

# Uni NEWS

JUNE 2019



## PENE FOR YOUR TORTS

New Dean of Law Pene Mathew: educating our law students for the modern legal profession

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## INVESTITURE FOR A PROFESSOR

Distinguished Professor Dame Margaret Brimble attended her investiture as a Dame Companion of the New Zealand Order of Merit at Government House in May. Accompanied by husband Mark and daughter Rebecca, Dame Margaret was recognised for her services to science, including her leading contribution to medicinal chemistry and drug development in New Zealand. The investiture was hosted by the Governor-General, the Right Honourable Dame Patsy Reddy (pictured with Dame Margaret).



## BIG NIGHT FOR MĀORI BUSINESS

An astrologer and authority on Maramataka, the Māori lunar calendar; experts in Māori tourism and TV-star funeral directors were some of the winners of the University of Auckland Aotearoa Māori Business Leaders Awards in May. Receiving the Māori Woman Business Leader Award, Pania Tyson-Nathan (Rongomaiwahine, Ngāti Kahungunu), CEO of NZ Māori Tourism, told around 500 guests she accepted it on behalf of everyone who works in marae kitchens. "They are our unsung heroes. We do what we do because of them."



From left: Pania Tyson-Nathan with Kaiora and Francis Tīpene of TV show *The Casketeers*, who won the Māori Entrepreneurial Leader Award.

## YOUNG ACHIEVER

At just 17, Tristan Pang has his Bachelor of Science degree in maths and physics under his belt – with a near-perfect grade point average. Tristin graduated in May, having begun full-time study at the University aged 13, and is now doing his honours in mathematics. He hopes to complete his PhD by the age of 21. Tristan was also recently named one of the Kupe Leadership Scholars, a scholarship to support exceptional postgraduate students who show leadership ability. He's already mentoring and teaching at undergraduate level.



Tristan Pang with his parents Thomas and Elaine Pang.

## WRITER DELIVERS AS RACONTEUR

Emeritus Professor C. K. Stead kept his audience enthralled with stories of literary rivalry, complex personal lives and masked identities, at the Auckland Writers Festival in May. Delivering the University of Auckland Public Lecture, Karl pondered his lifetime of literary connections with mentors and friends, colleagues and critics; from Brasch and Curnow to Sargeson. Answering the question, 'when does gossip become literary history?' he concluded the public's appetite for personal information about a writer's life largely depends on how famous the writer becomes.



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Main cover image: Pene Mathew by Dean Carruthers

## BOOK WINNERS FROM MAY

*Loving Sylvie* (Elizabeth Smither, Allen and Unwin) won by Cass Finlayson

*Frances Hodgkins: European Journeys* (ed Catherine Hammond and Mary Kisler, AUP) won by Suhaila Sizali

*Amundsen's Way: Race to the South Pole* (Joanna Grochowicz, Allen and Unwin) won by Joanne Ryves

## HARLEY HERN ONE STEP CLOSER

Harley Hern, profiled in Snapshots in May as a finalist in the Commonwealth Short Story Prize competition, has been named the regional winner for the Pacific, for her story *Screaming*. Harley completed her Masters in Creative Writing at Auckland in 2015. She was one of five Commonwealth regional winners chosen from a shortlist of 21, after 5,081 entries were submitted from 50 Commonwealth countries. The grand prize winner from the five finalists is named on 9 July. Keep an eye on [twitter.com/cwwriters](https://twitter.com/cwwriters)

**EDITOR** Denise Montgomery

[denise.montgomery@auckland.ac.nz](mailto:denise.montgomery@auckland.ac.nz)

**PHOTOGRAPHY** Godfrey Boehnke, Billy Wong

**DESIGN** Stephen Wang

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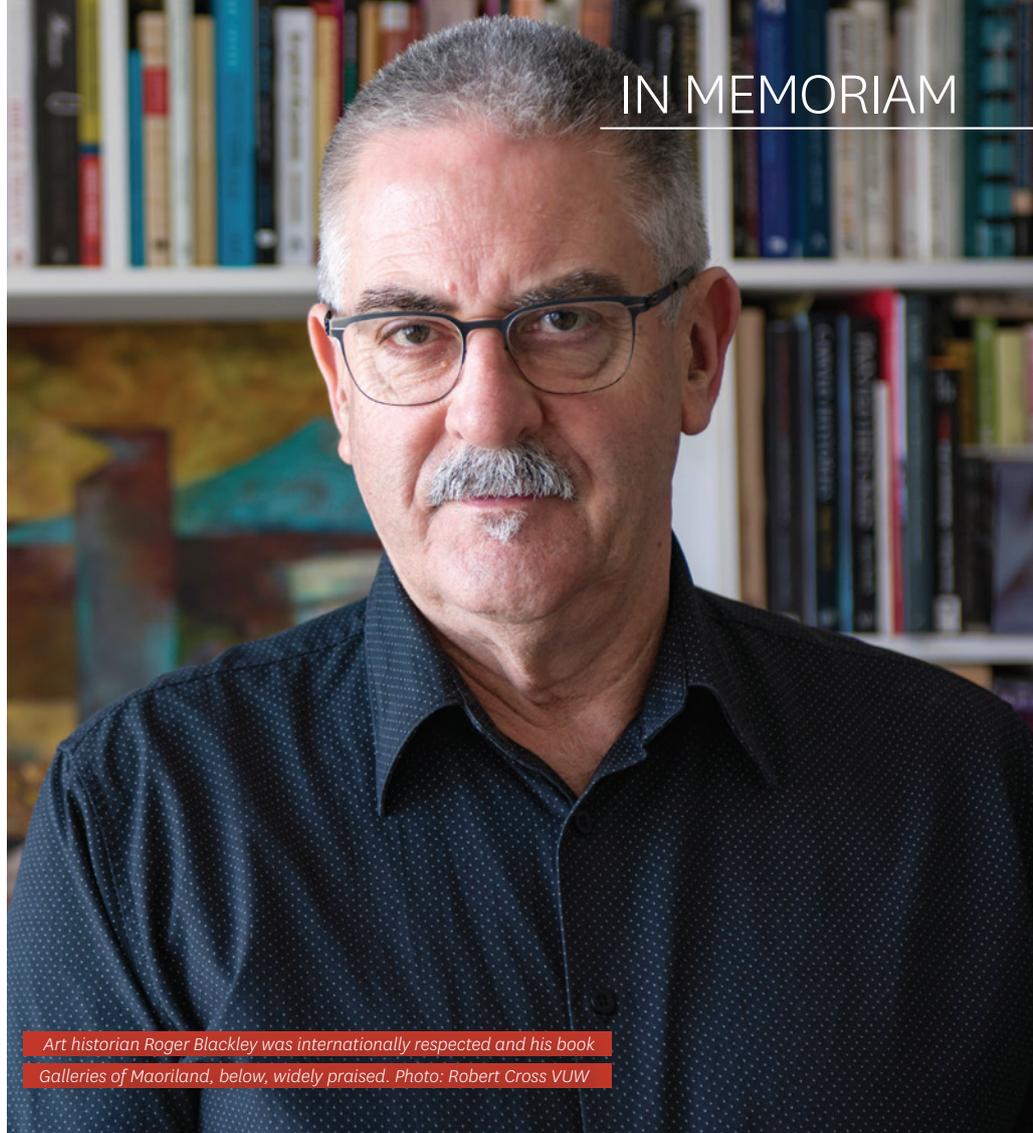
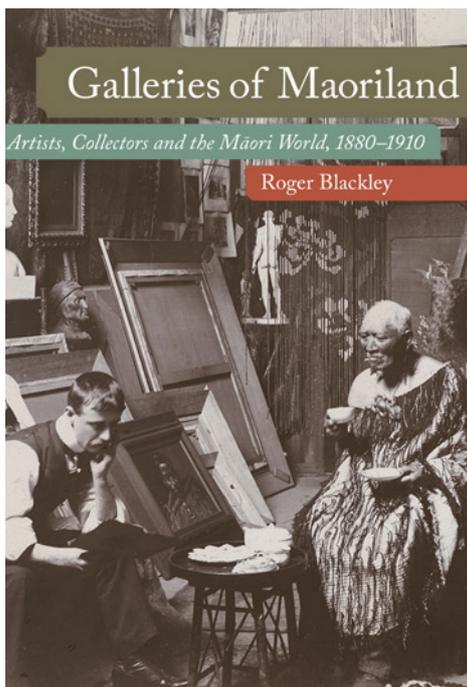
## ROGER ALLAN BLACKLEY

29 JULY 1953 – 15 MAY 2019

**Distinguished art historian and University of Auckland alumnus Roger Allan Blackley died in Wellington on 15 May, after a short illness.**

His was a national and international reputation built on a substantial body of publications and exhibitions, which made him a specialist in the field of colonial New Zealand art.

Born in the Wairarapa in 1953, he graduated with a Master of Arts in art history with first-class honours from the University in 1978, and was first employed in the Art History department to document and produce a checklist of exhibitions at Auckland art galleries. He was appointed Curator of Historical New Zealand Art at the Auckland City Art Gallery shortly afterwards in 1983, and remained in that role for 15 years. His thesis, an exhaustive study of the painting and lively writing of the 19th-century landscapist Alfred Sharpe (1836-1908), was published as the exhibition catalogue to accompany the exhibition *The Art of Alfred Sharpe* at the Gallery in 1992.



Art historian Roger Blackley was internationally respected and his book *Galleries of Maoriland*, below, widely praised. Photo: Robert Cross VUW

Roger's other exhibitions there included the nationally touring exhibition of the work of Albin Martin (1813-1888), organised to mark the centenary of Martin's death in 1988. As part of the sesquicentennial commemorations of the signing of the Treaty of Waitangi in 1990, Roger created the landmark exhibition *Two Centuries of New Zealand Landscape Art*. He also produced a monograph on pictorial panoramas of Auckland and contributed to a study of Paul Gauguin's relationship with Māori art before producing his landmark book, *Goldie*, on the artist Charles Frederick Goldie (1870-1947) in 1997.

Roger's argument in *Goldie* was a challenge to orthodox art's historical view that the artist's paintings were racist and patronising. Instead, he demonstrated the control that the Māori subjects had over how they were depicted, and documented Māori veneration of his skill as a portraitist of elderly kuia and kaumatua. Now in its fourth printing, Blackley's substantial book made him an authority on the artist, and led to television and radio interviews about forgeries and thefts of the artist's work.

In 1998 he became an art history lecturer at Victoria University of Wellington, and quickly became a highly regarded teacher while

continuing to publish on collections, contributing to the Scala publication on the Auckland Art Gallery, as well as producing two exhibitions with catalogues for the Adam Art Gallery.

His research on cultures of collecting in the Victorian and Edwardian periods led him to complete a doctoral dissertation on the topic in 2016, which was published by Auckland University Press last year as *Galleries of Maoriland: Artists, Collectors and the Māori World*. In it, he expands understanding of the era by showing how collectors and exhibitors here were part of a global network of artists, patrons, dealers and writers.

The book was described as "a work of intellectual distinction which represents a significant archival campaign and a refined understanding of the social and historical setting", by Tim Barringer of Yale University.

Roger Blackley's wit and depth of knowledge has been greatly appreciated by his students and the wider community of art historians in Aotearoa New Zealand and his death is a huge loss.

■ Associate Professor Linda Tyler, Convenor of Museums and Cultural Heritage in the Faculty of Arts.



All five winners for best doctoral thesis were women. Pictured are four of them.  
L-R Jacqualine Robinson, Yvonne Anderson, Emma Davison and Julie Spray.

## EXCELLENCE ACKNOWLEDGED

**The high quality of work and contribution of 19 researchers and teams across the faculties and institutes at the University of Auckland was acknowledged in the Research Excellence Awards on 7 May.**

The theme of the awards, held at Old Government House was 'The Future of Work: Te ao mahi ā mua'. Professor Jim Metson, the Deputy Vice-Chancellor (Research), said the theme highlighted how research shapes and responds to the disruptive technologies affecting the world of work. Artificial Intelligence, automation and robotics have a big impact on jobs, skills and wages and this will accelerate.

"Our theme also reflects the University's commitment to the United Nations Sustainable Development Goals. Addressing the SDGs is a major undertaking and cannot be achieved without harnessing expertise across a steadily widening range of disciplines," he said.

The awards recognise excellence at four stages in the careers of researchers: from the best doctoral theses, leadership and achievement in early career researchers, through to the achievements of some of the University's most senior researchers.

The 2019 Research Award winners:

### Best Doctoral Theses

- Yvonne Anderson, Liggins Institute
- Emma Davison, Chemical Sciences
- Rachel Low, Science
- Jacqualine Robinson, FMHS
- Julie Spray, FMHS

### Early Career Research Excellence Awards

- Ivanhoe Leung, Science
- Anna Boswell, Arts
- Christopher McKinlay, Liggins Institute
- David Moreau, Science
- Katrina Poppe, FMHS
- Xuyun Zhang, Engineering

### Vice-Chancellor's Commercialisation Medals

- Bruce MacDonald, Engineering
- Pierre Quenneville, Engineering
- David Budgett, Auckland Bioengineering Institute and Simon Malpas, FMHS (jointly)

### Research Excellence Medals

- Individual:** Marston Conder, Science; Jichao Zhao, Auckland Bioengineering Institute
- Group:** Andrew Barrie, Creative Arts and Industries; Cynthia Farquhar, FMHS



## PENE FOR YOUR TORTS

The new Dean of the Law School is big on social justice and diversity in education.

**Professor Pene Mathew is sitting in a huge wood-panelled office with largely empty bookshelves. Since she started at the University as Dean of Law on 25 March, her focus has been on settling into a new country and her new role, rather than stacking the shelves with legal tomes.**

Pene has come from Griffith University in Queensland. Before that, she'd taught at Melbourne Law School, the Australian National University College of Law, and Michigan Law School in the United States.

"I'd been dean at Griffith for four years and was very happy in that role, but I felt I'd come to the end of the challenges. I went on sabbatical and did some research with the UN High Commissioner for Refugees – work around the Global Compact on Refugees.

She says around 85 percent of the world's refugees are hosted in developing countries, which are the least equipped to deal with them. The UN has tried to set out some principles, although these are non-binding.

She's been working on the New York Declaration for Refugees and Migrants, the Global Compact for Safe, Orderly and Regular Migration and the Global Compact on Refugees.

"But I also had an eye out for senior leadership roles and this one came up. It's a very good university and a very good law school. The appeal of an independent faculty and being part of the senior leadership team was attractive, so I thought I'd apply and see what happens."

What happened is she's now meeting all staff and hearing about any challenges.

"I'm making sure I get to see every staff member individually to talk about their aspirations and research and anything they want to share.

"I'm getting the sense we could look at the way we do our teaching ... that there might be some appetite around that. So we'll be thinking through with the faculty 'what do we really want to do with our students and what do we think will really equip them for the future?'"

"There are also broader challenges around what the legal profession is going to look like. For example, how will Artificial Intelligence (AI) affect it and how should the curriculum evolve to help students deal with its changing nature?"

## SPECIAL SCHOLARSHIP

**Alumna Muriel Roberts was profoundly deaf and it wasn't until her late fifties that she decided to do tertiary study.**

Nineteen years later she had three degrees – a BA (English), a MA (Italian) and a LLB. When she graduated she thanked staff in the University of Auckland's Disability Services for providing her with a tape recorder for lectures.

Now, thanks to a bequest from Muriel, who passed away in 2015 aged 98, a new scholarship has been set up for students with disabilities, to give them the opportunity to study overseas.

Student Disability Services Manager, Mark Thomson, says the University is very grateful for the generous gift. "I'm sure that Muriel's inspiring story will be motivating for students who wish to study abroad, especially those who have faced barriers to travelling and living overseas."

Applications for the Muriel Roberts Study Abroad Award for Students with Disabilities close on 1 July. The scholarship is worth \$15,000.

Apply at: [tinyurl.com/MurielRobertsScholarship](https://tinyurl.com/MurielRobertsScholarship)

*‘When it comes to people arriving by boat without a visa, Australia’s policies have been dreadful. Draconian.’*

Professor Pene Mathew says big-picture thinking is needed with the growing Law School. Photo: Dean Carruthers

Another issue is one raised by alumna Chief Justice Helen Winkelmann in last month’s issue of *UniNews* – that law schools need to address a lack of diversity in their students.

“My faculty is already very firmly on board with that. Auckland Law School does have a natural advantage in that the city is multicultural. I’ve been really struck by the Māori and Pacific populations here and my faculty is very committed to equity and diversity. We already have a small taskforce thinking about precisely the issue the Chief Justice has raised, particularly around students of lower socio-economic background.”

Dame Helen said law schools don’t give disadvantaged students enough time to achieve.

“What Dame Helen might be talking about is that you may be privileging kids who have a private school background, for example, versus those who haven’t had the time to achieve in secondary school to get the required results.

“There are kids who are really battling, with no quiet space to study at home. They don’t have the kind of social and cultural capital of parents who’ve been to universities themselves, and who know how to prepare their child for that and how to access the resources and those sorts of things. I suspect that’s what she’s talking about.”

Pene says big-picture thinking is needed with the Law School on a growth trajectory. “What is the legal profession going to look like? We need a diverse profession. How do we get more lower socio-economic students into Law School? Those are exciting challenges, but they take time to think through with your colleagues.”

As far as gender equity goes, the Law School is doing well. “The numbers have been healthy for some time – it’s probably slightly more women

studying law, about 60-40. Looking beyond the University, we have another female chief justice and some women in senior positions. But when you look at the top echelons of the profession, we’re still lacking. There aren’t the same number of women partners or Queen’s Counsel.”

She says more law firms need to think about how to accommodate women during the child-rearing years. “To have educated these high-performing women and then lose them, and not see them progress to top positions, is a bit heartbreaking.”

Pene is an internationally respected expert in human rights and refugee law, and was entering academia just as Australia brought in its mandatory detention policy for boat arrivals.

“I cut my teeth writing about arbitrary detention being a violation of the right to liberty. In Australia, we’re still quite high on the list of countries that do a very good job of resettling and integrating refugees. But unfortunately when it comes to people arriving by boat without a visa – the policies have been dreadful. Draconian.”

She says despite a concerted campaign to get children out of off-shore detention centres on the island of Nauru, and with some refugees accepted into the US, the issues are ongoing.

“The US has an extreme vetting process which means certain nationalities are not accepted. The risk of mental illness for refugees and asylum seekers is very high. The strain on health services in Nauru and Papua New Guinea is ridiculous.

“Papua New Guinea is a developing country. At one stage, Nauru was quite wealthy but it’s a small community. They don’t have the facilities, possibly even for their own population, but certainly not for the kind of complex trauma refugees may have.”

While detention in the formal sense is over on

Manus and Nauru since the creation of an “open centre” on Nauru and the closure of the Manus Detention Centre, the reality is far from that. “The refugees are not wanted. There have been quite a number of violent incidents, so it’s dangerous.

“Nauru is small [13,000 people on 21 sq km of land] and if they don’t belong in that community, and don’t want to be there, you could argue they’re still in detention. Mandatory detention is bad. But the offshore detention, where it’s indefinite and in places that shouldn’t be asked to cope with Australia’s refugees, is appalling.”

She’s also aware of a crisis in access to justice at home, in New Zealand and Australia, and says if more graduates were prepared to move outside the main centres it would help. “You want to produce graduates who have a firm sense of social justice. It’s not just about being a proficient technician. Most Australian law schools have, using the American term, clinical legal education programmes, where students are actively placed with a community legal service.

“They deal with the most vulnerable members of the community and that’s often the experience students will say was the highlight of their entire degree – helping those who really, really need it.

“The president of the Law Society, Tiana Epati, talks about the joys of being a lawyer and the fact you can say to someone ‘I know what to do and I will take that stress away from you and I will solve this particular problem’. That’s a very empowering position to be in.”

#### ■ Denise Montgomery

The Auckland Law School is planning a women’s mentoring programme for law students. To become involved, email [catherine.davies@auckland.ac.nz](mailto:catherine.davies@auckland.ac.nz).

# WHAT'S NEW



## COOL AND HOT TOPICS FOR WINTER WEEK

**Winter Week on Campus runs 8-12 July and features 15 lectures showcasing some of the University's world-class research, presented by enthusiastic researchers. It's an annual event open to the public and, as such, the topics have mainstream appeal.**

One of those topics is 'The Health Implications of Travel Choices', a lecture by Associate Professor Kim Dirks (pictured). Kim, who is Head of Epidemiology and Biostatistics in the School of Population Health, says her lecture will be informed by her wide-ranging research over the years, on the benefits and disadvantages of all modes of transport in an urban environment. That includes numerous studies on the risks

and benefits of walking, cycling, driving and public transport. The subject area isn't as clearcut as people may think. For example, for those who choose public transport, the potential benefits to health gained from a modest amount of regular exercise is significant. But we also need to acknowledge the risks of walking and cycling, and create transport infrastructure to ensure people who cycle and walk aren't disadvantaged.

"There's exposure to pollution in the city, and the risk of harm," says Kim.

"In a car, you have a physical barrier between you and the outside world – as well as a shield, to protect you from pollution and noise, and travel time tends to be quicker than when cycling

or walking, though not always. There are health benefits to walking or cycling, but when you are breathing harder, you can be taking in polluted air."

Kim says challenges will remain until we design urban roadways to provide some separation between traffic and people, and reduce our dependence on petrol and diesel vehicles, thereby reducing the amount of pollution produced.

Her lecture will cover everything from cycling, to the benefits of physical exercise, to potential health issues from listening to loud music on a noisy bus, through earphones.

"Our studies have found around 80 percent of people listening to music for a long time on public transport exceed the recommended daily decibel allowance," says Kim.

"It's not like the old days when the batteries didn't last long, the audio quality wasn't great and you had to turn the tape in your Walkman over to keep the music going!"

She says other issues include ongoing traffic noise in urban areas affecting people's sleep. "The topic is so broad, the challenge will be to keep it within the timeslot."

Lectures will run for an hour, which includes the opportunity to ask questions, and there are morning and afternoon sessions.

Tickets to the public lectures are on sale at [publicprogrammes.ac.nz/events/winter-week/](http://publicprogrammes.ac.nz/events/winter-week/)

## FOR THE STUDENTS

**A new initiative has been launched to provide emergency financial assistance for students in need and to establish early intervention programmes that will support student health and wellbeing.**

Staff will be invited to help support the campaign if they can, by making a donation to the Staff for Students: The Wellbeing Fund – as much or little as they choose. The campaign, called 'Hands Up for Students', recognises that some students face financial barriers or unexpected circumstances that can result in them having to drop out. This could be as simple as not being able to afford counselling, or not being able to replace a broken laptop. The aim is to help support them to stay at University to complete their studies.

To find out more:  
[giving.auckland.ac.nz/HandsUp](http://giving.auckland.ac.nz/HandsUp)

## MAKING AN IMPACT



**The University is holding Volunteer Impact Week from 16-22 June. During that week, staff, students, friends of the University and alumni all around the world will volunteer in their communities or on campus.**

There's a pile of information on the website ([tinyurl.com/VIWJune16to22](http://tinyurl.com/VIWJune16to22) is the easiest way to get there) and the aim is to build on the University's For All Our Futures campaign. One of the questions asked in that is, "Can we increase the contribution our community makes to the world?" The University is tying in with Volunteering New Zealand's National Volunteer Week for this, its inaugural volunteer week.

Organisers says people can volunteer anything from an hour upwards and if you can't think up something to do, there are a whole lot of events you can piggyback – for example, cleaning up local parks or beaches, taking part

in wildlife surveys or planting native trees. It's just a matter of clicking the "view volunteering opportunities" button on the site (or just head to [tinyurl.com/VIWopportunities](http://tinyurl.com/VIWopportunities)), registering and turning up.

You can even do things like volunteering your body at the University of Auckland clinics for a hearing or vision test, or for a clinical trial at the Liggins Institute. Dog lovers could be part of the Clever Canine Lab.



# ASHLEY MARSHALL

Ashley is the senior designer in the Communications and Marketing team.

## What does your job involve?

I'm the studio manager who oversees a team that designs anything from annual reports, prospectuses and logos, to university signage. We work with the faculties and service divisions and make sure everything's designed on brand. We just started doing video too, expanding our content from print to digital and social media.

## How did you decide on graphic design?

In the fifth form at Pakuranga College I was in a technical drawing class and the teacher mentioned graphic design. He showed us a picture of an airbrushed lightbulb and said, "this is graphic design". He said you could be creative and make money! That's when I thought about it as a career. Dad's an air traffic controller and mum is in accounts. When I told them graphic design could pay my bills, they were good with it.

## What did you like to do as a child?

Burn things! And make movies. I directed disaster movies. They always involved building elaborate sets and filming them and then they'd get destroyed by a quake or a comet or something. Sometimes I'd bring in friends to act but I was always the villain. I love creating fantasy worlds – I'm into Warhammer Fantasy Universe too.

## What attracted you to this job?

Managing a team was the next step for me. And the material we work with and the stories we tell. It was also a brand going through change and I wanted to be part of that.

## Speaking of change, you've transitioned from Justin to Ashley in the past two years, haven't you?

At the weekends I was one person and during the week I was another. It was getting very confusing and I was worried about bumping into someone from work while I was dressed as a woman. I thought, 'why don't I just deal with this?'. I have quite conservative views and I'm quite conservative financially as well. So I always saw it as a risk to transition while building my career. But more people were coming out and it was becoming more normalised. So I decided to do it.



*Ashley's love of fantasy worlds includes the Warhammer Fantasy Universe.*

## So you're now working with many people who once knew you as Justin?

Yes, they're very supportive. About four years ago I started growing my hair long and having facial hair removal. One day I saw myself in a reflection and I looked very androgynous. I didn't like being caught in the middle any more. I thought 'I'm sick of this' so I decided to get on with it. The biggest challenge is telling people. You don't want to bump into someone you work with and you've got a frock on and you haven't told them and they're like "what's going on here?". So I researched how to approach it ... Google's fantastic. One of the pieces of advice was to tell your direct manager in person then get HR involved. Tell your broader team directly by having a chat or a meeting, or a manager could tell them. Then tell people who you don't have day-to-day dealings with. Just email 'this is what I'm going through. Please refer to me as X from this date' so they have a clear pathway.

## How did people respond?

The University has good systems in place, so being able to do it here is testimony to our inclusive environment. If it was a few years ago, and I was in a different company or situation, I don't think I would have been as comfortable. My colleagues and HR were very supportive. The most nerve-racking day was coming in to work as Ashley, going from androgynous me to 'now I'm going to wear makeup and the clothes I wear at weekends to work'. It was scary. But if you're projecting confidence and ease, it puts others at ease.

## Have you had surgery?

I had facial feminisation surgery in Spain in October 2018. It was a 15-hour operation where they pull your face off, literally. I was terrified. They cut you from ear to ear and then pull it down to work on your bone structure.

## When did you know you were transgender?

It was more like a plant I didn't know was there, growing underground. It really started coming up when I was 13. But being transgender then was just like some transvestite in a raincoat hanging around toilets – every story was negative. So at 13 I thought, 'I want to be a woman but I can't'. So that was the end of that.

## How would you define transgender?

It's hard to define. It's a spectrum. I don't identify as a biological woman. I see myself as something else. I'm not one of those people who says, 'I'm trapped in a man's body'. But living as a male was certainly uncomfortable. When I hear stories of being 'in a prison', I can't really relate to that.

## When you hear people who worked with you as Justin call you 'he', how do you feel?

I totally get why it happens because people may have known me for years. So I'm very understanding, but it's also jarring. I'm not someone who jumps up and down; I'm forgiving. When people get offended, that closes conversation down and it makes us an untouchable community. When I see trans activists demanding you call them this or that, and if someone makes a mistake they want vengeance, I just see the public going 'whoa, these people are too hard to speak to'. That can really shut down understanding.

## What about your voice?

I try to speak through my nose, rather than how I used to speak. I think I sound kind of androgynous. I use an app to study my voice! At first it tells you 'mostly male' then it goes 'androgynous'. And then if you go higher it's the female range. I started as mostly male and then I ended up sounding like Mrs Doubtfire! So I'm still working on that.



## DIABETES TRIAL COULD CHANGE TREATMENTS

**University of Auckland researchers are at the forefront of new diabetes research. In the future, Kiwis with type 2 diabetes could have medication prescribed to them personalised to their genetics, body size, ethnicity, age and other characteristics.**

Today, there are 12 classes of drugs proven in international clinical trials to manage type 2 diabetes. In New Zealand, half of these medications are funded. But medications work

differently in different people, and doctors can only figure out the best match for a patient through trial and error.

Associate Professor Rinki Murphy (pictured), endocrinologist and researcher at the Faculty of Medical and Health Sciences, says a 'precision medicine' approach to managing type 2 diabetes, which affects more than 200,000 people in New Zealand, would have many benefits.

"Knowing who responds best to each type of diabetes drug would help patients to get more effective medication earlier in their treatment, with fewer negative side effects and improved health outcomes," she says. "The savings made from removing redundant drugs from people's ever-growing medication cocktails could enable us to fund a greater selection of diabetes medications, to be used in a stratified and rational way."

Rinki is leading a pioneering study to identify which factors predict people's responses to two diabetes drugs: Vildagliptin and Pioglitazone. The study team of doctors and nurses is looking to recruit 300 people with type 2 diabetes, aged 18 to 80.

"We are particularly interested in whether the response is different among people of Māori and Pacific ancestry, because they are not represented in the international clinical trials evaluating these diabetes medications."

Funded by the Health Research Council and the Maurice Wilkins Centre, the study is running in Auckland, Kaitiaki, Gisborne and Waikato. **To find out more, email: [t2dmed@auckland.ac.nz](mailto:t2dmed@auckland.ac.nz)**

## ETHICS OVER A.I.

**Concerns over the use of big data are never far from the news, whether it's Facebook using profiling to target people with ads, or data gathering by government departments.**

Professor Tim Dare, who teaches ethics and critical thinking at the University, was the recipient of a NZ Royal Society Research Marsden Grant (2018-20). He's been using those ethical and critical thinking skills to provide an ethical analysis of the use of predictive risk modelling tools in the area of child maltreatment. Tim's research centres on the use of Artificial Intelligence (AI) in predictive analytics, especially in areas where governments interact with citizens. Put simply, AI can involve the use of algorithms that trawl through big data to identify the probability, for example, that a teenager will fall through the cracks of the education and training system or a discharged patient will be re-admitted.

"This technology can deliver tremendous benefits in those areas," says Tim. "We can identify children at risk of maltreatment in

advance; we can make sure that clients are channelled into correct services and we can find efficiencies in health and so on."

But he says there are also significant risks. "It's difficult to use the technology without threatening understood perceptions of privacy. There are dangers in stigmatising people when we're working with vulnerable populations ... there's a daunting list of risks."

He says the solution isn't simply to abandon the technology because of those risks. "That would be a mistake. What I've been doing is working to find ways we can have the benefit of the technology, while mitigating the risks."

There are two strands to his work. One is with the Ministry of Social Development, and other government agencies, designing a privacy and human rights assessment system. The Privacy, Human Rights and Ethics framework (PHRaE) is a detailed online assessment tool to identify privacy, human rights and ethics risks early in the design cycle of a proposal to use client data. The second could be more challenging. "I'm trying to address the deep scepticism [in the wider public] about the legitimacy of this technology."

## CLOCK ONE UP TO THE BEES

**The humble bee helps reveal how blue light – at the right time – is good for healing.**

**We've long looked to the birds and the bees to unravel nature's mysterious cycles.**

Much behaviour in the animal kingdom is centred on the circadian rhythm – whether it's birds heading elsewhere for winter, or bees finding their way to flowers at exactly the right time.

Dr Guy Warman is an associate professor in the School of Medicine who specialises in anaesthesiology and chronobiology (circadian rhythms). In recent groundbreaking research with Dr James Cheeseman from the Department of Anaesthesiology, bees helped the team see the light, so to speak.

The research arose from wondering if there was a way to prevent the 'jet lag' patients suffer when they are anaesthetised during an operation.

"Drugs – particularly anaesthetic drugs – affect the biological clock and affect sleep," says Guy. "But it was hard to get robust findings because most patients admitted to hospital are already sick, so their sleep is already disrupted. We took a step back and thought 'let's follow up on some research we've done with our chronobiology interests'. That's what took us to bees."

A common patient response when they wake up from anaesthesia is that they think no time has passed. "Some even say, 'well when are you going to start my operation?' We thought that was interesting and probably due to a biological



**Bee with a radar tag to track its movement.**



Associate Professor Guy Warman. Photo: Billy Wong

clock effect. The reason to study bees is that they show time-compensated behaviours.

“They do this thing called a ‘waggle dance’ in the hive that tells the other bees where a food source is. By tracking their behaviours, you can work out exactly, to within a few minutes, what time of the day the bees really think it is.”

For example, when bees head off from the hive each day, they always fly in a certain direction. The team wanted to see what would happen if they anaesthetised a bee and then woke it up.

So how do you anaesthetise a bee? “We used a common anaesthetic agent to knock out the bees for anything from a few minutes to six hours. Then we looked at which way they flew when they woke up from anaesthesia.

“We collaborated with scientists in Germany and used harmonic radars – we put radar tags on the backs of the bees, like an antenna. By using those antenna and a very powerful radar, you can track where the bees fly.”

The bees that hadn’t been anaesthetised for long just compensated for the movement of sun in the sky.

“But the bees that had been anaesthetised for six hours flew the wrong way because they thought it was the same time as when they went to sleep. They still thought it was 9 o’clock in the morning. They had jet lag.”

As well as doing the experiment during the day, they did it at night and there was no jet lag.

“That got us a little bit excited. We started looking at the combined effect of light and anaesthesia and found that in the morning, when anaesthesia caused a delay to the biological clock – jetlag – the light caused an advance to the honeybee clock.”

The next test was to give anaesthesia with strong light. “The jet lag went away. And then we thought we might be onto something, so we transferred the study from bees to humans and other mammals, as well as fruit flies.”

The problem was finding enough healthy humans, who previously had no sleep problems, who might be undergoing an operation.

“We hit upon the idea of doing studies in kidney donors,” says Guy. “They are healthy people, but undergoing a major surgical procedure that they don’t medically require, and they’re screened for sleep and mood disorders beforehand.

“They’re also extremely kind, altruistic people who are more than willing to help out.”

The team did the same thing with the kidney donors as they’d done with bees, measuring their circadian rhythms before and after surgery.

“Then we gave half of the participants blue light while they were anaesthetised, because it’s known to shift the human circadian clock.

“And we gave half of them red light, which we call placebo light, which is known not to shift humans’ circadian clock.”

The 40 patients in the trials wore goggles that emitted blue light flashes through their eyelids every 30 seconds.

“Excitingly for us, the patients in the blue light treatment group showed less jet lag than those in the control treatment group.”

The less jet-lagged a patient is after an operation, the quicker they are up and about and the sooner they are discharged from hospital. But that’s not all.

“There are more fundamental effects,” says Guy. “It’s entirely plausible that by preventing circadian misalignment or circadian disruption that wound healing and immune function might be less disrupted as well.”

Now Guy and his team are on the verge of expanding their research – pending funding – to a multi-centre international trial with a larger patient group.

It seems ironic that blue light – the target of much bad press – could have such unexpected health benefits.

“The blue light we use is 460 nanometres – a very specific wavelength that the circadian system is attuned to,” explains Guy. “The way your biological clock is adjusted by light daily, is through a set of receptors called intrinsically photoreceptive retinal ganglion cells. They have a pigment in them called melanopsin which is

maximally sensitive to 460 nanometres, which is blue light.

“Despite the fact sunrise and sunset look pinkish, actually the most light that’s getting to your eyes is blue. Your eyes attune to that light to keep your biological clock adjusted.”

Which is good when it happens in the morning, but it causes problems at night through devices, TVs and even lights in our homes, which are all far bluer than we’ve previously experienced.

“When I grew up, it was all tungsten bulbs and there was much less blue light,” says Guy. “Although you can buy LED lights in any spectrum – dark red or yellow or whatever – the ones installed in houses and buildings tend to be of a bluer wavelength than we’ve previously been exposed to. So this is the concern.”

The Blue Light Aotearoa document produced by the Royal Society of New Zealand states blue-light exposure is an important issue for society.

“Exposure towards bluer-enriched light, including LED lighting in the street at night-time, delays your circadian clock,” says Guy. “Blue light in the morning shifts your clock to an earlier time zone. Blue light in the evening delays your clock to a later time zone.

“Architects are well aware that light is important. I think they are now aware that morning light is particularly important and certainly there is a move in building design to try and maximise that.”

He says blue light in the morning has been used for decades to improve sleep and to reduce depression.

“There are cafes all through northern Europe where you can sit down in front of a lightbox in winter to try and avoid seasonal affective disorder, because that disorder is simply a biological clock misalignment.”

And while there are lots of reasons for sleep disorders, late-night blue light seems to be one. “Exposing ourselves to the light at the wrong time of the day – by sitting on devices late into the night – compromises our sleep duration and quality. You shift your clock to a later time zone.”

Which is fine if you’re undergoing surgery it seems, but not if you want a decent sleep.

#### Denise Montgomery



Blue-light goggles worn in surgery.



## ON A HIGH NOTE

**It was a Grad Gala with a difference this year, one that gave students from different disciplines at the School of Music the rare chance to perform together all on one night.**

The event was held in the Auckland Town Hall on 2 May and the evening began with a moving performance by Diane Huh (pictured above), winner of the 2019 Grad Gala Soloist Competition, playing Sibelius' *Violin Concerto in D Minor*, first and second movements. She was accompanied by the University of Auckland Symphony Orchestra, which then went on

to perform Gershwin's *An American in Paris*, conducted by Peter Scholes.

The concert included an impressive 200-strong massed ensemble and the University of Auckland Chamber Choir, conducted by Robert Wiremu and Dr Karen Grylls. Popular Music student, Sophie Bailostocki (pictured right) performed her original music and the concert ended in early 20th-century New York, with the School's Jazz Big Band performing Fletcher Henderson, Duke Ellington and Woody Herman.

■ The School of Music will hold free Popular Music Songwriting Concerts on 17 and 18 June in the Kenneth Myers Centre. See details of all their events on the Facebook page @UoASchoolofMusic.



Photos: Calvin Peter





*The Courtyard in Wartime, 1944.*

## OUR HODGKINS ON SHOW

Three University artworks are part of a major Frances Hodgkins exhibition.

**‘Fresh’ might not be the first word that comes to mind when considering paintings from early last century, but Frances Hodgkins’ works are strikingly so.**

Born in Dunedin in 1869, Hodgkins went on to become a leading figure in British modernism. Her approach to colouration and her attitude to painting are as vibrant and unique now as they were then.

Inspired by her peripatetic lifestyle, the *Frances Hodgkins: European Journeys* exhibition now on at Auckland Art Gallery tracks the influence of place on her development as a Modernist painter, through early 20th-century France, England, Morocco and Spain. This comprehensive survey features three Hodgkins paintings on loan from the University of Auckland Art Collection.

Since the 1960s, the University has had a committee and budget dedicated to the acquisition of artworks as a research and teaching resource, and to enrich campus life. The calibre and significance of works in the Art Collection results in numerous loan requests each year, for local and international exhibitions.

During his tenure here, art historian Eric McCormick purchased on behalf of the Collection two works by Hodgkins from Eardley Knollys, a friend of the artist. The watercolour *Courtyard in Ibiza* (1932-33) was acquired in 1974, along with *The Courtyard in Wartime*, one of a group of oils painted in the summer of 1944 which show the courtyard of the artist’s studio at Corfe



*Frances Hodgkins’ Courtyard in Ibiza, 1932-33.*

Castle, Dorset. *Hannah Ritchie and Jane Saunders* c.1923 was purchased during the 1980s by Professor of History, Keith Sinclair, while he chaired what is now known as the Art Acquisitions Committee.

*Frances Hodgkins: European Journeys* runs until 1 September and is a rare opportunity to see the works from our Art Collection in the context of the artist’s oeuvre, giving viewers the chance to understand and appreciate more fully the breadth and depth of Hodgkins’ artistic practice and highly individualised vision of the world.

■ Lara Thomas, University of Auckland Art Collection, Cultural Collections



*Hannah Ritchie and Jane Saunders, 1923.*

### ACCOMMODATION AVAILABLE

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*‘The teacher snarkily said in front of everyone: Pick a real job, Mohamed, do something meaningful.’*

## DREAM WEAVERS

**Growing up in a household that encouraged aspirational thinking, I often talked to my parents about my dreams and who I wanted to be when I grew up.**

I used to tell people ‘one day, I will become a TV presenter!’ I wanted to reach out to every home and family, to make a difference in their lives by being in their living room. I still wonder how my career would have turned out if I had pursued that pathway. Or whether it was even possible to have a TV career considering my loud, dorky laugh, frizzy hair and occasional squint – perhaps I’d have been better off in radio.

Anyway, my intermediate teacher overheard me talking to friends in the school corridor about my potential TV debut and becoming a talkshow host – yes, a full-on production was in the works. I remember that day like it was yesterday. The teacher walked past and snarkily said in front of everyone: ‘Pick a real job, Mohamed, do something meaningful.’ Off he went, and so my dreams of a media career were crushed.

Over the years, I wondered whether other people have experienced similar scenarios to mine. What were their dreams? Who changed their minds? Who could have helped them achieve their goals and aspirations? What would have happened if someone had come into their lives and believed in their dreams? Fortunately, my current research explores exactly that.

I am the principal investigator of a longitudinal project called ‘I Have a Dream’, taking place in Whāngārei. We are working with 400 children, their schools and their families in low socio-economic areas. Those involved share the same dream as us: to break the intergenerational

cycle of poverty, and open up opportunities for success, however that success might look in the eyes of the children.

This is an innovative community-based approach, where each group of students is assigned a mentor, known as a navigator, who helps the students navigate their dreams from primary to secondary and through to tertiary if that’s what they desire.

This is our second year in this partnership and preliminary results from our mixed-method investigation are promising. There were statistically significant improvements in students’ achievement in reading and maths by the end of 2018, as well as sustained positive levels of school satisfaction and future outlook.

Over time, navigators have also become more positive in their beliefs about how they can influence student educational outcomes. Teachers have reported increasing levels of value in having navigators providing support and mentoring to the students. We appear to be on the right track.

What’s astonished me most, is the students’ ability at a young age to articulate what it means for them to have a significant support person, as evidenced by the qualitative findings of the project. For Tane, who wants to be an All Black when he grows up, it was something as simple as his navigator celebrating with him, after he was praised in PE classes, and challenging him to try even harder next week.

For Jesse, who wants to be a dancer, it was when her navigator asked her about her favourite dance moves, and shared funny stories about dancing. For Davie, who wants to be an archaeologist, having a navigator who listened, reacted positively, and helped him Google information about archaeology, was all it took for

Davie to name his mentor as his main support person who cared about his success.

It is powerful to realise that student interactions with significant others can influence their beliefs about future success, learning and aspirations. It is even more powerful to realise how much teachers and navigators influence such processes by simply acting, reacting and interacting positively in these learning spaces. It’s exciting to know our project can play a part in improving students’ experiences at school and beyond.

It was some time back, that the teacher unwittingly changed my career trajectory. But it is now in ‘I Have a Dream’ where I, with others, can support each of our 400 dreamers to reach their highest potential, whether they want to be an All Black or a dancer, an archaeologist or an academic. Too often, educators and mentors underestimate the impact they can have on their students’ academic and life trajectory. ‘I Have a Dream’ is testimony to the importance of human connections, support and high expectations – all of which are pivotal to our roles as educators. The more we believe in our ability to make a difference, rather than talking ourselves, and sometimes the students, down, the more we will help young people make their dreams reality.

Our group welcomes support, ideas, collaborators or volunteers to join us from time to time. Contact me or visit the ‘I Have a Dream’ website: [ihaveadream.org.nz](http://ihaveadream.org.nz).

*Dr Mohamed Alansari is a research fellow within the Quantitative Data Analysis and Research Unit in the Faculty of Education and Social Work. The views in this article reflect personal opinion and are not necessarily those of the University of Auckland.*