

DEXTEROUS MOTOR A HIT OVERSEAS

A new development in the world of artificial muscles created at The University of Auckland is attracting overseas interest.

The Auckland Bioengineering Institute's Biomimetics Lab has designed a soft, bearing-free artificial muscle motor that can move a shaft in five different ways.

"There are other groups who have worked on membrane devices where they can make a shaft tip up, go side-to-side or back to front but we are the first to make the membrane turn the shaft," says Senior Lecturer Iain Anderson who heads up the Laboratory.

In March, Dr Anderson presented a paper about the new motor at the Electroactive Polymer Actuators and Devices conference in San Diego, California.

"It was very well-received and we've had collaborative research interest from a couple of overseas research labs," he says.

The current research has been published in the journal *Applied Physics Letters* and has also captured the attention of *New Scientist* magazine.

The design, which removes the need for rigid components such as bearings or gears, mimics the human hand's ability to manipulate and move an object in several degrees-of-freedom.

"For most motors motion is typically limited to only one linear or rotary degree-of-freedom. By comparison, the human hand, while unable to match the precision and high torque capabilities of motor technology, can manipulate an object between thumb and forefinger, rotating it by moving thumb and fingers in opposing directions or repositioning by moving thumb and fingers together," says Iain.

The new design of flexible motors could in the future be used for microsurgery and because they are non-magnetic, can be used around MRI scanners, he says.

The lab has been working on artificial muscle motor technology for about three years.

How the artificial motor works

The motor consists of a soft acrylic elastomer gear embedded within a stretched elastomer membrane that supports several radially arranged artificial muscles. The muscles are electroactive structures, made up of two layers of conducting carbon grease separated by a stretchy insulating polymer film.

When a voltage is applied to the artificial muscle, the opposite charges attract one another so the insulator is squashed between them and flattens and stretches. Muscle actuation releases membrane tension and this, in turn, causes deformation of the polymer gear. The gear can be made to turn a shaft or reposition it. Two motor membranes, placed one behind the other, can be used to fully support a shaft that can be moved, tipped and turned.

Photo: From left: Todd Gisby (Biomimetics Lab Business Development Engineer), Ben O'Brien (Research Fellow), Tony Tse (ME Student) holding the artificial muscle motor, Tom McKay (Research Fellow), Iain Anderson (Group Leader).



Retaining and attracting talented people, and creating an environment that fosters the development and success of those people, is vital to the University's strategy. That in turn requires that we have a mechanism through which staff can share their views of what it's like to work here, what the University does a good job of and what needs improvement.

In July 2007 we undertook a Pilot Staff Survey as a first exercise in gauging how staff perceive the University. We repeated the survey in 2009, taking the next step in the survey's development with communication of results, and the undertaking of action planning, at the Faculty/Service Division level as well as at the University-wide level.

This year we will undertake the survey from 16-27 May. The only changes in content are the addition of two new equity questions and an open-ended question at the conclusion of the survey. The comment question is something staff have requested previously and provides them with the opportunity to suggest how we can make the University a better place to work. Otherwise the Staff Survey 2011 will largely mirror the survey of previous years, allowing us to continue to measure progress over time and benchmark our performance against other institutions.

If you would like further information our intranet has a page <http://bit.ly/g4INJJ> dedicated to the Staff Survey, including Frequently Asked Questions. If you have any questions regarding the survey they can be addressed by your line manager, your HR Manager or by emailing staffsurvey@auckland.ac.nz.

The knowledge that we gained from the previous staff surveys has been important over the past four years in helping us develop initiatives aimed at improving the employment experience of staff and enhancing staff engagement. These initiatives have focused particularly around the challenges of communication in a large and diverse organisation. I therefore encourage all staff to take up the opportunity to have their say, and by doing so help us all create an environment that will ensure the continued success of staff and the University as a whole.

Canterbury graduates celebrate

Help for a beleaguered fellow university has been manifested in unprecedented yet thoroughly traditional fashion at the Maidment Theatre.

A special "Graduate Celebration" was held on 19 April for 32 University of Canterbury graduates based in Auckland. Their scheduled graduation ceremonies had been cancelled due to the Christchurch earthquake.

In a short ceremony the graduates, from six faculties, were presented by Canterbury's Registrar, Jeff Field and acknowledged by the Chancellor, Rex Williams. The Vice-Chancellor, Dr Rod Carr, delivered a graduation address.

Auckland's Chancellor, Roger France and the Vice-Chancellor, Professor Stuart McCutcheon took part with 13 Auckland staff, many of them Canterbury graduates, completing the official party. The Maidment was nearly two thirds full with families and friends of the graduates.

The maroon-coloured regalia of the three University officers lent an unmistakably Canterbury ambience to proceedings as did the fall hanging from the lectern and the prominent banner along the bottom of the stage.

The mace carried by the Esquire Bedell has genuinely ancient roots, its shaft of oak taken from the Big Tom Tower at Christ Church College, Oxford. After the academic procession had entered to the strains of Gaudeamus the national anthem was sung.

Roger France told the gathering that he had thought his own graduation from Canterbury in 1967 would be the last he attended at his alma mater. "It is a real pleasure to find myself participating again in a Canterbury University graduation," he said, noting that "the reason you are here lies in a very tragic event".

He spoke of Auckland's pleasure in establishing an exchange programme for 94 Canterbury



students for Semester One, and "how delighted we are to provide this hospitality today".

Rex Williams acknowledged "the generosity of our host the University of Auckland" and particularly the presence of the Chancellor, Vice-Chancellor and other staff. "This is a special occasion caused by the side-effects of forces of nature and circumstances literally beyond our control."

Dr Rod Carr praised the graduates for overcoming the disruption of the September earthquake to complete their studies. He said "today would not have happened but for the initiative of University of Auckland staff".

After the ceremony the official party, graduates and the audience processed to Old Government House for refreshments led by two bagpipers.

Canterbury held two similar celebrations for 600 local graduates in a large marquee on its Ilam Campus on 20 April.

Photo: Canterbury's Chancellor, Rex Williams congratulates a graduate. Vice-Chancellor, Dr Rod Carr is on the right.

Research expertise shared

The University hosted the Universitas 21 Pro Vice-Chancellors (Research) Conference last month.

Made up of 23 leading research-intensive universities from 15 countries, Universitas 21 facilitates collaboration and cooperation between its members, and creates new opportunities on a scale that could not be achieved independently.

Professor Jane Harding, Deputy Vice-Chancellor (Research), was joined by delegates from the United States, Britain, Ireland, Australia, Sweden, Mexico, Singapore, and Hong Kong.

"This meeting provides a unique opportunity to benchmark our research against

international best practice, as well as showcasing research The University of Auckland to our peer universities from around the world," she says.

Topics addressed at the conference included developing the next generation of researchers, measuring the impact of research, the interface between politics, industry and research, and working with research institutes.

The conference was held on the City Campus and delegates also toured facilities at Tāmaki Innovation Campus, including the Centre for Advanced Composite Materials, Wine Science, School of Population Health and National Institute for Health Innovation.



Survey sparks improvements

A new Staff Survey is soon to be launched, giving you the chance to help shape the University's future.

You'll be asked for your opinion on what it's like to work here, what the University is doing well and what you would like to see improved.

Knowledge gained in previous staff surveys in 2007 and 2009 has been of tremendous help in setting priorities and helping develop initiatives aimed at increasing staff satisfaction and improving the employment experience.

In the Faculty of Business and Economics, for example, staff were invited to volunteer to take part in three working parties to address areas seen in the surveys as in need of improvement: communications and leadership, career development for general staff and work organisation and operating efficiency. Their task was to analyse the survey results, get additional feedback from staff on desirable changes, and make recommendations about how to achieve them.

Says Cassandra Ellis, the faculty's Human Resource Manager: "We asked them to look at the big picture – to take an expanded view of the future and focus on more than just the current environment. However, we also asked them to suggest some improvements that could be carried out quickly."

The reports from the groups were "fantastic" says Cassandra, and have resulted in useful initiatives.

The recommendations on communication and leadership have led to the establishment of monthly coffee mornings giving staff the chance to meet and converse with the Faculty's Dean, Dr Greg Whittred. Alternating between general and academic staff, these give an informal channel for communication, identified as desirable through the staff survey.

Also serving to enhance communication is a fortnightly informal email from the Dean – to which staff are invited to contribute if they have news of interest to others in the faculty – and an

occasional informal meeting where staff can debate, discuss and exchange ideas on the future of the Business School.

The second working party, on career development for general staff, has resulted in valuable initiatives, including a pilot – carried out in conjunction with the Staff Organisation and Development Unit (SODU) – in which volunteers among the staff were given access to online career development tools. They then took part in workshops at which they were encouraged to assess the value of the tools and how they could be used for enhancing their careers.

These were followed by a comprehensive workshop helping them gain knowledge of how to manage their careers effectively, how to "brand" themselves professionally, to make full use of their talents and skills, and to move in directions that accord with their values.

In terms of work organisation and operating efficiency, changes have been made to the faculty's website and work is under way on improving the intranet.

All permanent and fixed-term staff will be invited to complete the Staff Survey 2011 between 16 and 27 May. The survey is online, entirely anonymous and will take about 15 to 20 minutes to complete. The more staff that participate the more strength the results will have, which will be good for staff and the University.

For more information on the survey, see <http://bit.ly/evWwLX>. Queries can be sent to the team at staffsurvey@auckland.ac.nz

Photo: From left: Mary Hoong, Paul Cunningham, Nickie Kemp and Mel Barr take part in a Business School pilot on online career development tools instigated as a result of the last Staff Survey.

Highlighted events

Green economy

Dr Gulelat Kebede, a senior member of the United Nations Human Settlements Programme, UN-HABITAT, will deliver a public lecture at the University on 9 May (6pm, Fisher & Paykel Appliances Auditorium, Owen G Building). His lecture, "Green economy: Challenges and opportunities for sustainable urban development", will highlight the notion of "decoupling" economic growth from the rate of use of energy and materials in the context of cities.

Dr Kebede heads UN-HABITAT's Training and Capacity Building Branch. During his month-long visit to New Zealand, he will participate in the opening of a multi-cultural art installation; lead seminars on urban sustainability, planning and development across the University; and meet representatives from the Ministry of Foreign Affairs and Trade, Ministry of Education and Ministry for the Environment.

Graduation Gala

The ever-popular Graduation Gala Concerto Competition will be held at the Auckland Town Hall at 7.30pm on 5 May. Three young musicians from the School of Music will compete for the grand prize of \$5,000, each performing a full concerto accompanied by The University of Auckland Symphony Orchestra. The event is free; patrons are strongly advised to arrive early to be assured of admission.

Visit www.auckland.ac.nz/gradgala

Yale historian

Professor Jay Winter, an historian from Yale University who is a visiting Seeley Charitable Trust Fellow to the Faculty of Arts, presents two public lectures this coming week.

On 11 May he speaks on "The Universal

Declaration of the Rights of Man" and on 12 May on "Reflections on silence". Both lectures are at 6.30pm in Engineering Lecture Theatre 439, 20 Symonds Street.

Climate change

Dr James Hansen, an active researcher in planetary atmospheres and climate science for nearly 40 years, is lecturing on 12 May, 6.30-7.30pm in OGGB4, Owen Glenn Building (followed by refreshments). His topic is "Human-made climate change – a scientific, moral and legal issue".

Dr Hansen is Adjunct Professor at Columbia University's Earth Institute and director of the NASA Goddard Institute for Space Studies in New York.

Acquiring the essentials

After a highly successful pilot of the first phase of the “Research communications for researchers” programme, planning is now complete and staff are invited to attend the 12 seminars comprising the second phase, commencing 12 May.

Dr Elsa Kassardjian from the Research Office, Project Manager for the programme, says she was delighted with the response from participants in the introductory workshop, “Introduction to research at The University of Auckland” (See Uninews, Vol 41, Issue 4, p3).

Now she is looking forward to an equally positive response to the “Research essentials” seminar series, to take place in the second half of this semester and the first half of the next.

Says Elsa: “The introductory workshop was designed to help research staff, especially early career researchers and those who are new to the University, to become familiar with the University’s research management structure and the assistance available to them.

“Research essentials, the second phase of the programme, will offer opportunities for researchers at all levels to look more deeply at specific topics important in research, and to share the experiences of some of our top researchers in negotiating the complex research environment in ways that have enhanced their careers, have boosted their chances of success – and can do the same for others.”

The first topic to be covered in the Research essentials series is “Successful research: What is it?”, led by Professor David Williams (Faculty of Science) and Associate Professor Julie Park (Faculty of Arts) and facilitated by Dr John Smart, Director of Research Management. Participants will gain an understanding of why successful research is more than just a good idea, and will hear successful researchers reflect on their research experiences. One of the later seminars, titled “New Zealand’s research landscape: Public and private research funding”, will give researchers the opportunity to hear the



inaugural Ministry of Science and Innovation chief executive, Murray Bain.

For more information about Research essentials, see <https://www.staff.auckland.ac.nz/uoa/research-essentials>. If you want more information, please contact Mariana Suarez, the Programme Coordinator on m.suarez@auckland.ac.nz.

Photo: Dr Elsa Kassardjian, Project Manager for “Research communication for researchers”.



Dynamic sculpture marries logic and art

A dynamic sculpture by Elam graduate Leigh Christensen, inspired by the logic circuits used in computer design, was unveiled at the Department of Computer Science this month.

“The sculpture is a physical representation of what computers can do,” explains Leigh. Constructed of pine and handmade brass logic-gates, and using small and large ball-bearings to represent the 0s and 1s of binary digits, the sculpture is a fully functional representation of a logic circuit for adding two numbers. Four ball-bearings, representing the two 2-bit input numbers, are loaded at the top of

the sculpture and cascade through a series of logic-gates to produce a 3-bit sum.

With a little assistance to get one of the ball-bearings through a logic gate, the sculpture successfully performed several calculations at the unveiling. “The logic is impeccable but the sculpture is not always guaranteed to give the right number. It’s a work of art, after all, and not a machine,” says Emeritus Professor Bob Doran who looks after the department’s displays on computer history. “It works nine out of ten times,” adds Leigh. “There are 19 different logic gates and it only takes one of them to get stuck for the calculation to stall.”

The work joins two further sculptures by the same artist, known informally as “Bessie and the Bug” and “Babbage’s Difference Engine”, which the department acquired from a 1994 exhibition at the Oedipus Rex Gallery celebrating the work of 19th century thinker Charles Babbage. Considered the father of the computer, Babbage was the first person to attempt to build machines to perform long sequences of calculations.

“He tried to build computers with cogs and wheels,” explains Leigh. “Reading about him sparked my imagination and I produced a series of six works based on that. When I was working on the exhibition I saw a circuit diagram for a binary adder, and foolishly thought I could make one with ball bearings.”

Director of the now renamed OREXART gallery, Jennifer Buckley, who has worked with Leigh for 20 years, says he has a very analytical and mathematical mind, which sits oddly with sculpting in wood. “He uses a very organic material to create something mechanical and it’s a perfect marriage of the two.”

Bob explains that department members who attended the 1994 exhibition were so inspired that they wanted to acquire all of the works. “I’ve always had an eye on the binary adder and when the opportunity came up last year to acquire the sculpture we grabbed it.”

“It can sometimes take a while for a work of art to find its right home, and I’m so thrilled that it’s here,” says Jennifer. “It needs to be somewhere where people can appreciate its scientific as well as its artistic value.” Leigh adds that he is very pleased with how the sculpture looks in its new home.



Imagine a trifecta

The University of Auckland has taken out first, second and third places at the 2011 Microsoft Imagine Cup.

Team OneBuzz, with their project to wipe out malaria, were named New Zealand winners of the prestigious technology competition at an event held at the Business School on 12 April.

The team of Vinny Kumar, Kayo Lakadia, Edward Peek and Steven Kang won with their idea which uses technology to inhibit the spread of malaria and ultimately eliminate the disease.

Vinny and Kayo are two members of Team OneBeeep, who won the competition last year and went on to place third at the worldwide finals in Poland.

"It is such a buzz to win this competition. It took months of sweat and tears to get to this point, and the whole process from generating the original idea, through to seeing the project

become a reality has been absolutely incredible," says Vinny.

Team MCG came second for their Sentinel project (Laser Defence System Against Mosquitoes), a laser beam system for killing mosquitoes.

Third place went to Team SkyEye. The team's project is a software solution designed to prevent car accidents and improve road safety globally.

The Microsoft Imagine Cup is the world's largest technology competition, challenging students from around the globe to develop technologies that help solve the world's toughest problems. Now in its ninth year, the Imagine Cup is a competition with more than 325,000 students from 142 countries participating.

Caption: From left to right Edward Peek, Steven Kang, Vinny Kumar and Kayo Lakadia.

Involved in Writers and Readers Festival

Novelist Emily Perkins, who has taught for years in the English Department's creative writing programme and has recently been appointed lecturer in prose fiction, will steer discussion between critically-acclaimed British novelist David Mitchell and two yet-to-be-announced home-grown budding Kiwi writers and their audiences at the Auckland Writers and Readers Festival next week.

As a well-known contemporary Kiwi author and a veteran of literary festivals both here and overseas, Emily is looking forward to the events. "Chairing an event means you get to ask questions about the work that writers often never ask each other," she says. "I try to be mindful of the audiences' interest as readers, and not to get too deeply technical but I do focus much more on the writing than the biography of the writer," she says.

Emily, who has recently been awarded the prestigious and discriminating Believer Award in the United States for her latest work *Novel about my Wife*, is one of many University staff

and alumni involved in this year's festival.

Others include Jan Cronin, Michele Leggott, Steven Ratuva, Sandy Callister, Dylan Horrocks, Albert Wendt, Grant Redvers, Kathryn Lehman, Tim McBride and Kris Gledhill.

Previous festivals have showcased University staff including Dame Anne Salmond, Dame Judith Binney and Len Bell and distinguished professors emeriti like C.K. Stead and Mac Jackson. Distinguished young alumni like Toa Fraser have contributed along with former writing fellows such as Elizabeth Smither, and especially the two founders of the festival, and still creative directors, Peter Wells and Stephanie Johnson.

Emily is keen to see students engage as much as possible with the festival. To this end, and in addition to the public event chairing "Hour with David Mitchell," she has secured him for a one-hour session with her students enrolled in the Masters in Creative Writing for a "masterclass-conversation of sorts" at the University.

Awards for Animal Ethics work

The National Animal Ethics Advisory Committee (NAEAC) gave both Associate Professor Malcolm Tingle and Bettina Brown an AEC Service Award in March, to recognise their outstanding contribution to animal welfare in research, testing and teaching. Both have been members of the Animal Ethics Committee (AEC) of the University for many years. Malcolm joined the committee in 2000, was elected chair in 2005 and only recently stepped down from this position. Bettina has already served the committee for almost 14 years as representative of the RSPCA and is still in this position. Their expertise and contribution have been of great value to the committee. Its task is to ensure the use of animals in research and teaching at the University is justifiable and compliant with the relevant legislation.

Manual coversheet process is being phased out

The manual coversheet process for approving research funding applications is being progressively phased out over the coming months. The implementation of the University's new Research Funding module will enable electronic application approvals as well as providing researchers with greater visibility and access to research project information.

The Research Funding module is being rolled out to faculties and LSRI's progressively in alignment with Faculty Research Development Fund (FRDF) timeframes, beginning with the Faculty of Education in May 2011. The Research+ project team and Research Office are working with key contacts in each faculty to ensure communication, demonstrations and support are made available during the rollout period.

Questions about the Research+ Project can be sent to researchplus@auckland.ac.nz.

Pacific Health and Environment

PACE-NET is an EU-funded project with the purpose of developing a Pacific-Europe network which aims to establish a bi-regional dialogue on science and technology between the Pacific and Europe. PACE-NET will be holding its first bi-regional platform and workshops on Health and the Environment in Brisbane from 4-8 July 2011. Initial focus will be on climate change, biodiversity and emergent disease.

There are some funds available from PACE-Net to aid researchers and other participants to attend.

For further details about this conference and opportunities for funding from the EU FP7 programme, please contact David Saunders, International Fund Specialist, d.saunders@auckland.ac.nz, ext 84886.



Frances Hodgkins (1869-1947) *Courtyard in Ibiza 1932-33* watercolour, 395 x 540mm

A childhood in Dunedin gave painter Frances Hodgkins a life-long aversion to cold weather. The south of France was her usual destination as soon as dreary English winters began to bite, but in the middle of the Depression she ventured instead to Baleares, the third largest of the Balearic Islands off the coast of the Spanish town of Valencia in the West Mediterranean. Better known now for the dance parties and rave culture that made it iconic in the late 1990s, the Balearic capital of Ibiza was fascinating to Hodgkins for its Roman, Phoenician and Carthaginian remains, and its famous whitewashed architecture.

On arrival in late 1932, Hodgkins set herself up in the Hotel Balear, situated high up in the old town (Dalt Vila), and commanding a view over the Mediterranean. She was joined by the Auckland painter May Smith and the Wellington artist Maud Burge. Together they enjoyed exploring the narrow, winding and steep cobbled streets and the views glimpsed through breaks in the high ramparts of the vast terraces at each level. She relished the high contrast of Mediterranean light, writing to a friend: "I would rather be here in the sunshine than alone in the Studio – it was getting me down badly." Notices reviewing her works in recent London exhibitions had been good, drawing attention to her skills as a colourist and her originality, with the critic for

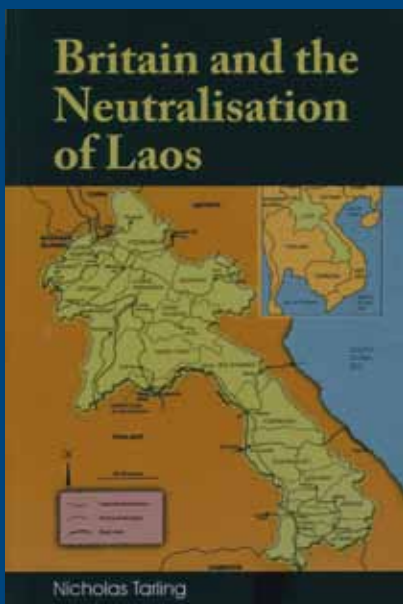
The Times remarking that her system of painting had become "a sort of free translation of natural forms". Already 63 years old when she went to Ibiza, Hodgkins felt the pressure to use the dramatic environment to produce brave new works: "The SHOW is the THING – I must set London talking – they expect it of me...but down here I forget all about it & think only of the jolly things around me & the awful urge to get at them."

A lively parrot belonging to Hodgkins' landlady had been a successful feature of works done in Cornwall in 1931, and the caged bird at the centre of the composition here is a tightly detailed anchor in an otherwise fluid composition. Hodgkins' scene is painted from a high viewpoint and includes a mysterious draped and hooded female figure seated on the wall looking down into the scene.

With their high-keyed colour and expert use of watercolour, the paintings Hodgkins produced in Ibiza were just what the artist needed to cement her reputation for adventurous effects. This work went immediately after exhibition into the collection of Eardley Knollys (1902-1991), an English artist of the Bloomsbury School who was a friend of Hodgkins and was also an art critic, art dealer and collector. It was purchased from Knollys (along with *Courtyard in Wartime*, one of Hodgkins' late oils of her home in Corfe Castle in Dorset) by Dr Eric McCormick on behalf of The University of Auckland.

Linda Tyler

Books



Written by Professor Nicholas Tarling, Fellow of New Zealand Asia Institute, and published by National University of Singapore Press, this is the historian's latest publication complementing his extensive works on the history of Southeast Asia.

This study focuses on the Geneva conference on Laos of 1961-1962, which Britain played a role in bringing about and bringing to a conclusion. It sheds light on Britain's policy in Southeast Asia in what in some sense may be seen as the last of the decades in which its influence was crucial. It is the first book to make full use of the British archives on the conference.

The book also bears on the history of Laos, of Vietnam, and of Southeast Asia more generally. It will interest those working in the various fields on which it touches, such as modern Southeast Asian history, the history of Laos, the Vietnam

War, the Cold War, and international relations. In particular, it will be of interest to those studying Britain's policy at a time when Britain was increasingly anxious to reduce its commitments but also, as always, to avert the escalation of the Cold War.

Professor Tarling was editor of *The Cambridge History of Southeast Asia*. His most recent publications in this field include *Britain, Southeast Asia and the Impact of the Korean War* (Singapore University Press, 2005), *Britain and the West New Guinea Dispute* (Mellen, 2008) and *Southeast Asia and the Great Powers* (Routledge, 2010).



MUSIC, PLACE AND WELLBEING

Geography and music are not commonly linked in the public imagination.

However, School of Environment geographer Professor Robin Kearns is exploring these links, drawing on his long-standing research interests in health and wellbeing.

Together with Gavin Andrews, a geographer heading the Department of Health Studies at McMaster University in Canada, Robin began exploring the work of well-known band U2 in terms of the sense of wellbeing generated within concert attendees and the role of celebrity status in offering a platform to advocate for global health issues.

In the process of discussions, two more collaborators were added to the mix and a trans-national conversation sustained over a year resulted in a paper recently published in the high-impact journal *Health & Place*. In the paper, Robin and his colleagues ask: How are music and place linked in the experience of human wellbeing?

Such research leads to the blurring of boundaries between leisure and fieldwork: Robin attended one of November's U2 concerts in Auckland with family, and while there noted the palpable sense of elation and elevation within the crowd.

"This experience," Robin says, "resonated with on-line comments by a member of Snow patrol who opened for U2 recently: 'People's faces were clothed in the kind of joy I've only seen in gospel churches...We were sharing ...a collective emotional and spiritual surrender of epic proportions.'"

Can music create community? Can it challenge as well as console? The paper draws on recent literature in the emerging field of emotional geographies to frame such questions.

A second observation, with respect to U2, is that some musical celebrities are becoming de facto public intellectuals, among the few people who seem able to deliver messages, and reach, wide audiences. U2's Bono has championed, and been a central figure in targeted poverty alleviation efforts and AIDS prevention campaigns. Like some academics, for him there is little separation between work and political commitment. From the platform of the concert stage, he consistently "troubles" an audience with references to instances of political oppression which complement the uncompromising character of his lyrics (An example is "Crumbs From Your Table" which challenges the listener with: "Where you live should not decide whether you live or whether you die").

Elsewhere, research has examined links between music and health (for example, music therapy) and music and place (world music studies), but the three-way links between music, health and place have yet to be adequately explored.

How, why, and particularly *where* might music be a fundamental and intrinsic part of personal health and wellbeing? How do particular genres of music create group identities and place-specific sub-cultures? What about music festivals? How do events like WOMAD (the World of Music and Dance festival held annually in Taranaki) raise consciousness of global wellbeing while serving as a retreat amidst an ephemeral community of like-minded others?

These questions are being addressed in a forthcoming book titled *Gonna Live Forever*, (named for a song by Oasis) edited by Robin and colleagues. The book takes a critical perspective on the production and consumption of popular music, emphasising the centrality of "place" in the associations between music and wellbeing. Specifically it illustrates how music from particular places, about particular places, or played in particular places is critical to the transmission of messages about health, and generates human wellbeing.