

# Advance

UNITEC RESEARCH MAGAZINE SUMMER 2010/11



## Human Performance Lab

Assessing the fitness spectrum – p3

## Avatar leads the way

Computing research crosses the boundaries – p4

## Uncovering history

North Shore history walk created – p8

## In the limelight

Architecture professor Bin Su talks about creating healthy homes – p10



editor

**Simon Peel**

staff writer

**Karen Burge**

sub-editor

**Ted Walker**

design

**Brigitte Smits**

cover image

**Paul Woodruffe**

printing

**Norcross Group of Companies**

**Advance** is published by  
Unitec Institute of Technology  
ISSN 1176-7391

**phone** 0800 10 95 10

**web** [www.unitec.ac.nz](http://www.unitec.ac.nz)

**address** Carrington Rd, Mt Albert,  
Private Bag 92025,  
Auckland Mail Centre,  
Auckland 1142,  
New Zealand

**Disclaimer** Unitec has used reasonable care to ensure that the information in this publication is accurate at the time of publication. However, to the extent permitted by law, Unitec is not liable for, and makes no warranties or representations as to such accuracy and may change or correct any such information without prior notice.



As part of our strategy to do a better job of telling our research stories we have added an extra issue of Advance this year. In this issue you will find a shapshot and overview of the diverse range of Unitec research activity.

Last month the second Unitec Research Symposium has held at our Waitakere Campus. This event is run for an internal audience and showcases the best of staff and student research. Many of the presentations exemplified various aspects of what we think makes our research distinctive. There was research featuring collaborations between colleagues from different academic disciplines, there was research into innovations in teaching and learning, and there was research with the potential to have a genuine impact, along with some high-quality presentations from postgraduate students at different stages of their research journey.

This issue of Advance provides an opportunity to reflect on the general health of research at Unitec. While we are doing some things well, the work of developing and strengthening our research culture and capability must continue. Particularly pleasing is the year-on-year increase in quality-assured research outputs. The percentage of our research that is published or exhibited through a form of peer-review process is increasing as staff focus more on quality and less on quantity. Also significant is our increasing volume of postgraduate student research (masters and doctoral research projects), and this issue contains a review of the student research completed in the last year. One significant area for improvement is in the amount of externally-funded applied research that we undertake for industry and community groups.

One of the ways in which Unitec can build on and strengthen its research capability and ensure that our research effort has an impact on industry, community and other stakeholders is to ensure that we engage as much as we can with those groups. In talking about encouraging 'engaged research' I'm referring to finding ways to bring the issues, challenges and problems of outside groups 'in' to Unitec and finding ways to take the knowledge, expertise and capability of our staff and students 'out'. Expect to read more about the new emphasis on applied research, development and technology/knowledge transfer in future issues of Advance.

#### || CONTACT

**Associate Professor Simon Peel**  
Dean, Research  
Email: [speel@unitec.ac.nz](mailto:speel@unitec.ac.nz)

**JOHN MCGOWAN**  
MASTER OF EDUCATION MANAGEMENT



# Are you up to the challenge?

Unitec's new Human Performance Lab offers a great sport teaching space in which staff and students will conduct new sports research, assessing the full spectrum of fitness.



Top-level athletes are used to having their performance constantly monitored but what about everyday folk? A new human performance lab at Unitec will allow students and staff to research the full spectrum of human performance, from elite sportspeople through to those who struggle to exercise. The lab has been equipped with sporting technologies including VO2 Max assessment equipment that records a person's oxygen intake and determines their fitness level, and video analysis to help identify areas to improve biomechanically.

"Having the lab, which we deliberately named the Human Performance Lab, rather than a sport or sport science lab, allows a space and venue for us to carry out this work," says Department of Sport lecturer Chris Lynch, who runs the lab with Wes Verhoeff, who also has research interests in physical activity.

## SPORT RESEARCH

"Essentially it's a teaching space, used predominantly in exercise physiology, biomechanics and exercise prescription papers, but as a research space and a venue for outside work and consultancy, it is ideal. We can screen, assess and data collect in a dedicated space."

Students from the department are using the lab for their peer assessments and Chris himself is carrying out research measuring people's respiratory responses to exercise. His research, titled "System efficiency in non-athletic populations" has come about through previous work Chris has done with rowers, cyclists and runners, and will test the responses to exercise of "everyday" people.

"As a sport scientist, work with athletes is my bread and butter but there is a real shift in this type of work towards looking at exercise for health wellness and this project fits that shift well."

Chris says that it is common to measure the volume of oxygen that athletes consume during exercise and the respiratory responses to that exercise. From that measurement of respiratory response, the oxygen uptake efficiency slope (OUES) can be determined. The OUES may be considered a measure of the efficiency of the physiological systems that support the body's ability to perform physical exercise. Hence the term "system efficiency" for this work.

Measuring respiratory responses to exercise has also been used to quantify the intolerance to physical exercise of patients with a reduced aerobic exercise capacity (through disease) and the response of these patients to physical training.

"As may be expected the slopes are very different in nature between an athlete and a person who has a reduced aerobic exercise capacity. But what has not been described is the nature of the slope between these two groups, so my work is with essentially sedentary healthy individuals."

Chris imagines that the lab will facilitate research work covering the spectrum of human performance, from sedentary to athletic in aspects such as physiology, psychology, bio-mechanics, nutrition, and skill acquisition amongst other areas. "We are very keen to establish collaborations with groups within the Faculty, Unitec and externally."

## || CONTACT

**Chris Lynch**  
Lecturer  
Department of Sport  
Email: [clynch@unitec.ac.nz](mailto:clynch@unitec.ac.nz)

## Follow the Avatar

Exciting new computing research started with an avatar called Eve, but the new directions are endless. Unitec's computing department is researching applications as varied as security, media, health, and care for the elderly and disabled.



Easy with Eve was originally invented as a virtual maths teacher for primary students.

*"The technology has a lot of applications and we will continue to build our capability, develop this technology further and commercialise it."*

A virtual teacher called Eve, originally designed to teach maths to primary students, is leading Unitec's head of computing, Hossein Sarrafzadeh, down research roads as diverse as cancer cell recognition and tracking dancers on stage.

Associate Professor Sarrafzadeh began developing the program Easy with Eve using a life-like avatar, Eve, which can detect students' emotions and even their heart rates through cameras and a special mouse.

Eve can ask questions, give feedback and discuss problems and solutions. She can tailor the difficulty of the work to match the feedback from the student and can show emotions to keep their attention. "When we interact with people we expect them to take note of our feelings and reactions. Soon we will be able to expect the same from a computer," says Hossein.

Since joining Unitec last year Hossein has further developed the algorithms that underpin Eve for new and broad applications. Algorithms provide the basic technique to get the job done when writing computer programs and are used for calculation, data processing and other fields.

"One of the great things about Eve is that the algorithms can be extended and made applicable to other areas such as security, media, health, assistive technologies for the disabled and online sales and marketing. One of the algorithms that we developed can detect objects like faces, even if they are rotated. And that was a breakthrough that we published and it is now being extended to detect cancer cells."

Together with one of his doctorate students, who now lives in China, Hossein has secured \$180,000 in research funds from the Chinese

Government to further develop the potential of the algorithm to detect cancer cells in images viewed through electronic microscopes. "The extended algorithms can be used to very effectively detect cancer cells. The Chinese Government is very interested in the development of the cancer detection potential of this work and my hope is that we will develop this further and apply for New Zealand funding and more funding from the Chinese Government. So it will turn into a collaborative project to which Unitec staff and students can contribute."

### EVE MOVES ON

Further work has also been undertaken on the original Easy with Eve project, with Eve now taking on a new physical look and some new capabilities. "Previously Eve was more like a toy-look but we are now using a different lifelike agent and soon the student will be able to choose their own agent from a number of agents."

And Eve will also have new capabilities to translate and speak in different languages. "We have concentrated on the visual aspects of the new agents and the project has moved into machine translation, and I am supervising some masters and doctorate students on each aspect of the project."

### TRACKING MOVEMENT

Hossein says that the Easy with Eve project received enormous interest from around the world when it was first published in 2008 and he had contact from schools and school districts all over the world wanting to use the program.

"Eve is limited to a very narrow area of maths and we need to develop content for it, which I will do when I have enough funding for it. Schools are excited and want to use it and at every conference where I present this work people come up afterwards to ask if they could have a copy or download it. The idea would be to develop it a bit further and put it up on a Unitec website for people to be able to download it and use in their classrooms."

In addition, algorithms developed initially to allow Eve to read the gestures and body language of her students have also spawned further work in motion tracking. The Unitec Department of Computing intends to start new work with Unitec's Department of Performing and Screen Arts on the use of motion tracking in stage productions.

"Our idea is to control the equipment that is used, the cameras and everything, and put them in the hands of the actor. One of the technologies that I developed for Eve was gesture recognition and it could recognise the body movements of the subject, which was Eve's student in our case. Our software can now detect an alphabet of 40 different movements, including more subtle movements of the finger, for example, instead of just the whole body."

Hossein says that unlike other technology currently being developed elsewhere in the world, the Unitec software does not require the person being tracked to wear any sort of sensor or wearable device.

"Our technology is marker-less and just detects movement from the skin colour and the hue in the images. We might find that we need to use markers to make the technology more effective for something like dance, but nothing would be attached to the subject. I think people feel some sort of intrusion when you attach sensors to them so it would be the clothing or the footwear that acted as the marker."

It is hoped that use of this technology on the stage will make it easier to track and film the dancer or actor as there is potential for the camera to automatically follow the subject. "You could also do some very interesting things like having an actual dancer and a virtual dancer dancing together and complementing each other's actions."

### POTENTIAL PLUS

Hossein says the motion-tracking algorithm has multiple potential uses as varied as care of the elderly or disabled, to controlling the functions in a smart house.

"We just detect the movements and what you do with them is up to you. You could use them in a smart house of the future for example, you could use them to turn the lights on and off if you moved your hand in a certain way."

"It could be used in a hospital setting so someone who is lying on a hospital bed could just move a finger and something is done for them. Or in disability or elderly care, we could put these devices in homes and they could detect sudden or unusual movements by the elderly (like falls) and contact St John when something abnormal is detected by the cameras."

"So the technology has a lot of applications and we will continue to build our capability, develop this technology further and commercialise it as general tools that could be used in different applications, where people could just buy the product and integrate it into their software."

### CONTACT

**Associate Professor Hossein Sarrafzadeh**  
**Head of Department**  
**Dept of Computing**  
**Faculty of Creative Industries and Business**  
**Email: [hsarrafzadeh@unitec.ac.nz](mailto:hsarrafzadeh@unitec.ac.nz)**



Gesture recognition software can track movements without the need of sensors.

# A world away

**In the early 1960s several hundred young, single women left their homes in Greece to travel across the world to New Zealand, destined to be domestic staff and brides to the country's single Greek men.**

Nearly 50 years on, a group of these Greek women are the focus of an oral history project by Unitec lecturers Evangelia Papoutsaki and Athina Tsoulis, in association with members of the Greek community.

The 267 women, largely from the island of Crete, came to New Zealand under a government scheme to provide staff for hotels and hospitals, as well as potential brides for the many single Greek men already in New Zealand.

They arrived in New Zealand between 1962 and 1964 and were dispersed across the country to fill domestic positions and often experienced isolation due to their limited English language skills. When their contracts ended many gravitated towards more established Greek populations around the country, of which Wellington was the largest. The scheme also resulted in a significant period of 'chain' migration consisting of fiancés and close relatives, often assisted by these young women.

Some of the women went on to immigrate for a second or third time, joining the much-larger and well-established Greek communities in Australia or returning to Greece, which is a strong trend amongst Greek Australians, who have an exceptionally high rate of return migration to Greece.

## FUNDING SUCCESS

Funded by the Ministry for Culture and Heritage with a \$30,000 grant through the New Zealand Awards in Oral History for 2010, the project will record first-hand accounts of around 20 women's observations and experiences.

Evangelia says the project will provide new insights into the lives of Greek female migrants by recording their personal perceptions of life in their home countries before departure and in their chosen new country – what it was actually like and how they felt.

"The project provides a unique opportunity to record the personal stories of elderly Greek female immigrants to New Zealand before they die. Themes will explore, for example, adaptation;



Young Greek women at work in a hospital laundry shortly after arriving in New Zealand in the early 1960s.  
Credit: Alexander Turnbull Library, Wellington.

challenges; settling in; contribution to New Zealand society and a female perspective of these experiences.

## ON THEIR OWN

"These young women were taking a big risk, moving to a country they knew very little about with very small Greek communities to provide them with support. This was in contrast to many post-war Greek Australian migrant women who often migrated with their families to a country with well-established Greek communities, which helped to lessen the social and cultural dislocation experienced through the process of migration and settlement," say Athina and Evangelia.

The project will gather information from women who are still in New Zealand as well as those who have immigrated to Australia or back to Greece or Crete.

Athina is a Greek Australian who experienced migrating from Greece to Australia with her family. She is

the head of Unitec's Department of Performing and Screen Arts and is an established writer and director of drama and documentary. Evangelia is Associate Professor of Communication Studies at Unitec and originates from Crete, the same Greek island as most of the study participants.

It is estimated that around 3000 New Zealanders identify with a Greek history.

## || CONTACT

**Athina Tsoulis**  
Head of Department  
Department of Performing and  
Screen Arts  
Faculty of Creative Industries  
and Business  
Email: [atsoulis@unitec.ac.nz](mailto:atsoulis@unitec.ac.nz)

**Dr Evangelia Papoutsaki**  
Associate Professor  
Communication Studies  
Faculty of Creative Industries  
and Business  
Email: [epapoutsaki@unitec.ac.nz](mailto:epapoutsaki@unitec.ac.nz)

# Recreating an island paradise

Work to turn a pest-plagued Hauraki Gulf island into an open wildlife sanctuary is benefitting from ongoing Unitec research into the changing birdlife.

Vegetation and wildlife on 564-hectare Motu Kaikoura island had been ravaged by fallow deer and ship rats, but an eradication programme in 2008 has given hope of restoring the island to its former state and creating a sanctuary environment similar to Tiritiri Matangi.

One of the projects currently underway is a census of the bird population led by Unitec senior lecturers and Motu Kaikoura Trust Board members Mel Galbraith and Graham Jones. The first census began in 2004 when very few bird species were found on the island.

The latest bird count was conducted last winter – the first post-eradication census – but results have not been as high as expected. “It was very surprising to find fewer birds than we thought there would be,” says Mel. “We really expected a population explosion of bush birds after the eradication but that hasn’t been the case and it’s purely down to the lack of vegetation currently on the island.”

Thirty-seven bird species were accounted for from last year’s data, which is very low considering there are 62 species found on nearby Great Barrier Island, which is only 120 metres away. “The species’ richness and populations were very low and this is a result of the impact of deer on the island, which have eaten everything in their path.”

Of the birds that were accounted for on the island, the majority were bush birds, fantails, kingfishers and kaka. To further complicate ongoing monitoring and the overall restoration programme, the Trust has discovered the return of ship rats due to the close proximity of Great Barrier Island. “It’s one of those things that we knew could happen so now we just have to monitor their effect on the environment and make sure we are able to control them without hindering the restoration programme,” says Mel.

Despite the lower than expected number of bird species on the island, Mel says there are some positives coming through from the eradication.



The deer-ravaged bush on Motu Kaikoura.

Another team from the Motu Kaikoura Trust is carrying out a similar research project around the vegetation on the island. They have found native plant seedlings sprouting, which was not possible when both rats and deer were on the island.

Mel says this could have a positive long-term effect on the bush and sea bird populations and the overall restoration programme. “The census we’re carrying

out is an ongoing project and factors like improving vegetation could have an effect on the project.”

The pair has published earlier work on species richness on Motu Kaikoura and Mel says the ongoing twice-yearly bird census will provide important data on bird life before and during a rat-eradication attempt. “We now have bird data for the island before the rats were poisoned, after the poison, and now as the rats return. This is a significant opportunity to assess the impact of the rats.”

Mel says the bird counts provide quantitative data for some species and they hope to publish their results when they have several years of data with rats present. “We’re confident that the bird species will increase in the next few years especially with the expected management of ship rats maintained at a low level.”

## || CONTACT

**Mel Galbraith**  
Senior Lecturer  
Department of Natural Sciences  
Faculty of Social and Health Sciences  
Email: [mgalbraith@unitec.ac.nz](mailto:mgalbraith@unitec.ac.nz)  
Website: [www.kaikouraisland.co.nz](http://www.kaikouraisland.co.nz)



Motu Kaikoura, with Great Barrier Island in the background.

# A walk down memory lane

Unitec researchers are creating a historical walk that links together hundreds of years of history on the coast of Auckland's North Shore.

Breathing new life into a long-forgotten war memorial park on Auckland's North Shore is one of the end goals for a collaborative Unitec research project.

The project links several historic areas in Campbell's Bay in a proposed new coastal walkway which will take people past an 18th century Maori pa and through an overgrown avenue of pohutukawa trees planted to commemorate the centenary of the signing of the Treaty of Waitangi and the local soldiers called up for war.

Unitec graphic design lecturer Paul Woodruffe spent two years identifying sites in Campbell's Bay for his Master of Landscape Architecture project and with that work completed he was awarded a Unitec Research Committee grant to do further work on the proposed walkway.

## LINKING HISTORY

Paul's initial work centred on Rahopara Pa on the Campbell's Bay clifftop, which was abandoned by Maori in the 18th century after a massacre, and neighbouring Kennedy Park, which is home to old Second World War gun emplacements and an observation tower, as well as the last of the old state houses that started life as accommodation for military personnel.

In the course of his masters work Paul discovered that there were many other fascinating buildings and green spaces nearby that could be linked together into a heritage walk. One area that had particular interest for him was Memorial Avenue, a long-forgotten memorial walk where Paul remembers playing as a local boy in the 1960s.

The avenue was created in 1939 for the 1940 New Zealand centenary celebrations. A 20m-wide track was cleared through the manuka and plantings of pohutukawa trees were made on each side. As men were called up to serve in the Second World War, the tree planting continued and each tree was given a plaque bearing the name of a soldier from the area who was leaving for war. Memorial Avenue has at times been known as Centennial Avenue, the Avenue of Remembrance or the Soldier's Trees but over the years has become quite forgotten to all except locals and amateur historians living nearby. "I have an aerial photograph of the area from the 1950s and it was pretty impressive."

At present not all of Memorial Avenue is easily accessible to even those who know of it. Over the years housing subdivision has created stormwater

issues and one of the features Paul would like to see in a rejuvenated park are new steps installed to make the walk easier and to carry the names of the men who used to be remembered on the plaques.

"Through looking at the archives I've found that about every 10 to 15 years people make a story about these different areas, but no one has ever proposed that by stringing them all together and making them a walkway and an asset, it will ensure the preservation of all of these little pieces along the way."

Paul hopes that over time he can work on a series of designs to reinstate Memorial Avenue as a heritage war memorial walkway linked to Rahopara Pa and the Kennedy Park area through an existing native garden at the local Campbell's Bay School.

At the moment the links between the two reserve areas are not obvious and Paul says he will propose a map and ways to design the proposed walkway so it can be easily followed.

"My research project is creating a site analysis and a map and a proposal for a heritage walkway that goes from the Pa site down to the beach. It's a walk



Paul Woodruffe's Memorial Avenue in seven parts, with accompanying symbols, light effects and artifacts.

### One of Paul's images showing the historical links.

"This image explores the physical and cultural events that shaped the avenue, especially the correlation between the centenary of the Treaty of Waitangi and the formation of the 28th Maori Battalion.

"School children and staff from Campbell's Bay Primary School were by some accounts involved in the plantings on the avenue.

"This work identifies the links between historic events, community and the creation of the memorial landscape."



that is about two-and-a-half to three kilometres long and it's a really intense experience of the old North Shore."

"It will be quite amazing because it will be a regional asset and hopefully the upshot will be that it will help to preserve the old architecture that is there."

#### COLLABORATION KEY

Paul says that collaboration with colleagues from other departments at Unitec has been the key to taking on such a broad project. He is working with Ian Henderson from Landscape Architecture, Edith Amaturei, a lecturer in the Department of Design and Visual Arts who has photographed the old state house,

and Ilsa Marie Erl, who is a contemporary craft lecturer in the same department.

"In the past no one has been prepared to pay to do this work, whereas if we can do it as a research project then we are more likely to get funding in order to take it further. You realise the value of research projects at an institution like this because you are able to do projects that are just not possible out in the commercial world or that within councils are politically difficult. We are able to do things independently and the cross-departmental collaborations are the key. Unitec has the advantage with design, art, landscape architecture, architecture and business all in one place. I think the future is not specialists, it's collaborations – people teaming up to get a good outcome."

The group will hold an exhibition of their visual work booked at a dealer gallery in March 2011. Along with the photographs of the state house there are drawings and paintings by Paul, who has been an exhibiting fine artist for 30 years, and pieces of contemporary jewellery by Ilsa Marie, who creates works from found items at the site which have hidden memory sticks inside to store all the collated information.

#### LOCAL KNOWLEDGE

When the new Auckland Council is in place, Paul and his team will present the proposal document and hopefully form a partnership to continue work on the project.

"We don't want to go to the council with a design, but a site analysis that connects all these places and proposes that the walkway is created. This project at the moment is laying all the groundwork for that and the most important thing is that this is designed by the locals.

"With my masters research some of the biggest disasters I uncovered were when council planners went into public parks, community gardens and neighbourhoods and imposed designs on them. So we are doing things differently. We are saying to the group that wants to save the gun emplacements, 'what do you think is the best way that people could walk through here? This is your turf so tell us and we'll facilitate that in a design'.

"People can be quite suspicious of strangers wanting to do things in their community. They think 'are you going to come into our neighbourhood and force some project on us, or put us under the microscope?' But now I've gained their trust they know that is not the case at all. We are using our resources to help them realise what they have got."

#### || CONTACT

**Paul Woodruffe**

**Lecturer**

**Department of Design and Visual Arts  
Faculty of Creative Industries and  
Business**

**Email: [pwoodruffe@unitec.ac.nz](mailto:pwoodruffe@unitec.ac.nz)**



## From ship to shore

A former naval architect in China, Professor Bin Su's research into mould and ventilation is making our homes healthier places to live.



*Professor Bin Su's research shows that the answer to mouldy homes lies in stopping the mould germination in the first place.*

New Unitec Professor of Architectural Science Bin Su has had some interesting turns of fate in his academic career. The Chinese-born academic was appointed as a full professor of architectural science at Unitec this year after a career that has taken him from working for the Chinese Government focused on warships to becoming an expert in the interior health of New Zealand homes.

His current research focuses on the thermal comfort and energy efficiency of New Zealand homes and the indoor health conditions that contribute to mould germination and growth. But his early career started at the China State Shipbuilding Corporation, where he worked as a naval architect focused on military ships. As one of the first wave of students accepted back into university in China following the Chinese Cultural Revolution, where the Chinese universities were closed for the 10 years prior to 1977, Bin graduated as a young man in high demand. The country had been starved of graduates and young people with university qualifications were given high-level jobs and a lot of responsibility.

It was a move to New Zealand that prompted his change of direction to architecture.

"I wanted to continue my study in naval architecture but unfortunately New Zealand does not have a major ship industry so I had to choose a new major and at age 32 I started my masters degree in architecture.

"Ship design is actually more complex than buildings because it is a moving structure so it involves a lot of engineering, mathematics and physics. A ship is like moving a building on the water so there is interior space arrangement and similar sorts of things, so in this way it was quite easy for me to turn my career towards buildings."

In fact it was a chance meeting that saw Bin enter Auckland University to study architecture. He had already been accepted by the School of Engineering there to start his masters in mechanics (flow dynamics) and was walking in to pay his tuition fees when he passed the architecture school. He had been curious about architecture so wandered

in to have a look. In the foyer he got talking with former Dean of Architecture Professor Dick Aynsley and by the end of the conversation Bin's new career direction was set.

Bin went on to complete his masters and then his PhD in architecture at Auckland University, with Professor Aynsley and Professor Brenda Vale supervising. "Throughout this time I studied really hard because the language barrier was a problem for me and the culture and the education system was different, but fortunately I am a survivor. I finished my PhD and won the Vice Chancellor's prize for the best PhD for that two-year period."

He started at Unitec in 2000 as a research fellow and became a full-time lecturer in early 2001. Over the past decade Bin has become an expert in architectural science, with his research focusing on building passive design related to the occupants' comfort and health, and building energy efficiency.

Some of that research relates to a common problem in New Zealand

homes, mould growth. Bin says that more than 30 per cent of homes in New Zealand have mould growth inside the house, with the problem particularly common in old houses with no insulation.

"Previously, architecture science people have believed the mould only grows on wet surfaces so people often focus on the condensation problem and the leaky building problem. But the biology experts in their lab tests have proved that the mould growth is related to relative humidity. If relative humidity is at more than 80 per cent for a long period of time – over 30 days – then the mould spore can start germinating, whether it is a wet surface or a dry surface."

Bin's research focuses on eliminating mould growth by eliminating mould spore germination – basically the premise that mould can't grow if it never germinates.

"If we can control the mould germination conditions, we don't need to control the mould growth conditions. If we can control relative humidity for even some of that 30-day time period then definitely no mould grows."

Bin also focuses his research differently to others – essentially looking to find what conditions exist in the more than 60 per cent of homes that are mould-free. "My research is looking at it from a different angle. We have more than 30 per cent of houses with mould growth but that still leaves us with more than 60 per cent of houses with no mould problem, so there must be some reasons for why the mould doesn't grow.

"I test new houses and old houses and find why mould grows and then I refer to the biologists' conclusion and prove that their theory also works in buildings. This is a new kind of a theory to control mould growth. Firstly, from an energy efficiency point of view you don't rely on air conditioning as you can control the mould germination much easier than you can control the mould growth. You can use a passive means of doing that, for example, with insulation, ventilation or through solar heating."

He says Auckland houses are not designed for permanent heating, with occupants turning on heating as they need it, rather than running air conditioning around the clock.

"There is a big opportunity for designers and architects to use the passive way to deal with the mould problem and not rely on active control. Insulation is a key and also having enough natural ventilation."

Bin's research is already being put into everyday use through the work he does with local architects and those working overseas. "A lot of architects try a new idea. They try to achieve thermal comfort, energy efficiency or to use passive design methods in their designs. But they often do this without hard data support and when they finish all they have are the occupant's comments and comments are not good enough.

"My job is to give them the data, analyse that and point out the advantages and disadvantages so they can improve their designs."

Bin has a database of energy consumption of over 200 different houses so he can compare data against that and comment on whether the house he is testing is good, poor or average for energy saving.

says will allow them to complete more and high-level research.

Since moving to New Zealand Bin has further broadened his Chinese connections through the joint architecture programmes with three Chinese universities. He teaches in China through those programmes, assists architects designing for Chinese projects and completes work there. A highlight was being asked by the Hebei Provincial Government to prepare a general urban plan and design for a new special economic zone, The Eastern Flower Garden Project, which has a land area of 10 square kilometres.

"If I get a project in China I like students from Unitec to try it as a project because a lot of projects we teach here are local projects, mainly focused on Auckland, so in climate and scale China is another world. In China there are plenty of projects and so plenty of opportunities for new graduates and it allows them to experience another market."



Professor Bin Su in a Unitec architecture studio.

"It's the full answer. And because I understand passive design of houses, I not only give the physical test results but I give suggestions for the design for the building elements and architectural features."

Bin's next goal is to establish the PhD of architecture programme at Unitec in conjunction with colleagues, which he

#### || CONTACT

**Professor Bin Su**  
**Architecture**  
**Faculty of Creative Industries and**  
**Business**  
**Email: [bsu@unitec.ac.nz](mailto:bsu@unitec.ac.nz)**

# Research strong in Osteopathy

Unitec is the only place in New Zealand to study osteopathy and with an increasing focus on research, it looks set to become a world leader.



Tonia Peachey works with her "patient" fellow student Sarah Dryburgh.

*"There is a really strong on-campus research base and we are doing a lot of experimental research."*

The success of Unitec osteopathy masters students in the latest round of Todd Foundation awards is a big tick for the department's increasing focus on research and critical thinking.

Tonia Peachey and Sarah Dryburgh were both awarded funding through the Todd Foundation towards their masters research work. Unitec's Department of Osteopathy is the only place to train as an osteopath in New Zealand and draws students from across the country.

Programme Leader for the Master of Osteopathy Dr Craig Hilton says the programme has a strong research focus and the success of students in receiving funding is a big boost to that.

"I'm quite proud of what we are doing with the students because there is a really strong on-campus research base and we are doing a lot of experimental research."

Craig says there is potential for Unitec to become a world-leader in manual therapy research through the students' high-level and "very publishable" masters research. The undergraduate course has also been refocused to address critical thinking and scholarship and Craig says that move is already paying dividends in how the students engage research to support their learning and educational writing.

The osteopathy course is structured as a three-year bachelors degree in Applied Science - Human Biology, followed by a two-year Master of Osteopathy. It is only after completing the masters degree that students can go on to practise. Unlike most other osteopathy schools internationally, Unitec's osteopathy masters students complete a substantial individual research project. The more common approach in similar courses overseas is on group projects or smaller bodies of work.

"It's relatively unique, there is not a lot of this going on but the challenge with our masters degree is to grow a culture and environment to support the students undergoing that sort of research." To support this, staff are being encouraged to grow research programmes that students can tap into and to act not just as research supervisors but also as collaborators.

Craig says the department's research focus is helping to uncover students with a strong academic focus and broaden their career options within the osteopathy field. "We are training clinicians but we want to grow our own academics as well and that includes educators and researchers as well."

## || CONTACT

**Dr Craig Hilton**  
**Programme Leader – Master of Osteopathy**  
**Department of Osteopathy**  
**Faculty of Social and Health Sciences**  
**Email: [Chilton@unitec.ac.nz](mailto:Chilton@unitec.ac.nz)**



Tonia, left. Sarah, right.

## Marketing the profession

Tonia Peachey came to osteopathy after a career in sports management, marketing and coaching so it's no surprise that she wants to combine those elements into her new career. Tonia is using her Todd Foundation funding to study osteopaths' attitudes to, and experiences of, marketing and how they build a client base and market their practice.

"I come from a business background and when I came into osteopathy what hit me was that people don't really know what an osteopath is. I wanted to look at the reasons for that and what stood out for me was that we just don't market ourselves.

"What I am finding from my research is that a lot of osteopaths misinterpret marketing. They don't understand that marketing is about communicating to the patient what we actually do. They see it as gimmicky stuff and a bad thing."

With so many osteopaths working for themselves and facing the challenge of starting new practices, Tonia wants to discover what works and what doesn't. "I want to know why there are these attitudes out there that inhibit us getting our profession better known."

Tonia says the vital step for her will be communicating the results to the industry once her research is finished. "I'd love to run programmes to help other osteopaths develop themselves.

"It's my ultimate goal to come back to Unitec and teach into the fifth-year programme and get students more educated before they go out there and do it all themselves. It's great knowing I am coming out of here with a lot of opportunities not just to be an osteopath but with academic options, teaching options or running my own separate consulting business."

## Understanding back pain

Suffering from lower back pain can be debilitating and despite treatment, may never completely go. Fifth-year osteopathy student Sarah Dryburgh hopes that her research and the development of a web-based resource on lower back pain will help ease the suffering. Sarah was inspired by reading about successful intensive programmes teaching long-term sufferers about pain, but could see limitations in the high cost and the low number of people who could be included.

"I started thinking wouldn't it be good if some of these people could be targeted earlier, not after they have had pain for many years, and wouldn't it be good if osteopaths were able to do that, or physios."

Her research project focuses on making a website that teaches people with low back pain about how pain works and how they can manage their pain.

"There is research that shows that if people understand how pain works and have ideas about how they can manage it, then they are a lot more successful about staying involved in life and not getting depressed."

The website will be used as a supplementary tool by osteopaths, physiotherapists and others involved in manual therapy.

"I wanted to do something that was real and that wasn't going to just get lost in the great mass of information. Having the Todd Foundation funding means this won't be a project that languishes as just a template of what it could be, I can make it into a real tool."

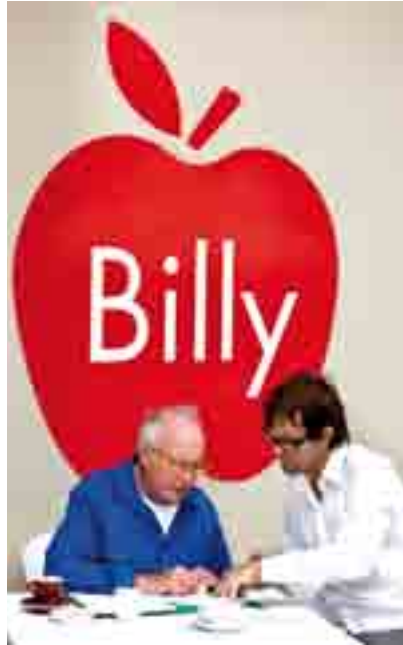
# The Year in Review

**With an increased focus on practical and applied research, Unitec is strengthening its position as an institution that can make a real and immediate difference to the communities we serve. In a round up of research over the past year we look at some of the highlights and areas of importance.**

Research at Unitec has a strong focus on applied and practical applications. The 'impact' research has on our stakeholders, communities, local region and nation is central to any funding application or project we endorse. Our research also impacts on the student experience by ensuring they have the opportunities to investigate contemporary and relevant issues, and access to staff who are up to date with the latest developments in their field.



Unitec had a strong year for research in 2009, with projects being funded by internal and external sources. Research is used throughout Unitec to support strategic goals and we use a variety of metrics to measure our success in research. These metrics include internal and external funding, the number of research-related outputs, the number of ethics applications submitted, and the number of research degrees completed per year.



Funding for research projects from external funding sources is highly competitive and sought after, and increasingly limited. While Unitec has a good success rate in winning funding from external sources, the graph below shows the total amounts awarded by these funding agencies are decreasing (figure 1).



One way Unitec invests in staff research is through a competitive funding round administered by the Unitec Research Committee (URC). This committee funds multi-disciplinary research and encourages partnerships with both government and non-government agencies and groups to improve the relevancy of research at Unitec. In 2009 the committee funded 10 projects (for the 2010 financial year) and these projects have been profiled throughout Advance in 2010. Access to URC funds is gradually becoming more competitive, with total dollars sought increasing significantly but total dollars awarded increasing slowly (figure 2). External industry and community partners are playing an increasingly important role in the success of these funding applications. URC-funded projects for 2010 had financial or 'in-kind' support from external partners to the value of \$87,665 (figure 3).



Research-related outputs include journal articles, books and book chapters, conference presentations, creative works and exhibitions (among other things). These outputs can be quality assured or non-quality assured. Quality assured outputs have been put through a rigorous checking process before publication or presentation, such as peer reviewing. The number of quality assured outputs produced by Unitec staff members has



been steadily increasing since 2007 (figure 4) and now accounts for 40 per cent of all outputs produced. Less emphasis is placed on 'other outputs' in favour of outputs which can pass the highest levels of review.

Another good measure of research performance is the number of research ethics applications approved by the Unitec Research Ethics Committee. In 2009 the committee approved 106 applications, which was comparable with 2007 and 2008 (110 and 117 respectively). The consistent number of applications shows the strong culture of both staff and student research at Unitec.



In terms of student research, the output is measured by the number of research degree completions. These are postgraduate qualifications which include a research component, usually masters degrees or doctorates. Unitec had 58 research degree completions in 2009, a number which has been steadily increasing since 2005. We hope to have a record year in 2010, with more than 65 completions.



2010 is shaping up to be another strong year for research at Unitec. Several staff have won prestigious research awards and fellowships and there has been strong engagement with external funding sources. The launch of the Unitec Research Strategy 2010-2015 provides guidance on the significance of research at Unitec, the vision for research, as well as our research aims and priorities.

For more information on research at Unitec please visit [www.research.unitec.ac.nz](http://www.research.unitec.ac.nz).

Further information on research performance can be found in Unitec's 2009 annual report ebook on [www.unitec.ac.nz](http://www.unitec.ac.nz).

Dollar Value of Externally Funded Research Proposals (excl GST)

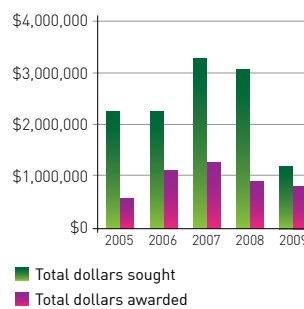
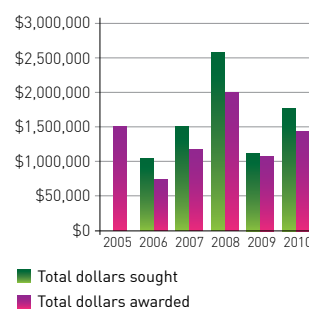


Figure 1.

Unitec Research Committee-funded research



Note: Funding is allocated in the previous year to be spent in the next financial year.

Figure 2

Unitec Research Committee-funded projects partner support 2010

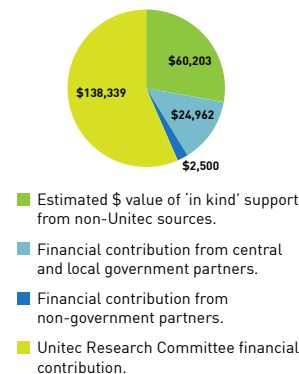


Figure 3

Research-related output

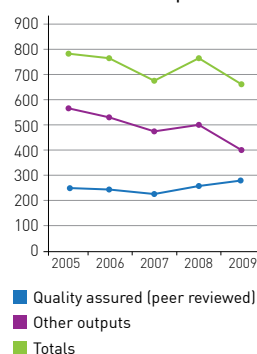


Figure 4

# Research Symposium 2010

Unitec's recent annual Research Symposium showcased the increasingly collaborative nature of research at Unitec and the diversity of projects being undertaken.

The day-long event, held at Unitec's Waitakere Campus, featured presentations and workshops from staff, students and guests.

Dean of Research Simon Peel said the range of research presented was impressive. "Several staff presentations really demonstrated the multi-disciplinary nature of research at Unitec. From Nursing and Social Practice to Design and Landscape Architecture, the collaboration was clear to see," he said.

"As well as excellent staff and guest presentations, there was a whole series of presentations from Unitec postgraduate students. These included students from the MBus, MEdLM and MSocP and covered a wide range of applied research topics."

The student focus was strong in the presentation by Kay Ingamells, Ksenija Napan and Susan Gasquoine. The three presenters quoted directly from some of the students that participated in the Strengthfinder coaching and "narrative of strengths" interviews. Their fresh and innovative approach illustrated the positive effects on the students of their involvement in the research.

Participants also enjoyed a lively discussion about Unitec's Research Bank and the value of open-source institutional repositories and how best to publish research outputs.

The finale of the Symposium was a performance of *Alfonsina*, a poetic meditation on friendship, honesty, the hardship of the lower classes and the desire for a better life. The play was devised and written last year by Unitec lecturer Pedro Ilgenfritz and performed by three Unitec acting graduates. *Alfonsina* depicts the adventures and misfortunes of a young Argentinean cleaner who migrates to Auckland in search of a new life. *Alfonsina* (Andrea Ariel) quickly manages to find a job cleaning offices thanks to her new neighbour Hera (Katie Burson), another cleaner. They both work for Tracy (Genevieve Cohen), the boss of Sparkle and Shine cleaning company. Everything goes well until *Alfonsina* is asked to show her work visa...

Even without all the lights and stage props of a conventional theatre, the performance thoroughly held the audience for the full 70 minutes. The play is the first project by Unitec's LAB: Research Theatre Company, an independent professional theatre company created in 2009. The company investigates the actor's methodology and the development of original theatre shows. The group, set up by Pedro, is proudly sponsored by the Unitec Research Committee.

The performance was followed by an enlightening discussion with Pedro, which showed the method, and value, of research in performing arts.

## || CONTACT

**Simon Peel**  
Dean of Research  
Email: [speel@unitec.ac.nz](mailto:speel@unitec.ac.nz)



Jonathan Leaver, Associate Professor of Civil Engineering, presents at the Research Symposium.

## Recent staff doctorates

Congratulations to two Unitec staff members who have recently completed their doctorates.

Lyndon Walker, Senior Lecturer and Curriculum Leader in the Department of Accounting and Finance, completed his PhD in Statistics and Sociology at The University of Auckland. He used statistical analysis and social simulation methods to examine the patterns of ethnic partnership in New Zealand using New Zealand census data from 1981 to 2006.

The main goals of the research were to examine the historical patterns of ethnic

partnership and then use simulation models to examine the partnership matching process. Lyndon's research was part of a Marsden-funded project and has been noted for its innovative use of the Auckland cluster of the BeSTGRID computer network. His thesis can be found at: <http://researchspace.auckland.ac.nz/handle/2292/5823>.

Dean, Teaching and Learning, Linda Keesing-Styles, completed her PhD at Deakin University in Melbourne, looking at the effect on tertiary teachers and teaching of uncertainty and ambiguity attributed to postmodernism and the

performativity demands that focus on accountability, surveillance and judgement.

Both of these create challenging conditions for teachers and Linda was particularly interested in those who teach with a social justice orientation within a range of disciplines.

Social justice generally refers to the idea of creating an egalitarian society or institution that is based on the principles of equity, that understands and values human rights, and that recognises the dignity of every human being.

# Our postgraduate completions

Over the last year, 85 significant postgraduate student research projects, theses and dissertations have been completed. All masters degrees at Unitec require a taught-course component and a significant research component. These cover a range of academic disciplines including Architecture, Osteopathy, Business, Education, Social Practice, Design, Education, Computing, Landscape Architecture, Health Science and Communication. The list below gives a view of the depth and scope of this research, all of which makes a significant contribution to the research life in those discipline areas. Copies of these studies are available through the Unitec Library or Unitec Research Bank, <http://unitec.researchbank.ac.nz>.

Name	Surname	Topic	Degree
Kylie	Giblin	A woven shelter	Master of Architecture
Abby	Bower	Back to Front – Mixing it up in Ponsonby	Master of Architecture (Prof)
Michael	Dalton	The New Museum and Architectural Experience	Master of Architecture (Prof)
Timothy	Daniel	A new Cruise Ship Terminal & Urban Waterfront Proposal for the Settlement of Lyttelton	Master of Architecture (Prof)
Jack	Darlington	Seeing is Believing	Master of Architecture (Prof)
James	Dawe	Tectonics	Master of Architecture (Prof)
Callum	Dowie	Folding Whare - Deployable Shelter for the 21 <sup>st</sup> Century	Master of Architecture (Prof)
Jacob	Hadler	Bigness in Architecture	Master of Architecture (Prof)
Sasha	Hendry	PASSIV HAUS - A New Zealand Adaptation	Master of Architecture (Prof)
Elysse	Jones	Something Old: Something NEW	Master of Architecture (Prof)
Waikere	Komene	Low Cost Community Housing	Master of Architecture (Prof)
Jayshree	Magan	Natural Inspirations	Master of Architecture (Prof)
Jason	Mazey	The Sustainable New Lynn Neighbourhood	Master of Architecture (Prof)
Isabel	Najera	Modern New Architecture in a Mexican Historic Town	Master of Architecture (Prof)
Alisha	Patel	Memento Mori: Remember your Death	Master of Architecture (Prof)
Pritesh	Patel	Digital Exploration & the Airport Terminal	Master of Architecture (Prof)
Kumar	Singh	Cultural Diversity: Interaction in the Public Realm	Master of Architecture (Prof)
Alfonso	Sirilan	Architecture and Movement	Master of Architecture (Prof)
Nikron	Thammavongsa	Mangere Refugee Resettlement Centre	Master of Architecture (Prof)
Ann	Thiermann	A Specific Genericism	Master of Architecture (Prof)
Elisabeth	Tryland	Architecture in the Threshold of Built Form and Landscape	Master of Architecture (Prof)
Rachel	Vullinovich	Performance Space and Public Space Movement	Master of Architecture (Prof)
Sam	Williams	An Urban Verge: Designing an Adaptable Events Centre	Master of Architecture (Prof)
Alby	Yap	STATIC DYNAMIC An Urban Outward Bound Centre for Youth	Master of Architecture (Prof)
Brad	Balle	Wasted Opportunities	Master of Architecture (Prof)
Sian	Bennett	Urban village: exploring synergies between affordability and sustainability	Master of Architecture (Prof)
Pamela	Dziwulska	Reclaiming the Urban Environment	Master of Architecture (Prof)
Cyrus	Rahimi	Architecture: The bridge between two ethnicities	Master of Architecture (Prof)
Mark	Ravering	The new urbanism development of Onehunga	Master of Architecture (Prof)
Sven	Damm	The implications of best practice event management when applied to small-scale local events	Master of Business
Jens	Elting	Green Supply Chain Management in manufacturing companies in New Zealand: A Comparative Case Study Analysis	Master of Business
Maurice	O'Rourke	To what extent do Undergraduate Business Degree students find Corporate Social Performance, and its elements, to be attractive in a potential employer?	Master of Business
Su	Pu	The Business of Export Education: Expectation Gaps in Living Conditions for Chinese Students in New Zealand	Master of Business
Jai	Singh	Identifying and Managing the Impact of Stress during Organisational Restructuring	Master of Business
Feng	Xu	Chinese and non-Chinese Real Estate Strategies in the Auckland Market	Master of Business

Name	Surname	Topic	Degree
Kishan	Bhashyam	Performance of Diverse Operating Systems and Applications in VMware's Virtual Environment	Master of Computing
Olele	Gambo	Improving the Birth Registration System in Vanuatu: Do Information and Communication Technologies have a Role?	Master of Computing
Sharon	James	Lecturers' experiences and perceptions of using Learning management Systems	Master of Computing
Peng	Li	Factors that affect students' decision making on buying computers: online or in retail shops	Master of Computing
Karen	Mcdonald	What are the factors that have an impact on the current attitudes of selected New Zealand small businesses towards implementing a 'Green' ICT environment?	Master of Computing
Jacquie	Thornley	Factors involved in contributing to effective student learning and classroom strategies when using interactive whiteboards: A case study of a New Zealand primary school	Master of Computing
Maree	van Praagh	Information and Communications Technology Skill requirements for Hospitality Students	Master of Computing
Myah	Flynn	Ideal Worlds: An Investigation into the role played by the processes of painting in constructing fine art imagery	Master of Design
Serena	Stevenson	Beyond documentary photography: An investigation into the benefits of collaborative multimedia story telling techniques	Master of Design
Amber	Wilson	Practising uncertainty in search of something strangely attractive	Master of Design
Angela	Dale	APPRENTICING STUDENTS INTO A CULTURE OF ENQUIRY: Evaluating two courses of undergraduate skill provision in one New Zealand Polytechnic	Master of Education
Belinda	Dolan	Adult Literacy Provision within New Zealand Private Tertiary Establishments	Master of Education
Mohamed	Shareef	Environmental education in the Maldives: The implementation of inquiry-based learning at the primary level	Master of Education
Rashika	Sharma	Education for Sustainability in Certificate and Vocational Education at a New Zealand Polytechnic	Master of Education
Karene	Biggs	The induction of overseas trained teachers in South Auckland secondary schools	Master of Educational Leadership & Management
Elizabeth	Clarkson	The Complexities of Schools Sustaining Their Focus on a School-wide Initiative	Master of Educational Leadership & Management
Debbie	Cowie	Coaching for improving teacher practice in a professional development initiative	Master of Educational Leadership & Management
Richard	Crawford	Data Driven Decision Making and the New Zealand Secondary School Principal	Master of Educational Leadership & Management
Pip	Gorrie	Teaching international fee-paying students in a primary and intermediate school in New Zealand: An investigation into the issues classroom teachers face	Master of Educational Leadership & Management
Linda	Harvie	Leadership identification and development of primary school teachers: Exploring the complexities	Master of Educational Leadership & Management
Namsoon	Jo	The impact of the new teacher appraisal on secondary teachers' professional lives at a trial school in South Korea.	Master of Educational Leadership & Management
Roy	Lilley	Problematising student leadership	Master of Educational Leadership & Management
Sarah	McWilliam	Collaborative leadership in the context of appraisal	Master of Educational Leadership & Management
Paul	Millar	LEADERSHIP IN LEARNING AND CHANGE an evaluation of leadership in the context of implementing a bible college programme	Master of Educational Leadership & Management
Maggie	Ogram	The expectation and the reality: the challenges for primary principals in leading learning	Master of Educational Leadership & Management
Matthew	Stockton	Meeting the demands of a new curriculum philosophy: A study of the challenges of curriculum implementation for small rural schools in New Zealand	Master of Educational Leadership & Management
Susan	Hamilton	What is the appropriate role of bilateral breast ultrasound, as an adjunct mammography, in the management of patients with positive findings?	Master of Health Science
Hannah	Thompson	The dosimetric impact of IV contrast when planning radiation therapy for radical lung cancer	Master of Health Science

Name	Surname	Topic	Degree
Bonnie	O'Neil	New Zealand Politicians' use of social media applications: A Political social capital perspective	Master of International Communication
Beate	Simarud	Evaluation of the Participatory Communication Model "Community Centric Empowerment" (CCE): A Case Study	Master of International Communication
Chanelle	Borsos	Perception in the Rural-designing within the rural New Zealand landscape	Master of Landscape Architecture
Mark	Henwood	A New Zealand Translation of the Architecture of R. M. Schindler	Master of Landscape Architecture
Yushan (Joselle)	Yu	How can landscape function as a medium for integrating stadium events and surrounding suburbs? Eden Park, Kingsland	Master of Landscape Architecture
Lydia	Carey	An Investigation of the Experience of Osteopathically Treating Babies with Breastfeeding Problems	Master of Osteopathy
Abby	Carrington	New Zealand osteopaths towards chronic pain	Master of Osteopathy
Kim	Collard	Preliminary prediction models for autonomic nervous system response to a cranial osteopathic technique	Master of Osteopathy
Sarah	Fisher	The intra-session and inter-session reliability of centre-of-pressure based measures of postural sway within a normal population	Master of Osteopathy
Gregory	Fitchew	Work related musculoskeletal disorders among Osteopaths practising in New Zealand: A national survey	Master of Osteopathy
Janice	Huang	Effect of a Novel Osteopathic Technique on the Axial Length of the Eye	Master of Osteopathy
Kirsty	Richardson	An investigation into the effect of unilateral immobilisation of the upper limb on the physiological responses to stair climbing	Master of Osteopathy
James	Morgan	A comparative study of music and soft tissue massage on heart rate variability	Master of Osteopathy
Nicholas	Naysmith	Cavitation of the cervical spine	Master of Osteopathy
Leyla	Okyay	Predictors of functional improvement in people with chronic low back pain following a graded programme of movement control exercises	Master of Osteopathy
Lyndal	Sharples	Does a single thrust manipulation of the upper thoracic spine increase neck range of motion?	Master of Osteopathy
Cushla	Storey	The Effect of Resistance training on Pressure Pain Threshold: A potential tool for chronic pain management	Master of Osteopathy
Sharon	Hosking	The effect of osteopathic manipulative techniques on diaphragm movement and respiratory function in asymptomatic subjects	Master of Osteopathy
Simon	Yardley	Effects of an Osteopathic Clinical Based Approach for the Treatment of Chronic Non-Specific Low Back Pain in Factory Workers: A single cohort, pilot study	Master of Osteopathy
Joyce	Matogo	The impact of customs and sexual practices on young Maasai women's ability to negotiate their sexual and reproductive health in relation to HIV and AIDS in Loitokitok, Kenya	Master of Social Practice

## Braunias wins Fulbright-Wallace Award

Congratulations to Unitec design lecturer Mark Braunias who has been selected as the 2010 recipient of the Fulbright-Wallace Arts Trust Award.

One of New Zealand's most established visual artists, Mark is well acquainted with the Wallace Art Trust as he was the inaugural winner of the paramount Wallace Art Award 18 years ago.

The Kawhia-based artist will take up a three-month residency at Headlands Center for the Arts in the Marin Headlands near San Francisco as part of his US\$30,000 winning prize.

Mark, whose work revolves around the interface between drawing and painting (often directly onto gallery walls),



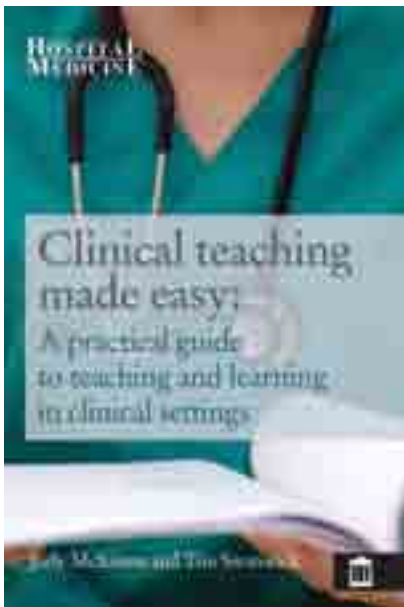
Mark Braunias in front of his award-winning work *Periodic Table*. Credit: Wallace Arts Trust

intends using his residency to develop a body of drawings based on scientific and popular culture imagery around the notion of a parallel universe.

Over the past two decades Mark has exhibited extensively throughout New Zealand and has taught drawing and painting at Unitec's Department of Design and Visual Arts since 1997.

## Clinical teaching made easy

A popular magazine series co-written by Unitec Pro-Dean of Health and Social Practice, Associate Professor Judy McKimm, has been released as a book. *Clinical Teaching Made Easy*, co-authored with Tim Swanick and published by Quay Books, is based on the popular *Clinical Teaching Made Easy* series published in the *British Journal of Hospital Medicine*. It covers all areas of education for health professionals, making it relevant for clinical teachers at any stage of development. With its easy-to-follow format, the book covers all aspects of clinical teaching and learning, appraisal, supervision and career development.



## Life-changing graduate research

When former chef Maurice O'Rourke swapped the kitchen for the classroom at Unitec, he never imagined he would become a competent researcher and masters degree graduate.

Maurice's Master of Business research thesis on 'What students look for in a potential employer' is the capstone to his academic journey through a Bachelor of Business degree to postgraduate study. His study has also provided the catalyst for a career shift from the hospitality industry to a new role as Workforce Development Coordinator with Counties Manukau District Health Board.

Maurice's choice of research topic reflects his interest and the orientation of the Master of Business programme towards answering questions that matter to organisations and the people who work in them or are affected by them.

His study investigated the importance and impact of an organisation's espoused Corporate Social Performance (CSP) on job-seeker attitudes towards that organisation. In other words, the study asks "to what extent do job-seekers find Corporate Social Performance and its elements to be attractive in a potential employer?"

CSP can sometimes be a vague concept but in this study the focus was on five sub-dimensions or elements of CSP including: employee relations, treatment of women and minorities, concern for the environment, product quality and community relations. Maurice's study

contrasted the perceived importance of CSP against five more traditional organisational attributes that people look for in an employer: challenging work, training and development, pay compensation and benefits, career advancement and job security.

This study was conducted using a survey questionnaire with a population of undergraduate business degree students.

The study finds that, overall, traditional job factors hold more importance than CSP to job-seekers, however, the element 'employee relations' was prominent as being valued in an employer. Of the five CSP elements measured in this study 'employee relations' and 'product quality' ranked first and second most important in a potential employer respectively.

The findings of this study indicate that job-seekers value CSP elements that are more closely linked to daily work life more highly than those seemingly more removed.

This study found support for the idea that potential job seekers may be attracted by an organisation's espoused CSP activity but of greater importance are those actions and words that send signals about what the organisation will actually be like to work for.

**You can read Maurice's study in full at the Unitec Research Bank:**  
<http://unitec.researchbank.ac.nz>