



OUR HONOUR

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INSIDE

INCREASE YOUR IMPACT

A campaign is underway aimed at highlighting things academics can do to ensure their research is as visible as possible.

Although research produced by the University of Auckland is top-quality and often published in the most prestigious journals, the University's research ranking is not as high as it could be against international benchmarking. There is no one simple explanation for this, but one reason may be that some of our research is not as widely disseminated as it could be.

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DISCOVERING UNDER WATER

Watching the graceful and elegant way that fish and marine mammals swim is one of the great attractions of scuba diving. Iain Anderson Group Leader for the Biomimetics Laboratory of the Auckland Bioengineering Institute and an Associate Professor in the Department of Engineering Science writes of his team's latest discoveries in advancing the art of fin swimming by taking a watchful lead from our underwater creatures.

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TO BLOG OR NOT TO BLOG

Blogging is a way to promote your ideas, and increase your visibility, says Professor Shaun Hendy. "These days my blog is read by all sorts – people in industry, government ministers and even academic referees! I had no idea that would happen when I started, but it has clearly increased the uptake of my work here and overseas. It requires a different style of writing, but you can take more risks and have a bit of fun. Writing for a broader audience challenges you to write in a more accessible way."

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APPRECIATING THE FULL MOON

Dr Melissa Inouye (Asian Studies) is seen here with young mooncake tasting specialist “Shooty” McMullin at the 2014 University of Auckland Mooncake Competition, held in the Patrick Hanan Room of the Arts 2 Building to celebrate the Chinese Mooncake Festival. This is an occasion for appreciating the beauty of the full moon and thinking about the wholeness and togetherness it represents. Nora Yao, Director of the Confucius Institute, judged the mooncakes, for which prizes were awarded in categories of taste, design and being “most moonlike”.



PUSHING THE BOUNDARIES

Two fine arts students received joint first prize in this year’s Henrietta and Lola Anne Tunbridge Scholarship for watercolour painting, with works the judges described as “cleverly pushing the boundaries of the medium”. Elam School of Fine Arts honours student Gowoon Lee (pictured) and masters student Yu Na Lee received \$6,000 each from the \$15,000 prize pool at a packed ceremony at Projectspace Gallery. The award is given annually to an Elam student who excels in exploring contemporary themes in watercolour. It is one of New Zealand’s largest art prizes.



GOLDIE SYRAH RANKED HIGHLY

Heinrich Storm and his team at Goldie Wines have once again produced an excellent vintage with the 2013 Goldie Syrah, Waiheke Island, being ranked in the top 12 Syrah in New Zealand. Wine critic Bob Campbell described it in the *Australian Gourmet Wine Magazine* as an excellent wine from a top vintage. Goldie Wines are available at discounted prices to staff of the University and purchases can be made directly from the online store at goldiewines.auckland.ac.nz



TOP LAB AT UK S-LAB AWARDS

The University of Auckland has received international recognition for the design of its new Chemistry Undergraduate Teaching Laboratories, which won the Refurbished Laboratory category at the prestigious S-Lab Awards in London. The laboratory (pictured right) was designed by specialist laboratory architects Lab-works Architecture, in association with Architectus and BECA. Professor Jim Metson, Deputy Dean of Science and Chief Science Advisor to MBIE, was at Kings College in London with Lab-works director Ken Collins to receive the award for the team.



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COVER PHOTO: His Excellency Ban Ki-moon at the Fale Pasifika, after receiving his Honorary Doctor of Laws degree from the University of Auckland.

Photo: Godfrey Boehnke

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JOHN HOOD BACK TO CELEBRATE



Former Vice-Chancellor Sir John Hood was guest of honour at an event in August to celebrate the first decade of the University's Hood Fellowships programme and Sir John's investiture in Wellington the previous week.

Sir John and wife Emma arrived at University House, which he officially opened in 2003, to be welcomed by recipients of Hood Fellowships, philanthropists, supporters and senior staff. The group included Professor Rosemary Bailey and Professor Peter Cameron, both experts in algebra and combinatorics, who were visiting Auckland on Hood Fellowships from the University of London.

Sir John spoke of the vital role that the Hood Fellowships play in advancing the University's international reputation. He also highlighted the importance of philanthropy in the University's future and thanked the large community of benefactors who support the institution. He encouraged a sense of participation and shared "ownership" in the University through energetic engagement with our communities of interest. "Institutions are a reflection of their societies; societies, in turn, reflect their institutions."

Vice-Chancellor Professor Stuart McCutcheon and the Chair of the University of Auckland Foundation, Geoff Ricketts, paid tribute to Sir John's leadership and the ongoing impact of the Hood Fellowship Programme. The Fellowships were established to mark the former Vice-Chancellor's outstanding contribution to the University of Auckland. Since 2004, the programme has enabled 107 international academic exchanges. Of these, 83 have been visits to our university by esteemed academics from around the world, and 24 by outstanding individuals from our own ranks who have visited colleagues in similar leading institutions overseas. Hood Fellowships were announced for 11 academics at the event.

For information about the new Hood Fellows and Fellowship visit www.uoafoundation.org.nz.

GREEN FUTURES

This year's Vice-Chancellor's Lecture Series will focus on renewable energy and green growth, showcasing our research activities in these areas.

On Monday 13 October Dr Nirmal Nair (Electrical and Computer Engineering) and Ryno Verster will speak of "Empowering electricity network consumers through smart grid technologies". Multi-utility providers who can provide comprehensive solutions to customers for all their energy needs are likely to emerge, and distribution utilities will need to develop new business models. Consumers will have a multiplicity of choices such as installing solar PVs and storage batteries, switching to electric vehicles, and using new ways of home energy management.

On Tuesday 14 October Professor Mark Taylor (Chemical and Materials Engineering) and Dr Golbon Zakeri (Engineering Science) will speak on "Creation and utilisation of demand response in energy markets". The fundamental difficulty of electricity markets is obtaining demand response, as much of the demand is inelastic. This lecture will focus on leading-edge Shell Heat Exchanger technology from the University, that could enable order-of-magnitude increases in consumption flexibility, and large savings on electricity consumption for large industrial users.

On Monday 20 October Professor Rosalind Archer and Dr John O'Sullivan (Engineering Science) will speak on "Geothermal energy". An important challenge in exploration for new geothermal fields is that of drilling and producing geothermal fluid from deeper below the earth's surface, where the fluids will have much greater energy content. These "deep" geothermal resources could potentially provide all the electricity the country needs.

The lecture will focus on new resources such as reservoir management tools which can provide sophisticated models of how fluids are moving.

On Tuesday 21 October Dr Stephen Poletti (Economics) and Rod Oram will speak on "Green growth: New Zealand's future" and of the ways New Zealand can benefit from global green investment patterns by exporting to nations investing in green assets and technology, and importing new technologies and ideas.

The lectures are free and no booking is required. They will be held from 5-6pm in Rooms 401.439 or 401.401 at the Faculty of Engineering, 20 Symonds Street. For more information contact Andrea Ross (as.ross@auckland.ac.nz) or 09 923 5664.

INCREASE YOUR IMPACT

You may have noticed some "Increase Your Impact" posters, postcards and articles appearing around the University as part of a campaign aimed at highlighting things academics can do to ensure their research is as visible as possible.

Although research produced by the University of Auckland is top-quality and often published in the most prestigious journals, the University's research ranking is not as high as it could be against international benchmarking. There is no one simple explanation for this, but one reason may be that some of our research is not as widely disseminated as it could be.

One of the suggested actions is to let people know about your research and its significance. See Maramatanga on page 12 where Professor Shaun Hendy explains how he first began blogging to do this.

The "Increase Your Impact" campaign also recommends making your research more widely available by uploading the full text into the University research repository. This is a form of

self-archiving that is also known as Green Open Access. Several studies suggest that Green is as good as Gold Open Access (which might require a publication fee) in terms of both the visibility and citation advantage, compared to restricted access.

Most highly-ranked research universities have an institutional repository, and research available through an institutional repository also fulfils some funder requirements to make research publicly available. As technology changes the publishing model, this expectation is likely to become more common among funders.

Other recommended actions to increase your impact are to ensure your staff profile in the University Directory is up to date, and use a clear and consistent author name and institutional affiliation.

A comprehensive list of Frequently Asked Questions around uploading full text can be found on the campaign's landing page, www.auckland.ac.nz/increaseyourimpact.

MOOCS

Department of Statistics Professor Chris Wild will face more than 11,000 students from all over the world when the department's massive open online course (MOOC) starts on October 6.

The free, online, eight-week course *Data to Insight: An Introduction to Data Analysis* assumes no specialist statistical skill but aims to give students a hands-on introduction to finding the stories in datasets. Enrolments had reached 11,000 by mid-September. The course is the first University offering under the FutureLearn banner, which aims to provide free, high-quality online courses from more than 20 of the world's leading universities and institutions. A second course: on Academic Integrity begins in November.



Professor Chris Wild of the Department of Statistics faces his biggest-ever class on October 6.

A MEANINGFUL LIFE



Professor Yuan Tse Lee and Deputy Dean Professor Jim Metson

Professor Yuan Tse Lee, an esteemed Taiwanese Chemist and Nobel Prize Laureate, visited the Faculty of Science to give a lecture for young scientists while in New Zealand as part of the Royal Society International Council for Science General Assembly.

He talked about his student days in Taiwan, and how as a little boy he read a book about scientist Marie Currie and learnt of her "extraordinary determination and patience", which showed him "how beautiful the life of a scientist can be".

In post-World War II Taiwan, under the repressive Kuomintang-led Republic of China rule, a young Professor Lee dreamed about becoming the "master of himself" and leading a "meaningful life". He aspired to work with idealistic people, which led him to study with Professor Bruce Mahan at the University of California Berkeley, where he gained a PhD in Chemistry.

Professor Lee expressed an interest in engaging with young scientists. For this reason the audience for his lecture was made up of around 100 selected undergraduate and postgraduate students and University staff. This allowed him to engage with them before being taken out to lunch at the Northern Club with Deputy Dean, Professor Jim Metson, and six PhD students from the Faculty of Science.

HIGH PRAISE FOR LAW



A visiting professor of International Law has passed on his high opinion of the University's Law School.

Professor Joe McCahery, Professor of International Law at Tilbery University in the Netherlands and Programme Director of the MSc and LL.M in Finance and Law at Duisenberg School of Finance in Amsterdam was at the University of Auckland to be the keynote speaker at the Law Faculty's recent conference on "The changing landscape of corporate law".

Professor McCahery said he was "thoroughly impressed" with the Auckland Law School, and for that matter, Auckland. Having also taught in the UK, he says it's wonderful to see a person of Dean Andrew Stockley's calibre here.

"The Law School has a great reputation," he adds. "People I know are attracted to it and come here regularly. It is an engaged school with top researchers and high-achieving students."

He likes Auckland as a city also, finding it dynamic and cosmopolitan with lots of different dialects. He enjoys the Polynesian influence and that he can buy good Dutch cheese here.

MUSEUM MEDALS

Two University academics have been honoured with Auckland Museum Medals at a recent ceremony.

Professor Jonathan Mane-Wheoki (Elam School of Fine Arts) was made a Companion of the Auckland War Memorial Museum and Associate Professor Linda Tyler (Centre for Art Studies), an Associate Emerita of the Auckland War Memorial Museum.

The awards acknowledge individuals who have given exceptional service to the museum or added value to its interests, including outstanding contributions to the generation of new knowledge drawing on the museum's collections and research resources.

Find out more on the Staff Intranet and the next issue of the *News*.

RANKINGS

The University of Auckland has again been ranked as the leading university in New Zealand following the publication of the 2014 QS World University Rankings. In the latest rankings, the University's position improved slightly to 92= compared to 94 in 2013.

The University is the only New Zealand university ranked in the top 100 in the QS World University Rankings, in the top 200 in the *Times Higher Education* World University Rankings, and with the maximum rating of Five Stars Plus in the QS Stars University Rankings. The University is also the highest ranked New Zealand university in the Shanghai Jiao Tong Academic Ranking of World Universities.

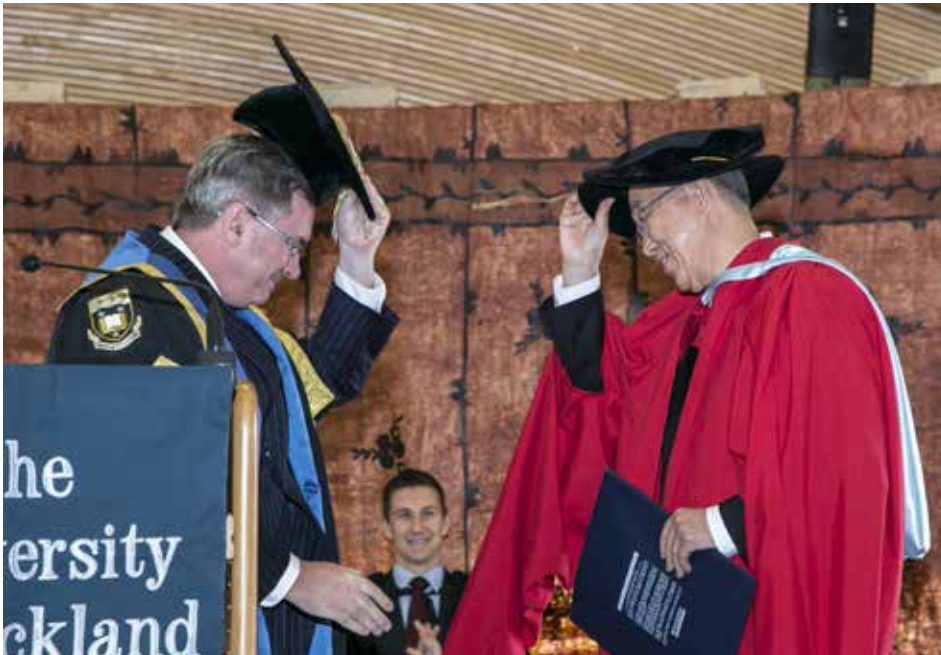
WOMEN IN LEADERSHIP 2015

The University's Women in Leadership Programme is inviting applications for next year with a closing date of 31 October 2014. All interested women are invited to apply but priority is likely to be given to professional staff women at Level 4-7 and academic women who are considering applying for promotion in the next two years. These are likely to be at Lecturer 6-7, Senior Lecturer 4-5 or Senior Tutor 6-7, Professional Teaching Fellow 2-3. Further information and the application form can be found on the POD website under Career Development or by contacting Mary Ann Crick, ext 86379 or ma.crick@auckland.ac.nz

FULBRIGHT ART AWARD

Congratulations to Senior Lecturer Dr Ruth Watson from Elam School of Fine Arts, who is the winner of this year's prestigious Fulbright-Wallace Arts Trust Award. Ruth will go on a three-month residency to the Headlands Center for the Arts in Sausalito, California USA.

AN EXTRAORDINARY OCCASION



On 3 September His Excellency Mr Ban Ki-moon, Secretary-General of the United Nations, received an Honorary Doctor of Laws degree from the University of Auckland, and afterwards delivered a public lecture attended by around 2,800 people.

His Excellency then joined senior staff and invited guests for lunch.

The occasion was described by Vice-Chancellor, Professor Stuart McCutcheon, as “an extraordinary event”, for which he extended thanks to the many staff who contributed to its success.

The conferral ceremony at the Fale Pasifika was overseen by the University’s Pro-Chancellor Peter Kiely, in the absence of the Chancellor, Ian Parton, who was overseas. Among distinguished visitors were the South Korean Ambassador and representatives from Australia, Canada, Cook Islands, Czech Republic, Denmark, Ecuador, the European Union, Germany, Hungary, Monaco, Nepal, Philippines, Poland, Samoa, Spain, Thailand and Uganda, as well as from the New Zealand Ministry of Foreign Affairs and Trade.

University Public Orator, Professor Paul Rishworth, former Dean of Law, delivered an eloquent eulogy, describing His Excellency as “universally admired for selflessly delivering [a special kind of] leadership.

“He is acknowledged as a tireless advocate and effective negotiator across the enormous range of UN activities. These include security crisis interventions, peace-keeping missions, humanitarian aid in war and disaster zones, social and economic development – especially children’s health and education – and reckoning

with the global environmental issues wrought by climate change. The business of the United Nations is in essence, the business of reckoning with problems in all four corners of the earth.

“His Excellency has put his own stamp on the role.”

Paul spoke of the close connection between the mission of our University and that of the United Nations.

“As a leading internationally-orientated university, we too strive to do our part in the betterment of our society through research-based teaching... The future of our planet depends on the exchange of ideas and collaboration.”

His Excellency said he was deeply grateful for the Honorary Doctorate, which he accepted “on behalf of all staff of the United Nations”.

Around 2,800 staff, students and members of the community came to hear the public address that followed, either directly or by video link to adjacent lecture theatres, with many more watching the live streaming from the University’s home page. Held in the Fisher & Paykel Auditorium of the Owen G. Glenn Building, the lecture was entitled “The United Nations and New Zealand: Partnering for a Sustainable Future”.

This was Mr Ban’s second visit to the University; in 2011 he gave a public address which was extremely well attended, with approximately 1,600 attendees across four lecture theatres.

His Excellency referred to his earlier visit with a flash of humour that also touched upon serious topics that form a continuing part of his responsibilities. “Unfortunately when I spoke here

in 2011, I used up all my rugby jokes. Although I will say the General Assembly is sometimes like a very messy scrum; talks on reforming the Security Council are more like a collapsed scrum; when it comes to Millennium Development Goals we are going for a try under the goal posts. And I don’t care if you root for All Blacks or Wallabies – you have to play for women’s equality if you want to be on my team.”

His Excellency went on to speak of some of “the calamities” now facing the world. Among those he mentioned were the Ebola virus; the lack of mutual understanding and respect for the traditions, beliefs and faiths of others; the need to “open the space for a political process in Gaza”; the “border situation between the Ukraine and the Russian Federation”; the conflict in Syria, and others taking place across the world.

He expressed gratitude for New Zealand’s engagement with the United Nations, right back to one of its earliest engagements in 1950 in his own country, Korea.

“I was just six years old when I had to flee the fighting around my village. I was too young to understand the term ‘collective security’ in my mind – but in my heart I knew the world was by our side. The United Nations was a beacon of hope.”

He spoke of New Zealand’s “long and staunch” championship of nuclear and conventional disarmament. “I hope that with New Zealand’s ratification of the Arms Trade Treaty, it will come into effect by the end of this year.”

He also spoke of the need for success in climate change negotiations and of the pleasure of a visit he had made to the Tuaropaki Trust in Taupo, where he was impressed by “how they are using timeless wisdom to address modern challenges. The Māori there live harmoniously with nature, based on their traditions and heritage. At the same time they are adapting themselves to this changing world. I was encouraged by their approach to geothermal renewable energy, horticulture and waste management.”

Mr Ban ended by urging his audience to be “global citizens”, “to view problems from the perspective of the whole world”, to use their “enormous powers of connectivity to speak out and take action” and to “be fearless in standing up to injustice”.

His Excellency then invited questions from the floor, with a request (made earlier) that these should be from students.

Staff who attended described the occasion as smoothly-flowing and very successful.

MY STORY

STAFF QUESTIONS & ANSWERS



MARK BENTLEY

Mark Bentley is the Director of Alumni Relations and Development. He previously spent eight years in the School of Business, first as Director of Marketing and Advancement, and then as General Manager of the New Zealand Leadership Institute. He has also been employed in marketing roles in the UK, in sport and then in education. Mark is an alumnus, with an MBA from the University of Auckland.

WHAT DID YOU LOVE DOING WHEN YOU WERE A CHILD?

I was very much an outdoors kid. I was keen on hiking, back-packing, rock climbing, canoeing and potholing. Outdoor pursuits became such a big part of my life that I have to confess to even choosing my first undergraduate university primarily for its proximity to the English Lake District.

WHAT DID YOU ENJOY LEARNING ABOUT, IN YOUR EARLY LIFE?

Maps and geography. I had a great urge to travel in “foreign climes” and as a child I would spend hours and hours poring over maps of places like Samarkand or Kamchatka. I ended up coming even further in the end I suppose!

TELL US ABOUT YOUR FIRST JOB EVER.

When I was at school I had a job as a columnist for the village newspaper. This was a voluntary job but I loved it and always thought I would become a journalist. That was why I studied literature when I started university, but later, of course, I had a change of direction.



WHO WAS YOUR BEST TEACHER AT UNIVERSITY, AND WHY?

One of my most inspiring and challenging lecturers for the Auckland MBA was Associate Professor Daniel Vidal from the Graduate School of Management, who taught on a course called “Managing growth”. He guided us through the process of developing strategies and then testing them rigorously in a challenging environment. We worked with real companies on real problems. What we got was a wonderful combination of real-world experience and big-picture thinking.

HOW AND WHEN DID YOU DECIDE WHAT YOUR FUTURE CAREER WOULD BE?

My career has changed and developed over time but my work has always been in communication, first in marketing and later in fundraising and leadership. I think as I have grown older I have perhaps become a little less self-centred, and have certainly become increasingly concerned about making a worthwhile contribution to society. Winston Churchill said that we make a living by what we get, but we make a life by what we give. For me the move from the corporate world to education started me on that kind of transition. I feel that working in education has added more depth and value to my life. I enjoy the feeling that my efforts are helping to bring about socially responsible outcomes.

IN JUST ONE SENTENCE DESCRIBE THE PURPOSE OF YOUR PRESENT POSITION.

My role is to encourage generous people to support the worthy work of the University of Auckland.

WHAT DO YOU LOVE MOST ABOUT THE JOB?

I love the variety of projects and the incredible people I meet inside and outside the University.

DO YOU BELIEVE THAT WHAT YOU DO CHANGES PEOPLE’S LIVES?

Absolutely. Without a doubt. In many cases we make things possible that are very much for the public good and that could not happen without philanthropic support.

WHAT HAVE YOU ACHIEVED THAT YOU ARE VERY PLEASED ABOUT?

I was proud to be the founding CEO of the Auckland Communities Foundation, which created an opportunity for passionate Aucklanders to support causes they cared about, in a very effective way.

I was delighted to be part of the “World Class Business School” project, which brought together Government and business to give the financial support that was needed to transform the learning environment of the Business School. It was such a great project with superb leadership and in many ways it signalled a new standard for philanthropic support for higher education in New Zealand.

WHAT DO YOU ENJOY DOING WHEN YOU’RE NOT WORKING?

I’m still keen on outdoor pursuits. Not quite so hard-core these days – my main sport is mountain biking, which I do a couple of times a week. I am a Board member of Outward Bound, which is a great institution. I also do a lot of reading and love live music – the noisier the better.

DID YOU KNOW



... The University's Computer Science Department has one of the most comprehensive displays on computer history in this country?

Since it was founded in 1980 the Computer Science Department has been given items of computing equipment that were obsolete but which "were just too good to be thrown away" by their owners. The department has preserved many of these and displayed them so that students may learn about the history of their rapidly-advancing discipline. The first displays were in spaces refurbished for the department in the mid-80s but the new building, opened in 2003, gave the opportunity for enhanced displays in its generous lobbies. Also, part of the "artistic embellishment" budget of the new building was allocated to displays including a timeline of Computing History in a corridor leading into the building.

This was demolished as part of current building developments but replaced by an upgraded and impressive timeline called "The Information Age,

the evolution of computing and communications" that now adorns the Science Faculty's newly constructed atrium. It tells the story of computers from when the first adding machine was designed in 1642 by a 19-year-old French mathematician to advances today like server farms, the computer simulation work going on at Bioengineering and infrastructure networks like NeSI (New Zealand e-Science Infrastructure) based at the University.

As you go up each floor of the Computer Science building there are many displays in each lobby, of which we can just mention some highlights. The ground floor houses a collection of Apple Macintosh computers and bas-relief sculpture designed for the department by the artist Para Matchett.

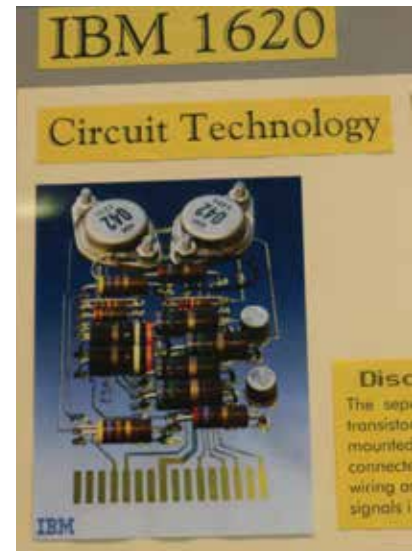
On the first floor you will see the University's first computer on display. This IBM 1620 arrived in 1963 and Emeritus Professor Bob Doran who currently curates the displays remembers as a student using the identical machine at Canterbury University between the hours of 2am

and 6am. Today, Bob says students often sit at the historic computer to eat their lunch.

On the second floor are examples of Totalisers – early betting machines. Another gem on the second floor is a 100-year-old mechanical calculator donated by the old Auckland Harbour Board. The third floor has examples of the first personal computers and also an astounding sculpture "MainFrame" by the artist Leigh Christensen that simulates a computer circuit.

The fourth floor has relics of larger computers and the fifth floor concentrates on computer input/output and storage. This lobby houses the most recent display built around Computer-aided Design equipment preserved by our Mechanical Engineering Department.

The displays are in areas open to the public and may be viewed during normal hours and also during the evenings and weekends when the computing laboratories are open.



Also see story on page 9

WHAT'S ON CAMPUS

FALE PASIFIKA'S TENTH BIRTHDAY

2ND OCTOBER

This is a special week for Pacific Studies, with celebrations being held to mark the Fale's 10th birthday. The Fale was opened on October 2nd 2004 by Prime Minister Helen Clark at a ceremony attended by more than 600 people including the Prime Minister of Samoa, The Hon Tuila'epa Sailele Malielegaoi. The Fale stands 12 metres high, 26 metres long and 15 metres wide and is the second largest in the world after the Fale at the National University of Samoa.

WINTER DREAMS

17 OCTOBER, 7.30-9.30PM

Holy Trinity Cathedral

The School of Music presents the University of Auckland Symphony Orchestra and Massed Choir including the Chamber Choir. They will jointly perform Borodin's Polovstian Dances for Large Choir and Orchestra. Doctor of Musical Arts candidate Abigail Sperling will be the soloist for Penederecki's Concerto for Flute and Chamber Orchestra. The title stems from Tchaikovsky's youthful first symphony entitled *Winter Dreams*. Professor Uwe Grodd conducts with Associate-Professor Karen Grylls the chorus master.

JAZZ: STUDENT CONCERTS

20 - 21 OCTOBER 7-9:30PM

Studio One, Kenneth Myers Centre

Admission is free

Percussion Ensemble and Jazz Choir Concert Monday 20 October, 7pm. A journey through percussive repertoire from its early stages to modern works, including a newly commissioned piece and collaborative works written by University of Auckland students. Large Ensemble Concert, Tuesday 21 October, 7pm Jazz performance concert featuring the University of Auckland Big Band, School of Music guitar and saxophone ensembles.

RESEARCH

WHAT AM I DISCOVERING?

400 MILLION YEARS AHEAD

Watching the graceful and elegant way that fish and marine mammals swim is one of the great attractions of scuba diving.

Their fins are multifunctional, providing propulsion and steering control. When deployed they can feel what the water is doing, enabling their owner to get lift from currents and eddies. While gliding they can be folded against the body.

We can match their speed using propeller-powered devices, but we can't match fin-driven maneuverability. And one can't feel water movement through a gearbox!

To explore finned drives and to link this directly to augmentation of human underwater transport, my Biomimetics Lab team (www.abi.auckland.ac.nz/biomimetics) has developed a human-powered finned submarine, the Taniwha.

Serious work began a little over a year ago. To drive the project forward we set a hard deadline: to race our submarine against the best in the World at the European International Submarine Races (EISR) in Gosport, near Portsmouth (www.subrace.eu); the submarine equivalent of a Formula 1 grand prix.

Our design was inspired by the NZ Leatherjacket (Parika scaber) that uses fins set on the upper and lower rearward surfaces for forward, reverse and up and down maneuvering. While the NZ Leatherback is swimming, the tailfin acts as a rudder. To mimic this general layout we have installed two sets of Hobie Mirage drives, normally seen on kayaks, linked by cable so that the two pedals operated by the pilot's feet power both drives simultaneously. The pilot that breathes air from a scuba tank steers the submarine in pitch and yaw through levers that are directly linked to dive planes and rudder.

The judging panel that inspected our sub at the EISR were impressed with our preparations, our mode of propulsion and the neatness of our hull. Although we achieved good forward speed in QINETIQ's giant 120m by 60m Sea Basin we encountered some challenges. Straying too near the surface or bottom led to an instability as incapacitating as an aircraft stall: it became near impossible to break away and return to mid-water. We now have a solution for this that will be implemented during the 2014-15 summer break.

Another issue was the ability for the pilot to judge by how much the sub was pitched up or down. A solution was provided by one of our Part IV students (Ryan Chao), who implemented an electronics system that detects the direction of gravity. This is built around a device for measuring the position and movement of arms and legs, produced by the Auckland Bioengineering Institute spin-out I Measure U.

Only five subs completed the course around QinetiQ's Ocean Basin and we almost succeeded in becoming the sixth; stopping within 40 metres of the finish! The rudder handle was broken and our pilot gallantly steered by pulling the rudder cable when he ran into a ladder at the poolside that stopped the sub. Although we finished seventh out of ten overall, our design efforts were rewarded when we received a trophy for "Best Non-Propeller Performance".

Fish are technologically 400 million years in front of us but one day we'll catch them.

Iain Anderson is Group Leader for the Biomimetics Laboratory of the Auckland Bioengineering Institute and is an Associate Professor in the Department of Engineering Science.



Taniwha is lowered into the water by QinetiQ Ocean Basin staff. Our divers wait to collect the sub.



Taniwha at the start.



Ben Pocock, our engineer, working on a repair. We had to leave the sub in the water to stay in the racing queue.



Team Taniwha at the Kiwi base camp. Left to right: Iain Anderson (Surface officer, Manager), Ryan Chao (Diver), Ben Pocock (Engineer), Dominik Appel (Diver), Daniel Vochezer (Pilot), Antoni Harbuz (Captain, Diver), Marcus Thompson (Surface support diver).

BRIGHT CONNECTION

(continued from page 7)

Professor Bob Doran is himself worthy of a "living display" in the museum.

After completing a mathematics degree at Canterbury University, he obtained one of the first MSc's in Computer Science from Stanford University and spent years working on extensions to computer architecture at Amdahl Corporation in California. "We were working at the interface between a computer's hardware and software and trying to improve computers to allow multiple systems to operate at the same time," he recalls.

When Bob returned from the US to a job at the University of Auckland he was the only expert on computer architecture in New Zealand. So when a young student Dave Jagger completed

a Computer Science MSc thesis examining Acorn ARM architecture at Canterbury in 1991, it was sent to Bob for marking.

"I was the only person around who was speaking the same language as Dave."

Bob rated the thesis as "a first class piece of work... A by our standards (though certainly an A++ for effort)," he wrote.

The rest is history. Dave's thesis got him in on the ground floor of the ARM company in Cambridge just as it was being spun out of Acorn. His role there was to commercialise an instruction set simulator he wrote as part of the thesis, and to facilitate rapid prototyping of ARM-based embedded systems.

SMART NUTRITION

Volunteers are being sought for a pioneering study on nutrition labelling underway at the University's National Institute for Health Innovation.

Adult smartphone owners from across New Zealand are invited to take part in the five-week study. The Starlight trial will use smartphone technology to deliver the study intervention and record participant information, so there will be no need to attend clinic appointments.

Lead researcher Professor Cliona Ni Mhurchu says, "Poor diets and obesity are leading risk factors for ill-health in New Zealand. Nutrition labels inform consumers about the composition of foods and can support healthier choices, but many people find current nutrition labels hard to understand



"New front-of-pack labels deliver simple, 'at-a-glance' nutrition information to buyers. Our aim is to see if these labels have an effect on the healthiness of foods bought by New Zealand shoppers," she says.

The aim is to recruit 1500 people from around New Zealand for the trial. Participants will be randomised to one of the following study arms: 1) Traffic Light labels 2) Health Star Rating labels, recently adopted by NZ and Australia 3) Nutrition Information Panel labels (control). Participants' food purchasing data will be collected for 5 weeks. More information on the study and how to take part can be found here: www.diet.auckland.ac.nz.

Soon after he was promoted to head of architecture design, and went on to run the US engineering division in Texas.

Today, ARM employs nearly 3000 people and annually sells about 10 billion processors that are used in 95 per cent of the world's smartphones and 80 per cent of digital devices.

Dave left ARM to retire at 33 years old while the company's share price sky-rocketed. When his daughter Kathryn was considering a conjoint degree in Commerce and Electrical Engineering at Auckland recently, he took it as a chance to meet the man who marked his thesis whom he credits with setting him on his road to success.



Fittingly, the pair were photographed together (Bob left) recently among the University's Computer Science displays.

Highlighting some of the University's news and commentary that have hit the headlines in the past month.

VOTE COMPASS

Political marketing expert Associate Professor Jennifer Lees-Marshment of Politics and International Relations and Dr Danny Osborne of Psychology have featured extensively on One News in their roles as the Academic Advisors to TVNZ's Vote Compass, an educational tool One News has developed for the 2014 NZ Election with political scientists including Jennifer and Danny. Their expertise in analysing the election campaign has also been used in interviews on radio and in print media

FIJI ELECTION

Senior lecturer Dr Steven Ratuva has been interviewed by several media outlets including CNN, *The Australian* and ABC on the build-up to Fiji's first democratic elections in eight years. Dr Ratuva has been based in Suva during the campaign and polling day to witness the historic election.

ON SAMOA

Associate Professor Damon Salesa, Academic Head of the Centre for Pacific Studies, has been a major contributor to the commemoration events of the hundredth anniversary of New Zealand's invasion of Samoa during World War I on 29 August 1914. Damon was interviewed by Radio New Zealand, the *NZ Herald* and 3News. He also helped shape the Auckland Museum's exhibition "Entangled Islands: Sāmoa, New Zealand and the First World War" and delivered an opening night speech in which he set the scene on this little-known part of our shared history.

TACKLING RHEUMATIC FEVER

Faculty of Medical and Health Sciences Dean, Professor John Fraser featured in the media with news of a world-first programme to develop a vaccine for rheumatic fever co-led from the Faculty. The Coalition to Advance New Vaccines Against Group A Streptococcus (CANVAS) is now up and running with combined funding from the New Zealand and Australian governments.

This was covered nationwide in print and radio media with coverage from the *NZ Herald*, Radio Newstalk ZB News, Radio 531pi, RadioLive News, Radio NZ Checkpoint and News and the *Otago Daily Times* and other regional newspapers in the first week.

FROM THE COLLECTION

ART COLLECTION

Using their 40 centimetre Schmidt telescope at the Palomar Observatory in California to make close observations of objects that were close to Earth, on 24 March 1993 astronomers Carolyn and Eugene Shoemaker and David Levy took a photograph in which they noticed a new comet. It was the ninth periodic comet that they had discovered, and was accordingly named Shoemaker-Levy 9 with an original centre of up to five kilometres in diameter.

Unusual for its multiple nuclei and eccentric path, this comet was discovered to be orbiting Jupiter biennially, the planet having captured it in the 1970s. Calculations determined that the comet would soon pass within 45,000 kilometres of the centre of the planet, and could possibly collide with it, resulting in a train of nuclei being released into Jupiter's atmosphere. Astronomers all over the world were watching when this occurred on 16 July 1994, since it was the first time that a collision of two objects in the solar system had been able to be observed. The collision, which took place on the dark side of Jupiter, caused eruptions of matter from the layers obscured from clouds, giving a unique glimpse into Jupiter's atmosphere, and showed as a huge dark spot as soon as the planet's rotation brought the site of impact into view.

Carole Shoemaker took up astronomy in 1980 at the age of 51 years, and still holds the world record for the most asteroids (800) and comets (32) discovered by one person. Painter Mervyn Williams heard a New Zealand radio interview with her which inspired the titling of this painting. Badly injured in the car crash that killed her husband near Alice Springs when she was travelling in Australia mapping impact craters in 1997, Carole Shoemaker continues to spend 13 hours each night making observations and taking photographs of the cosmos.

Mervyn Williams has described his own paintings as being "at once both totally abstract and as representational as you can get". This painting with its irregularly placed circles of light against a heavenly blue background show his interest in balancing his tendencies to minimalism with moments of concentrated visual interest. Gifted to the University on the tenth anniversary of the comet's destruction, this painting is dedicated to the memory of New Zealand astronomer Beatrice Hill Tinsley (1941-1981) whose 1967 doctoral dissertation, written in record time in her early twenties, demonstrated that evolutionary changes in the properties of galaxies are large enough to be clearly observable. The subject of a biography by Christine Cole Catley and a play by Stuart Hoar, she had a profound impact on the course of cosmological studies over her 14-year career. The painting will be on show at the Gus Fisher Gallery in the exhibition *Gifted: Works Donated to the University of Auckland Art Collection* until 1 November.

■ Linda Tyler



Mervyn Williams, born 1940 Shoemaker (light) 1994 Acrylic on canvas, 1680 x 865mm

CLASSIFIEDS

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REMUERA COTTAGE, furnished, all services, with garden and garage, on direct bus route to University. Suit mature person seeking quiet environment for study/research. Semi-share with occasionally resident owner doing research. Rent negotiable. Short or longer term. Enquiry by email to jhay016@aucklanduni.ac.nz

STUDIO APARTMENT AVAILABLE short-term in Mount Street. Two minutes from Auckland University campus. Full security and self-contained kitchenette and bathroom. \$240 pw incl. Dates: 13 October - 03 November. Contact: aberens0021@hotmail.co.nz or leave text on (021) 085 10669.

ACCOMMODATION REQUIRED

PROFESSIONAL COUPLE AND TEENAGE FAMILY moving to Auckland looking for a house sitting/rental arrangement for 2015. Minimum three bedrooms required. Please contact Tony on (021) 272 8433, Joanne (022) 1730433 or email wellerl@ihug.co.nz

VISITING US PROFESSOR and his wife are looking for a 2-3 bedroom, furnished home or apartment to rent from late January 2015 through December 2015, with easy access to the University via public transportation. Dates can be flexible. Please contact Kirk, kmoloney@iastate.edu or Martha, martharappaport@gmail.com

HOLIDAY ACCOMMODATION

WAIHEKE BACH. Black Cottage, a cute fully-furnished, newly-renovated 1940s house in Little Oneroa. Three bedrooms and two bathrooms, sunny, retro style, less than ten-minutes walk to two beaches, three-minute drive to ferry and main village (Oneroa). Available from Christmas until after Easter: Dec to Waitangi, \$350 per night/ \$2300 per week. Then \$250 per night/ \$1600 per week. Contact Vicki or Mark at vicki@wildflowerwaiheke.com or 372 9399, 0274 420727.

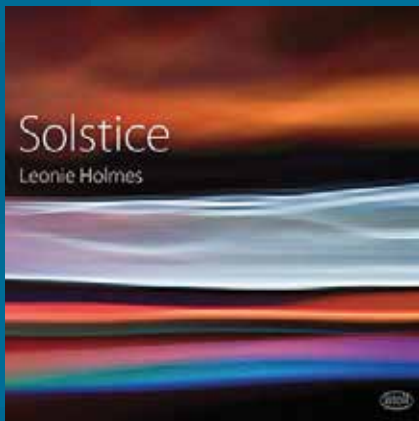
WAIHEKE COTTAGE. Charming, sunny, fully furnished Waiheke cottage, quiet location near bus stop, midway between Little Oneroa and Palm Beach. Suit couple or family of up to 4. Minimum three nights. Reasonable rental. Christmas and some dates in school holidays still available. Text (021) 1361759 with email address to request photos and further information.

SOLSTICE

This recent CD released by Atoll Records features the orchestral music of Dr Leonie Holmes, performed by the New Zealand Symphony Orchestra.

Leonie has written works for orchestra, chamber, choral, vocal and solo instrument, and receives commissions from ensembles and individuals throughout New Zealand.

Leonie is a senior lecturer in composition and music studies at the School of Music, and is active as a speaker, adjudicator and teacher at all levels and age groups within the New Zealand music community. This compilation of her orchestral music spans from 1997 to 2013.



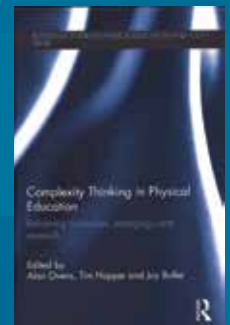
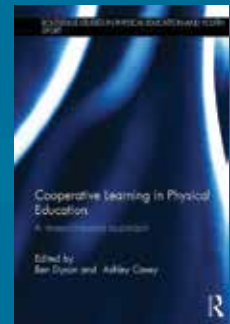
THREE BOOKS ON CURRICULUM AND PEDAGOGY

Three colleagues from the School of Curriculum and Pedagogy, Principal Lecturer Dr Alan Ovens, and Associate Professors Ben Dyson and Lawrence Zhang, have each published a book with a shared theme on curriculum, pedagogy and teacher education with Routledge: London and New York.

The first, *Complexity Thinking in Physical Education: Reframing Curriculum, Pedagogy and Research*, edited by Dr Alan Ovens, T. Hopper, and L. Butler, explores the concept of complexity in physical education. Suggesting that teaching is complex is certainly nothing new to teachers, but this is the first book to focus on complexity thinking in the context of physical education, enabling fresh ways of thinking about research, teaching, curriculum and learning. The book encourages teachers, educators and researchers to embrace notions of learning that are more organic and emergent, to allow the inherent complexity of pedagogical work in PE to be examined broadly and inclusively.

The second, *Cooperative Learning in Physical Education: A Research Based Approach*, edited by Ben Dyson and A. Casey, defines cooperative learning in physical education, examines the implementation of cooperative learning in a variety of educational settings, and presents research from eight different countries. It documents a number of studies and projects that represent what cooperative learning in physical education looks like in different parts of the world. It also presents implications for professional development and discusses how national curricula or national standards can be met by teaching with cooperative learning.

The third, *Language Teachers and Teaching: Global Perspectives, Local Initiatives*, edited by Lawrence Zhang and S. Ben Said, gathers 18 contributions from a range of global experts in teacher education to address the topic of language teacher education under five strands: Policy in education, Theory-practice nexus, beliefs, expectations, and negotiating a professional self, reflective practice, feedback and facilitation, teaching and learning in new times, and teacher learning in cross-cultural contexts. The book shows how teacher education involves the agency of teachers, which forms part of their identity, and which they take on when integrating into the teaching community of practice. The volume also explores the teachers' situated practice—the dynamic negotiation of classroom situations, socialization into the professional teaching culture, and “on the ground experimentation” with pedagogical skills/techniques.



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MIDDLE COURTVILLE APARTMENT. 9 Parliament Street. Gracious one bedroom first floor apartment 54 square metres. Lovely period features, balcony, close to University, Albert Park, CBD. Large sunny communal garden plus roof garden with panoramic views of city. Phone (021) 731 007 or email berwilson@gmail.com see Trademe Ad DYJ635.

MISCELLANEOUS

CINEMA GROUP: This is a group for University staff and students interested in filmgoing to attend European movies on a regular basis at the Lido and Academy Cinemas. Meet for coffee. All welcome. Contact aberen0021@hotmail.co.nz

CITY LEGAL SERVICES. Rainey Collins Wright is a small law firm centrally located at L1 Princes Court, 2 Princes Street. We are near the University, with good

parking. We can assist with property transactions, trusts, wills, administration of estates, enduring powers of attorney and relationship property matters. Please phone our senior solicitor Nichola Christie on 379 5828 to discuss your needs, or email nchristie@rainey.co.nz
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RESEARCH ASSISTANCE AVAILABLE. Postgraduate student. Previous experience and excellent computer skills. Please contact aberen0021@hotmail.co.nz or text (021) 085 10669.

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TO BLOG OR NOT TO BLOG

People often ask me why I blog at this stage in my career, but in many ways using social media has helped shape my career.

I first started blogging when I began moving into the area of complex networks and was interested in how complex data could be used to get insight into the economy. As this was a new area of research for me (at the time my core research topic was advanced materials and nanotechnology) I didn't have the time or resources to turn out academic publications on the topic. Blogging let me disseminate the results informally and still get feedback from other researchers. I thought what I was doing was interesting, and I wanted people to pick up on it, and they did.

Most notably, my blog posts started attracting the attention of economists, people outside my discipline who I wouldn't normally be connected to – I didn't go to the same conferences as they did or work in the same building. Blogging turned out to be a great way of making this research accessible to people from other academic disciplines.

So blogging definitely is a way to promote your ideas, and increase your visibility. These days my blog is read by all sorts – people in industry, government ministers and even academic referees! I had no idea that would happen when I started, but it has clearly increased the uptake of my work here and overseas.

It does require a different style of writing, but you can take a few more risks and have a bit of fun. Writing in that passive tone for academic publications can be quite mundane, whereas

writing for a broader audience challenges you to write in a more accessible way. It is this style of writing that enables you to reach more people and make yourself more visible outside your own discipline. Even though there is still value in traditional outputs, like a book or a journal article, blogging has become an important complement to these. In fact blogging was also my training ground for writing *Get Off the Grass*.

But there is more to the web than blogging. I remember realising that the world had changed three years ago. I was fresh onto Twitter – I had started using it to draw attention to my blog posts – and I put my twitter handle on the slides of my presentation. At the end of that talk, I saw that a silent discussion had taken place among the audience on Twitter. I could see what from my talk had resonated and what had not. And I was able to follow up with people who weren't comfortable asking questions in public after the talk. It gave me insight into what those people were thinking. That talk, more specifically, getting that instantaneous feedback, is what sold me on Twitter.

I think social media has allowed my work to have a much bigger impact on society, and that means that I'm achieving more impact as an academic. I don't think the system has quite caught up with measuring that, but I've definitely seen the benefits in my career. The fact that my work on complex networks and economics has become a central area of my research now can partly be put down to the interest that I generated in it using social media.

It is worth thinking about what stage in your career you should start using it, and I don't have a simple answer. At an early stage in your career academic publications are much more important, but younger people are probably always going to adapt more easily to social media. As long as use of social media is complementing your academic work, not replacing it, I think it is worthwhile at any career stage.

And if you are a science communicator, you really must embrace these new media. There are benefits to the University and there are personal benefits, but I think we also have a responsibility to society to engage in these new ways. By breaking down that image of ivory tower academics and making our work more accessible, we can make the University more relevant to society.

Professor Shaun Hendy is Director of Te Punaha Matatini – The Centre of Complex Systems and Networks and writes a blog, 'A Measure of Science', as part of Sciblogs.co.nz. His first book, *Get Off the Grass*, co-authored with the late Sir Paul Callaghan, was published in 2013.