

November 2023 • auckland.ac.nz/UniNews

# UniNews

A man with glasses and a blue checkered shirt is smiling and holding a 3D printed object that resembles a musical instrument or a piece of art. The background is a laboratory or office setting with a computer monitor displaying a map or data visualization.

## OLAF DIEGEL

3D technology creates new possibilities for preserving our musical taonga

Page 8

## A GUNPOWDER PLOT

Schoolboy experiments led to David Williams' life in science

Page 3

## GRAPHIC MEDICINE

Neal Curtis collaborates with brain researchers to tell medical stories

Page 4

## UKRAINE: LET'S OPEN DOORS

Misha Vorobyev: New Zealand could take more Ukrainian refugees

Page 12

A selection of University staff and students who provided expert commentary in the media recently. Let us know! Email: [uninews@auckland.ac.nz](mailto:uninews@auckland.ac.nz).



Geoffrey Handsfield

## MEASURING CEREBRAL PALSY

Dr Geoffrey Handsfield (Auckland Bioengineering Institute) talked to RNZ about ABI's work with the Mātai Medical Research Institute in Tairāwhiti, using MRI scans to investigate muscles, ligaments and tendons of children with cerebral palsy. "We want to understand how their muscle size progresses over time."

Link: [tinyurl.com/RNZ-Handsfield](https://tinyurl.com/RNZ-Handsfield)



Kyle Eggleton

## RURAL SCHOOLING AN OBSTACLE

Research shows attending a rural school hinders students' access to professional training. Associate Dean Rural Dr Kyle Eggleton (Medical and Health Sciences), who led the study, told Newshub that equity is needed in rural admission programmes. "One of the most important things we can do is get rural students to enter medicine."

Link: [tinyurl.com/Newshub-Eggleton](https://tinyurl.com/Newshub-Eggleton)



Winston Byblow

## VR IS MORE THAN A BIT OF FUN

A VR game is helping stroke patients. In a trial led by Professor Winston Byblow (Science), a camera tracks a patient's movements to develop a map of their body. "It uses that information to create a game, so they make the highest-quality movements possible," says Winston. Newshub filmed a patient moving their arm to direct a virtual dolphin to catch fish.

Link: [tinyurl.com/Newshub-Byblow](https://tinyurl.com/Newshub-Byblow)



Hanna Wilberg

## WELFARE SYSTEM FEEDS POVERTY

The welfare system is pushing vulnerable people into a cycle of debt, Associate Professor Hanna Wilberg (Law) told Radio Waatea. "Benefit rates have been far too low ... and that's why people run out of money for weekly payments. One-off discretionary payments are available, but these take the form of a loan to be repaid."

Link: [tinyurl.com/Waatea-Wilberg](https://tinyurl.com/Waatea-Wilberg)



Alice Mills

## FOUR WALLS TO CALL HOME

Associate Professor Alice Mills (Arts) talked about her study, which shows the importance of stable housing in curbing recidivism. She said a home is vital to "ensure people leaving prison are able to play a role in society. It's extremely hard for them to do that without stable housing."

Links: [tinyurl.com/Newshub-Mills](https://tinyurl.com/Newshub-Mills) and [tinyurl.com/RNZ-Mills](https://tinyurl.com/RNZ-Mills)



Geoff Willmott

## A MUG'S GAME

Dr Geoff Willmott (Science) ran TVNZ's *Fair Go* through the science of being scorched by a mug out of the microwave. A reconstruction tracked by an infrared camera showed a mug handle hitting 95 degrees Celsius after two minutes, and 117 after four. Water molecules had entered the handle because of failed glazing, worsening a problem caused by the mug's design.

Link: [tinyurl.com/Willmott-FairGo](https://tinyurl.com/Willmott-FairGo)

David Williams' science 3

Good to Know 4-6

- Epeli Hau'ofa
- Neal Curtis and graphic medicine
- Blues winners
- Velocity \$100k winners
- Taumata Rau Conversations
- Horizon funding
- Hood Fellowships

Obituaries 7

- Don Smith
- Alison Quentin-Baxter

Olaf Diegel 8-9

Arts and Culture 10-11

- Ayesha Green artwork 10
- Greg O'Brien's Don Binney book launch 11
- Books 11

Māramatanga: Misha Vorobyev 12

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Something to share? The next UniNews is

December 2023, copy due 13 November.

Email: [uninews@auckland.ac.nz](mailto:uninews@auckland.ac.nz)

For the fortnightly Whaimōhio The Loop newsletter, email: [staff-comms@auckland.ac.nz](mailto:staff-comms@auckland.ac.nz).

Deadlines are on the intranet under News, Events and Notices, The Loop.

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Professor David Williams and student Robert Deas at Incredible Science, conducting an experiment known as 'Smaug the Dragon's stomach'. Step one: Take a blow torch, get a bright flame.



Step two: Immerse blow torch in a dish of soap to make bubbles that become full of explosive gas mixture. Ignite (from a distance) by touching a glowing candle to the bubbles. Photos: Chris Loufte

## IT'S OKAY: OXIDANTS HAPPEN

Professor David Williams is partial to blowing things up. In retirement, he's happy to cool it.

**In the pharmacies of 1960s Auckland, an 11-year-old David Williams could buy all the ingredients for gunpowder ... and that was just the start.**

Concentrated hydrochloric acid sat on the cleaning products shelf of the local store.

"It came in an octagonal bottle with a cork in it," the chemistry professor enthuses.

"Eleven years old. Oh my God." Joy.

An 'adventurous' family friend up the road in Mt Roskill – "he was mostly interested in explosions" – blasted a path for David's entrée into the scientific life by sharing his extensive chemistry set.

Contagious enthusiasm, self-deprecation, a sense of fun, the tone of Professor David Williams' valedictory lecture delivered in September, 63 years later, and titled "Occupation: scientist", showcased qualities that have helped him galvanise researchers to get things done.

"You've just had the David experience," colleague Professor Cather Simpson told the audience.

Unusual for switching between academia, private enterprise and government, David has helped develop chemical sensors for detecting gas, pregnancy and air pollution. Corrosion is another big interest.

Holding about 50 patents, he has co-founded a string of technology companies in the UK and New Zealand and is credited with changing the culture at the MacDiarmid Institute for Advanced Materials and Nanotechnology by helping scientists commercialise their research.

He says scientific advances come via curious people connecting – the chance conversation at the water cooler, and overcoming shyness to approach a stranger at a research conference – not bureaucrats' spreadsheets. He despairs at universities feeling they must chase rankings, and the pressure on researchers to publish constantly.

Sitting on the deck of his Kerikeri home, drinking wine with Mary, his wife of 51 years, David looks across Doves Bay to *Hullabaloo*, his 11m sailing yacht. Taking up sailing late, after returning to New Zealand 17 years ago, he rates completing the famous Auckland to Russell Coastal Classic as a lifetime achievement.

Born into a Welsh family who arrived in New Zealand in 1957, David thrived at Lynfield College, getting the run of the science lab in exchange for setting up the next day's demonstrations.

"Oh my God." Heaven.

When his father was fishing at Whatipū in West Auckland, David wedged himself between the rocks, sheltering from the cold, to work on maths problems. A 'ripple tank' for studying waves in water occupied most of his bedroom for months, on loan from the physics teacher.

"Yes, I was a nerd," he says.

Graduating with a PhD in electrochemistry from the University of Auckland in 1974, the next stop was Oxford and what David recalls as an encounter with confidence-crushing condescension towards a colonial 'hick'.

Persevering, he switched to Imperial College London, a place teeming with enthusiasts from everywhere, and explored metallurgy, building a furnace for experiments in extracting zinc from slag, and securing his first patent.

With Mary pregnant, the couple swapped London for industrial Birmingham and a steady job for David, experimenting with titanium for alloys.

Armed guards and fences ringed his next workplace: the UK government's Atomic Energy Research Establishment, an Aladdin's Cave of amazing facilities, brilliant scientists, and stimulating challenges.

"Man, your brain just exploded."

Located at Harwell, south of Oxford, the facility had thousands of staff who converged in the morning and diverged in

the evening, four nuclear reactors and two particle accelerators.

"It had people who could do anything."

Famously, David led the atomic agency's investigation of the bombshell claim in 1989 that two American chemists, Martin Fleischmann and Stanley Pons, had achieved 'cold fusion'; nuclear fusion at room temperature in a test tube instead of at 15 million degrees Celsius in the sun.

Fleischmann had been a mentor and close colleague. David's team spent months investigating, but discovered nothing to support the claim.

"We have no heat, we have no gamma rays, we have no neutrons, we have got nothing, basically," he told an interviewer. "Sorry."

Condemning neither Fleischmann nor Pons, he told reporters that, regardless, it was important to leave room for "mad ideas". The headline that resulted from that remark was "Cold fusion dismissed as 'mad idea'".

Switching back to academia, David's career peak was heading the chemistry department at University College London from 1999 to 2002. He then became chief scientist at UK company Inverness Medical Innovations, working on rapid biochemical tests, such as pregnancy tests, with his former postdoctoral student as his boss.

He returned to New Zealand and the Faculty of Science at the University in 2006, where he's renowned for the passionate way he conveys the excitement of science.

This year, six decades on from his schoolboy experiments, David helmed a magic show for intermediate school pupils for the faculty's 'Incredible Science' event.

Immersing a blow torch in a dish of soap, he made bubbles full of explosive gas. A glowing candle provided ignition. The kids, in awe, no doubt thinking, "Oh my God".

■ Paul Panckhurst

## SHARED PRIDE IN EPELI HAU'OFA



Proud son Epeli Hau'ofa Si'i spoke at the posthumous honorary doctorate ceremony held for his dad Professor Epeli Hau'ofa.

The University's Fale Pasifika was bursting at the seams with people, music and dance during a special ceremony in October.

More than 200 attended what guests called 'Epeli's day' as a posthumous honorary degree of Doctor of Literature was awarded to Professor Epeli Hau'ofa (1939-2009) through his family.

The doctorate was received by his son Epeli Si'i, visiting from Suva for the event.

Family representative Sione Tu'itahi said the posthumous recognition for Epeli as an academic, poet and novelist was an honour, and the recognition was appreciated by not only the extended family, but all of Tonga.

"His ideas were transformative; they were about empowering people. He changed our worldview in that we are guardians of the biggest continent and not defined by our smallness."

Vice-Chancellor Professor Dawn Freshwater said the honour was important as Epeli's ideas remained highly relevant for the region and Pacific peoples, despite his passing more than 14 years ago.

"With this degree, as well as two other posthumous honorary doctorates awarded in this, our 140th year, we honour and celebrate these trailblazers."

Pro Vice-Chancellor Pacific, Associate Professor Jemaima Tiatia-Siau, says Epeli Hau'ofa's 1994 essay 'Our Sea of Islands' was groundbreaking.

"Epeli was transformative in that he reshaped the way people viewed the Pacific; he opened up opportunities for Pacific peoples and reindigenised Pacific scholarship."

**Full story:**  
[auckland.ac.nz/epeli-hon-doc-ceremony](http://auckland.ac.nz/epeli-hon-doc-ceremony)



Professor Neal Curtis is looking forward to conveying important information about brain tumours in an accessible way – comics. Below: The type of graphic comic Janina Gaudin is known for.

## COMIC RELIEF IN EXPLAINING TUMOURS

Comics will tell the story of patients' brain tumours.

**Professor Neal Curtis (Media and Screen Studies) is using his expertise in comics to help convey vital information about health.**

Neal's academic interest in comics, combined with a plan to convey scientific knowledge in an accessible way, will see him collaborate with brain researchers and illustrators on an ambitious new project. He will partner with the Centre for Brain Research and a newly established national neuro-oncology group to create eight comics dealing with various issues related to brain tumours.

"This is where comics and health, medical and scientific issues intersect," says Neal. "There are some early examples of comics being used to disseminate knowledge and teach."

'Graphic medicine' is a term first coined by English GP and cartoonist Ian Williams who drew a comic strip for *The Guardian* called *Sick Notes*.

Neal says a big area for graphic medicine has been patient testimony, where people tell their stories of illness, disease and surgery.

"The institutional approach to medicine takes symptoms and translates them into a universal condition, diagnosis and a prognosis.

"Early graphic medicine was about moving from the 'universal' back to the 'particular' to make sure individual patients and their contexts weren't forgotten. It was good at articulating what the medical establishment couldn't."

Neal had attended a cross-faculty workshop where Dr Thomas Park, a senior research fellow



in pharmacology, asked him if he wanted to be involved with a project to advocate for brain tumour research.

Neal had been wondering why he was there "among all the scientists", but as a person with a background in political and critical theory, social media, graphic novels and comics, he soon realised what he could offer. "I could tell everybody about the importance of comics for this form of patient testimony as well as for explaining complex information in an accessible way."

Funding from the University, as well as Brain Tumour Support NZ and a Health Research Council grant, will initially cover four six-page comics. One will help people understand the testing process for brain tumours; one is aimed at children of parents with tumours to explain the behavioural changes the adults might be experiencing; one is on brain tumour research; and another is aimed at Māori communities, explaining symptoms and support networks.

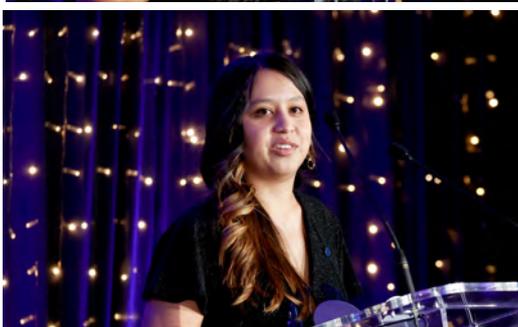
The first of several artists involved is Janina Gaudin, known as Miss Diabetes, a New Zealand/Samoan illustrator who creates comics about life with Type 1 diabetes, among other projects.

"I want the comics to be beautiful, not institutional," says Neal. "And Janina's work is wonderful."

**Full story:**  
[auckland.ac.nz/comics-tumours-research](http://auckland.ac.nz/comics-tumours-research)

# BLUES WINNERS' RED-HOT TALENT

Exceptional students have had their extra-curricular feats recognised in the annual Blues awards.



Four of the winners, clockwise from top left: Sportsman of the Year, William McKenzie; Shreya Gayatri Geji who won Most Meritorious Performance (Arts and Cultural); Most Outstanding Contribution (Service and Leadership), Sarina Todd; and Māori Major Award winner, Madeline Shelling. Photos: Chris Loufte

**The 2023 Blues Awards were held in October, with 164 Blues and nine major awards presented to students who excelled across four categories: Arts and Cultural; Innovation; Service and Leadership; and Sports.**

In Arts and Cultural, Shreya Gayatri Geji, a doctoral student in Media and Communications and Sociology, won Most Meritorious Performance. Among her many achievements, filmmaker Shreya produced the award-winning short film *Perianayaki*, which premiered at the 2022 New Zealand International Film Festival.

The Blue for Most Outstanding Contribution (Service and Leadership) went to Engineering honours student Sarina Todd, co-founder and director of Women in STEM NZ and a champion for STEM education and gender equity.

The Most Meritorious Innovation Blue went to commerce and law student Luke Davis, who has excelled in three international case competitions.

Sportswoman of the Year was rugby star Theresa Fitzpatrick and she again took the crown for Most Meritorious Performance (Sport). A gold medal winner with the Black Ferns in the most recent Rugby World Cup, she was also part of the winning World Sevens Series Black Ferns side.

Sportsman of the Year was sailor William

McKenzie. His skilful navigation led to a fourth place at the 49er, 49erFX and Nacra 17 World Championships. William's dedication was evident at the Junior 49er World Championships in Italy, where he secured another fourth.

Patricia (Paddy) Louise Walsh won Para-athlete Sportsperson of the Year. At the New Zealand Para Tour of Canberra, she achieved the World Championship minimum entry standards in long jump and 100m (T64 category), setting a new New Zealand record in the long jump.

The Māori Major Award was won by Madeline Shelling, a cross-fit athlete who was part of a team that came sixth out of 40 international teams in Wisconsin, US.

The Pasifika Major Award went to Toesulu (Sulu) Fitzpatrick, Theresa's sister. A stalwart for the Silver Ferns and Northern Mystics, Sulu's leadership and netball skills shone in 2023 when she guided the Mystics to an ANZ Premiership title in her farewell season.

**Watch: The Blues ceremony at [auckland.ac.nz/2023-blues-winners](https://auckland.ac.nz/2023-blues-winners)**

**Read:**

**Shreya's story: [auckland.ac.nz/blues-shreya](https://auckland.ac.nz/blues-shreya)**

**Luke's story: [auckland.ac.nz/blues-luke](https://auckland.ac.nz/blues-luke)**

**The Fitzpatricks' story:**

**[auckland.ac.nz/blues-fitzpatrick](https://auckland.ac.nz/blues-fitzpatrick)**



All the 2023 winners in the Velocity \$100k Challenge.

## SIX GREAT IDEAS SCORE SLICE OF \$100K

The Velocity \$100k Challenge is in its 20th year of helping start-ups prepare for a global stage. This year, six new ventures were given a kick-start that could see entrepreneurial ideas burgeon into successful businesses.

Construction and demolition waste, detection of plant diseases and gender challenges on trade sites were just a few of the real-world concerns tackled by the entrepreneurs.

The winning venture was WasteXpert, led by law student Jean-Luc Ellis and his friends Max Lawton and Logan Soole. With approximately 50 percent of landfill in New Zealand coming from construction waste, WasteXpert aims to address this environmental challenge.

For the win, WasteXpert scored \$25,000 seed capital. As well, like all the winning teams, they receive \$30,000 worth of VentureLab support and a \$10,000 stipend. VentureLab is the Centre of Innovation and Entrepreneurship's incubator programme. It connects teams with industry leaders and mentors, and provides weekly support meetings.

The \$15,000 runner-up prize went to the PlantPeepers team, who created a monitoring tool to help greenhouse growers detect plant diseases and pests early, with the aim of proactively preventing outbreaks and reducing the need for pesticides.

Four other teams were each awarded \$5,000. CycleMate is a discreet sanitary disposal kit used on construction sites; Glowguard is a next-generation SPF50 for sun protection, with a dissolvable refill system; Smartbell is an innovator in the field of fitness equipment and tracking; and Resys has designed a tailored project management system for researchers.

**Read the full story: [auckland.ac.nz/2023-velocity-20-years](https://auckland.ac.nz/2023-velocity-20-years)**

# GOOD TO KNOW

## LET'S TALK ABOUT OUR HEALTH WORKFORCE

The inaugural Taumata Rau Conversations event explored the future of the health workforce.

**Speakers with deep experience of the health system took part in the first Taumata Rau Conversations event, hosted by Vice-Chancellor Professor Dawn Freshwater.**

The objective of the series of discussions is to provide a forum for reasoned dialogue, offering fresh insights on complex issues facing New Zealand. Aptly, the Future of the Health Workforce panel discussion was held



From left: Professor Sir Ashley Bloomfield, Tamzin Brott, Dr Jenny Parr, Associate Professor Matire Harwood and Dr Lloyd McCann.  
Photo: Chris Loufte

at the Faculty of Medical and Health Sciences (FMHS) and moderated by Professor Sir Ashley Bloomfield, director of the University Public Policy Impact Institute. Panellists were Dr Jenny Parr, chief nurse and director of patient and whānau experience at Te Whatu Ora; Associate Professor Matire Harwood, head of general practice and primary healthcare at FMHS and a GP; and Tamzin Brott, from Te Whatu Ora Waitemātā. Alumnus Dr Lloyd McCann, CEO of Tāmaki Health, was a panellist and delivered the keynote address. It had two themes: the need to grow the health workforce and how Covid delivered valuable lessons.

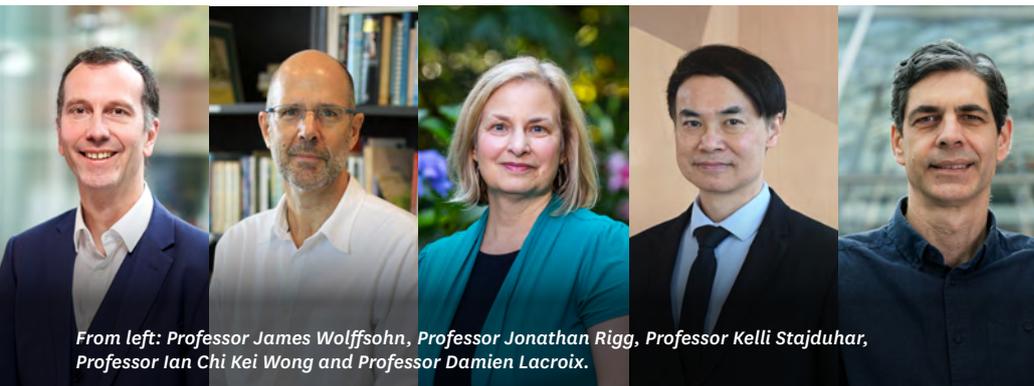
Sir Ashley Bloomfield, in thanking the panel, said if there was a value he'd want any health minister to consider it was 'radical humility'.

"Radical humility is characterised by acknowledging complexity, understanding that answers are not obvious, and listening to other people's ideas. It's about accepting that there will not be simple answers and to be willing to change one's mind when new evidence is found."

Most important, he said, was the resolve to "stand up and be accountable when things don't go right".

**Full story:**

**[auckland.ac.nz/health-conversation](https://auckland.ac.nz/health-conversation)**



From left: Professor James Wolffsohn, Professor Jonathan Rigg, Professor Kelli Stajduhar, Professor Ian Chi Kei Wong and Professor Damien Lacroix.

## OVERSEAS ACADEMICS IN THE HOOD

**Next year, the University will host five world-class scholars as part of an initiative to foster academic collaboration.**

They are coming as part of the Hood Fellowships programme, a philanthropically funded initiative fostering academic collaboration. It was established to honour Sir John Hood, the University's Vice-Chancellor from 1999 to 2004.

Arriving in Auckland early 2024, the Hood Fellowship scholars are Professor Damien Lacroix (professor of mechanobiology and deputy director of the Insigneo Institute, University of Sheffield), Professor Jonathan Rigg (School of Geographical Sciences, University of Bristol), Professor Kelli Stajduhar (Canada Research Chair in Palliative Approaches to Care in Ageing and Community Health, University of Victoria), Professor James Wolffsohn (clinical research optometrist, Aston

University, UK) and Professor of Pharmacy Ian Chi Kei Wong (Head of Pharmacology and Pharmacy, University of Hong Kong).

During their stay, the academics, all of whom are global leaders in their fields, will take part in collaborative projects with Auckland academics and students through workshops, lectures, seminars and meetings, as well as public lectures.

Mark Bentley, director of the University's Alumni Relations and Development office, says the programme has strengthened researchers' international networks.

"The fellowships are a great opportunity for our scholars and visiting experts to challenge and inspire each other. These collaborations have also sparked world-class research opportunities."

Since the programme was established in 2004, more than 100 scholars from overseas universities have been awarded a Hood Fellowship, with almost 30 academics from this University travelling to overseas institutions as outbound fellows.

## GOOD THINGS ON HORIZON

**Two University research programmes have gained funding from the world's largest research and innovation programme.**

Research proposals from Professors Peter Hunter and Merryn Tawhai in the Auckland Bioengineering Institute, and Professor Ralph Buck and Sarah Foster Sproull of Dance Studies, (Faculty of Creative Arts and Industries), have been selected for funding by the world's largest research and innovation programme, Horizon Europe.

In 2023, New Zealand became an associated country, enabling researchers to lead or join research consortia on equal terms with European counterparts and receive funding.

Peter is an international expert on 'virtual twins', where digital representations of a person become an invaluable health tool. The Virtual Twins project will create tools for personalised clinical care and has earned funding of about \$21 million, with \$1.83m for the New Zealand research team.

Ralph will work with Nord University on the D@RTS programme, which uses the performing arts in communities to lift cultural literacy and enhance social cohesion. The total Horizon Europe funding for D@RTS is \$5.3m, with \$260,000 for the New Zealand research contribution.

**Full story: [auckland.ac.nz/horizon-success](https://auckland.ac.nz/horizon-success)**

**DONAL IAN BRICE SMITH**  
**4 FEBRUARY 1934 –**  
**27 SEPTEMBER 2023**



*Professor Don Smith and wife Jill, with daughter Caitlin at her graduation.*

**Emeritus Professor Donal (‘Don’) Smith, who published as D.I.B. Smith, was a true luminary in both the academic and athletic realms.**

Born in Auckland, he was educated at Auckland Grammar and the University of Auckland where he earned his MA. Don was an outstanding student and received the Eliot Davis Memorial Scholarship in 1956 which enabled four years of doctoral study at Merton College, Oxford. Then followed a distinguished career at the University of Toronto and, from 1973, as professor in the Faculty of Arts back at Auckland.

A specialist in the literature of John Milton and Andrew Marvell, Don was also celebrated for his memorable research and teaching in all aspects of English. His edition of Robin Hyde’s *Passport to Hell* (AUP) remains an important contribution to New Zealand literature.

For many years, Don taught 20th-century fiction. The lecture theatre was often filled twice over, as students listened to his enthralling lectures on James Joyce, D.H. Lawrence, William Faulkner, Thomas Pynchon or Jean Rhys, delivered without notes and in a continuous flow.

Don was also a long-time member of the Auckland University Athletic Club and an

outstanding athlete. As a middle-distance runner, he represented New Zealand on the international stage. In the 1958 British Empire and Commonwealth Games in Cardiff, he finished fifth in the 880 yards and, in the 1960 Rome Olympics, he made the 800-metre quarter-final.

In 1959, Don married Marjory Jill Evans (Jill) and they had three children, including renowned jazz vocalist Caitlin Smith, who performed at the retirement parties of several former English department professors.

In her eulogy at his funeral, Caitlin remembered that her father, whom she adored, had a sense of “unspoken knowing” about him, which was true of many aspects of his life. “It was there in his deep appreciation of art, music, literature, truth, justice, meaning, and beauty. He just got it. As a brilliant artist himself, he could sketch anything freehand. When I couldn’t attend a school art trip because of my limited vision, Pa sketched me One Tree Hill beautifully. That was far more precious than being there with the other kids.”

Don’s legacy endures not only through his academic work and athletic achievements, but also in the hearts of family, friends, and the countless students he inspired.

**Full story:** [auckland.ac.nz/obit-don-smith](http://auckland.ac.nz/obit-don-smith)

**DAME ALISON BURNS**  
**QUENTIN-BAXTER**  
**28 DECEMBER 1929 –**  
**30 SEPTEMBER 2023**

**Dame Alison Burns Quentin-Baxter was a distinguished public and international lawyer, a graduate of Auckland Law School, the first woman chair of the law students’ society, a writer of constitutions, a diplomat and a law reformer.**

Alison was born on a farm north of Auckland in 1929 and attended Epsom Girls Grammar and Nga Tawa Diocesan School. In the late 1940s, She undertook her degree at the University of Auckland’s Faculty of Law, where she was one of very few women. In her final year, she became chair of the students’ law society – the first female to hold the position.

After graduating, she worked for the Department of External Affairs and went on to represent New Zealand in New York on the Legal Committee of the UN General Assembly. She was later promoted to head of the department’s legal division, a position she held until 1960 when she was posted to Washington DC as the first secretary in the New Zealand Embassy.

After she and Robert Quentin-Baxter were married, they spent time in Tokyo before moving to Wellington where, from 1967 to 1969, Alison taught law and constitutional history at Victoria

University, which later awarded her an honorary Doctorate of Laws.

In 1970, Alison was appointed constitutional adviser to the Niue Island Assembly, and she and Robert helped draft a new constitution for the country. In 1974, the Niue Constitution Act was passed and, ten years later, she was appointed to the Niue Review Group and the Niue Public Service Commission. She also advised the Fiji Constitution Review Commission, among many other international roles. She was the New Zealand Law Commission director from 1987 to 1994.

With Professor Janet McLean (Faculty of Law)

she wrote *This Realm of New Zealand: The Sovereign, the Governor-General, the Crown*. Janet says Alison “broke the glass ceiling for women in many ways”.

In 1993 she was made a Companion of the Queen’s Service Order for public services and, in 2007, became a Distinguished Companion of the New Zealand Order of Merit for services to law. In 2009, she was named a Dame Companion of the New Zealand Order of Merit.

**Full tributes:**  
[auckland.ac.nz/obit-dame-alison](http://auckland.ac.nz/obit-dame-alison)



*Alison Quentin-Baxter in the International Court of Justice in the Nuclear Tests, New Zealand v France, case in 1973. Inset: Dame Alison. Photos supplied: Victoria Hanham, MFAT.*

## OLAF DIEGEL:

## 3D PRINTING

## CULTURAL

## TREASURES

Professor Olaf Diegel is using 3D technology to create new possibilities for preserving Aotearoa's precious taonga.

**A few months ago, Professor Olaf Diegel walked through the doors of Auckland Hospital. But he wasn't there to treat a health issue or pay a visit to a loved one.**

His visit had a unique purpose: to get a CT scan of a pūtātara (conch shell trumpet), one of many highly prized taonga pūoro (traditional Māori instruments) with immense cultural significance. The hospital's CT scanner was needed because it was bigger than any scanner on campus.

As the head of the University's Creative Design and Additive Manufacturing Lab, the scan gave Olaf the intricately detailed images he needed to craft a 3D-printed reproduction of this invaluable taonga.

The trumpet was a cherished family heirloom of the University's Kaiarataki Michael Steedman, and had been passed down his whānau through generations.

"The problem is that you couldn't have children playing with it because if they drop it, it's gone forever," says Olaf.

That concern is now a thing of the past. The trumpet that Olaf created is not only fully functional, but it faithfully reproduces the sound of the original.

"We've printed a bunch of them, including full-colour prints and nylon 'strong' prints that you can pretty much throw against the wall without having to worry about them breaking," Olaf says.

Since then, he has been working on 3D printing a pūkāea (long trumpet), which was created using the same process as the conch shell trumpet and took 16 hours to print.

These taonga pūoro are some of the most unique and rare instruments found across the motu. Replicas of both are now held at Ōrākei Marae in Auckland.

This convergence of technology and heritage preservation is shaping a new era in how we



*Professor Olaf Diegel is head of the Faculty of Engineering's Creative Design and Additive Manufacturing Lab. He has printed and is holding replicas of two highly prized taonga pūoro (traditional Māori instruments). Photo: Chris Loufte*

safeguard and share our cultural treasures.

Over the past decade, the technology has been increasingly used for preservation work by museums and cultural institutions. Tourists can now visit a 3D-printed replica of Tutankhamun's tomb in the Valley of the Kings in Egypt or view ancient artefacts from China's Forbidden City that have been restored, thanks to the technology.

"Don't get me wrong, this is an expensive

technology. But compared with any other way of preserving a cultural artefact, it's way cheaper and much more flexible."

Olaf is playing a significant role in combining the power of digitisation and 3D technology in Aotearoa New Zealand. He is working with Auckland Museum to digitally scan a traditional waka and create a 3D model of it.

Software will also be used to restore any damaged parts of the waka, says Olaf.

“Once you have the digital file of an artefact that’s been damaged, you can fix it and then print a good artefact rather than a damaged one.”

However, replicating cultural artefacts does raise some ethical considerations.

When the long trumpet was being printed, a dilemma emerged: should the replica closely mimic the original, down to its wood texture? In this instance, Olaf and his team engaged with iwi Ngāti Whātua Ōrākei and made the decision to produce it using white plastic, as a sign of respect for its cultural value and significance.

“You don’t want to remove the value from the original artefact,” Olaf says.

Olaf set up the Creative Design and Additive Manufacturing Lab – or “giant toy room”, as he likes to describe it – at the Newmarket Campus in 2018. It’s filled with all sorts of weird and wonderful 3D-printed projects, including an assortment of guitars decked out with LED lights, which he designed.

“Anything you can imagine, we can make here; whether it’s metal, food, ceramics, or plastics, we try to make it as quickly and as efficiently as possible,” he says.

Most projects don’t require a trip to the hospital. They can be designed using computer-aided design (CAD) software and then created layer by layer in a 3D printer.

Olaf says the technology is very accurate.

“With the colour prints we did of the conch shell, the layer thickness is about 20 microns – that’s 0.02 of a millimetre.”

The efficiency that 3D printing offers is already having a big impact on manufacturing by helping companies slash costs, reduce waste and cut production lead times.

“If you can take a product that, say, weighs 16 kilograms, and you can reduce it to one kilogram – and you think about that being shipped around the world or being a part on an aeroplane – the fuel you save every year because of that weight saving is huge,” says Olaf.

Although it’s still an emerging technology, significant advancements have already been achieved in 3D printing, particularly when using it for medical applications.

“We all have different-shaped bodies, so being able to make a medical implant that’s custom-made and fits you perfectly is a huge advantage.

“We can print a titanium hip replacement and make the outer surface of it porous so that after we implant it, the bone grows into it and you don’t have to go back five or ten years later to get all the screws tightened up.”

Another notable innovation in medical applications revolves around bioprinting,

where the goal is to print tissues and organs. Although printing complete organs can’t be done yet, Olaf is working to produce synthetic muscle substitutes using electroactive polymers. The technology could help people with muscle atrophy, effectively replacing their weakened muscles.

Olaf and his team of students in the lab are also experimenting with 3D-printed food using cutting-edge industrial-grade printers. This ground-breaking technology holds the potential to benefit people with dysphagia, a condition that impedes their ability to chew or swallow food. Although still a work in progress, they aim to offer tailored, dissolvable bite-sized meals, delivering essential nutrition in a format that suits the unique needs of those with the condition.

**“This is an expensive technology. But compared with any other way of preserving a cultural artefact, it’s way cheaper and much more flexible.”**

**– Professor Olaf Diegel, Creative Design and Additive Manufacturing Lab**

In another remarkable development in additive manufacturing, local company QOROX successfully used 3D printing technology to construct an entire concrete house in the West Auckland community of Huia.

“We have a housing crisis in New Zealand. Now imagine if you could print a house in 48 hours or a week instead of six months or a year. Think how that would change how we live and how we build houses around New Zealand.”

Olaf says there’s another exciting frontier on the horizon: the integration of artificial intelligence (AI) into the realm of 3D design. This innovation promises to revolutionise the creative process and push the boundaries of what’s possible.

“You will be able to type, ‘I’d like a guitar that looks like Donald Trump’, and the AI will then generate a guitar that looks like him.

“I’m not sure why anybody would want one,” he says. “But you could do it.”

■ Hussein Moses

View the story online to see a video of the process for making the 3D-printed instrument.



The 3D-printed pūkāea before it was painted to look like the one Olaf is holding. Below: Three versions of the conch trumpet printed in different materials. Bottom: Stephen Brockbank from museum workshop Object Support with the original pūkāea from Ngāti Whātua Ōrākei.





*Untitled (2021) by Ayesha Green sits on the wall in the main entrance to the General Library.*  
 Photo: William Chea

## TROUBLING HISTORIES, OPTIMISTIC FUTURES

**Over the years, several significant artworks from the University Art Collection have adorned the expansive wall in the main entrance to the General Library, one of the liveliest thoroughfares at the City Campus.**

The most recent was Dr Fiona Pardington’s unmissable photographic triptych, *Portrait of a Life-cast of Matua Tawai, Aotearoa/New Zealand* (2010). Recently, a monumental work by contemporary painter Ayesha Green arrived to newly occupy the same foyer space. *Untitled* (2021) is one of the most recent acquisitions to the Art Collection and, measuring 1.9m x 3.3m, has become one of the largest canvas paintings in the University’s care.

Ayesha Green (Ngāti Kahungunu, Kai Tahu) is a contemporary Māori artist. Born in 1987 in Ōtautahi Christchurch, she has spent time further south in Ōtepoti Dunedin and now lives and works in Tāmaki Makaurau Auckland. Following studies at Wintec in Hamilton, Ayesha completed a Master of Fine Arts at Elam School of Fine Arts (2013) and a Graduate Diploma of Arts in Museums and Cultural Heritage from the University (2016).

Working in painting, drawing and sculpture, Ayesha is best known for her distinctive painterly style through which she produces figurative portraits and scenes using flattened blocks of colour and bold outlines. Her subjects are localised and she frequently examines histories of Māori and Pākehā representation by drawing on personal as well as historic references specific to Aotearoa New Zealand.

*Untitled* (2021) was part of a body of work produced for Ayesha’s solo exhibition, *Ayesha Green: To the Best of My Knowledge* at Hastings

City Art Gallery in 2021. The exhibition interrogated the visual language and history of native schooling in New Zealand, particularly focusing on Hukarere Girls’ College, founded in 1875 in Hawke’s Bay. As outlined in the accompanying exhibition text, “The early education of Māori girls was pivotal in the assimilation tactics undertaken by the colonial government, alongside missionaries’ activities. As agents of change, Māori girls were expected to take their new-found Pākehā knowledge into the kāinga. However, these women became leaders in advocating for and creating positive change for Māori, whose achievements have given agency to Māori women across the country.”

In *Untitled* (2021) in particular, Ayesha took inspiration from a well-known and respected Māori woman who was first enrolled at Whakarewarewa Native School in Rotorua in 1903, then came to Hukarere in 1910 to finish her schooling. Rangitīaria Denna, better known as Guide Rangī, was an advocate for the rights of Māori to self-determination and she achieved wide recognition as a cultural ambassador. Throughout her life, she spoke about the impact of having Māori women as doctors, lawyers and teachers, and was passionate that there wouldn’t be just one, but many Māori women in such roles.

Ayesha’s painting is a response to this, spotlighting both the troubling history and the enriching, optimistic future of education for Māori girls and women in Aotearoa and beyond. As inspired by Guide Rangī, Ayesha depicts an elongated table akin to that of da Vinci’s

*The Last Supper*. Devoid of a rendition of Christ flanked by his disciples, here we instead meet 12 Māori girls facing the viewer, their bread and wine substituted for a spread of biro pens and markers on the table before them. In referencing *The Last Supper*, Ayesha alludes to the role of Christian missionaries within the native schooling and colonising initiatives.

Represented at Ayesha’s table though, are all types of Māori girls. Their various pens and markers are their tools for learning, writing their reo and sparking change. The painting thus looks past individualism and encourages viewers to understand what it might mean to see many Māori girls in positions of leadership and agency collectively.

In a note about the work, Ayesha’s gallerist Jhana Millers expands: “The eye lines and the waving arms of the figures signal that there are also people outside the painted frame. Perhaps there are many more Māori girls who are being invited to a seat at the table.”

This sentiment is one of a hopeful future, and the placement of the painting in the General Library, where students from all disciplines gather, serves as an encouraging reminder to young women of the importance of such a future.

■ Madeleine Gifford, Art Collection adviser, Te Tumu Herenga Libraries and Learning Services

**The University’s Art Collection comprises close to 2,000 artworks and includes work by many of Aotearoa New Zealand’s best-known artists. The collection is a valuable cultural asset shared across campuses and is permanently on display.**

# BINNEY BOOK TAKES FLIGHT

**Around 100 guests attended the launch of writer, painter and art curator Gregory O'Brien's book, *Don Binney: Flight Path* at Old Government House (OGH) on 19 October.**

A who's who of the arts world heard about Greg's seven-year labour of love to document the works of renowned artist, alumnus and former Elam staff member Don Binney, in Greg's 400-page, large-format book.

Jacqueline Fahey, Dick Frizzell, Jenny Bornholdt, Liz Thomson, Doris de Pont, John Reynolds, John Pule, Professor Brian Boyd, Ian Wedde, Fred Graham and Marilyn Sainty were among those in the crowd. The art exhibition for the Auckland University Press (AUP) book launch was curated by Associate Professor Linda Tyler,

assisted by Art Collection adviser Madeleine Gifford. AUP's Lauren Donald thanked Don's wife Philippa and daughter Mary for their support during the book's creation. "It's an absolute pleasure to see this book out in the world."

Linda says OGH was a fitting venue; Don features in a portrait hanging over the kitchen doorway as a stalwart member of the senior common room club from days gone by.

"We have the best possible proof of the importance of keeping things, in *Flight Path*," she said of the inclusion of the artist's letters, journals and even Xeroxes in Greg's book.

Greg said he spent his childhood sleeping under a Binney artwork of two shining cuckoos "an inspired gift from my parents". The book is a reciprocal gesture to Don, whom he met at AUP Christmas drinks at OGH when Greg was a "young and bushy tailed poet".

**Read full story, see photos and video at: [auckland.ac.nz/don-binney-book-launch](http://auckland.ac.nz/don-binney-book-launch)**



*Don Binney: Flight Path* author, Greg O'Brien and Associate Professor Linda Tyler. Photo: William Chea



**Rapture: An Anthology of Performance Poetry from Aotearoa New Zealand**

Carrie Rudzinski is an adviser in the Business School but also a performance poet and author of numerous poetry books. She has edited this collection with Grace Iwashita-Taylor as a snapshot of contemporary performance poetry in Aotearoa.

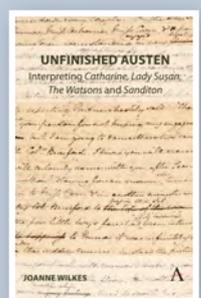
**Eds Carrie Rudzinski and Grace Iwashita-Taylor, AUP, \$60, out on 9 November.**



**A Bloody Difficult Subject**

Subtitled *Ruth Ross, te Tiriti o Waitangi and the Making of History*, this book by alumnus Bain Attwood, a Professor of History at Monash University, tells the story of Ruth Ross, a public historian (1920-1982). Bain's book is described as a 'provocative' study of three difficult subjects and valuable for anyone interested in Aotearoa history.

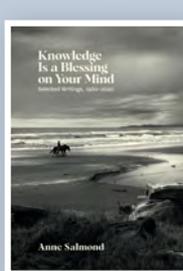
**Bain Attwood, AUP, \$60**



**Unfinished Austen: Interpreting Catharine, Lady Susan, The Watsons and Sanditon**

*Unfinished Austen* is a scholarly monograph by Emeritus Professor Joanne Wilkes, examining four texts left incomplete by Jane Austen. None was published until well after her death. This is the first study to examine *Catharine, Lady Susan, The Watsons and Sanditon* in detail, and in relation to each other.

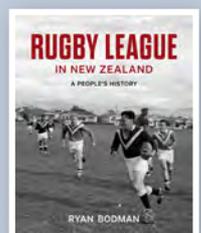
**Joanne Wilkes, Anthem Press, \$35**



**Knowledge Is a Blessing on Your Mind, Selected Writings, 1980-2020**

A collection of Distinguished Professor Dame Anne Salmond's writings over 40 years – from *Hui and Eruera*, through to *The Trial of the Cannibal Dog* to today's debates about race and te Tiriti o Waitangi.

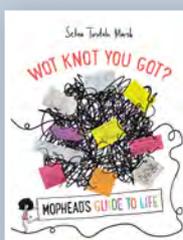
**Anne Salmond, AUP, \$65, out on 20 November**



**Rugby League in New Zealand: A People's History**

Historian Ryan Bodman, who did a MA in history at the University, tells the story of rugby league in New Zealand in a way that reveals as much about the cultural fabric of the country as it does about the evolution of the game.

**Ryan Bodman, Bridget Williams Books, \$60**



**Wot Knot You Got? Mophead's Guide to Life**

Professor Selina Tusitala Marsh's eternally wise and popular Mophead character is back to solve knotty problems in work and life. For readers from eight to 80, no matter what knot you've got.

**Selina Tusitala Marsh, AUP, \$30, out 9 November**



**The Forgotten Forest: In Search of the Lost Plants and Fungi of Aotearoa**

MSc alumnus Robert Vennell's first book, *The Meaning of Trees*, was very popular. His second, *The Forgotten Forest*, explores our overlooked plants and fungi. Once again, Robert includes beautiful historical artworks and illustrations.

**Robert Vennell, HarperCollins NZ, \$40**



**Team Coaching for Organisational Development**

Helen Zink has a MBA from the University and is now a growth, leadership and team coach in business. In this case study, she tracks the development of a team through five viewpoints over three years, exploring the concepts of collective leadership and teamwork.

**Helen Zink, Routledge, \$63**

## KIWIS HAVE SPACE FOR MORE

**Just recently, I returned from Europe where I witnessed some of the consequences of the Russian invasion of Ukraine, which began on 24 February 2022.**

About six million refugees from Ukraine are registered in Europe, and they can be seen everywhere. These are women, children, and older people only, as men capable of serving in the army cannot leave Ukraine. Millions of Ukrainian children will be raised without fathers and millions of women are separated from their husbands, partners, sons and brothers.

Russian President Vladimir Putin started this war on the pretext of liberating the Russian-speaking regions in Eastern and Southern Ukraine from Ukrainian Nazis. Ironically, the Russian-speaking regions in Eastern and Southern Ukraine suffer from this aggression most, as they are either occupied or have been bombed.

While Ukrainians see the war as an attempt to colonise Ukraine, many Russians believe that their country is fighting Ukrainian Nazis, which in their eyes justifies aggression. But a Ukrainian woman I met in Germany asked me, "Can you explain who the Russians are liberating me from? I have not met any Nazis in Ukraine. I spoke Russian and no one ever asked me to switch to Ukrainian."

Given that Ukrainian president Volodimir Zelenski is a Russian-speaking Jew, it is difficult to convince people that he leads Ukrainian Nazis. However, Russian propaganda is creative. For example, to justify the allegation that Zelenski is a Nazi, Russian Minister of Foreign Affairs Sergei Lavrov repeated the debunked claim that the Nazi leader Adolf Hitler had Jewish blood.

The atrocities committed by Russian troops – mass murder, torture, and rape – are well documented. Still, Putin sympathisers (within and outside Russia) disbelieve these acts, because they don't believe the news reported by 'evil' mainstream media, such as CNN. Others acknowledge what has occurred, but insist the ends justify the means.

At the right-wing extreme of the political spectrum, Putin is a hero because he leads a crusade for 'traditional values' against liberals. Trump called Putin a genius when he started the war against Ukraine. Pro-Russian and anti-Ukrainian policies are currently a part of a worldwide resistance to liberal values. Recently, the anti-liberal sentiment in Slovakia brought to power a pro-Putin politician, Robert Fico, who promised to cut all aid to Ukraine.

At the left-wing extreme of the political spectrum, the Russian war in Ukraine is regarded as a war with the US and the 'collective West'.

*"Russian propaganda portrays the invasion of Ukraine as part of a fight for the liberation of suppressed nations."*

*Dr Misha Vorobyev  
Photo: William Chea*

Russian propaganda portrays the invasion of Ukraine as part of a fight for the liberation of suppressed nations. Certainly, Russia maintains good relationships with anti-American armed groups such as Hamas. In fact, Russian media went so far as to praise the deadly 7 October Hamas assault, which saw women, children and the elderly killed, attacked or kidnapped.

Similarly, to justify Russia's invasion of Ukraine, Minister Lavrov claimed that Russia is in a struggle with "those few who use neocolonial methods of subjugation to maintain their elusive dominance".

Modern Russia inherited its anticolonial rhetoric from the Soviet Union, which claimed to be on the side of suppressed people of Asia and Africa in their fight against colonialism. However, the Soviet Union itself was a colonial empire, inherited from the traditions of 19th-century Russia.

Following the Bolshevik Revolution, which saw the establishment of the Soviet Union, five Russian colonies – Poland, Finland and three Baltic states – gained independence.

Despite the official party line that all nations of the Soviet Union were equal, the then government imposed collective punishments on a number of these independent nations, including Ukraine. It orchestrated a famine in Ukraine (the Holodomor, 1932-1933) that killed millions in retaliation for its refusal to join collective farms.

Citizens of other nations were deported en masse to Central Asia in reprisal for alleged collaboration with Nazi Germany. At least a quarter of the deported Chechens perished in the process.

After the collapse of the Soviet Union in 1991, another 14 nations, including Ukraine, gained independence. However, others remain in the Russian Federation and continue to suffer from oppression; it is still unknown how many died during the Chechen wars for independence (1994-1996 and 1999-2009).

Putin called the collapse of the Soviet Union 'the greatest geopolitical catastrophe of the

20th century' and believes his mission is the restoration of the Russian Empire. Following this thinking, the war against Ukraine is a colonial war aimed at eliminating Ukraine as a nation.

However, internationally, Ukrainians are generally not recognised as victims of colonial policies because they are Europeans, in a world where colonialism is generally regarded as something 'white' nations have imposed on peoples of colour. But people of all races can suffer from colonisation.

In March 2022, New Zealand created a Special Ukraine Visa to allow refugee Ukrainians to stay for two years. Around 1,500 such visas have been granted and, in August, new residence pathways were created, open to Special Ukraine Visa holders who arrive in New Zealand before 15 March, 2024.

But Ukrainians can only apply for a work visa if they're sponsored by members of their immediate family who already live in New Zealand. They do not receive any interim financial support from the government. Surely New Zealanders could help Ukrainians by providing shelter or sponsorship in the same way Europeans do? If you agree, look for the online version of this story and a link to a petition.

Having lived in Aotearoa New Zealand for 14 years, I have seen kind attitudes to refugees from Asia and Africa, including to some of my students. European victims of Russian colonisation deserve similar kindness to that afforded to refugees from other areas.

■ Dr Misha Vorobyev is a senior lecturer in the School of Optometry and Vision Science. Born in Russia, he has lived here for 14 years. He helps compile a newsletter ([inhabitedisland.com](http://inhabitedisland.com)) in Russian, English and Ukrainian with information on the impact of the war on Russians and Ukrainians in New Zealand.

*The views in this article are personal opinion and not necessarily those of the University of Auckland.*