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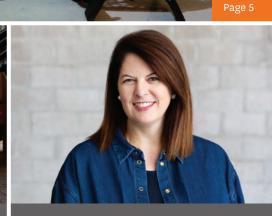
3D printing: music to Olaf Diegel's ears



AGE CONCERNS Ngaire Kerse's ideas for changing our mindset about ageing



PIANO MAN Petr Tomek's talent as a pianist hits the right note for cancer research funding



DESIGNING JOBS Deb Polson leads a programme preparing students for roles not yet invented

SNAPSHOTS

NO PARADE BUT A REAL CELEBRATION

No one was letting the cancellation of the autumn graduation processions rain on their parade: the smile on graduates' faces told the story. Broadcaster John Campbell spoke at the Arts graduation on 29 April and had a message for first-time graduates in particular: "The world is your oyster now. You are old enough to know who you are and to have done this [graduated] but you are young enough for everything still to be possible. As I walked in I felt such a flush of pride and delight in the sense of possibility this room contains."



PBRF RESULTS AN EXCELLENT OUTCOME

The recently announced 2018 Performance Based Research Fund (PBRF) results have confirmed the University of Auckland's reputation as the most influential research institution in the country. The results show significant increases in the number and proportion of A and B-rated researchers. Deliberate investment in new and emerging researchers has seen 18 percent of eligible staff in this category rated in the top two categories. This includes four As – half of the As awarded to early career academics across New Zealand. Vice-Chancellor Stuart McCutcheon is congratulating the University's researchers for this excellent result. For more information on the results, visit the PBRF pages on the University website. SCREAMING SUCCESS A story by Harley Hern, who completed her Masters of Creative Writing in 2015, has been shortlisted for the prestigious Commonwealth Short Story Prize. *Screaming* joins 20 other stories on a list that attracted more than 5,000 entries from 50 Commonwealth countries. Harley is an administrator of the Academy of New Zealand Literature, established by Associate Professor Paula Morris with a grant from the Vice-Chancellor's Development Fund. The winner, who receives £5,000, is announced on 9 May.





HAVE YOUR SAY: STAFF SURVEY

The biennial staff survey runs from 13-24 May. It contains 83 questions, taking around 25 minutes to complete. Independent provider Willis Tower Watson manages the survey on behalf of the University so responses are anonymous. The survey allows the University to evaluate its staff engagement over time as well as benchmark against other educational institutions. Results will be presented by Vice-Chancellor Stuart McCutcheon in July. All eligible staff will be sent an email from Willis Tower Watson on 13 May inviting them to take part.

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Main cover image:

Olaf Diegel photo by Dean Carruthers

HR SERVICES OPEN DAY

The HR Services team is holding an Open Day on Monday 13 May, 1-4pm, at Workshop Room 101, Level 1, in the Kate Edger Information Commons (opposite the Ubiq Bookshop). It's a drop-in session in which staff can ask the HR team questions about payroll, staff benefits, leave and related matters. Speak one-on-one with a real-life human!

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FEATURE

Smuggling health into design is her thing. "I mostly design with game technologies to present interesting ideas playfully. That way, I can smuggle science in through play."

That has included working with augmented reality (AR) as well as VR. In 2004 she worked with technology created by Professor Mark Billinghurst from the Auckland Bioengineering Institute (ABI) when creating her first mixed-reality game for families to engage with the likes of science museums and art galleries in Melbourne.

She says designers work best in collaboration and there are 11 conjoint study options for design students, so the new programme will include collaborations with engineering, health science, law, global studies and arts among others.

"That's why I was attracted to the job, because design has already created this framework. You can't design anything in this world on your own any more. Design involves teaming up with people and organisations that challenge and complement design practices. The way I look at it is, a great band needs more than a drummer to make us all dance and sing along. Designers can work with engineers and scientists ... and we all bring something to the table."

When the first students walk through the door in 2020, Deb says they're likely to be creative types who are also interested in science, as well as technical types interested in health and wellbeing.

Deb is now working to expand her team to include teachers and researchers from a variety of fields within the university and from industry, epitomising the concept of collaboration.

"We're not really interested in doing the traditional thing. It's about 'what is the ideal graduate in the world and how do we all contribute to that?'.

"I've already worked with a lot of interesting people in this University. In bioengineering, robotics, business and more – people like Suranga Nanayakkara from ABI, Dermott McMeel from architecture, Charlotta Windahl in business and scientist Julie (JR) Rowland."

She says the course will use the UN's Sustainable Development Goals as a guide for developing course content and student projects.

"I only started thinking about this early last year. I realised it was a really good tool to explore and apply those kinds of concerns into the design process with my students and colleagues.

"It's become an important framework to adopt as it ties us to a global initiative. It's just something we should think about at any university."

She's excited about the fact Auckland is already playing its part. "It's a massive deal that we're No. 1 in the inaugural University Impact Rankings by Times Higher Education. That's just such a proud moment."

Denise Montgomery

DESIGN FOR THE FUTURE

With 65 percent of children in school predicted to have jobs that don't exist yet, someone has to be thinking ahead.

If you think design is all about art or graphics, it's time to get up with the play.

"Design is no longer predominantly a visual art. A designer is a systems thinker and someone who understands the way people, places and things interact," says Associate Professor Deb Polson.

She's the head of the new Design School under the umbrella of Creative Arts and Industries (CAI) and has come from 25 years at universities in Australia and China. Deb will lead the bachelors and masters programmes that begin in Semester One 2020.

Right now she's involved in the design of the teaching and research spaces (experience as an interior designer has helped), recruiting a new team of staff and explaining to students, teachers and parents exactly what the course will offer.

"I'm going into schools and also holding workshops here. The feedback I get from students is really helpful. They've got no problem with the idea of the future designer – it's often parents and teachers who struggle a bit.

"A UN World Economic Forum in 2016 stated very clearly that 65 percent of kids in school today will have jobs that don't exist yet. When I present this fact to parents, it understandably panics them because we can't predict exactly what those jobs will be. But the field of design is totally made for that reality – you're learning how to adapt and respond to constantly changing environments, technologies and human behaviours."

Deb says the purpose of a design lead is to "understand complex systems and find unique opportunities". She gives an example of collaborating with a hospital that was keen to work out how it could use virtual reality (VR). She spent time talking to parents of children who were frequent visitors to the wards and often stayed for long periods.

Photo: Dean Carruthers

"I found it was common for young patients to feel disappointed about being alone in hospital rooms and anxious about going to hospital.

"So I designed a VR experience that when they are in their hospital bed and put on a VR headset, their bed instantly transforms into a boat and their room fills with water. They see other boats on the horizon, which are other kids in other hospital beds all around the world. They can explore the reef and play games together."

She says it is designed to take children from being isolated and anxious to feeling connected and entertained. "That's the designer researching and responding to a context with focused intent, instead of trying to reinvent or disrupt hospitals."

Another project that provided an innovative solution was the Future Fruit simulator (fruitfutures.tumblr.com) where you design a fruit in a game world and then send it to a 3D printer. The printer is loaded with a material made from a custom agar gel solution containing nutrients. The idea is that the 'fruit' can be eaten in remote areas where access to good nutrition is an issue. She worked with game developers, scientists and nutritionists for the Future Fruit project, including collaborators from Plant and Food New Zealand.

"I wanted to look for a playful solution that wasn't sugar or just pushing mashed potato through a printer," Deb says. "It needed to be a material that could be both sustainably produced and taste okay. The material scientists had to do a lot of experimentation making sure they had the right consistency and viscosity for 3D printing and for human consumption. It was a natural fit with the UN's goals.

"Now we want to build a 'play and print' kit that we take out to remote communities ... which can print material that has the nutrients they're missing. Like in remote parts of India it might be potassium and in remote Australia it might be calcium. So we custom-design to 'smuggle' in nutrition where it is needed."

WHAT'S NEW



CHIEF JUSTICE HAS MESSAGE FOR LAW

Dame Helen Winkelmann was sworn in as the 13th Chief Justice of New Zealand on 14 March, becoming not only the second woman in the role, but the second alumna from the University of Auckland.

Her predecessor, Dame Sian Elias, held the position for 20 years until 13 March, retiring from the role at the compulsory age of 70.

Dame Helen says while some issues of gender equity have been addressed in the judiciary

through the efforts of successive attorneysgeneral, equally as important is addressing the issue of diversity in the profession.

"The judiciary needs diversity of thought and you achieve that by having people from diverse backgrounds. Our profession currently lacks diversity in background and I see this as an urgent issue for our profession and our law schools."

Dame Helen says there's no simple solution, but it's an urgent discussion needed in tertiary institutions.

"I suggest law schools need to revisit their methods of assessing merit and entry into law. Right now we're not giving young people from disadvantaged backgrounds enough time to show excellence."

Dame Helen's role as Chief Justice places her at the top of the pyramid of judges in New Zealand. She says the day of the ceremony was a special one, marking "the importance the role has to society".

The very next day was the Christchurch terror attacks. "This is a hard time for New Zealand. At such times the public institutions, including the courts, must step up and perform their work in an exemplary fashion."

AWARD IS **REALITY**

Professor Mark Billinghurst of the Auckland Bioengineering Institute (ABI) has received a global award recognising his lifetime contribution to augmented reality (AR) and virtual reality (VR). Mark was presented the Virtual Reality Career Award in Japan. It is the highest award given by the Graphics Technical Committee, part of the Institute of Electrical and Electronics Engineers (IEEE) which has more than 400,000 members.

Mark is director of the Empathic Computing Laboratory here and at the University of South Australia and his contribution to humancomputer interaction for AR and VR has resulted in an award-winning career for the expert in human-computer interface technology.

Mark joined ABI in 2018 under the Entrepreneurial Universities Programme and his team is exploring how AR can be used for nextgeneration teleconferencing. "AR enables new types of teleconferencing that have not been possible before," he says. "Using AR you can create the illusion that a remote person is part of your real world, rather than being seen on a handheld display or desktop screen ... it's more like face-to-face conversation."

SEEKING THE DISTINGUISHED

Do you know an exceptional alumna or alumnus? Nominations are open for the 2020 Distinguished Alumni Awards. The University of Auckland and the University of Auckland Society bestow the awards to honour alumni who have made outstanding contributions to their professions, to their communities and globally. To find out more or to submit nominations visit **auckland.ac.nz/daa**. Nominations close 30 June.

ON YOUR BIKE

The annual census of bicycles parked around the University counted 393 bikes on the central campuses (City, Newmarket and Grafton), up from 347 in 2018 (not including hire bikes). The number of bikes in the OGGB racks increased by 70 percent over last year, while Sector 100 was up 17 percent and Sector 400 up 33 percent. Sector 300 stayed the same but bike counters say that could be because of a lack of bike racks there.

CARING FOR NURSES

Nursing students in financial difficulty can be given a helping hand thanks to a new award established by a generous staff member.

The Robyn Dixon Nursing Award was established by the School of Nursing's Dr Robyn Dixon for an undergraduate student from West Auckland experiencing financial hardship.

Robyn says when she first enrolled to do a BA, it was the days before university fees and student loans, and students automatically received a study allowance that wasn't means tested. She later went on to train as a nurse at a time when hospitals used a paid apprenticeship model so students could support themselves.

"Being paid while studying afforded me the opportunity to break the cycle of family dysfunction and associated disadvantage," says Robyn. "I established the award hoping I might contribute to young people being able to complete their studies."

She says it could be simple things, like not being able to afford textbooks or their own medical costs, that mean students can't continue studying.

"In many cases students would have been able to continue if they had access to monetary aid,

to help them get them over a financial hump. I am also aware of school leavers for whom a small grant could mean the difference between applying to enter an undergraduate nursing programme or not."

Robyn isn't alone in seeing the plight of students. The 2018 Christmas appeal raised almost \$43,000 with just over \$6,400 going towards the Nursing Support Fund. Robyn was thrilled to see people backing the cause as every day she sees how tough it is for financially struggling students to complete their studies. To find out more about the award see

tinyurl.com/RobynDixonAward.



STRUTTING HIS 3D STUFF

Professor Olaf Diegel sits surrounded by some of his collection of 3D printed guitars, looking pretty stoked.

The guitars are a hobby for the worldrenowned specialist in additive manufacturing (AM) or 3D printing. But Olaf, who plays bass and a bit of guitar, gets a thrill out of making them as a tangible example to demonstrate what additive manufacturing is all about.

"I purposefully designed them to show off 3D printing. The Americana has New York City inside the guitar, Brooklyn Bridge, Yankee Stadium ..."

The black guitar has spiders, the orange one is a hive with bees inside. An oxidised one has moving cogs and the green one is his treasured bass. They're all printed in white and painted by an artist friend and he's made 72 of them so far. He also has a 3D printed drum kit, keyboard (white with ladybugs) and a skull-shaped microphone.

But Olaf has many strings to his bow and less time to be making guitars since arriving at Auckland this year as the third appointee under the Government's Entrepreneurial Universities programme. He's setting up the University's Creative Design and Additive Manufacturing Lab, the main objective of which is to teach industry how to use AM and how to design for AM. There'll be an open day later in the year to show the massive potential already being demonstrated in Europe and the US, leaders in the field.

The term additive manufacturing reflects the process of adding layers of material to build a complex three-dimensional part. Objects are designed in 3D – a skill engineering students are expected to develop during their studies, and which can even be learned through free software.

Olaf's office, aside from many guitars, has boxes of prosthetics, model bits of spine and engines – all 3D printed in plastic, aluminium, stainless steel or titanium. "Many are sample parts for companies to teach them about the technology. Parts are 60 percent lighter ... weight-saving on a satellite, an aeroplane or a car adds big value."

He shows us a custom-made prosthetic arm for a pre-schooler that fits her perfectly but can be reprinted overnight as she grows. For a roughand-tumble youngster it's a good alternative to using a bionic hand at the cost of \$US20,000.





"In the future there will be an app where she can add dragonflies or unicorns or Hello Kitties or whatever to really make it her own."

Already Olaf's colleague and students, who spun out a company called Anatomic Studios, have printed a leg prosthetic for man that has tattoos that match his other leg.

Soon, pets may also benefit."I have two students working on pet prosthetics," says Olaf. "What happens now is, if your dog gets his paw crushed, vets amputate the whole limb. The idea is to make a paw prosthetic so you don't need to amputate. The problem may be in getting vets to accept there's a new way of doing things ... "

'Working with industry is a good way to advance New Zealand.'

Part of Olaf's role is to work with companies to explain the benefits of 3D technology and he's also about to publish a book on design for additive manufacturing. "Europeans and the Americans are leading the way in terms of company adoption. Aeroplane companies are adopting this big time. If you can lose a kilo on an aeroplane that's thousands of dollars in fuel savings a year."

He says New Zealand is punching above its weight in AM, with world-class companies such as Ram3D in Tauranga and Zenith Technica in Auckland, producing parts for companies around the world. But it's in the industrial adoption of AM that we're a bit behind. "We are starting to see companies, such as Rocket Lab, who are already using it, and Air New Zealand realising its potential but we need to get our many SMEs to take advantage of what it has to offer too.

"The yacht industry too, and I'm not just talking America's Cup, but if you're buying a million-dollar yacht, you probably want every widget on it to be custom-made, which you can do with 3D printing.

"My goal is also to form a better relationship

between the pure academics and industry people to get both working together in much better ways and to help students with start-up ideas or spinoff companies. These relationships modernise a university – we can no longer just stand at the front of the classroom. We have to advance New Zealand in some way. Working with industry is a good way to do that."

The potential of AM with human organs using stem cells is vast. "It works layer by layer," says Olaf. "You take a model of a bladder, for example, and slice it into thin slices. Then you print it with layers of stem cells which are then suspended in hydrogel to keep them in the shape. The stem cells know that they're supposed to be a bladder so they grow into the bladder. As they grow, the hydrogel gets displaced by the real cells.

"I'm not a biologist so I don't fully understand the biology of how a stem cell *knows* it's supposed to be a heart or bladder or kidney. But apparently they do when in the right configuration in the right environment. That's part of what I enjoy about working in this area – the interdisciplinary collaboration with experts from almost all fields who understand all the stuff I don't.

"They've done bladders, trachea and heart valves but not more complex organs yet ... it's not far away. A kid in South Africa lost his ear so they printed one. It wasn't from stem cells but it feels real and looks real."

Back to the guitars, what about the acoustics?

"One of the difficulties with music is that it's subjective. People say a wooden guitar sounds better than any other material guitar. It's largely psychological. With electric guitars it makes little difference, although I've done one semi-acoustic, rock 'n' roll style guitar that has some resonance, until it's plugged in. Probably the single biggest factor in guitar sound quality is the player. You can give a good guitarist a \$10 guitar made from a toilet seat and they will make it sound like heaven."

Denise Montgomery

STRIKING A CHORD

\$3.53.

Photo: Godfrey Boehnke

Dr Petr Tomek has found his forté not just in cancer research, but as a pianist.

WHAT'S NEW

What could be more fitting than a cancer researcher doing fundraisers for the Cancer Society, an organisation that helps fund the Auckland Cancer Society Research Centre?

Dr Petr Tomek has been hitting the right note by putting on concerts aptly named "Doctors with Instruments" with other doctors and musicians in a group collectively known as Trio Pohádka & Friends.

Petr, a talented pianist, and his group, which includes his cellist wife Dr Lisa Chung, recently raised around \$1,700 playing to 100 people in the lounge of two retired lawyers in the Wairarapa.

"They've been running concerts in their Greytown home for 40 years and they're very popular. They have a grand piano and convert their living room into an auditorium. People come there from Wellington."

The group's previous concert was at the Blyth Performing Arts Centre in Hawke's Bay, to several hundred people, raising \$13,000. Each musician gives their time freely and close to \$40,000 has been raised in total to support cancer research.

It's not something Petr expected to be doing when he moved to New Zealand in 2011 to do his PhD. "One of my major areas of study interest is cancer immunology. I moved to New Zealand from Czech Republic because there was this fascinating project being offered in the Auckland Cancer Society Research Centre."

But that wasn't the only opportunity that arose. Despite having only a few years of formal piano lessons, Petr's skill as a pianist resulted in the formation of a chamber music group, originally playing for a bit of fun on a Sunday.

"I didn't expect anything on the music front, but suddenly I've had all these opportunities to perform. I've been really lucky to find amazing people around me."

On the cancer research front he's working in a team that includes professors Lai-Ming Ching and Cristin Print. "We are at the stage where we are actually developing drugs with potential to go to clinical trials, so that's a big achievement. But there are many other projects, such as simply advancing understanding of basic cancer biology.

"For example, how do cancer cells overcome stress? In tumours there is a lot of stress going on ... cells don't get enough nutrients and while many normal cells cannot cope well with starvation, cancer cells somehow manage to cope really well and actually thrive. We're trying to understand how cancer cells do it."

He enjoys working with that team as much as he does with his musical friends. "Some people say I should have become a concert pianist but that feels a bit selfish to me. I prefer just having people I like around me and to play music with them. I never imagined it would reach where it is now, fundraising for cancer research and giving these sell-out performances."

He pays tribute to events coordinator Adrienne Scott who approached him after seeing the group perform its first show at the School of Music in 2012. "We played just one 25-minute piece. Adrienne was very enthusiastic. She said it was incredible. She'd never heard the piece of music before so she wanted to purchase a CD recording but there wasn't one.

"She said 'oh no this is terrible. I can't find it anywhere. You have to record it!' So we did. I learned from her that anything is possible and determination makes things happen."

Adrienne found people who provided their time for free. "We did it in the School of Music who were very generous too and then released a CD which has sold out," says Petr.

Adrienne has since helped the group set up other fundraising concerts, usually two a year.

"It's been great. The amounts raised have increased each year. I think it was also a great idea to do shows outside of Auckland because there are so many competing events here compared to smaller towns."

Petr takes a creative approach to the music played. "I like exploring some less-performed music, the forgotten gems of chamber music. We've been very lucky recently in finding some Jewish-inspired music which has had amazing success with our audiences and has become a hallmark of the group."

Denise Montgomery



NO. 1 IN TIMES HIGHER EDUCATION WORLD RANKINGS

The University of Auckland has been rated first globally in the inaugural University Impact Rankings by Times Higher Education (THE), out of the 500 ranked.

The new global ranking measures how well institutions are delivering on the United Nations' 17 Sustainable Development Goals (SDGs), a benchmark established in 2016.

This outstanding result recognises the

University's commitment to sustainability and making a positive social impact through its research and teaching.

The goals include providing inclusive and equitable quality education, achieving gender equality and fostering innovation. The inaugural ranking sought information on 11 of the SDGs, but in the future will measure all 17.

Some of the metrics used in the Impact

Rankings include the number of graduates in health professions and the proportion of women in senior academic positions. Auckland ranked first in health and wellbeing, and sixth in gender equality.

You can read more about how we ranked in each category and a number of case studies that helped the University achieve its No. 1 ranking at **tinyurl.com/UoATimesHigherSDGs**

AGE-OLD **ISSUE**

Society needs to change its attitude to older people because more are on the way.

When Professor Ngaire Kerse, head of the School of Population Health, was doing her PhD on health promotion for older people, she undertook a focus group with doctors.

"About a quarter said 'na you don't want to do anything for older people ... just leave them alone. They're old. They want to do nothing'."

But she says doctors are simply a product of society. "We have an ageist society – still – and that ageist society affects older people a lot.

"If you grow up and you think older people are worthless and a nuisance, clogging up the hospitals, then when you get old and look in the mirror and you see yourself as old, how does that make you feel about yourself?"

Ngaire is an international expert in maximising health for older people. "I've come from general practice. I've always been interested in ageing and passionate about older people. My grandmother got to be 94. She was an amazing person, living in Motueka with a huge garden. We had lots of Christmas holidays with her."

These days the goalposts have moved on the definition of 'elderly'. "For legal reasons 65 used to be considered aged because it's when you got the pension and you were supposed to retire," says Ngaire, who was recently appointed the Joyce Cook Chair in Ageing Well, created after Metlifecare founder Cliff Cook donated \$5 million to set up the role. "I think 75 is a much more reasonable number for being older now. But we're not really old until we're 80 or 85."

In New Zealand there are about 85,000 people aged over 85. "But by about 2060 we're going to have 385,000," says Ngaire.

She has been involved in the LiLACS NZ study – Life and Living in Advanced Age, a Cohort Study in New Zealand – which has debunked a number of myths about those aged 80 plus.

"The study showed most people of that age are able to manage themselves and to contribute to society. They don't see themselves as a burden or want to be a burden."

She says we should enable people in their 70s and 80s to keeping doing the things they can do. "So the idea is to take an enabling approach rather than a catastrophic approach to ageing so they can continue to be independent."

Technology will play a part. "Driverless cars are a great way to get around safely to visit families or to social occasions."

Respect is also important. "We need to expect

FEATURE

'The idea is to take an enabling approach rather than a catastrophic approach to ageing.'

elderly people to be a positive influence. They've got lots to contribute and they do it already."

Photo: Godfrev Boehn

That's come through clearly in the LiLACS. "We studied 85-year-old non-Māori (500 people) and 80 to 90-year-old Māori (400). We interviewed them and then followed them for five years, interviewing them every year. We found 25 percent are actively working and/or volunteering. More Māori were actively involved in their societies with tikanga roles on the marae and child-minding in their communities – up to 30 percent do that regularly."

Such activities require some physical fitness and that's one of Ngaire's key focuses. "We have a trial that gives people exercise in nursing homes – to stimulate balance and increase lower leg strength to try to help them stay upright.

"If you go into a nursing home, everybody does everything for you! But if you were in a little unit or something you'd have to get up to the bathroom, get your mail, get your breakfast. When you just sit, you lose condition quickly."

She says there's also a misconception that over 85s automatically go downhill if they get sick. "We measure their functional level every year and have found that people are like a see-saw. If they are at a lower level, it is quite possible that the following year they would be on a higher level of function – they do recover. More than half stay the same or improve.

"If someone gets the 'flu or has a fall or ends up with pneumonia, they can still recover and regain their function. So don't send them to a nursing home too quickly!"

The treatment for hip breaks, for example, now reflects that. "Having a hip fracture is one of the worst things that can happen. You have an operation and because you're in bed losing muscle, you can get pneumonia. Now they're very careful to get people out of bed as soon as possible, get the hip fixed fast – less than 24 hours is the best – and get them up again for rehabilitation. Older people can be rehabilitated like younger people – it just takes a bit longer."

As for dementia the news isn't all bad. "We think the rate of dementia is decreasing. There's a UK study of the over 65s called CFAS (Cognitive Function and Ageing Studies). In the 1980s they found 8.5 percent of people over 65 had dementia. They did the exact same study 20 years later and it was 6.8 percent."

The problem, however, is the rise in the absolute number as the population ages. "If in 2060 we have 385,000 over 85, you're going to have a hell of a lot more people with dementia."

Generally speaking, she says there are ways to reduce the chances of dementia. "The best thing to do is extend your brainpower during your life. If you have a high-functioning job, managing a whole lot of people, you're less likely to get dementia because you've had that constant stimulation of having to think about managing several things at once."

Ngaire says housing is going to become a real challenge in the next 50 years. One solution is for older people to go flatting together, which also helps prevent loneliness. "In this group of 85 year olds, about 78 percent own their own home. But only about 60 percent of current 50 year olds do. For renters, poverty in old age is a problem.

"I think we should turn all the old motels into this kind of living. You could have a pool and a barbecue. Imagine having a motel and all your friends live in the different units!"

Denise Montgomery

RESEARCH IN BRIEF

EPILEPSY BREAKTHROUGH



SCIENCE RESEARCHER IN THE MONEY WITH **HYDROCARBONS**

Associate Professor Jane Allison from the School of Biological Sciences is part of an international team that's been awarded a \$US1.2 million grant for three years.

The money comes from the Human Frontier Science Programme (HFSP) which funds research on the complex mechanisms of living organisms. HFSP has a key focus on supporting innovative, cutting-edge research at the frontier of the life sciences and encourages high-risk research that promotes international collaboration.

Emergency doctors now have a better way to treat severe epileptic seizures in children, thanks to a study led by Stuart Dalziel, **Professor of Emergency Medicine and** Paediatrics in the departments of surgery and paediatrics at FMHS.

Prolonged epileptic seizures are the most common neurological emergency in children seen by hospitals. The seizures are potentially fatal: up to five percent of affected children die and one third suffer brain damage. The longer the seizure, the greater the chance of long-term complications.

The study - which will change management of the condition globally - was published in medical journal The Lancet in April. In severe seizures, the first line of treatment (benzodiazepines) only stops the seizures in 40 to 60 percent of patients. Before this study, the secondline treatment was the anti-convulsant drug Phenytoin. In this world-leading study, funded by the Health Research Council of NZ, researchers compared Phenytoin with newer anti-convulsant Levetiracetam for the second-line treatment

The award is highly competitive, with fewer than four percent of applications funded in 2019.

Jane is in a team of four, with researchers from the UK and Sweden, looking at the physiological impact of hydrocarbon compounds, hydrocarbon fuels and global carbon cycling on algae and marine bacteria. Hydrocarbons are produced in vast quantities in the ocean by algae and by microbes called cyanobacteria - up to 800 million tonnes per annum. Luckily, these hydrocarbons are consumed by other bacteria living in the ocean. These bacteria are also known to have helped with the clean-up of petroleum released during ecological catastrophes such as the Exxon Valdez tanker spill.

Read the full story at tinyurl.com/AwardJaneAllison



of seizures. Levetiracetam is used routinely as a daily medication to prevent seizures, but had not been properly tested against Phenytoin for treatment of severe prolonged seizures.

The joint NZ-Australia research involved 233 children in 13 hospital emergency departments in both countries. The researchers found that given individually, the drugs are as good as each other with a moderate success rate (50-60 percent) at stopping a prolonged seizure. But strikingly, treatment with one drug and then the other increased the success rate of stopping a seizure to approximately 75 percent, potentially halving the number of children who need to be intubated, sedated and sent to intensive care.

Stuart, who sees the impact of seizures first-hand in his role as a paediatric emergency medicine specialist at Starship, says the finding is significant. "By controlling seizures in the emergency department we increase the chance of these children recovering more quickly and returning to their normal lives," he says. "This research has already changed practice and led to new guidelines in New Zealand and Australia."

THE KEY TO HAPPINESS

A 21-year-old nursing student spent 10 weeks with people around four times his age to find out what made them happy.

Mikkol Macabali received a Summer Research Scholarship from the University that allowed him to spend time with the residents of an aged-care home. "My aim was to uncover the residents' perspectives by directly asking what makes them happy and what they need to live well in an aged-care facility," says Mikkol.

His question to the residents was, 'What gives you meaning and makes you happy?' In his results, presented as video interviews, friendship emerged as the most important factor to living well. "The key to flourishing in residential aged-care was through forming meaningful relationships with staff or other residents," says Mikkol. "Socialisation was very important for both the mental and emotional wellbeing of all residents. It goes to show it's never too late to make a new best friend."

Mikkol hopes the digital stories will help the aged-care sector and his fellow students at the FMHS to better understand the importance of social culture in retirement facilities.

The research was supervised by Dr Lisa Williams, research fellow in the School of Nursing, and Associate Professor and nurse practitioner, Dr Michal Boyd, an expert in gerontology. Recently Michal was honoured with a special award at the Nurse Practitioners NZ conference for her service as a nurse practitioner.



Paula Morris in Menton, France. Photo: Tom Moody

My out-of-office message right now tells people I'm on sabbatical, but that's not the whole story.

For much of the first half of this year I'm in France as the Katherine Mansfield Menton Fellow, based in the last French town on the Riviera just before the road climbs into Italy and the Ligurian coast. Every morning I wake up to a broad view of the Mediterranean and a wide blue sky. Beyond a stretch of marinas to the west lies Menton's old town, a cluster of ice-cream-coloured buildings on a hillside. Most days I walk ten minutes to the Villa Isola Bella, the house rented by Katherine Mansfield in 1920-21, where I write in the 'Memorial', a studio below the villa, once used as a gardener's storage space. It's cool in there and quiet, aside from trains passing twice an hour and the chatter of birds and insects from the gardens that grow up steep slopes to the cliffs.

Mansfield was very sick when she lived here: much of her time was spent sleeping, or hoping for some miraculous recuperation. Menton is the sunniest town in France, and the two old cemeteries, high above the old town, are testimony to the number of TB sufferers – British, Russian, German – who travelled here in the late 19th and early 20th centuries in hope of a cure.

It was also a productive time for Mansfield as a writer, as the Memorial's various commemorative plaques attest: she wrote a number of stories here, including *The Daughters of the Late Colonel.* I'm here to write as well. My daily life in Auckland is built around the work of my students, especially the writers of the Master of Creative Writing (MCW) programme, of which I've been the convenor since 2015. This time in Menton is a necessary disruption, a break from other people's work so I can immerse myself in my own fiction and nonfiction – and my first play.

But some things I can't resist about other writers back in New Zealand, which is why I'm coming home in late April for almost a month. The first is my students and celebrating their success. I'll be back in time to watch last year's MCW class graduating, and to attend the book launches of two recent graduates: Rosetta Allan, whose second novel *The Unreliable People* is being published by Penguin Random House (see page 10), and Ruby Porter, whose first novel *Attraction* will be published by Text in Melbourne. In 2018 Ruby was the inaugural winner of the \$10,000 Michael Gifkins prize for an unpublished manuscript, and this year another MCW grad, Angelique Kasmara, is on the Gifkins shortlist – the winner to be announced at the Auckland Writers Festival.

That's the other writer drawcard for me in Auckland this month. Rosetta and Ruby will be featured in Auckland Writers Festival events, along with MCW grads and award-winning writers Renee Liang and Gina Cole, plus a host of colleagues – including Selina Tusitala Marsh, Jennifer Curtin and Siouxsie Wiles, and retired professors Albert Wendt, Witi Ihimaera and Karl Stead. Two of this year's writers-in-residence, the poet, novelist and *Landfall* editor Emma Neale and historian Joanne Drayton, will appear in panels and interviews, along with last year's writer-in-residence, playwright Victor Rodger.

Joanne Drayton is also a finalist in this year's Ockham New Zealand Book Awards, the awards ceremony held in the Aotea Centre on Tuesday 14 May during the festival week. I'm on the New Zealand Book Awards Trust and spend much of my year working towards this event. I can't bear to miss it. Even if it means leaving the Mediterranean and my Mansfield studio for a few weeks, and returning to the rain of Auckland – and to other people's words and imaginations.

Associate Professor Paula Morris

WIN

Paula Morris is involved in several events at the Auckland Writers Festival

from 13-19 May. One of those is being part of the line-up in Pūrākau: Māori Myths Retold, on 16 May. We have a double pass to Pūrākau to give away. Email: **Uninews@auckland.ac.nz** with Pūrākau in the subject line.

We also have a double pass to the Ockham NZ Book Awards on 14 May. Email UniNews@auckland.ac.nz with 'Ockhams' in the subject line.

ART & CULTURE

AUCKLAND WRITERS FESTIVAL

Events featuring writers connected to the University of Auckland.

15 May:	Opera by Witi Ihimaera, 6pm tinyurl.com/AWF-WitiOpera	
15 May:	Victor Rodger, 7.30pm tinyurl.com/AWF-Victor	
16 May:	Karl Stead Lecture, 5pm tinyurl.com/AWF-KarlStead	
17 May:	Rosetta Allan and Joanna Grochowiz, 4pm	
	tinyurl.com/AWF-Rosetta	
17 May:	Ruby Porter tinyurl.com/AWF-Ruby1 and 18 May, 2.30pm	
	tinyurl.com/AWF-Ruby2	
17 May:	Selina Tusitala Marsh (with Akala), 2.30pm	
	tinyurl.com/AWF-Selina	
17 May:	Joanna Drayton, 2019 UoA Writer in Residence, 10am tinyurl.com/AWF-Drayton	
17 May:	Emma Neale, 6pm	
in may.	tinyurl.com/AWF-Neale	
17 May:	Caroline Barron, 2.30pm tinyurl.com/AWF-Barron	
17 May:	Gina Cole, 6pm	
	tinyurl.com/AWF-GinaCole	
18 May:	Albert Wendt and Witi Ihimaera, 11.30am	
	tinyurl.com/AWF-AlbertandWiti	
18 May:	Siouxsie Wiles (with Peter Godfrey- Smith), 10am	
	tinyurl.com/AWF-Wiles	
18 May:	Jennifer Curtin (chairing A Sporting	
	Nation), 2.30pm	
	tinyurl.com/AWF-Curtin	
18 May:	Renee Liang, 4pm	
	tinyurl.com/AWF-Renee	
19 May:	Mary Kisler talking about Frances	
	Hodgkins, 11.45am	
	tinyurl.com/AWF-Hodgkins	
19 May:	Jennifer Curtin with Marilyn Waring, 4pm	
	tinyurl.com/AWF-CurtinwithWaring	
Paula Morris, multiple events – search her name		
at writersfestival.co.nz		

Sonya Wilson - several events, search her name.

ART & CULTURE



FITTING **TRIBUTE**

It's unsurprising that both my mum, Heather McAllister, and I ended up working at the University, she as a Creative Arts and Industries (CAI) fundraiser, and me in the ClockTower.

As an MA in philosophy, Heather had passed on to me her intellectual curiosity (nerdiness), pleasure in community (gossip) and prioritisation of independent, critical thinking (arguing). We'd regularly meet at University cafés to gossip and argue over her favourite ginger crunch.

After she died, unexpectedly, shockingly, of lung cancer aged 67 in December 2017, I decided that the best way to commemorate Heather's unique splendiferousness was not with a park bench plaque but with a book. A beautiful book, as a lasting, portable tribute to her humour and depth, full of interesting, witty, meaningful ideas.

So I used some of my legacy to commission essays from five exceptional local writers. I asked the writers – who all happen to be University of Auckland alumnae – to write whatever nonfiction they wanted. The resulting collection, *Life on Volcanoes*, is published this month, and I am utterly delighted with it. With wit and verve, all the essayists have surpassed even my stratospheric expectations.

Razor-sharp commentator Tze Ming Mok dissects China's treatment of people in Aotearoa and Xinjiang; literary genre-bender Courtney Sina Meredith – an erstwhile *UniNews* cover girl – reveals the pain of her endometriosis; stylish humourist Ruth Larsen describes her adventures as a stage mother; and superb revolutionary thought leaders Tui Gordon and Tulia Thompson offer compelling alternatives to capitalism's poverty and commercial "self-care" in this age of beneficiary bashing and #metoo recognition.

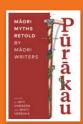


And, yes, all the essays display intellectual curiosity, pleasure in community, and independent, critical thinking. A fitting tribute indeed to the smart, sociable and wonderfully complex woman who I was proud to call my mum.

Janet McAllister

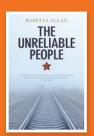
Life on Volcanoes: Contemporary Essays Beatnik Publishing RRP \$25

BOOKS IN BRIEF



Pūrakāu: Māori Myths Retold, Witi Ihimaera and Whiti Hereaka eds (Vintage, RRP \$38)

A collection of myths written by some of our most distinguished Māori storytellers including Paula Morris.



The Unreliable People, by Rosetta Allan (Penguin Random House, RRP \$38)

Rosetta Allan graduated with her Masters in Creative Writing in 2018. Her teacher, Paula Morris, describes this book as, "an absorbing novel

of disappearances and discoveries set again the atmospheric backdrop of the dissolving Soviet Empire".

The Meaning of Trees, by Robert Vennell (HarperCollins NZ, RRP \$55)

Robert Vennell graduated from the University in 2017 and works as collections manager for the

natural science galleries at Tāmaki Paenga Hira. His blog meaningoftrees.com has been turned



into a book. The beautifully illustrated hardback about our native plants reveals how they've been used in traditional medicine, as food and as powerful symbols in

When We Remember to Breathe: Mess, Magic and Mothering, by Renee Liang and Michele Powles (Magpie Pulp, \$25, ebook \$7)



Author, paediatrician and lecturer Renee Liang and author Michele Powles were both pregnant at the same time. They wrote a paragraph or a page every week and sent it to one another, marking their progress in pregnancies, births and their children's early lives.

The result is an uplifting book that beautifully articulates their experience of motherhood. Says Renee: "A lot of people take photos to record their child's progress but as writers it made sense for us to do it in a literary way."

Two Inspiring Deans: TDJ Leech and GCJ Dalton, by Colin Maiden and Des Mataga (Opuzen Press, \$55 incl delivery)



Two distinguished alumni, former Vice-Chancellor (1971-94) Sir Colin Maiden and Des Mataga, explore the impact of engineering deans, professors George Dalton and Thomas Leech, who transformed the School

of Engineering from 1940-54. Payment to Opuzen Press bank account 06-0193 -0862124-00 then email desmataga@gmail.com

Under Glass, by Gregory Kan (Auckland University Press, RRP \$24.99)



Gregory Kan's follow-up book of poetry to *This Paper Book* is a dialogue between a series of prose poems, following a protagonist through a mysterious and threatening landscape, and a series of verse poems, driven by the speaker's

compulsive hunger to make sense of things.

CONNECTING WITH **TAONGA**

A recent workshop was a great opportunity for Cultural Collections staff to delve into the collections and identify items they considered to be taonga. The exercise brought out all kinds of interesting material and prompted an enthusiastic discussion.

The workshop, Taonga: He tīmatanga, was run by Rukuwai Jury, Cultural Collections assistant, Te Kaitiaki Māori, from the Archive of Māori and Pacific Sound. The aim was to begin a discussion about taonga and what having taonga in a collection means for staff who care for them. Participants brainstormed and discussed what taonga meant to them and then compared their ideas with definitions from three key sources.

Next, they looked at photos of seemingly random items and discussed which might be taonga and why. But it was the homework that really struck a chord. Each person was asked to select an item from their collections, post an image, video or song about it on Yammer and state why they believed it was a taonga. Their colleagues were invited to vote for their favourite posts and the 'winner' received a mystery taonga of their own.

Among the chosen taonga were a 1938 recording of Princess Te Puea Herangi during the opening of Tūrongo House at Tūrangawaewae Marae; an original 1921 architectural drawing of the ClockTower building; the Michael Parekowhai *Kapa Haka* sculpture from the University's art



collection; an 1883 employment letter for one of the University's first professors; and a tā koha family photograph of a benefactor who supported the work of the Archive of Māori and Pacific Sound.

Rukuwai says he was pleased with everyone's enthusiasm, including during the Yammer voting.

"I had hoped that Cultural Collections staff would engage with each other and highlight the taonga but I didn't expect the level of interest or the positive way the taonga discussion was embraced by everyone, including by those who voted."

It was an important discussion for the Cultural Collections teams who work in the Archive of Māori and Pacific Sound, Special Collections, the University's art collection and Media Services within Libraries and Learning Services Te Tumu Herenga.

The workshop was so popular that Rukuwai has repeated it for others in Te Tumu Herenga and is developing a follow-up session for Cultural Collections that will address the cultural considerations of caring for taonga.

"Our taonga connect people from the past with the present, and as kaitiaki, we ensure the taonga endure, to connect us with the future," he says.

Cultural Collections staff



BOOK LOVERS: WIN!

For the Auckland Writers Festival, we have giveaways to these books by writers connected to the University. Email your choice to UniNews@ auckland.ac.nz Winners announced in June.

Frances Hodgkins: European Journeys Catherine Hammond and Mary Kisler, eds (Auckland University Press, RRP \$75)

This hardback has been published to coincide with the *Frances Hodgkins European Journeys* exhibition at Auckland Art Gallery Toi o Tāmaki from 4 May until 1 September, 2019.

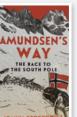
Loving Sylvie by Elizabeth Smither (Allen & Unwin NZ, RRP \$36.99)

Elizabeth Smither was awarded an honorary doctorate of literature by the University in 2004. Her new novel interweaves the story of three women across three generations – Sylvie, her mother Madeleine and grandmother Isabel.

Amundsen's Way: Race to the South Pole by Joanna Grochowicz (Allen & Unwin NZ, RRP \$18,99)

loanna Crochowicz is a graduate of:

Joanna Grochowicz is a graduate of the University's Masters of Creative Writing



programme. This book is an Antarctic adventure story for children, which builds on the diaries of Norwegian explorer Roald Amundsen. It tells the story of how he raced Robert Falcon Scott to the South Pole in 1910 – and made it back alive.

CLASSIFIEDS

ACCOMMODATION AVAILABLE

SHORT-TERM RENTAL: Point Chevalier art deco home from 20 May to 19 June. Fabulous location, walk to beach! Three bedrooms, fully furnished and renovated. Rent reduced to \$625 a week. Comes with two happy cats. A car may be available. Call: 021 1589467 or caryntrupp@gmail.com

SABBATICAL ACCOMMODATION: Three-bedroom furnished Mt Albert house available for 3 to 12 months from mid-January, 2020. Familyfriendly fenced back garden, modern kitchen, two bathrooms. Easy (approx. 20min) travel to city campus by train or bus. Close to schools, parks and shopping. Contact: pat.neuwelt@gmail.com

THREE-BEDROOM HOUSE PLUS SEPARATE SELF-CONTAINED APARTMENT: Stunning rural/ sea location. Our modern, comfortable house is situated 50km north of Auckland city, with easy commute by park-and-ride. Available second semester (from 3 July for minimum of 3 months). \$550 a week. Full details at tinyurl.com/ MahurangiSabbatical

FOR SALE

BRYNDERWYNS BUSH PROPERTY: Your chance to share in 423ha QEII covenanted Brynderwyns bush property, 10 mins from Mangawhai Heads. Sunny building site. Enjoy joint ownership, privacy, clean streams, walking tracks. Active conservationists sought. Kiwi present, so no dogs or cats. Affordable opportunity. POA. Phone 09 376 4069 or email marunui.share@gmail.com

SERVICES

PRINTING: Course books, conference, presentation and display, pull-up banners, posters and flyers. Newcomb Digital have amalgamated with Soar Printing to offer a wider range of quality printing. Now at 100 New North Road, Eden Terrace. Approved 'preferred supplier' to the University of Auckland. Contact Barny Hards: barny@newcomb.co.nz or 027 482 6272.

CITY LEGAL SERVICES: Rainey Collins Wright is a small law firm at L1 Princes Court, 2 Princes Street. We are near the University, with good parking. We can assist with property transactions, trusts, wills, administration of estates, enduring powers of attorney and relationship property matters. Please call senior solicitor Nichola Christie on 600 0256 to discuss your needs or email: nchristie@rainey.co.nz. Website rainey.co.nz

BINDING: Auckland University Bindery is your one-stop print shop. We have the latest digital printing technology for leaflets, booklets, cards and invitations produced to a very high standard. We can do it all – print, bind and deliver. Print and collect on the same day! Call 278 2456 or email unibindery@auckland.ac.nz.

VACANCIES

TREASURER'S POSITION: Auckland University Dance Association (AUDA) needs a new club treasurer. You will be managing our accounts and working with a committed group of executives. No dance experience required! Accounting students are encouraged to apply. For more info, email: audanceassociation@gmail.com.

MĀRAMATANGA

IT'S NOT ALL ABOUT THE DOCTOR

In the growing global conversation about compassion in health, the doctor (or the nurse) is unsurprisingly prominent. We see troubling news reports of patient suffering and neglect and wonder "How could they let that happen?" Given it is the doctor who appears to have failed in their duty of care, such questions seem both necessary and reasonable.

A similar focus is also evident in research, most of which is conducted under the "compassion fatigue" banner. However, while studying compassion fatigue has highlighted burnout in our healthcare systems, this focus has also blinkered us to the fact that compassion is powerfully influenced by factors that are well beyond any doctor's control.

In most sciences, interventions follow from the factors seen as causing the problem. In medicine, we treat doctors and nurses as the root cause of a lack of compassion. Commensurately, we debate different selection criteria in our medical schools, whether there should be more compassion training, and if we should provide greater rest/recuperation. Such conversations are clearly worth having. However, they also obscure the self-evident fact that healthcare professionals are only one piece of the overall compassion puzzle.

Like all compassion, medical compassion has its origins in the evolutionary processes that resulted in humans naturally caring for the young or taking mutual care of their group.

Accepting that "medical" compassion is

subject to the same influences that govern everyday compassion suggests a unitary focus on the physician which is inaccurate, unhelpful and obscures other important considerations.

While compassion in medicine is expected and a legal requirement, everyday compassion is optional and celebrated. The NZMA Code of Ethics lists 12 principles and requires that physicians "Practise the science and art of medicine to the best of [their] ability with moral integrity, compassion and respect for human dignity." So in health, compassion is obligatory, repeated and compensated while nonmedical compassion is unexpected, voluntary and infrequent. The effects of repetition, compensation and obligation on compassion in medicine are unknown.

As well, like all behaviour, medical care happens in particular contexts. Doctors work in demanding environments, with shorter appointment times, frequent interruptions, pressure to maintain electronic records and the like. How many of us have experienced our doctor frantically typing or answering the phone during an appointment? Does this help compassion? It seems unlikely and the systems in which we expect our doctors to work do not naturally lend themselves to care.

Finally, we need to talk about ourselves – the patients. All compassion is expected to occur in the relationship between a helper and the person in need of help. To think that the characteristics of the person seeking help are not relevant is naïve. Evidence shows that empathy – a response related to compassion – declines across medical training, dropping precipitously during the clinical years when junior doctors start dealing with patients. A coincidence? Perhaps. But our own experience tells us that it's more difficult to care for some people. Do we care more or less for the friend who consistently gets into destructive relationships? The spouse who complains of toothache while refusing to go to the dentist? The student who is repeatedly disorganised but seeks an extension?

bot Compassion

Theoretical characterisations suggest compassion systems are not designed to be limitless. Neither are those of our doctors. Nonetheless, in medicine, we expect physicians to care even when patients are demanding, insulting or unappreciative or when their suffering seems self-inflicted (such as lung cancer following a lifetime's smoking).

Certainly, doctors should *strive* to be compassionate to all, but the type of patient does play its part. In experimental studies we've conducted, we've found the effect of the patient on whether their doctor is compassionate is up to six times more important than any other factor. Six times!

This is not a question of blame. Rather, it's a question of recognising that the natural capacity to care does not mean that compassion systems lack checks and balances.

So, yes, doctors need to think about compassion, but so do patients. Yes, we need to train our doctors to care but we also need to think about how our healthcare systems affect compassion. The lack of compassionate medical care is a systemic problem that requires systemic thinking and systemic solutions. It's not all about the doctor.

About the authors: Professor Nathan Consedine is a health psychologist in the School of Medicine. Dr Tony Fernando is a sleep specialist, psychiatrist and a senior lecturer in psychological medicine at FMHS.