary art at the China Central Academy of Fine Arts.

I am very fortunate that my filmmaking has taken me to many parts of the world. Earlier this year, I returned from Cuba after making a film under the guidance of renowned Iranian director] maestro Abbas Kiarostami [who died in July this year].

**What do you find exciting about living and working in Beijing?**

Beijing is an ancient capital, both pre and post-modern at the same time, Living here, one may find oneself amidst a sophisticated, ever-changing social scene infused with the often surreal conditions of our turbulent times. What I find exciting here is people's will for progress and change.

China is a strange homeland that I deeply connect to and am still learning about, so I find it relevant to base my practice and research here. There is a general sense of optimism in the air for

cinema; people still talk about films and debate over movies they see, which I find uplifting.

**Is the study you did at Auckland important to what you do now?**

I started at Elam in 2003 and completed my masters in Screen Production in 2013. My academic study at the University of Auckland was fundamental and immensely important to me in many regards. The precious years there shaped my thematic and philosophical interests, and helped me develop a critical mind.

Throughout my time in Auckland, I was exposed to profound ideas and developed the close friendships, mentorships and partnerships that will last a lifetime. At the moment, I am developing a feature film project titled *The Manifesto* with my mentor and dear friend, Associate Professor Jake Mahaffy (from the University's Department of Media and Communications). It is a comic satire about the falling of the masks of the "nuevo" riche and the realisation that we are only human.

*Image: Detail of a still from Han Niu's 2014 film, Land of Nobody*

## ALUMNI AND FRIENDS EVENTS

We host alumni and friends networking functions and special events throughout the year in New Zealand and all over the world. Our events are a great opportunity to reconnect and refresh networks. In many cases, you'll also have the opportunity to hear the latest University news and hear about the latest research and innovations taking place on campus.

### ALUMNI AND FRIENDS RECEPTIONS

2016 DATES	EVENTS
15 November	Hong Kong
23 November	Hamilton
24 November	Wellington

### SPECIAL EVENTS

2016 DATES	EVENTS
1 November	University of Auckland Society Salon Series
6 December	Society AGM and Christmas Function
2017 DATES	EVENTS
9 March (Date TBC)	Bright Lights: an audience with Distinguished Alumni
10 March (Date TBC)	Distinguished Alumni Awards Dinner

*Events are based in Auckland unless otherwise stated*

For more information, visit [www.alumni.auckland.ac.nz](http://www.alumni.auckland.ac.nz)

## SCHOOL OF ARCHITECTURE AND PLANNING CENTENARY

The University of Auckland School of Architecture and Planning is celebrating its centenary in 2017. Alumni of the school are invited to a series of events to mark the occasion. An architectural exhibition at the Gus Fisher Gallery will open the celebrations on Friday 8 September with the launch of a book written in response to the centenary. Look out for more information on the celebrations on the School website, in Alumni newsletters and on the Auckland School of Architecture and Planning Centenary Facebook page.



#### VOLUNTEER PROFILE

## CRAIG VICKERY IN MELBOURNE

**Meet Craig Vickery, Volunteer Alumni Coordinator (VAC) in Melbourne, who graduated in 1996 with a Bachelor of Commerce, majoring in Economics, Accounting and Finance. He is now Head of Interest Rate Oversight at the National Australia Bank.**

"I always envisaged working in a role closely linked to financial markets," says

Craig. "Working in the banking industry in New Zealand will inevitably lead to opportunities to work in Australia because a large number of New Zealand banks are owned by Australian parent banks."

His role centres around ensuring the bank remains safe from market risk. Craig works closely with the Treasury division to ensure acceptable risk and return decisions are made. "I enjoy the relationships and constantly changing environment that need to be managed," he says.

Outside of work, Craig is a keen All Blacks supporter and enjoys getting out to Melbourne's many fantastic events. He says it's an amazingly diverse city with something to suit everyone's interests.

He would encourage current students to think about their career aspirations while at university. "Don't be afraid to take different roles for diverse experiences. Everything you can bring to the table in job discussions counts."

Craig is interested in hearing from alumni based in Melbourne. Get in touch at [vickery\\_craig@hotmail.com](mailto:vickery_craig@hotmail.com) or connect with him on LinkedIn.

*Victoria Brownlee*

## INTERNATIONAL ALUMNI NETWORKS

With over 180,000 alumni living in 147 countries our alumni networks bring together groups living all over the world. Our networks are run by Volunteer Alumni Coordinators (VACs) who help alumni remain connected with the active life of the University.

If you live outside of New Zealand and would like to network with local alumni, we encourage you to make contact with the VAC in your area – their details can be found on our website. If there isn't an existing alumni network where you are, you may want to start one and consider being a VAC. Contact us at [alumni@auckland.ac.nz](mailto:alumni@auckland.ac.nz) for further information.

#### Connect with us

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-  [@AucklandAlumni](https://twitter.com/AucklandAlumni)
-  Auckland University Alumni & Friends

# D I V I N G

## D E E P



**When you dive underwater, your perceptions of sound, vision and movement are all altered.**

Water resists penetration; you are slowed down and held suspended as if flying.

Depending on the degree of underwater visibility, life forms and objects can loom up unexpectedly.

Humans have long been fascinated by the realms of the deep: Jules Verne's science fiction classic *Twenty Thousand Leagues Under The Sea*, published in 1870, tells the tale of the search for a mysterious sea creature, thought to be a giant narwhal. It turns out to be the submarine *Nautilus*, designed and piloted by Captain Nemo, an exile from civilisation, who captures his pursuers and takes them on an extensive undersea odyssey.

Having grown up exploring creeks and ditches full of slithering eels in the Wairoa district of Northern Hawkes Bay, Elam School of Fine Arts senior lecturer and doctoral candidate Joyce Campbell now makes photographs and videos about the unknowable deep. In 2002, her Marianas Trench series of photographs showed milky-white liquids suspended in oceans of black, recreating a sense of delving into the famous undersea chasm near Guam.

Inspired by those photographs, American science fiction writer and cultural critic Mark von Schlegell wrote a short story, "Flugtraum", or "Flight Dream", which Joyce Campbell reinterpreted as an abstract film, with

a spooky soundscape by Los Angeles guitarist Peter Kolovos.

Shown as "Flightdream 2014" at Two Rooms Gallery last year, it was chosen for the Sydney Biennale, where it was given a soundtrack with an excerpted reading of Schlegell's story, and was installed in one of the tunnels on Cockatoo Island, near a disused submarine-building facility.

Now jurors have selected it for inclusion in the 2016 Walters Prize, and Joyce Campbell has extended it to a 25-minute three-channel video installation which is currently being exhibited at the Auckland Art Gallery as "Flightdream II, 2016".

A voiceover is delivered via sound cones, while the full immersion in the Kolovos electronica comes from stereo surround sound. "All the different iterations of this work invite immersion, but this is the first time I have had the space and resources to actually physically immerse my audience in the aural and visual field of the work. Its narrative takes place under water in a space of pure phenomenological immersion."

Across town, in South Auckland, Joyce is exhibiting watery photographs from the Taniwha Whakaheke (Taniwha Descending) series, an extension of another work that was also shown earlier this year at the Sydney Biennale. Working with Richard Niania of the Ngai Kohatu hapu, Joyce has used her camera to explore her turangawaewae, the Ruakituri Valley inland from Wairoa near where she grew up. She explores the realm of

the taniwha, believed to be a large female albino tuna (eel) called Hinekorako, which Niania and his hapu claim as an ancestor. Hinekorako is believed to live under the rock Hinekuia at the base of Te Reinga falls.

This work also carries a conservation message as Joyce mourns the loss of habitat for the longfin eel, one of the largest eels in the world. She explores the freshwater habitat for the secretive, and mainly nocturnal, native tuna that spend their long lives hiding in nooks and crevices before eventually migrating to the Pacific Ocean to breed and die.

Ancestors of these eels began swimming up and down waterways in the early Miocene period, 23 million years ago, but the longfin eel is now considered at risk, with their numbers declining. Glimpses of white flash through Joyce's darkly monochrome imagery, reminders of spiritual guardians of place, and unknowable mysteries that dwell in the depths.

STORY LINDA TYLER

Above: Joyce Campbell  
Image below: *Flightdream II*, 2016, 25-minute three-channel video installation





# BLOOMSBURY SOUTH

**Our featured book is a very special one, the first recipient of support in the Marti and Gerrard Friedlander “Creative Lives Series”, which will benefit one Auckland University Press publication each year. Author Dr Peter Simpson, an alumnus and former associate professor of English at the University, writes about what he set out to accomplish.**

My book *Bloomsbury South: The Arts in Christchurch 1933-1953* (AUP, 2016) is an attempt to document the brief period in the country’s cultural history when Christchurch was indubitably the cultural centre of New Zealand, especially in literature, publishing, classical music, theatre and visual arts.

For a decade either side of World War II Christchurch was the home of a remarkable group of gifted individuals who were linked by friendship, collaboration and common purpose to bring about a double purpose: first to create for the first time a national art that was about New Zealand, by New Zealanders and for New Zealand, and second to introduce to this country some of the modernist innovations in style and technique which had transformed the arts in Europe in the twentieth century.

The main protagonists in this movement included Ursula Bethell



(poet), Allen Curnow (poet and critic), Denis Glover (poet and printer), Leo Bensemann (artist and printer), Douglas Lilburn (composer), Ngaio Marsh (crime writer and Shakespeare producer), Rita Angus (artist), Charles Brasch (poet and editor), Doris Lusk (artist), Colin McCahon (artist) and James K. Baxter (poet).

The institutions created by this group included the Caxton Press (publisher), The Group (visual arts), the Little Theatre (Shakespeare productions), and the journals *Tomorrow*, *Book* and *Landfall*; these served not only Christchurch artists, but the best and most progressive from all over the country (such as Aucklanders Frank Sargeson and Rex Fairburn, and Toss Woollaston from Mapua near Nelson), making Christchurch not just a local centre but of national and even international importance.

My book was the lucky beneficiary of both public and private philanthropy. In 2012 I was awarded the Michael King Fellowship, which gave me support for two of the book’s four years of writing and enabled me to travel to research libraries in Dunedin, Christchurch and Wellington. My book also had the good fortune to be given support as the first in the Marti and Gerrard Friedlander Creative Lives Series. In my case the support enabled me to include an exceptional number – more than 450 – of quality images in the book: paintings, photographs, book covers, theatre programmes, facsimiles of private letters and the like, thus enabling me to “load every rift of my subject with ore”, as John Keats advised Percy Shelley in 1820, a phrase that has become my personal mantra.

## TUPUNA AWA

“We have always owned the water . . . we have never ceded our mana over the river to anyone,” King Tuheitia asserted in 2012. Prime Minister John Key disagreed: “King Tuheitia’s claim that Māori have always owned New Zealand’s water is just plain wrong.” So who does own the water in New Zealand – if anyone – and why does it matter?

In *Tupuna Awa: People and Politics of the Waikato River* alumna Dr Marama Muru-Lanning offers some answers to that fraught question, introducing us to the way Māori of the region, the Crown

*Right: Peter Simpson. Photo by Marti Friedlander  
Top right: Marama at the Waikato River*



and Mighty River Power have talked about water, ownership, stakeholders, guardianship and the river. By examining debates over water, Marama provides a

powerful lens into modern iwi politics and contests for power between Māori and the State. This is Marama’s first book, published in September 2016 by Auckland University Press.

## THIS PAPER BOAT



The poems in this book follow the author, alumnus Gregory Kan, as he traces his own history through the lives and written fragments of Iris Wilkinson (aka Robin Hyde), his parents, and their parents.

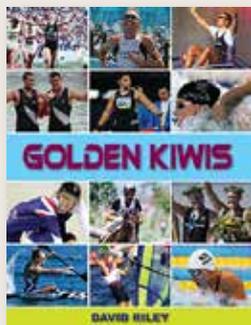
He explores old territories of Robin Hyde’s – the tide pool at Island Bay with its shrimp and driftwood, the garden at Laloma with its crushed lemon

leaves. He listens to the stories of his parents and their parents, the frangipani trees, drains and barbed wire of their childhoods. He remembers a jungle of his own and searches for his own ghosts in the water.

Published by Auckland University Press, this is a rich and haunting first book, which uses beautiful images to explore the lives and preoccupations of two authors and their families.

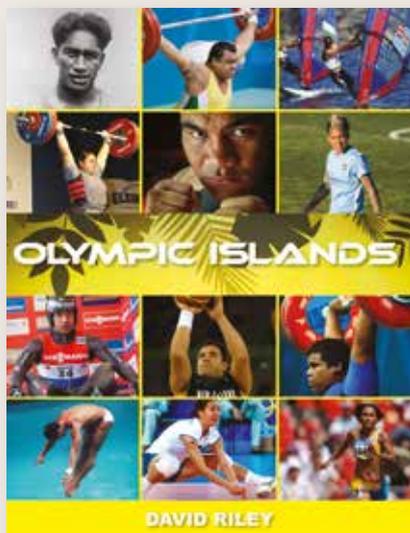
Gregory was also featured in *Paper Boat: Moments in the Life of a Book*, a short film directed by Alex Mitcalfe Wilson which you can watch on vimeo: [video.lumiere.net.nz/paper-boat](http://video.lumiere.net.nz/paper-boat)

## TIMELY RELEASE



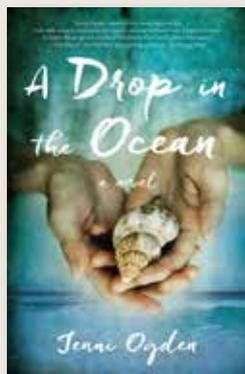
Two new books celebrating New Zealand and Pasific Olympic achievement, written by a University of Auckland alumnus, have had a timely

release. The aim of the books, written by award-winning children's author and teacher David Riley and published by Reading Warrior, is to inspire young people with positive stories of achievement and to improve literacy by providing them with reading material they can relate to. *Golden Kiwis* tells the inspirational stories behind every Olympic gold medal won by a New Zealander – from Malcolm Champion, our first Olympic gold winner, to Lisa Carrington, the first Māori to win an



Olympic gold medal. *Olympic Islands* celebrates the history and achievements of Olympians of Pacific Island descent. It includes chapters on American Samoa, the Cook Islands, Fiji, Hawaii, Nauru, Niue, Samoa, Tonga and Tuvalu. Athletes featured include multiple gold medal winners Greg Louganis (Samoan-American), Duke Kahanamoku (Hawaiian) and Valerie Adams (Tongan).

## A DROP IN THE OCEAN



Anna Fergusson, Boston neuroscientist and dedicated introvert, arrives at an unwanted crossroads when the funding for her Huntington's

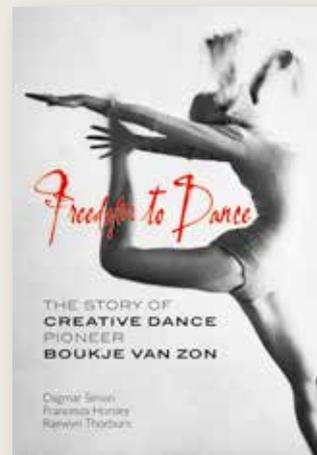
disease research lab is cut.

With her confidence shattered and her future uncertain, on impulse she rents a cabin on Australia's Great Barrier Reef. However, Turtle Island, alive with sea birds and nesting Green turtles, is not the retreat she expected. Here she finds love – for the eccentric islanders who become her family; for Tom, the laid-back turtle whisperer; and for the turtles whose ancient mothering instincts move her to tears.

This is the first novel of alumna Jenni Ogden, a former associate professor in the University's Department of Psychology and the author of two previous nonfiction books. *A Drop in the Ocean* was published this year by US publisher, She Writes Press, and is on sale internationally.

## FREEDOM TO DANCE

All three authors of this fascinating book are alumni of the University of Auckland: Dr Dagmar Simon (PhD, Dance Studies), Francesca Horsley (Master of Creative and Performing Arts, Dance (Hons)), and Raewyn Thorburn (Diploma in Performing Arts, Dance).

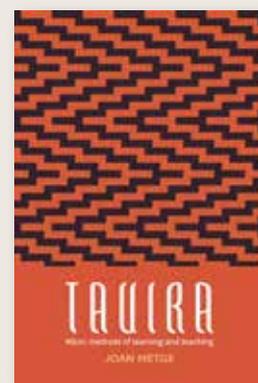


*Freedom to Dance* tells the story of Boukje van Zon, an inspiring Dutch dance teacher who directed her Van Zon School of Creative Dancing in Auckland from the 1950s to the late 1980s, and had a lasting influence on New Zealand's contemporary dance scene.

Her story is told in the context of life and arts practices in Europe (1920s-1940s), the German occupation of the Netherlands, expatriate life in Indonesia, Dutch migration to New Zealand, and the twentieth-century socio-cultural and artistic environment of New Zealand.

It further includes Boukje's teaching methods and many dance photographs by Dutch photographer Ben Boer – as well as some by iconic New Zealand photographer Marti Friedlander.

## TAUIRA



In te reo Māori, "tauira" means both student and teacher. In the book *Tauira*, published by Auckland University Press, acclaimed educator and anthropologist, alumna and

former staff member, Dame Joan Metge, introduces readers to Māori methods of teaching and learning that are rich in lessons for us all.

Based on extensive interviews, this book offers a window on a mid-twentieth-century rural Māori world, as described by those who grew up there.



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