Ingenio

ET LABORE

MAGAZINE OF THE UNIVERSITY OF AUCKLAND

THE UNIVERSITY OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau

SPRING 2005

MAKING MOVIES

THE ART OF THE DOCUMENTARY

- A DROWNING PACIFIC ISLAND
- MATHEMATICS IN EMERGENCIES
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Celebrate THINKING

This sixth issue of *Ingenio* coincides with the release of The University of Auckland's Strategic Plan, which will be the basis of development over the next seven years. The guiding plan of the country's premier university – which is, not incidentally, a $650-million-a-year institution – emphasises the importance of boosting numbers of graduate students and maintaining the research-led focus that sets The University of Auckland apart. But, surveying the pieces in the pages that follow, it is impossible not to be struck by the breadth and depth of research expertise that University staff are already undertaking.

The work our writers describe is remarkable for its direct engagement with the world we live in: mathematicians develop ways to make ambulance services more efficient; an anthropologist records a drowning culture; a physiologist is looking at how to protect hearing in an increasingly noisy world. Meanwhile, two new research institutes being formed at the Tamaki Campus under the Partnerships for Excellence scheme underline the status of The University of Auckland as the country's foremost research-led university; five of the nine PFXs so far established are at this university.

The magazine provides an opportunity to celebrate the generosity of donors who have made substantial contributions and bequests to the University. The world in which universities operate is changing fast and the importance of research to create new knowledge, as opposed to simply teaching the knowledge we have, cannot be overstated. Changes in the models of public funding reflect an awareness of this at Government level but New Zealand universities are still funded at much lower levels than their international competitors and private donation makes an enormous contribution to maintaining The University of Auckland's position in the front rank.

PETER CALDER
Editor

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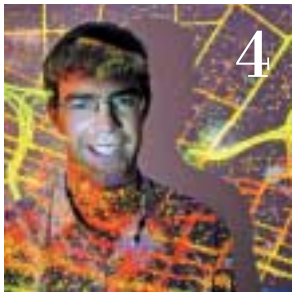

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Scheme improves access to justice

Students at the Law School are running a pro bono legal service.

The Equal Justice Project (EJP), as it is called, aims to provide legal service to people who would not otherwise have access to it.

It is modelled on similar initiatives in law schools in the United States, where students, supervised by qualified lawyers, offer legal information and advice.

More than 120 students in the final two years of their law degree are involved. The project has three main thrusts: partnerships with community law centres, legal education in schools and the wider community, and targeting the needs of new migrants and refugees.

It was conceived by two final-year Law students, Eesvan Krishnan and Peter Williams. They want the project to benefit those in need of legal services "currently out of their reach".

ACCESS TO JUSTICE: Justice Ted Thomas with Eesvan Krishnan and Peter Williams.

The project's patron, Justice Ted Thomas, sees it as bringing the Auckland legal profession a step closer to making a pro bono ethic an essential element of the legal system.

Medal honours distinguished historian

Thirty years' research into French missionaries in the Pacific has earned an accolade for Associate-Professor Hugh Laracy (History).

He won the John Dunmore Medal, awarded by the Federation of Alliances Françaises of New Zealand. It recognises major contributions to knowledge and better understanding of the part played by the French people and French culture in the scientific, economic, historical and cultural development of the Pacific.

Laracy's research and publication have added considerably to knowledge of the extensive role played in the Pacific by the Société de Marie (Marist Fathers), a Catholic congregation founded in France in 1836.

His work has taken him across the Pacific Islands, from New Guinea to the Cook Islands, and also to Europe to access archives of the Marists' writings. He has written two books about French missionary activity in the Pacific as well as more than 50 articles and other publications.

Tutor scores top tertiary teacher award

Repeated accolades at university level for his teaching prowess have translated into national honours for senior tutor Dr Colin Quilter. He was one of 10 winners in this year's Tertiary Teaching Excellence Awards established by the Government in 2001.

Quilter has taught for 23 years in the Department of Anatomy with Radiology in the Faculty of Medical and Health Sciences. Students and colleagues describe him as an inspiration, but he says he learns as much from his students as they do from him.

TOP TEACHER: Quilter receives his award from Chancellor Hugh Fletcher.

"Students are intelligent people who know what kind of teaching helps them to learn and what doesn't. All you have to do is ask them."

He tries to find an "angle" which will engage their interest "whether it be a poem, an anecdote, an image, a video, music, an historical incident or an unusual pathology". In front of classes sometimes numbering more than 1000, "the lecture has to be in some ways a performance, a semi-theatrical event designed not just to transmit information but also to engage, motivate, and to provoke curiosity."

The Auckland Medical Students Association has given Quilter more than a dozen awards over the years, and in 1993 he won his faculty's Distinguished Teaching Award.

PROBLEM SOLVERS: Richard Hellaby, Anna Chan, Rochelle Scanlon and Paul Ryan with coach Brendon Potter behind.

Business team world-beaters

For the second year in a row a Business School team has won an international business case competition. Competing against 16 teams from some of the world's top business schools, it became the first in the seven-year history of the Global Business Challenge to successfully defend its title. Auckland defeated Shanghai Jiao Tong University, the University of California, Berkeley and Universiteit Maastricht (the Netherlands) in the final round.

Teams were given 48 hours to solve a problem scenario about how and where a North American timber giant should expand operations to capitalise on the Kyoto Protocol carbon credits that forests would give the company. Judges praised the Auckland team of fifth-year students for delivering a presentation most similar to a board's in real life and for demonstrating good understanding of company culture, and world timber and carbon markets.

Legal pioneer stands down

Judge Mick Brown, former Chancellor of the University, a staunch defender of institutional autonomy and lately Pro Vice-Chancellor (Maori), has retired.

He has been associated with the University since starting law studies in the 1960s, and carved out a distinguished legal career as a lawyer and District Court Judge. As the first Principal Youth Court Judge, he pioneered the use of restorative justice for youth offenders.

As Chancellor from 1986 to 1991, Brown presided at graduation ceremonies with enormous aplomb. He was instrumental in the University's joining with Canterbury University to challenge the Government over sweeping changes which would have eroded university autonomy.

While Pro Vice-Chancellor (Maori) – responsible for enhancing the contribution made by Maori students, staff and researchers – he took on other major roles such as chairing the board of Nga Pae o te Maramatanga, one of three Centres of Research Excellence awarded to the University in 2002.

LONG ASSOCIATION: Judge Mick Brown.

The University has twice recognised Brown's enormous contribution by bestowing on him an honorary Doctor of Laws and a Distinguished Alumni Award. He is also a Companion of the New Zealand Order of Merit.

Trail brings past to life

The Business School has established a University heritage trail to mark its centenary this year.

The walkway, which the school gifted to the City of Auckland, incorporates historic and architecturally significant buildings on the City Campus. It follows a clockwise tour around 29 sites, finishing at Albert Park's floral clock.

Among the sites are the Princes Street merchant houses, Old Government House, the Old Barracks Wall and the site of the new Business School, the Owen G. Glenn Building, formerly the Phoenix Foundry. All are detailed in a 34-page illustrated guidebook, part of the school's ongoing Business History Project which featured in the last issue of *Ingenio*.

Early next year the Business School will publish *City of Enterprise*, a book on Auckland's business history.

The heritage trail booklet is available from External Relations, University House, 19A Princes Street (phone 377-7599 ext 85885, i.singh@auckland.ac.nz) and at Tourism Auckland outlets.

Centre promotes Chinese culture

The Confucius Institute, a newly established national centre to promote and popularise Chinese language and culture will work with schools and other universities.

New Zealand is one of the first countries invited to establish such a centre – one of only 20 worldwide – in partnership with the Chinese government. The University of Auckland has the country's largest grouping of scholars teaching and researching on China.

The institute will be jointly staffed by senior University of Auckland and Chinese academics. It wants Chinese to be learned in all New Zealand schools as the second international language of choice.

It also aims to recruit and train teachers who can teach Mandarin in the New Zealand context, and promote the learning of Chinese language and culture in the business sector.

Around 260,000 people of Asian origin live in New Zealand, and more than 40 per cent of these are Chinese.

NO PROBLEM

A University of Auckland mathematician once thought he could never use his knowledge to solve real-world problems. Now he knows better.

JOANNA WANE explains.

On the wall of Professor David Ryan's office hangs a poster listing the typical characteristics of a Virgo, his astrological birth sign. Among them are a great intellect and a predisposition to scientific subjects. "Detail is foremost," it says. "You are painfully accurate in your work."

Such unscientific whimsy is hardly what one would expect to find among the accoutrements of a mathematician distinguished enough to have been elected a Fellow of the Royal Society of New Zealand in 2003. Ryan laughs at the comment and explains that it was his wife, not he, who was taken by the poster. "She read it and said: 'It's so like you'."

Ryan has made his life in the precise science of numerical analysis but when he did his PhD in the subject, the idea that it would have any application to the "real" world simply didn't cross his mind.

"I'd never seen a practical application for maths in my whole life," he admits. "It was so far removed from anything I could ever imagine people using it for that it was just irrelevant. As a student I loved maths, but I didn't think it actually had any use."

Now, as Professor of Operations Research in the Department of Engineering Science, he heads a group that devises mathematically based solutions to practical challenges as diverse as yacht design, forestry harvesting, radiation treatment for cancer patients and setting the market price for electricity.

His pioneering work in the 1980s, creating computerised flight planning and crew rostering systems for Air New Zealand, set an international benchmark and saved the airline more than $15 million a year in operating costs.

Now the Operations Research Group (ORG) that Ryan leads has developed a piece of sophisticated software that drives an advanced simulation system being used by ambulance services in Australia, the UK and Canada to improve emergency response times (see box).

Operations Research takes a scientific approach to analysing problems and making decisions. The team is acknowledged as a world leader in the field and The University of Auckland now ranks first equal in the world (alongside the University of Chile) for the number of publications on the application of OR.

The technique dates back to World War II, when it was developed to determine the most effective positioning of radar

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BEYOND THEORY: The Siren system finds real-life solutions to practical problems, says Andrew Mason. **PHOTO:** Geoff Dale

SIREN GIVES SERVICES AN EDGE

Trauma experts talk of the "golden hour" – the period of time in which a severely injured person must receive specialist treatment to stand a chance of survival. Having an ambulance stuck in rush-hour traffic while other paramedic crews may be sitting idle at a base on the far side of town could mean a potentially fatal – and utterly avoidable – delay.

Efficiently resourcing and deploying emergency services in a metropolitan centre is a logistical challenge of enormous complexity. But in the Canadian city of Toronto, soon all they'll need to do is switch on the Siren. The name given to sophisticated software developed by the Operations Research group at The University of Auckland, Siren stands for Simulation for Improving Response-times of Emergency Networks.

Its creator, Dr Andrew Mason, is a senior lecturer in the Department of Engineering Science and a founder of Optimal Decision Technologies (ODT), a spin-off company exploring global markets for research-led software.

Winning the contract with Toronto Ambulance Services ahead of fierce international competition is a major coup for the team. Once fully deployed, the new system will make it possible to keep a "live eye" on the entire emergency network, providing data that can be analysed instantaneously to ensure ambulance crews get to where they're needed as soon as possible.

SIREN: The software keeps track of all the ambulances in Melbourne.

Fire up Siren on the PC and it looks like a cute computer game: little flashing ambulances navigate their way through a dense city grid, picking up patients and depositing them in hospitals before returning to base.

However, thanks to the skills of simulation expert Shane Henderson of Cornell University near New York, Siren illustrates – quite literally – how complex mathematical models and a technique called optimisation can transcend the realms of pure theory to find real-life solutions to practical, everyday problems.

Originally used by Mason and Henderson in a one-off analysis for St John, Siren has been given a new lease of life through its licensing to ODT. The first-phase software, Siren PREDICT, an advanced simulation system, has been adopted by the Metropolitan Ambulance Service (MAS) in Victoria and enhanced to be an integral part of the service's day-to-day operation in Melbourne.

With the volume of callouts in the city growing by eight per cent every year, the ambulance service wanted to find out how to improve operational efficiency – and how to eliminate ineffective strategies before wasting a lot of money implementing them. Siren, says Mason, made this possible by allowing different "virtual" scenarios (such as closing or moving a base) to be plugged into the simulator and analysed, while decisions such as where to target resources and the ideal mix of crew can be based on the pattern of historical calls. A detailed profile of the road network is also created by evaluating emergency response times – providing invaluable data on traffic congestion on specific routes at varying times of the day and even calculating seasonal variations. With the cost of one 24-hour ambulance response unit estimated at $1 million a year, the potential savings are enormous.

"Siren has given MAS huge capability to investigate the response time impacts of changes in operational practice," says Alex Currell, general manager of strategic planning at MAS. "The advantages of being able to simulate what-if scenarios before the ideas are implemented are very obvious."

Siren LIVE, which will be deployed in Toronto, takes the concept to another level by allowing live interaction to improve emergency response times. By tracking ambulances using Global Positioning Systems (GPS), data can be analysed on the fly to recommend redeployment, identify "coverage holes" and calculate the quickest routes based on the time and day.

"You can sit there monitoring in real time where the vehicles are and new patterns of emergency calls, then use optimisation to work out where they should be relocated to," explains Mason. "The simulation aspect plus its capabilities for graphical and statistical analysis is a combination that is unique. No one else in the world is doing that."

The system has huge potential for use by other emergency services such as the police and fire service. Siren has already been chosen by St John in Perth to improve performance and also by the West Yorkshire Metropolitan Ambulance Service in the UK as a planning tool.

Siren continues to benefit from a research programme within the University. "The close links we now have with ambulance operators give a strong practical focus to our work," says Mason. "The continuing collaboration with ODT also helps bring in valuable research dollars, and gives our students ready access to real-world problems on which they can hone their engineering science skills."

– JOANNA WANE

• FROM PAGE 4

stations, and then to maximise the kill rate on enemy submarines by analysing the ideal depth at which bombs should explode. But the advent of powerful, high-speed computers expanded its capability exponentially, allowing solutions to terrifyingly complex problems to be calculated in a matter of minutes.

"Without computers, we would not be doing what we do," says Ryan. "We simply apply [OR-based software programs] in circumstances where the number of possible solutions is so astronomically large that human beings could never possibly work out what the best solution would be."

In contrast to pure mathematics, OR puts the problem itself first: solutions, unlike those to pure equations, are not absolute, but aim to seek out the best-possible scenario based on the principle of optimisation.

It's something we all do subconsciously hundreds of times a day, Ryan explains. Go into a supermarket and you might pick from a range of products by selecting the cheapest, or make a more sophisticated choice on the best value for money, based on cost per unit of weight or volume. Other constraints or influences may also be automatically factored in, such as personal taste preference or the desire to buy New Zealand-made products. What eventually ends up in your trolley is the optimum outcome based on specific criteria. And one day you might have a personalised computer program that works it all out for you.

The ORG system works by an intelligent process of elimination and forward planning. For example, if you're driving between Auckland and Wellington, the shortest route won't necessarily be the quickest. So if your need is for speed, that will determine the decision made at every junction where there's a choice over which way to turn – creating what's known as a linear program.

Real-world problems are formulated as an optimisation model, and then an algorithm or formula is used to find the best possible solution. Dr Andrew Mason, a senior lecturer in the Department of Engineering Science who developed the Siren software (see page 5), describes it as adding intelligence into computer programs so that they can "think smarter" than humans can.

"The first linear program – a really small one – took 120 hours of manual calculations to solve back in 1947," he says. "We now solve problems thousands of times larger in seconds."

DAVID RYAN: The number of possible solutions is astronomical.

Like Ryan, Mason takes an interest not in pure mathematical theory but in its practical application. "We're lucky here because the focus on real problems is something that's recognised and valued, which is what makes it so exciting."

Ryan's personal conversion came in the 1970s when he spent three years at the Atomic Energy Research Establishment in Harwell, Oxfordshire, working on a computerised system for the Seabridge shipping consortium to schedule trips by bulk carrier ships transporting wheat, oil, coal and iron ore.

"It was the first time in my life I was involved in a practical problem where people were paying money to use mathematics," he says. "It was a huge transformation in my life."

Back in New Zealand, his own breakthrough came when he worked with a fourth-year student on a project to crack a problem that had been confounding airlines throughout the world – the complex logistics of crew scheduling. The prototype solution they developed so impressed Air New Zealand that Ryan took a six-month leave of absence from the University to work for the airline implementing a system for planning "tours of duty" by domestic flight crew.

In the late 1980s, Ryan moved on to a second-phase system which saw Air New Zealand become the first airline in the world to use optimisation methods to solve rostering. The airline is still a world leader in the field: both domestic and international models not only satisfy a complex set of legal requirements (the need for on-the-ground time, meal breaks and so on) but also minimise costs by making the most effective use of staff time.

The system, which can respond to staff requests for certain destinations, has improved the quality of rosters from a crew perspective while a "language-assignment optimisation step" ensures that flight attendants with relevant language qualifications are assigned tours of duty requiring those skills.

Amanda Day, an Operations Research analyst at Air New Zealand who did her PhD under Ryan, says both planning and rostering systems have proved invaluable. Tailored specifically to the airline's needs, they can also be used to run an analysis of hypothetical scenarios – such as the impact of a change in flight-crew conditions or the cost benefits of establishing a long-haul cabin crew base in London (a proposal that subsequently went ahead).

The potential applications of optimisation in both the commercial and public sector are virtually limitless. A current ORG project is using optimisation principles to determine the most effective radiation treatment for cancer patients by working out the best angle and intensity of radiation to employ to ensure that it targets the tumour rather than the healthy surrounding tissue. Another area of research focuses on the forestry industry, balancing the maximum dollar value of harvesting trees against ecological, conservation and aesthetic concerns.

Professor Andy Philpott, who heads the Department of Engineering Science, has spearheaded the development of optimiser-based software for designing optical fibre networks for TelstraClear. Other projects have included analysing yacht design for Team New Zealand's America's Cup campaigns; determining an optimum rowing route for our TransAtlantic Challenge crew; and analysing a model, which runs every five minutes, to provide information used to set market prices for electricity.

In September, Ryan was in Germany, investigating the possibility of creating a mathematical model to optimise the passage of trains through a railway junction – a prospect that could have significant implications for the design of rail networks and train timetabling throughout Europe.

"Success in OR isn't judged simply on the basis of how many publications you've had in which class of journal, but on how relevant the work is," he says. "Success is someone saying, 'Wow, this is such important work that I want to use it to solve a practical problem.' It's that real-world application which gets everyone hooked."

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STRANGER THAN FICTION

Film studies teacher Annie Goldson practises what she preaches. **BETH MILLER** meets her.

The rich, textured sound of the cello is possibly the most moving in the orchestra. That's the strong impression conveyed by the opening sequence of a powerful film by Annie Goldson, an Associate Professor in the Department of Film, Television and Media Studies.

BOY ON THE BUS: A still from the Goldson-produced *Pacific Solution: From Afghanistan to Aotearoa:* "Truth is always contestable," says the film-maker.

PHOTO: James Frankham

The camera zooms slowly in on renowned American solo cellist, Lynn Harrell, as he plays the great cello concerto of English composer Edward Elgar. Mixed emotions contort his face, conveying both the power of the deeply elegiac music and the joy the musician feels in making it.

Elgar's Enigma: The Story of the Cello Concerto is being produced and directed by Goldson with funding from TV One and with the assistance of research grants totalling $30,000 from The University of Auckland. It's the fascinating untold story of Helen Weaver, who broke off her engagement to Elgar and, after contracting TB, emigrated to New Zealand.

The piercingly poignant concerto, one of the finest in the repertoire, is acknowledged to be a requiem to the untold fallen in the First World War, but there is also a theory that Elgar composed it in memory of Weaver's New Zealand-born son who was killed on the Western Front in 1916.

Goldson was fascinated by the story when she was first alerted to it by Peter Walls, the New Zealand Symphony Orchestra's chief executive. But telling it on film proved a challenging assignment that took the filmmaker to Gallipoli, Flanders, the UK and the US.

"There isn't a lot of footage from that early era and what footage there is has steep copyright costs," she says "You have to start thinking of alternative strategies to create the narrative."

Goldson is a prolific and acclaimed filmmaker whose documentaries have included *Punitive Damage*, about a mother's attempt to solve the murder of her son by Indonesian soldiers in East Timor; *Georgie Girl*, about trans-sexual MP Georgina Beyer; and *Sheilas: 28 Years On*, which revisits the subjects of a groundbreaking feminist documentary of the 1970s.

More recently she produced *Pacific Solution: From Afghanistan to Aotearoa*, which examines the refugees who came to New Zealand from the Tampa. It screened at the recent inaugural Documentary Festival (DOCNZ) in Auckland and Wellington, an event Goldson helped organise and which emerged in part out of a biennial documentary conference that Goldson, her colleagues and their students began in 1996.

Goldson's first degree was a BSc but she later trained as a journalist and went on to get a Masters degree in Film and Television Studies from New York University. In 1993, she was the first academic to be employed full-time as a Film and Television studies lecturer. This

FILM-MAKER ANNIE GOLDSON: Those who can, do. And they teach as well.

was an era when film and television studies were yet to be taken seriously, she recalls.

"It used to be thought that we were pretty flaky, using research money to do demanding things like watching television, and that film and media could never be proper subjects for academic consideration. And if it was hard for Film Studies to be accepted, it was even harder for filmmaking, because that was seen as 'trade'. But those times have passed – it seems that filmmaking is largely accepted as research now."

This year, Goldson, whose teaching and research traverse both production and the development of critical theory, was awarded her PhD. Her thesis, called "A Claim to Truth: Documentary, Politics, Production", explores the emergence of what she calls the "human rights documentary."

This subgenre has arisen in the post-Cold War era as human rights rather than political ideologies became the drivers of political change. Goldson is writing a book on the subject which will be published next year. Called *After the Fact: Documentary, Human Rights and International Law*, it will also look at the question of authenticity. "If you ask the average punter the difference between fiction and documentaries, they say documentaries are about the truth," she says. "But truth is always contestable, not only in terms of biases, but in terms of the visual language the documentary maker uses."

As with *Elgar's Enigma*, the documentary maker is often working without footage.

"Some totalitarian governments document the abuses they inflict, but many do not, so a filmmaker may be trying to reveal what's going on without material to draw on. How then do you inform an audience?"

Goldson plans to revisit Helen Todd, the key subject of *Punitive Damage*. In *Moris Rasik: A Life of One's Own*, she will follow Todd's efforts to sue an Indonesian general over the murder of her son, Kamal. Today, as Timor Leste, the nation is independent and Todd is running an aid programme in the volatile, impoverished border area of Suai.

BEFORE THE FLOOD

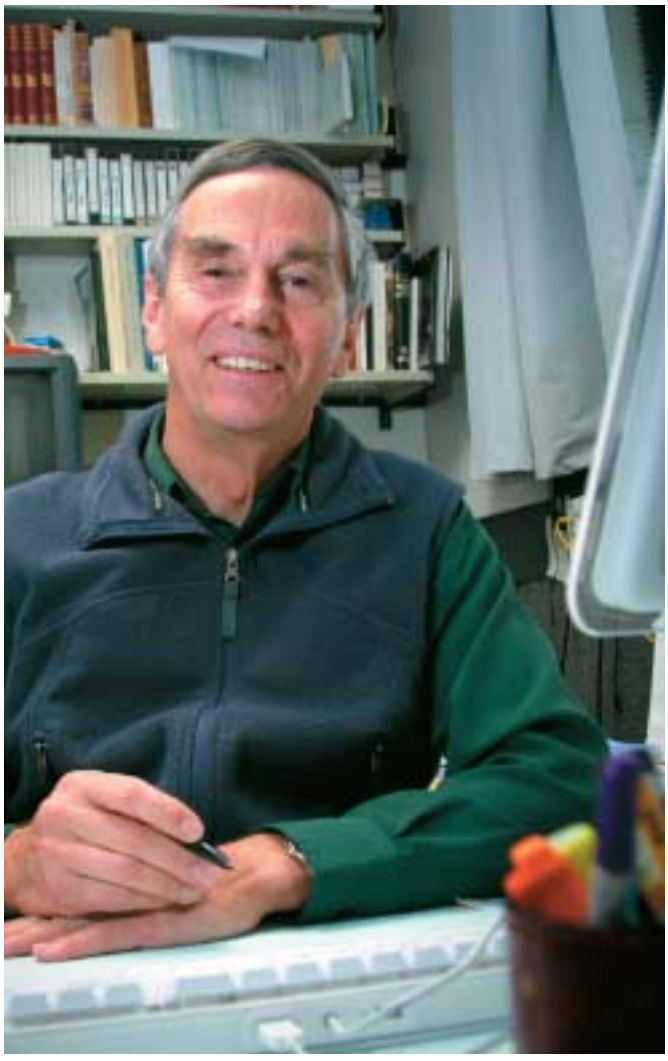
HUNGRY TIDE: Rising sea levels are eroding Takuu's coast.

PHOTO: Richard Moyle

A University of Auckland anthropologist is racing against time and tide to record a drowning culture. **JOANNA WANE** talks to him.

On a tiny Melanesian atoll barely as big as two football fields, a unique Polynesian culture is facing extinction.

The island of Takuu lies 200km off the east coast of Bougainville at the intersection of two shifting tectonic plates, which are causing the atoll to sink. Sea levels rising at a rate of 20cm a year have savagely eroded the coastline, threatening its fragile ecosystem and contaminating traditional taro gardens with salt water. The highest point is now a mere metre above the high-tide mark and soon there will be no safe place to store canoes used for fishing, the cornerstone of the islanders' simple diet.



RICHARD MOYLE: A race against time.

PHOTO: Geoff Dale

Some 600 people live on Takuu, a remote Polynesian island which is under the political control of Papua New Guinea but whose natives claim ancestral links with Samoa. No plans have yet been made to resettle them but eventually the entire population will be forced to evacuate.

The loss of their island home and the inevitable scattering of the community will be its death knell, believes Associate Professor Richard Moyle, a specialist in ethnomusicology at The University of Auckland's Department of Anthropology.

"This is a unique place where traditional Polynesian religion is still practised openly," he says. "It is reflected in their songs, their language and everyday way of life. But in the next decade they will experience rapid cultural change which will see much of this disappear."

Moyle predicts the sea's relentless advance will extinguish the atoll's ability to sustain life within the next two or three years. "A couple of years ago, I would have said five. Takuu families living elsewhere in Papua New Guinea will take in as many as they can, but with no single resettlement location, I can't see Takuu continuing to function as a community."

One of only a handful of international researchers permitted on the isolated atoll since the first contact with the outside world, Moyle has been entrusted as guardian of Takuu in a race against time to document and preserve its distinct cultural heritage.

He has already produced two books, one recording the island's rich traditions of song and dance, the other a bilingual collection of fables. His latest project is a multi-media dictionary capturing Takuu's unique language both in book form and on DVD-ROM, drawing from hundreds of hours of audio recordings and video clips.

"I want to give not just definitions to the words, but also illustrations and explanations, to show how they fit into the islanders' cultural practices," says Moyle, who hopes to publish the dictionary in 2007.

Adopted as a son of the island's Ariki [chief] (whose granddaughter was named after Moyle's wife), he has been accepted by the islanders as one of their own. In the past 10 years, he has made seven visits to the atoll, where he's been granted permanent sleeping quarters in the chief's converted cookhouse.

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• CONTINUED FROM PAGE 10

Crowded rows of traditionally thatched huts stand so close together that the eaves touch. Apart from coconut palms, there are no trees on the island, and the main street doubles as a marae for ritual ceremonies.

Only the most basic facilities exist on Takuu, says Moyle, whose packing always includes such essential supplies as multi-vitamins, toothbrushes, soap powder, malaria tablets and an extensive medical kit. Last year, he found himself stranded there for five months after the sole supply boat was grounded, and managed to leave only through the chance visit of a naval patrol boat.

A dentist comes to the island once a year with pliers and painkillers which he dissolves on gums around diseased teeth before extracting them. When a local fisherman was bitten in the hand by a shark, Moyle used a needle and dental floss to sew up the wound; when he returned a year later, he found that it had healed well with no permanent damage.

Music is an integral part of daily life on Takuu. A body of songs pre-date European contact, which occurred in the middle of the 19th century, and tell stories of inter-island voyaging, while dance performances fill 20 or 30 hours a week.

No one knows exactly how the first arrivals came to settle on such a remote site or from where their ancestors came. Moyle, who has spoken Samoan since he first visited the Pacific Islands as a Masters student at Auckland in the 1960s, says Takuu has strong linguistic links to Samoa and that was what originally drew him to the atoll. However his assumption that he'd be able to communicate with the islanders readily was swiftly dispelled "five minutes after I got out of the canoe". Takuu's unique language and culture are a product not only of geographical isolation but also a decision to ban both churches and missionaries from the atoll – a restriction lifted just five years ago.

ISLAND LIFE: The main street doubles as a marae..

PHOTO: Richard Moyle

Exposure to outside influences has gradually eroded the purity of its traditions, as high-school students migrating to the mainland return, bringing with them modern ideas and new religious beliefs.

Takuu's Ariki and council of elders first approached Moyle for help in documenting their performance traditions in 1993. "They believed their young people were gaining an off-island academic education at the expense of a cultural one, from the art of cooking and gathering materials for the building of a house to the finer points of fishing," he says. "They wanted an enduring record of the culture before it was lost altogether."

A grant from the prestigious Marsden Fund, which supports cutting-edge research outside the normal framework of Government research priorities, supported his first three years of fieldwork and a Claude McCarthy Fellowship, awarded by the New Zealand Vice-Chancellors' Committee, has enabled ongoing studies.

The people of Takuu have survived the threat of annihilation in the past. An epidemic in the 1890s reduced the entire population to 11 until intermarriage with new arrivals from Bougainville replenished their numbers.

This time, though, the odds are stacked against them. With no viable industry and no source of income, Takuu is economically invisible and its plight all but ignored by the international community. Plans to build a sea wall to protect against the encroaching tide have foundered due to lack of money.

Moyle says it would be a Canute-like attempt doomed to failure anyway. When he was last on the atoll, sea spray would blow through the door of his hut. By the time he returns, his island shelter may no longer be standing. Yet the islanders remain philosophical as the final moments of their civilisation ebb away.

"Ask them, 'If the water floods over, what will you do?' and they shrug. This is their home. They simply cannot comprehend not being there."

MAN AT THE TOP: "We are a public entity that is here to advance the nation."

THE ROAD AHEAD

Running an institution with an annual budget of almost $650 million calls for careful planning. The Vice-Chancellor spoke to **PETER CALDER** about the thinking behind the University's new Strategic Plan.

Once a week – sometimes more – between May and September, University of Auckland Vice-Chancellor Professor Stuart McCutcheon took the speaker's platform at a meeting of a Rotary or Lions Club somewhere in the Auckland region and talked up a storm to promote the value of public investment in our universities.

Two dozen engagements took him from Alfriston to Albany and even put him on an evening ferry to Waiheke. The audiences were attentive and full of questions and, although the speaker realised he wasn't reaching many people at any given meeting, he didn't begrudge the investment of time.

"I suppose in some ways it could be seen as inefficient," he says, "but it was an important thing to do. I think the universities – and I was talking about the whole university sector using The University of Auckland as an example – should make their case to the community. Rotary, Lions and other service organisations are full of thinking individuals, many of whom are community leaders. They are people who are vitally interested in the future of education in this country.

"What I want to achieve is an understanding in the community that universities are important and they ought to be one of the priorities for public investment. This is not simply because it's wrong to have our young people educated in a university system that is under-resourced compared with the systems of our competitors. We need a higher level of awareness of the return to New Zealand on that investment and the critical contribution our universities are making to this country's future as the powerhouses of research."

This kind of community engagement has become a key part of the new VC's job (on some occasions, such as when he was overseas, Chancellor Hugh Fletcher stood in for him). Its importance is reflected in the fact that it is one of 20 objectives in University's Strategic Plan, approved by the University Council in August.

The objectives, which make up the University's statement of direction for the next seven years, are nothing if not ambitious: underpinning them is a determination to lift the University into the top 50 in the world. But McCutcheon makes no apology for that. He and the University's Council and staff are ambitious for the institution.

Why is being world-class so important? The VC says it's very simple.

"We are a public entity that is here to advance the nation. We operate in a global environment – as will our graduates – and we must prepare them for that. And if we are to grow economically and advance as a society, we have to invest in research that will create new opportunities for New Zealand."

Becoming one of the world's top 50 universities – as measured by the *Times Higher Education Supplement* which currently ranks The University of Auckland as 67th – is not one of the plan's specific objectives, he says "but if we achieve our objectives we will have achieved that.

"All over the world – and particularly in Asia – university rankings are becoming increasingly important to students and investors."

But why would he set such an ambitious target?

"In a large organisation, with devolved management, you have to be clear about common aspirations so as to achieve focus. A numerical target immediately gets you talking about it and you start focusing on what those rankings mean and what the international drivers of quality are."

He is under no illusion that the competition is stiff and that higher-ranked universities are not going to stand aside while Auckland climbs up the list.

"When you go, as I did, to the 100th anniversary dinner of the University of Singapore and hear their Deputy Prime Minister exhort them to be in the top 10 in the

world – and by implication offer to pay for it – or you see the University of Sydney's so-called 1,5,40 strategy – to be first in Australia, fifth in the Asia-Pacific region and 40th in the world – you see what we're up against."

The VC sees nothing wrong with aspiring to be in the top league internationally.

"No one worries that Oxford, Cambridge or Harvard universities are elite. What we are saying is that Auckland's contribution – to the country and to new knowledge globally – will be in attracting the best staff and the scholastically most able students who will excel in a large, competitive, success-oriented research university."

Substantial discussions with the University Council, staff, alumni, student representatives and other stakeholders on Auckland's future vision revealed a widespread desire to make it into a world-class university. The final plan, which took into account some 70 submissions, is designed to answer the question: "What does that mean in terms of what we do?"

Underpinning the aspiration to become a world-class university is a fundamental change: in emphasis from rapidly growing student numbers to attracting top quality school leavers – those most likely to want to go on to graduate study, and promoting the postgraduate programme at Auckland as a "highly desirable place to be".

The university sector, says the VC, is emerging from 15 years of "massification".

"The attitude was that if some university education is good more must be better. The result has been a huge increase in numbers –

we've risen from a national university roll of 79,000 students in 1990 to about 167,000 now. But in some ways it created 'vanilla' universities that were more and more like each other.

"The focus has changed and there is more emphasis on research quality and global competition. Governments are realising that producing a lot of ordinary graduates is not going to do it for us."

What follows from that development is that top-end universities like Auckland inevitably emphasise research. The balance of student numbers must shift in favour of graduate students – six per cent of students are currently in postgraduate research programmes and the plan calls for lifting that figure to 10 per cent.

STRATEGIC EMPHASIS ON GRADUATE STUDENTS

Just five months into the role, Professor Gregor Coster, the new Dean of Graduate Studies, is facing the challenge of developing an international quality postgraduate programme that will significantly increase the numbers of doctoral and Masters students graduating from the University each year.

Far from being fazed by the task, Professor Coster is excited by the challenge of changing the way the graduate programme is delivered. His mission is to more than double (to 500) the number of PhDs coming out of the University each year and increase Masters completions to 800 by 2012. He acknowledges these are ambitious targets, but notes they have been developed from benchmarking with other leading international universities and are not unrealistic.

It's a complex task which involves everything from ensuring the quality of student recruitment to improving postgraduate supervisor training, student support and international marketing. But Professor Coster says the Strategic Plan is acting as a catalyst to some lateral thinking and vigorous discussions on how things can be done differently to bring about change – a process that is at once stimulating and, at times, just a bit scary.

His starting point is to look at the current performance of the graduate programme – the number of students undertaking postgraduate study, the time it takes them to complete their Masters degrees or PhDs, and the number who fail to complete and why. He also wants to know what influences prospective students when they are choosing a university for postgraduate study.

Like all New Zealand universities, Professor Coster notes, Auckland has been dominated traditionally by undergraduate education, whereas leading research universities have a much more even balance between undergraduate and postgraduate programmes.

"Our strategic plan reflects that. We are looking for just one per cent growth in undergraduate EFTs and actually want our growth to be in the postgraduate area. What we are really saying is that to be a world-class university we need to have a strong postgraduate programme.

"It is really a shift in balance to seeing the interface between research and postgraduate study as being one of our defining characteristics. This will take a culture change within the University so that the importance of postgraduate research is understood as a key strategy that we have for the future," he says.

Where will postgraduate student growth come from? Domestically, it starts at undergraduate level with strategies to attract New Zealand's brightest students – those most likely to continue to graduate studies. The quality of research staff and level of supervisory and other support, including scholarships, are also critical to attracting domestic postgraduate students, says Professor Coster. Attracting international students into the graduate programme will depend on a mix of initiatives including further building linkages with overseas universities through research and academic exchanges, and better postgraduate international marketing.

The other part of the strategy is to ensure students complete their graduate studies. This calls for more scholarships to overcome the single biggest barrier – living costs – and ensuring the availability of high quality resources to support their work. Well-defined career paths and ongoing professional development is also needed to attract top international researchers, and ensure they are well-trained for graduate student supervision.

"We are working on multiple strategies to improve the graduate programme and its attractiveness. No single initiative will achieve the lot."

Implicit in that aim is an international focus, with the student flow two-way – New Zealand students studying abroad and international students coming to Auckland. The VC says the plan emphasises the need to attract a higher proportion of postgraduate, as opposed to undergraduate, students because "a vibrant graduate school tends to be characterised not only by having some very bright domestic students but also by its ability to attract top international postgraduate students."

The emphasis on research must be tailored to play to the University's strengths – Auckland is currently rated 36th in the world in biomedical sciences, for example – and the VC is keen to create "a range of entities of such quality and scale that they are irresistible to offshore funding agencies."

"This university has more or less saturated the domestic funding market," he says. "We win a disproportionate share of local funding because our people do an outstanding job of writing grant applications and producing quality research. There is a large international research funding opportunity and a trend internationally for large corporates not to do all their research in-house but to trawl the world looking for good research ideas. We need to capitalise on those opportunities by continuing to develop research capability that is unique, while supporting from our own resources those disciplines which do not have access to external research funding."

In the end, McCutcheon is aware that the numerical targets in the Strategic Plan are a big ask: "I'm as challenged by the figures as anyone else," he says, "but if we look back over the last seven years, this University has grown considerably in many of its activities. The Strategic Plan targets are, in that context, difficult but not impossible. And I am very encouraged by the way that the Plan has already stimulated discussion on how we can attract new resources, and better use our existing resources, in support of that goal. I think that shows that the Plan is already helping us to focus on the task ahead."

The Strategic Plan may be accessed at http://www.auckland.ac.nz/uoa/about/uoa/plans/strategic_plan.cfm

ALL THE BEST: Doctoral Scholarship recipients Kim Meyer, Paul Bowker, Katrina Ford, Lisa Crandall, Kathryn Askelund and Alice Coveny, with the Minister of Finance, Michael Cullen.

AWARDS BOOST WORK OF TOP PhD SCHOLARS

University of Auckland PhD students took nine of 40 Top Achiever Doctoral Scholarships awarded in September. The awards, with a combined total value of $780,000, will enable these top scholars to work with leading researchers at the University to enhance their skills and further their research. Competition is intense for the prestigious scholarships, which are awarded by the Tertiary Education Commission (TEC) to further research at PhD level by supporting the top 10 per cent of doctoral candidates.

> **Sally Rutherford,** a bioengineering student from the Faculty of Medical and Health Sciences, is undertaking research to combat one of New Zealand's leading causes of death – heart attack – by developing the first comprehensive computer model of electrical activity in the border zone between healthy heart tissue and tissue that has been scarred by previous heart attacks.

> **Matthew Rayner** (Biological Sciences) is studying the endangered native bird, the Cook's petrel, as part of a broader project which seeks to reintroduce a range of seabirds to mainland New Zealand. The Cook's petrel is a tiny seabird, weighing only 200 grams, which is now confined to small populations on Little Barrier Island (Hauturu) and Whenua Hou, off Stewart Island. Matthew hopes to relocate the Cook's petrel and other seabird species to Maungatautari Mountain in the central North Island, which is being developed as a predator-free sanctuary for native species.

> **Gareth Ferrari** (Engineering) is looking at the aerodynamics of a wind-turbine blade in an attempt to better understand how it performs when hit by New Zealand's turbulent winds. He hopes to develop a more durable and reliable blade to suit local conditions.

> **Kathryn Askelund** (Medical and Health Sciences) hopes her research will lead to a better understanding of the physiology of normal pregnancy and how diseases such as pre-eclampsia (maternal high blood pressure) can develop.

> **Alice Coveny** (Medical and Health Sciences) is exploring how changes in the protein and fat content of a diet across different generations can increase the risk of obesity and diabetes in children. She hopes to establish how a mismatch between the diet of a mother and her offspring can programme the metabolism of her children and even grandchildren.

> **Katrina Ford** (Arts) will explore the period from 1870 to 1910 in New Zealand when widespread recognition of the role of bacteria in disease changed ideas about medicine and saw the rapid development of scientific medical research. By studying medicine and people's attitudes to it, she aims to learn more about the role of gender, race and class in medical history.

> **Lisa Crandall** (Arts) is recording and analysing conversations between lecturers and their students, with the aim of improving language-training methods for international students and assisting staff to communicate more effectively with these students.

> **Paul Bowker** (Arts) will examine the historic events that occurred between Spain and Latin America in the 20th century and show how those interactions have influenced self-perception.

> **Kim Meyer** (Science) will focus on the synthesis, testing and tuning of a new class of chiral or directional catalysts. These are extremely useful in the synthesis of chiral organic molecules, which find application in many areas particularly as the building blocks in the synthesis of pharmaceuticals.

FUTURE PROOF

The Tamaki campus is developing collaborations between the University and private and public partners that will transform the way research is done. **PETER CALDER** takes a look around.

To anyone who graduated from The University of Auckland before the 1990s, even the phrase "Tamaki Campus" may be unfamiliar. But the University, which has virtually doubled in size since those days, has spread as well. It now occupies five distinct campuses – in the city, at Grafton, at Epsom (the newest, formerly the Auckland College of Education), the North Shore and at Tamaki.

The 34-hectare Tamaki Campus, 20 minutes from the city, overlooks the Tamaki River estuary and is on land which was the site of the athletes' village for the 1990 Commonwealth Games. The sporting flavour of the precinct remains – major netball, soccer and tennis venues are in place or under construction – but the most notable exertion taking place at Tamaki is of the intellectual kind.

The campus is at the centre of what is called the Auckland Innovation Park, an environment designed to foster cutting-edge collaborations between the University and strategic partners in both the public and private sectors.

Appropriately, Tamaki has its own division of the Business School, headed up by Professor Kenneth Husted, previously an Associate Professor at Copenhagen Business School. Husted, whose research interests are in the fields of management of research and development and corporate entrepreneurship, has been appointed Professor in Innovation and Management and will work to foster a multi-disciplinary environment which will create interaction between the University and industry.

The thinking that underpins the Tamaki development is that the knowledge wave that will propel a relatively small economy like ours into the 21st century is driven by innovative partnerships between disciplines that have not, in the past, worked together and that might not have even considered what they have in common.

The head of the campus, the Pro Vice-Chancellor (Tamaki), Professor Ralph Cooney, explains that the Innovation Park is part of a "Tamaki Edge" development planned by the Auckland City Council, which will be the largest urban development in the country's history. The development, which will take place over the next decade, will transform the area between the Remuera Golf Club and the Tamaki estuary. The former Mt Wellington quarry will become a new suburb of more than 6000 residents, creating a town centre with new and attractive recreational and business facilities.

The 10-year plan which began in 2002 will see the Tamaki Campus population grow from 1600 to 10,000. This growth will be developed around six major disciplinary "themes" which have been identified in international foresighting reports as the basis of a future knowledge society. Cooney emphasises that these themes are the product of a global consensus.

"They are widely agreed key growth areas that are critical to New Zealand's development in the rapidly changing and turbulent global environment," he says. "Everyone knows now that e-commerce sounded very good before the dotcom bubble burst, but concentrating on these areas, which represent a balance between advancing a knowledge economy and ensuring community benefit, is a future-proof basis to proceed on."

The key themes or areas are Health, Sports and Community; Information Technology, Communications and

Electronics; Information Management; Environment, Energy and Resources; Food and Biotechnology; and Materials and Manufacturing.

The way things work at Tamaki is underlined by the "porous" architecture which favours interconnectedness over separation and emphasises what disciplines have in common rather than what sets them apart. Cooney explains that the new campus wants to move away from the "silo" model that characterised universities in the late 20th century when single-discipline specialisation was the academic watchword. The modern best research practice emphasises collaborations even between disciplines that might not necessarily have seen themselves as likely partners.

Thus the new Institute for Health Innovation (see story page 19) is a collaboration between three schools – Population Health, Computer Science and Business. More importantly, it constitutes a partnership with public organisations (in this case, the District Health Boards) and private concerns (health informatics companies like iSoft and Orion, along with GPs' associations).

Likewise a Centre for Plastics Innovation and Technology (see story page 18) is a collaboration between Engineering and Chemistry. But it is also a partnership with 182 companies affiliated to Plastics New Zealand, including Fisher and Paykel and multinational packaging giant Huhtamaki.

These two units were recently named as the recipients of Government funding of up to $12 million under its Partnerships for Excellence programme. The programme commits the Government to matching, dollar-for-dollar up to specified amounts, private sector funds raised by institutions for approved projects. Of the nine partnerships already established, five are at The University of Auckland and Cooney describes the two at Tamaki as "transformational funding which is out of all proportion to the size of the campus".

Tamaki's growth strategy rhymes perfectly with a shift in Government education policy towards funding innovative research and quality of education, as distinct from simply boosting undergraduate numbers. The campus has a higher ratio of postgraduate students than any other in the country: it currently stands at 39 per cent and the aim is to lift that proportion to half (the ratio in the University as a whole is around 16 per cent).

"Industry will always be interested in a supply of first-degree graduates," Cooney says. "But what will attract external research income, and be aligned with Government research funding policy, is an emphasis on university-private industry-Crown Research Institute partnerships.

"The only campus in Australasia with that sort of emphasis on research is the Australian National University in Canberra which potentially in the future will make Tamaki a very special campus in this part of the world."

What's plain is that the evolution of a knowledge-based society – which is what will allow New Zealand to continue punching above its weight internationally – is transforming the tertiary education landscape. The plans – some of them already enacted or in train – are ensuring that Tamaki will be well-positioned to be at the cutting edge of new developments.

FANTASTIC PLASTIC

Plastics might not have the same allure as, say, the wine or tourism industries, which regularly command media attention as major moneyspinners for the New Zealand economy. But there's big money in it.

Some 8000 people work in 400 separate concerns in the local plastics industry. The combined annual turnover of more than $3 billion may be minuscule compared with the $800 billion-a-year global turnover, but it's three times as big as the wool industry, 12 times as big as wine and almost half the size of international tourism.

It is also, as Plastics New Zealand Chief Executive Robin Martin points out, "a great enabler" of other industries, developing products and processes that allow, for example, the meat and dairy industries to prosper and thrive.

Little wonder then that the Government was excited by the proposal for a Centre for Plastics Innovation and Technology at the Tamaki Campus. In August, the centre was awarded up to $5 million in funding under the Partnerships for Excellence scheme which will match, dollar-for-dollar up to $5 million, funds raised by the plastics industry.

The Centre, an initiative of The University of Auckland in collaboration with the industry umbrella group Plastics New Zealand, will provide a world-class innovation centre for developing advanced polymeric materials, conducting industry-specific research, graduate and industry training and developing applications of leading-edge technologies in plastics processing and manufacturing.

The areas of opportunity are huge: intelligent food packaging, incorporating responsive membranes; polymers that resist UV degradation and environmental stress; improvements in recyclability; and high performance polymers that will conduct electricity.

Associate Professor of Chemistry Allan Easteal who, with senior lecturer Neil Edmonds and Professor Debes Bhattacharyya, made the application for PFX funding, says the centre will be a place where innovative materials get made and innovative thinking gets done.

"Some of the research work is likely to focus on short-term practical projects on behalf of industry to find answers to specific questions that Plastics New Zealand member companies might not have the resources to find. But at the other end of the spectrum the work will be more fundamental, to provide what you might call the underpinning science. This will serve a longer-term objective of the industry which is to be more innovative and internationally competitive."

ALLAN EASTEAL: "It's about making the industry more competitive."

In line with the collaborative spirit that underlies research initiatives at Tamaki, the centre is a joint venture of Science and Engineering – specifically Chemistry and Mechanical Engineering. That partnership has already borne fruit in the Centre for Advanced Composite Materials, of which Bhattacharyya is the director, and which featured in the last issue of *Ingenio*.

Easteal says that the work that will go on at the new centre will be "more profound" than making better plastic products.

"It's about making the industry more competitive," he says. "The thing about the New Zealand plastics industry is that it is small enough to respond to innovations in technology and try things quite rapidly compared with larger countries with larger plastics industries where there may be a lot of inertia."

Plastics New Zealand's Robin Martin agrees. He says he knows of indications from two "major international brand owners, names you would be very familiar with" who are keen to use the centre because of New Zealand's isolation and the chance to keep research initiatives confidential.

Easteal says the centre will develop both products and intellectual property.

"Within industry there is a great desire to use biodegradable materials, for example, but the major issue is cost. Developing commercially viable bio-degradable polymers for particular applications may well be something undertaken by the centre as a long-term activity."

Working in association with the Centre for Advanced Composite Materials, the Plastics Centre will house not only University of Auckland researchers, but also involve collaboration with researchers from other tertiary institutions, Crown Research Institutes (CRIs) and industry. Bhattacharyya says it will be an invaluable national resource.

"Plastics training, research and development are currently unco-ordinated activities in New Zealand, with a number of tertiary institutions providing education at various levels, a few universities and Crown Research Institutes involved in research, and commercial enterprises competing for business as individual companies.

"For the New Zealand economy to grow at a rate that the Government has publicly called for, the productivity of the manufacturing sector needs to progress significantly further than it has done in recent years. This can only be achieved through the development of a concerted approach from industry, government and university researchers."

CREATIVE THINKING

Medical science is becomingly increasingly specialised with every passing year. But the future of healthcare will rely as much on the ability to forge collaborations between what might seem to be disparate disciplines as it will on the advances being made in an ever wider range of specialties.

That's the thinking behind the Institute of Health Innovation at Tamaki, formed in August with Government assistance of up to $7 million. The funding, under the Partnerships for Excellence scheme, means the Government will match, dollar-for-dollar, up to $7 million, funds raised by the institute from the private sector.

The new institute, located in the School of Population Health, will build on partnerships between the tertiary sector, private sector, Government and the community to develop systems of what are known as health informatics. That means marrying the skills of health researchers and computing experts to develop ways of using information technology to improve health outcomes and reduce healthcare costs.

The head of the school, Professor Alistair Woodward, says the work is "all about trying to do more with the same amount of money or ideally more with less".

Professor Rod Jackson's web-based diagnostic tool, Predict, which featured in the last issue of *Ingenio*, is an example. "The sort of systems that the Predict model provides will give doctors and patients the information that they need."

Woodward says the principle of interdisciplinary collaboration that underpins many research initiatives at Tamaki is the way of the future.

"If anything, trends are running the other way internationally, concentrating on narrower and narrower areas of research and teaching," he says. "The disadvantage of that is that people become more and more specialised and you run the risk of losing the creative element to your work. What's exciting here is that we are bringing together for the first time people who come from very different fields. You put them together and some very exciting initiatives start up."

The attitude underpins the recent appointment of a Professor of Health Informatics, Professor Jim Warren, who arrives from the University of South Australia. This was a joint appointment between Population Health and Computing Science. And Woodward points to an "exciting new initiative' being headed by Professor Peter Thorne in Audiology. With support from the Danish hearing-aid giant Phonak, one of the foundation partners of the Institute, he is collaborating with people in Epidemiology and General Practice to look at the question of hearing loss in prison populations.

"These are things that would probably not have happened in their specialised areas but put them together with people working in other areas and these sorts of projects take on a life of their own."

The formulation of the new research paradigm has been assisted by Colin Giffney, an investment banker who studied overseas institutes, notably at the University of Toronto, which has put health and computing specialists in a Centre for Global eHealth Innovation.

"Health expenditure is typically eight or nine per cent of GDP in most developed countries," he says. "It is growing at twice the rate of economies and therefore at twice the rate of our capacity to pay for it. If you can get a 10 per cent reduction in health costs, you are talking about big money."

One of the important considerations for the Institute, which is in the process of appointing a director, is ensuring that it exploits the intellectual property it develops.

"We need to consider how we set things up so that we protect the University's position and advantage the private sector partners who have given us such strong support," says Woodward. "They are not interested in an institute that will just produce publications and PhD students. They want ideas that are going to assist in their commercial mission."

ALISTAIR WOODWARD: "We are well set up to explore and develop innovation."

Woodward explains that New Zealand's size and isolation, so often cited as a disadvantage, make it an ideal test-bed for the development of health informatics.

"We are a cohesive society. We have a good health system. And there is an extremely high uptake of computer use among primary caregivers not just for billing but for managing patient records. So we are well set up to explore and develop innovation.

"Also, for our size we have a very good research workforce. Put that all together and we are in a position to do something very special."

The foundation partners of the Institute of Health Innovation are: Enigma Publishing (medical publishing and software development); Vodafone; ProCare (the largest Auckland association of independent GPs); Southern Cross Healthcare; Phonak; iSoft and Orion (health IT companies); and the Goodfellow Trust.

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MASTER CLASS: Max Gimblett says he is "remagnetised" by New Zealand.

DRAWN FROM LIFE

A distinguished expatriate artist is bringing a lifetime's lessons to creative students, writes **JASON KING.** That includes taking dancers to art galleries.

It's a hot August afternoon, a Manhattan summer and the first thing artist Max Gimblett says is, "The room is full of beautiful light. It's warm and the fans are going." His studio in the Bowery is a generous open loft space with a concrete floor, a high stud and an artist's sense of organisation, both functional and aesthetic. This is where Gimblett works in New York.

Of late, the 70-year-old Gimblett, who left New Zealand as a young man to make New York his second home, has enjoyed wider recognition in the city of his birth. Last year the Auckland Art Gallery presented a major retrospective exhibition of his work, "The Brush of All Things". In August, the Gow Langsford Gallery held a show called MGM that examined the linkages in the work of Colin McCahon, Gimblett and the influential American abstract expressionist Robert Motherwell.

But perhaps the surest sign of Gimblett's influence in his old home town is his appointment in July as the inaugural honorary Visiting Professor at the National Institute of Creative Arts and Industries (NICAI) at The University of Auckland. Established as a faculty in 2004, NICAI incorporates the schools of Architecture, Creative and Performing Arts, Fine Arts, Music and the Department of Planning.

A professorial post may seem strange for a man who left school at 15 and – though he went to technical college and continues to study at the CG Jung Foundation in New York – still holds no formal tertiary qualification. But it provides the opportunity for Gimblett to pass on what he learned as he forged a career as a significant artist in that toughest of art towns New York.

He says his brief is to bring his studio practice into the University, exploring the pertinence of creative ideas in studio work and in scholarly practice and research.

The position is voluntary – the artist sees it as

MAX GIMBLETT
MOLY
2005.
Courtesy of the artist and Gow Langsford Gallery

a chance to give something back to a place he has always loved – but the idea of Gimblett as pedagogue is not new. In 1979 he was appointed visiting Associate Professor at the Pratt Institute of Art and Design in Brooklyn and he will soon teach a master class at the San Francisco Art Institute where he studied 40 years ago. And, as Gimblett recounts his teaching experiences over the phone from New York, it is clear that he is the sort of artist who enjoys discussions with students about the nature of creative endeavour. Barbara Kirshenblatt- Gimblett, his wife, is Professor of Performance Studies at New York University.

The appointment is part of a drive at NICAI to establish international links. The Dean, Professor Sharman Pretty, has already relied on contacts Gimblett has with the San Francisco Art Institute to begin discussions about student exchanges between the Institute and Elam School of Fine Arts.

Gimblett is a regular visitor to Auckland and the importance of this sense of place is readily apparent in the way his voice catches when he speaks of the city. He heartily approves of Professor Pretty's effort to sharpen the Institute's international focus and make the New Zealand diaspora work for the country. Like many other expatriates, he has always wanted to see his birthplace prosper.

"This is about our culture growing up," he says. "Twenty years ago we'd bash expatriates: 'Why did they stay away? Why didn't they come back?' In my case I am re-magnetised by New Zealand. I have a yearning to visit and I need to be there at least twice a year."

During his annual visits to Auckland he came to enjoy the friendship of former Vice-Chancellor John Hood, a collector who admired Gimblett's work. The relationship built to the extent that Gimblett has hosted University of Auckland alumni functions at his Bowery studio. So an informal relationship has now been formalised.

Gimblett approached his new role with gusto when he was in Auckland in July and August. Professor Pretty invited the artist to sit in on regular meetings with the heads of departments where he became acquainted with his new colleagues. He also began to appreciate the breadth of disciplines the institute encompasses: fine arts, music, architecture and planning, dance, and Maori and Pacific performing arts. In July he gave a lecture in the Design Theatre entitled "all mind/no mind" and conducted master classes for Elam students.

More unconventionally, he also took three groups of students from the Dance Studies programme to the MGM exhibition in August for a talk and a series of interactive exercises. Ralph Buck the head of the Dance Programme says the exercise was hugely valuable. "It gave our students valuable insight into the creative process." Nor was it all one-way: the dance students improvised work as they responded to the art works in the gallery.

Gimblett recalls the experience with warmth: "The students were inspiring. With students it isn't just about idealism, it's hope. Nobody starts a career in the arts without incredible will."

When he returns in March next year Gimblett plans to reverse the experience. He can't wait to spend time in the dance studios with his signature tools, inks, mops, brooms and Asian brushes.

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ON A GLOBAL STAGE

The University of Auckland alumnus in charge of the money at the world's third-largest company tells **PETER CALDER** that New Zealanders need to have global aspirations.

CHRIS LIDDELL: "The pace of change is just phenomenal."

It should hardly be surprising that a New Zealander in the top ranks of Microsoft management applauds the idea of aiming high.

Chris Liddell, who began work as Chief Financial Officer for the software and computing giant in May, doesn't see anything surprising in The University of Auckland's aspiration to be among the top 50 in the world by 2012.

"I believe it's an aspiration well worth having," he says. "The University of Auckland is positioned to take this leadership role for New Zealand, and striving to be among the world's best is important in continually lifting our performance as a country."

Liddell believes New Zealand needs to complement its "great all-round capabilities" with an aspiration to succeed on a global basis.

"There are plenty of people who demonstrate greatness in a New Zealand context, who have started with relatively little and achieved a tremendous amount with their lives," he says, "and increasing numbers of Kiwis are also showing that they can compete on the global stage. But our achievers tend to be prominent in the sports or the arts. So I think it's both important and entirely appropriate that the University aspires to global significance in academic and teaching areas."

Liddell spoke to *Ingenio* from his home near the Microsoft HQ not far from Seattle. The interview had been scheduled, cancelled and rescheduled several times and Liddell was apologetic when we finally pinned him down on a Saturday afternoon.

"My life's pretty hectic these days," he said, by way of rather superfluous explanation.

Matamata-born Liddell, 47, went to Mt Albert Grammar School before gaining a Bachelor of Engineering at The University of Auckland and a Master of Philosophy degree from Oxford. His business career included time as managing director and joint chief executive officer for CS First Boston NZ Ltd and took him

to the top job at New Zealand's major listed company, Carter Holt Harvey. The global aspirations he must have had then were rewarded when he was appointed CFO at CHH's parent company International Paper, the world's largest forest products company.

The Microsoft job is of a different order again. The company's market capitalisation of about US$280 billion makes it the world's third-largest listed company. The finance group he heads has 2100 workers and he is in charge of leading the financial operations in a workforce of nearly 60,000 people, working on everything from desktop and enterprise business software to home entertainment.

"It's obviously a vastly different challenge from a 50-person start-up [company] where you can look [at] and feel and touch everyone on a daily basis," he told the *New Zealand Herald* on his appointment. "Here, you've got this massive flotilla of boats that you want drive forward in the same direction."

By general consensus, Liddell is a man who settles for nothing less than the best. Scott St John, now chief executive of First NZ Capital but who worked at CS First Boston with Liddell, said he "relentlessly pursues excellence, focuses on outcomes and is very competitive".

And though the man himself professes no surprise that a New Zealander fills such a major role in such a major company, he points to a Kiwi attitude that can get in the way of realising our full potential as individuals and as a country.

"I think we sometimes constrain ourselves by our own mindsets," he says. "We often have a belief that someone who comes from a bigger environment must know something that we don't – though the more you compete outside New Zealand, the more you realise that we are as capable as anyone.

"It's also true that one of New Zealand's great strengths is also one of its great weaknesses: we can enjoy a great lifestyle without ever having to compete in the outside world. To achieve more than that you have to believe, 'I really want it; I am willing to challenge myself; I am as good as anyone else in the world'."

In a recent publication by the New Zealand Stock Exchange in which business leaders expressed their vision for the country, Liddell wrote of "a nation capable of becoming 'The Best Small Country in the World'" by offering a unique combination of outstanding lifestyle but also with significantly higher wealth for all our people.

"As Thomas Friedman points out in his excellent recent book *The World Is Flat*," he wrote, "the economic barriers between nations, businesses and peoples are rapidly disappearing. This is a tremendous opportunity, but also a very real challenge for New Zealand."

He points to the potential to create "mini-multinationals which make products owned and designed in New Zealand, made in Thailand, assembled in China and sold in the USA."

Liddell keeps in touch with New Zealand, and remains a trustee of the New Zealand Institute, an independent think tank that "brings global thinking to bear on important domestic social and economic issues". He believes his time at Auckland gave him a great platform for success.

"An engineering degree combines the knowledge of a set of disciplines and processes with the overlay of a creative and lateral approach to problem-solving. This is an ideal combination of skills for young people who will need to be multidisciplinary as they move into a rapidly changing workplace."

It's fair to say that from where he sits, Liddell can see the future being invented.

"There is an enormous amount happening in front of me," he says. "The pace of change is just phenomenal. Given that New Zealanders are proficient users and developers of technology, we need to build the infrastructure and skills to take advantage of what is a sea change in the way the world operates.

"The Internet has given New Zealanders a wonderful opportunity to participate in the global economy in ways which would have seemed inconceivable even a few years ago. Our University has a key national role in ensuring our students are equipped with the right level of skills to compete globally, and thus must aspire to a global ranking.

"With the right level of aspiration and leadership, both within The University of Auckland and across all sectors of our society, there is nothing to stop us cementing our place as the Best Small Country in the World."

BEYOND BUILDINGS

The 21st-century architect will need to reinvent the discipline if architecture is to evolve along with a rapidly changing society, says one of New Zealand's most distinguished practitioners.

Mark Wigley, a University of Auckland alumnus who is the Dean of the Graduate School of Architecture, Planning and Preservation at New York's Columbia University, says that modern architecture students need to be taught more than how to become experts in the discipline.

"We need to teach them how to change the discipline."

Wigley says Columbia is famous as "a kind of experimental lab where we develop new ways of thinking about architecture".

Wigley, pictured, graduated Bachelor of Architecture from The University of Auckland in 1979 and completed his PhD in 1987. He spent more than a decade teaching at Princeton University before being appointed to his present position last year.

He is one of the most highly regarded and provocative architectural theorists and critics of his generation. He told the New Zealand Institute of Architects conference in June that architecture schools owe the profession its future.

"If you are running a school," he elaborated later to *Cross Section*, the magazine of the New Zealand Institute of Architects, "you cannot afford to have a single view of what the future is. What you have to do is create the possibility for the school to generate new futures.'

A prolific writer on architecture, Wigley received the Triennial Award for Architectural Criticism bestowed by the International Committee of Architectural Critics (CICA) in 1990. One of his key arguments is that architect must evolve along with society. "The world is constantly changing," he says. "The way we act, the way we talk, the technology we use. If the figure of the architect doesn't evolve at the same speed we will have no value."

– BETH MILLER

EYE ON THE FUTURE

Three generous acts of philanthropy have boosted ophthalmological research.

No one was happier than Dr Bruce Hadden to see the appointment in 1999 of the first Professor of Ophthalmology at The University of Auckland.

Dr Hadden, who worked for more than a quarter-century as an ophthalmologist in the public health system, decided to concentrate on private practice in 2002, not least because he had assumed the presidency of the Royal Australian and New Zealand College of Ophthalmologists – the first New Zealander to hold the position. In his final few years in the public system he had been hugely impressed by the new Maurice Paykel Professor of Ophthalmology, Charles McGhee.

The professorial appointment was the culmination of years of effort to establish the chair, in particular by the late Calvin Ring and by Dr Lindo Ferguson, a former Chancellor of the University. And the new appointee turned out to be an energetic Scotsman who has lured talented overseas graduates to join him, taking the department's staff from two to 36. He has attracted more than $4 million in research funding and he and his colleagues have published more than 150 papers in peer-reviewed journals – a key indicator of research output.

"He's been the best thing that has happened not just to Auckland but to New Zealand ophthalmology in decades," says Dr Hadden. "The research, teaching and presentations by his department have raised the profile of ophthalmology and the standard of patient care."

Little wonder that when McGhee started talking about the need for a chair in so-called basic sciences of ophthalmology – the platform on which the specialties are built – Dr Hadden was listening. The result: Dr Hadden and his wife Wendy – also a doctor and one of New Zealand's leading radiologists – decided on a $1 million donation that would make such a chair a reality.

The W & B Hadden Chair of Ophthalmology and Translational Vision Research was established in June and its first recipient, Professor Colin Green, is an eminent cell biologist with an international reputation in research into wound healing, particularly in the cornea. The chair has also been funded by bequests from the Sidney James Taylor and Helen Cadman estates.

The "basic" sciences are, of course, anything but basic: Green's areas of research expertise are not just in the eye but in the central nervous system, the skin and the cardiovascular system, all of which are intimately interlinked with the science of vision.

Dr Hadden explains that the term "translational" refers to basic science research "which you hope will translate to better clinical care".

"The department has earned its keep in terms of research and teaching," he says. "Professor McGhee has displayed tremendous energy and ability in building up a department which is now the leading eye research department in Australia and New Zealand. When he said it would be a good move to have such a chair we thought 'Well, that's got to be positive'."

The Haddens are modest in discussing their philanthropic gesture, keen to underline the fact that that their donation is one of many to the University and, in particular, to the Faculty of Medical and Health Sciences.

"The appointment of Charles McGhee was made possible largely by a donation from Maurice Paykel," says Dr Hadden. "I

RICH BEQUEST MADE THE DIFFERENCE

Everyone who knew Sid and Ralph Taylor referred to them as "the boys". But there was nothing boyish about the way they managed their money – turning modest earnings into a substantial fortune through a lifetime of canny investment.

The generosity they showed late in life, when deciding what to do with their substantial estates, has been instrumental in the establishment of a new research chair in the Faculty of Medical and Health Sciences. The W & B Hadden Chair of Ophthalmology and Translational Vision Research is named in recognition of major donors Drs Wendy and Bruce Hadden, who gave $1 million specifically for the creation of the chair. In addition, $800,000 of the Taylors' generous $2.8 million bequest to

Ralph, left, and Sid Taylor: generous donors.

The University of Auckland has also been applied to the funding for the chair.

The brothers grew up in Helensville where their parents ran an old time grocery store of the kind that has virtually vanished now. It was all white aprons and pencils behind the ear and from an early age Ralph (born 1924) and Sid (born 1926) helped the staff out, serving behind the counter when it was busy and out the back – weighing potatoes into paper bags and so on – when things were quieter.

They wanted to serve in the air force during the war, but Ralph's eyesight ruled him out and Sid was too young to enlist.

When the family sold up and shifted into Auckland in 1957, the boys got administrative jobs on the waterfront before joining TEAL – later Air New Zealand. Ralph was a personnel officer and Sid worked for the industry body IATA and the two became frequent fliers – domestically and internationally – before the term was invented.

The boys had a bit of a reputation for keeping to themselves. A mate in their

LOOKING AHEAD: Drs Bruce and Wendy Hadden.

think there is definitely a place for individuals to assist the University in what it does and my wife and I hope that our donation will encourage others to follow suit."

Professor Green, who has been in the Faculty of Medical and Health Sciences for 12 years, previously held a personal chair in the Department of Anatomy with Radiology, and was director of the Biomedical Imaging Research Centre. Professor Green graduated from The University of Auckland with a PhD in Zoology and spent 12 years conducting research in international centres in France, England and earned the prestigious DSc.

later life, Dan Lyons, says they were "very good citizens."

"While you could say they were a bit insular, taking the time to get to know them revealed delightful traits and personalities."

They would often drop in on their way home from shopping. "There would be a knock on door," he recalls, "and there was Ralph and Sid two steps behind. They would never stay long and it was very rare for them to take a cup of tea or any refreshments."

But Don Anton – a friend of both for over 50 years – said Sid had a very droll manner. Ralph was "the boss", he said, though family and friends describe them as very close and with a finely-tuned sense of humour. An invitation by phone – answered almost always by Ralph – would bring the response "Hang on, I'll have to ask my mate".

Living very much a frugal lifestyle – their overseas travel was at generous staff airline discount rates – the brothers built up substantial investments in residential property. When Ralph, who succumbed to cancer in 1998, was terminally ill, he and Sid discussed what they would do with their estates and a friend recalls that they had decided to "put their estates to some real use to benefit society".

Sid died of a heart attack in 2001 but "the boys" survive through their $2.8 million bequest to The University of Auckland which they wanted earmarked for research in the areas of the eyes, cancer and the heart.

FIRST GUS FISHER FELLOW APPOINTED

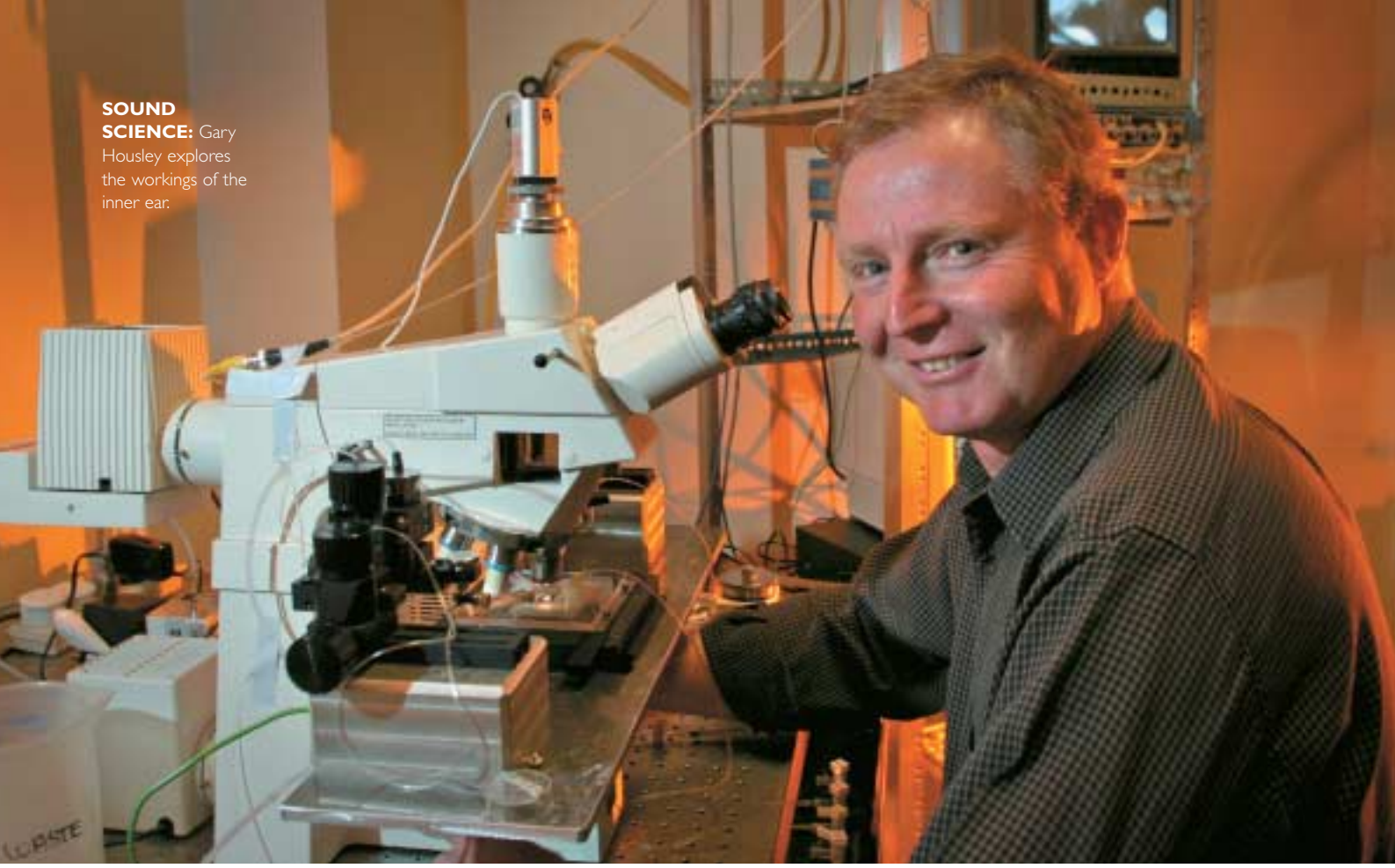
The first Gus Fisher Post-Doctoral Fellowship has been awarded to Dr Patricia Lawlor, who is based in the Faculty of Medical and Health Sciences. The fellowship – worth up to $100,000 annually – was established by the Gus Fisher Charitable Trust, and supports advanced research aimed at finding a cure for Parkinson's disease. Dr Lawlor has previously won a University of Auckland best doctoral thesis award for research into the disease, a progressive disorder of the nervous system. She will test gene therapy treatments that could prevent the build-up or promote the breakdown of toxic proteins that are a key feature of Parkinson's. Gus Fisher also gave funds for the refurbishment of 74 Shortland Street, which houses the Gus Fisher Gallery, performance, rehearsal and teaching facilities. The Post-doctoral Fellowship was established to commemorate his mother, Fanny, who died from Parkinson's disease.

HAVE FUNDS, WILL TRAVEL

The departing Dean of the Faculty of Medical and Health Sciences made sure of maintaining his links with The University of Auckland by establishing a fellowship to fund collaborations with research-led universities in Australia.

Professor Peter Smith left in August to take up a position as Dean of the Faculty of Medicine at the University of New South Wales. Before doing so, he donated $250,000 to set up a travelling fellowship which will assist University of Auckland staff to access the resources and skills at Australia's top research-led institutions. Professor Smith's gift inspired a matching donation from the Freemasons of New Zealand who have a long legacy of support for The University of Auckland.

The fellowship's first recipient is Dr Marie Ward of the Department of Physiology, who will travel to the University of Sydney to collaborate with Professor David Allen of the Institute of Biomedical Research on further research into the effects on the heart of Duchenne's muscular dystrophy.



SOUND SCIENCE: Gary Housley explores the workings of the inner ear.

BAD NEWS ABOUT NOISE

Life is louder than it used to be. That makes a challenge for a group of University of Auckland researchers. **CAMILLE GUY** explains.

Our world is probably noisier than humans have ever had to endure. Quite apart from the self-inflicted noise preferred by teenagers, whose permanent attachment to personal audio players is putting them at high risk of premature hearing loss, we suffer from traffic and aircraft sound previous generations never knew.

Associate Professor Gary Housley and his collaborators – in the Auckland auditory neuroscience group in the Department of Physiology at the School of Medical Sciences and in the Audiology section in the School of Population Health – are helping to understand why noise makes us lose our hearing and how we may be able to protect this most precious of our senses. Certainly, this research cannot happen quickly enough if all the teens earplugged into iPods and similar portable digital music devices are not to go deaf.

A whole generation of music-mad kids is at risk, according to some researchers. Hours of personal music listening at high volumes, especially when compounded by loud evenings at concerts or nightclubs, can cause some of the delicate hair cells in the inner ear to be literally shaken to death. That disturbing conclusion can be drawn from some of the work that The University of Auckland researchers are undertaking in collaboration with international colleagues.

Housley, a Hamilton-bred scientist, did undergraduate and doctoral work in zoology, biology and neuroscience at The University of Auckland. Post-doctoral fellowships in pharmacology and biophysics followed, in Britain and the United States, before he returned on a repatriation fellowship to set up his own research group. His work has been handsomely supported by prestigious grants from the Marsden Fund and the Health Research Council.

He is currently the recipient of one of the Royal Society's James Cook Fellowships which are awarded only to well-established academics with promising research projects to work on. And what Housley – along with colleagues Professor Peter Thorne and Dr Srdjan Vlajkovic and their teams – have been working on is very promising indeed. They are studying the process that occurs in the cochlea, the coiled organ in the inner ear that converts vibrations into the nerve impulses that transmit information to the brain. Their aim: to find out how that process fails under noise stress and ageing, with consequent damage to those inner sensory cells.

Most developed countries now make it mandatory for workers to wear equipment that gives protection against levels of sound that might not appear terribly loud. That is because cumulative exposure to sound at the level of 85 decibels (see box) can damage your hearing.

To Housley these mounting environmental stressors are bad news for what he describes as "the most exquisite and fragile of the sensory structures."

"In NZ, the Accident Compensation Commission pays out more for hearing-loss rehabilitation in industry than for any other injury except sprains," he says.

"About 10 per cent of the population has significant hearing loss."

Our hearing arises from the active focusing of sound energy on the hair cells which translate it into neural impulses. A mere 18,000 to 20,000 cells do that work and only 6000 of them – a number that could sit comfortably on a pin head – are wired to the auditory nerve fibres. The problem is that every one of those 6000, once gone, is gone for ever.

"Basically if you lose even one of those hair cells, it won't regenerate," says Housley.

While 6000 hair cells are occupied with encoding sound messages to the brain, the remaining 12,000 cells are occupied with converting the electrical energy from sound into movement. As the sound wave changes the electrical potential in the cell, proteins in the wall of that cell change their shape. It is those outer hair cells that are most prone to stress; they can be killed off by loud sounds.

"It is almost," says Housley, "as though they are shaken to bits."

But what the Auckland group would like to know is how the cochlea – which Housley calls "an exquisitely developed structure" – manages to perform so well for decades. The group members have been looking at the processes of signalling within the cochlea, examining the way the cells communicate with each other and exploring whether there is a mechanism for responding to stress.

At this point Housley's research becomes highly technical but, in simple terms, his team is using a unique model for studying hearing loss. Mice have been altered by having a gene for a specific receptor knocked out. This receptor detects the presence of a chemical called ATP which is released by cochlear tissue stressed by loud sounds or other stressors. The Auckland researchers have established that ATP is the stress signal that the cochlea uses to reduce hearing sensitivity. They believe that this process protects us from hearing loss.

For older people, exposure to loud noise can be extra hazardous, since poorer health can mean greater vulnerability to noise stressors. But what of those young people, chronically exposed to hazardous sound levels?

"I think the future is probably going to be bleak with regard to hearing function, longer term," says Housley. He himself enjoys loud music but he says that young MP3 users do not realise that by subjecting themselves to the volume extremes now possible, hour after private hour, they may be seriously compromising their ability to enjoy music in decades to come.

Nevertheless he is optimistic. He says there has been a quantum leap in understanding cochlear function in the past five years. There are opportunities that would have seemed like fantasy only a short time ago. Only this year, researchers in the US used gene therapy in an animal model to restore hearing function after catastrophic hearing loss.

HOW LOUD IS TOO LOUD?

Scientists agree that cumulative exposure to sound at the level of 85 decibels (dB) can damage hearing. Some researchers say damage occurs at 75dB. Ordinary speech registers at between 55 and 65dB. At many concerts and clubs, patrons are exposed to up to 120 dB. MP3 players and other personal stereos music can reach 100dB, especially if the user is turning up the volume to drown out background noise.

Alumni of The University of Auckland make waves at home and abroad.

MARK CAIRNS [BE 1992] When appointed chief executive of the Port of Tauranga in August, he described it as "the best job in Tauranga and the best job in the port industry". The port, New Zealand's fastest-growing, also operates an inland container port, Metroport, near Auckland and has a half-share in a deep-water port at Marsden Point.

Formerly chief executive of Toll Owens Ltd, a subsidiary of the Port of Tauranga, which provides marshalling and stevedoring services at 11 ports throughout the country, Cairns has held various management positions with Works Civil Construction, and was regional manager for Transit New Zealand in Hawke's Bay. In 1999 he moved to Tauranga as general manager for Fulton Hogan where the Port of Tauranga head-hunted him three years later.

The company had "differentiated itself by wanting to be a port of choice," he says. "It has focused on excellent customer service and world-class productivity, and I'm excited by the challenge of carrying this forward."

TIM CAMERON [LLB (HONS), BCOM 1994, MCOMLAW (HONS) 1997]
SHERON KORPUS [LLB (HONS), BCOM 1991] These two Auckland graduates have been made partners in prestigious New York law firms, Cameron at Cravath, Swaine & Moore and Korpus at White & Case.

Cameron, left, is a generalist commercial litigator with experience in a wide range of practice areas, including securities and antitrust litigation, tax litigation, mergers and acquisitions, and representing corporations involved in regulatory investigations. He regularly advises international clients involved in litigation or regulatory matters in the US, and consequently spends a significant amount of time working abroad, particularly in France. In 2001, Cameron appeared as junior counsel before the United States Supreme Court. Cravath, Swaine & Moore, one of New York's leading law firms, employs 400 attorneys in offices in New York and London. He is a partner in Cravath's New York office, located in the Worldwide Plaza building at 825 Eighth Avenue in midtown Manhattan, near Times Square and the Theater District. Cameron says working in New York is both demanding and highly rewarding. The nature of the work is extremely challenging and often high-pressure, particularly in "bet-the-company" type cases, where the survival of significant US or international corporations may be at stake. The need to deal with a civil jury in the US — which requires lawyers to communicate complicated economic and financial concepts to lay people — also adds a unique dimension to practising law in New York. In Auckland, Cameron worked for Russell, McVeagh, for three and a half years before studying at the University of Chicago, where he gained an LLM in 1998.

Sheron Korpus, right, is also a commercial litigator with experience in contractual disputes, bankruptcy litigation, arbitration, intellectual property litigation, securities actions and employment disputes.

White & Case is an international law firm with around 1700 lawyers in 38 offices around the world. Korpus is a partner in the central New York office, located at 1155 Avenue of the Americas in midtown Manhattan (right next to Times Square). He works on a variety of disputes in US courts and on international arbitrations in different countries. The work is challenging and stimulating at the same time – involving long hours, demanding clients and cutting-edge cases. He enjoys the variety of the work which takes him from jury trials on medical patents to insider trading cases to arbitration before the former directors of the FBI and CIA. Before joining White & Case, Korpus was an associate with Kensington Swan in New Zealand, practising in commercial and tax litigation.

DAVID FERGUSON [BE 1992, MPHIL 1995]
New Zealand's Trade Commissioner to Japan, Ferguson has spent seven of the last 15 years working in both the public and private sectors. Previously Trade Commissioner to Korea for three years, he says that many New Zealanders perceive Japan as an economy in perpetual recession, and have underestimated its real potential as a market.

"They should think again. Japan is the second-largest economy after the US – larger than those of China and the UK combined, with clear indications the economy is again expanding.

"Japan is a nation of wealthy, sophisticated consumers and our third-largest export market. While it is a demanding market, it rewards successful companies both in profitability and customer loyalty. It is our single biggest market for aluminium, vegetables, cheese and kiwifruit, and the second-largest market for forest products and fisheries products."

Japan is also one of NZ's largest sources of foreign students and Japanese tourists are among the highest spenders.

"There is fundamental change going on at the consumer, retail and distribution levels in Japan," says Ferguson. "It is more important than ever that exporters understand consumer trends which drive shifts in demand."

KELLY ANA MOREY [BA 1999, MA 2002]
A prolific and successful novelist since completing her masters thesis in Art History, Morey included the creative writing paper taught by Professors Witi Ihimaera and Albert Wendt in her undergraduate degree. Her first novel, *Bloom*, was published by Penguin in 2003 and in that same year Kelly also received the Todd New Writers' Bursary. The following year the novel received the NZ Society of Authors Hubert Church Best First Book Award for Fiction at the Montana Book Awards. The judging panel considered it "a wonderfully accomplished first novel that reads like the work of a veteran writer rather than a first-book author". *Grace is Gone*, Morey's second novel, also published by Penguin, was one of five fiction finalists in the 2005 Kiriyama Prize which celebrates books from and about the Pacific Rim. The finalists were chosen from 165 eligible entries including Tim Winton and Margaret Drabble, fulfilling the prediction by one reviewer in 2003 that Morey would "become a powerful new voice in the current crop of young New Zealand writers". Morey, who lives in South Kaipara, also writes art and literary criticism, does some magazine journalism, and works part-time as an oral historian for the Navy. Her writer's memoir, *How to Write a Book*, will be published shortly by Awa.

NZ LISTENER PHOTO BY: JANE USSHER

CAROLE PRENTICE [BFA 2002] Before enrolling at Elam as a mature student, Prentice had already painted and exhibited widely. The fourth-generation New Zealander of mixed European descent lives and works at

Whangarei Heads where she focuses on identity and landscape in her work. As a child she often clambered up the steep sides of Maungarei (Mt Wellington) but as an artist she climbs mountains only to look more critically at landscapes she thinks she knows. From such a vantage point the artist considers how tenuous Pakeha occupation of the land is and imagines ways in which traces of much earlier indigenous occupation echo and endure.

A major exhibition of her work, "Finding Longitude", was recently staged at the Whangarei Arts Museum and in Northcote, Auckland. The paintings are of dreamlike islands floating suspended in still, lusciously coloured seas. "These shapes in an archipelago of discovery explore the dimensions of place where the past persists and speaks to us in the present," she says. Prentice employs washes of acrylic paint over canvas and board, creating a translucent, vibrantly coloured effect.

ROMAN REYHANI [BA LLB 2005] Reyhani is just back from working for the United Nations in Arusha, Tanzania, at the International Criminal Tribunal for Rwanda. The tribunal was established by the UN Security Council to prosecute the leading instigators of the 1994 genocide of more than 100,000 Tutsis. He undertook a six-month internship in the Office of the Prosecutor of the UN Tribunal. Many of Reyhani's duties involved building the case against four co-accused, each a high-ranking government official in the main political party (MRND) at the time of the genocide. They are accused on multiple counts, primarily genocide and crimes against humanity. He was also sent with the trial team to Rwanda on an official UN mission to develop the case further. This involved working with attorneys and investigators to interview witnesses and examine their reliability. In Rwanda, he attended the local community-based Gacaca courts where hundreds of thousands of accused are being tried for their involvement in the Rwandan genocide. He was also able to visit a number of genocide sites where horrific massacres took place and many thousands were slaughtered. Reyhani moved to the Netherlands in August to begin his masters of law programme (LLM) in public international law at Leiden University.

CECILIA TARRANT [BA 1984, LLB HONS 1985] Tarrant, who has a high-level position with the large global financial services firm, Morgan Stanley, at Canary Wharf in London, had her initial legal experience at Simpson Grierson in Auckland, specialising in construction arbitration. Then she headed to the University of California, Berkeley to take a masters in law with Professor Justin Sweet, the foremost expert in US construction law.

Next came a stint in real estate finance for the San Francisco office of Boston law firm Csaplar & Bok.

"I knew practically nothing about finance or real estate when I began but soon developed a great liking for the transactional nature of the work and have been a 'deal junkie' ever since," she says.

In 1992 she was employed at CS First Boston (now Credit Suisse) in New York in banking roles connected to real estate and finance. Five years later she moved to Morgan Stanley where she is now an executive director. In her eight years there, she has had a variety of roles all relating to securitisation.

Tarrant, who had spent 1999 in London, returned there in September 2004 and is now responsible for commercial mortgage-backed securities agency and execution within the Securitised Products Group in Europe. She and her team source, structure and execute transactions to finance, through securitisation, commercial property such as office buildings, shopping centres and apartment buildings, and loans secured by commercial property. Morgan Stanley is a leader in the CMBS market not only in Europe but also in the US and Japan.

Tarrant was a founding member and chair of the board of the Friends of The University of Auckland in the US and is now on the board of the equivalent UK body.

CARMEL WILLIAMS [BA 1983, MA 2002] An extensive background in business, communications and health publishing, combined with a strong interest in economic and social development, led Williams to undertake her masters in Development Studies. This multi-disciplinary degree allowed her to pursue interests in public health and international economic development, and was enhanced by the practical experience of managing an economic consultancy with contracts throughout the Pacific. Williams' thesis on health and development was researched in Samoa. The postgraduate qualification, plus her business skills and Pacific experience, were immediately put to use when a position became available to develop Pacific programmes for the eye health NGO The Fred Hollows Foundation (NZ).

As executive director of the Foundation, she has overall responsibility for developing health strategies to help prevent blindness in "Pacific" countries, which include Timor-Leste, and Papua New Guinea as well as Melanesia and Polynesia. The challenges, she says, are fascinating. "There are all the usual difficulties of working in the public-health sector, where need always far outstrips supply, added to which is the overwhelming problem of working within failing health systems with a chronic shortage of a trained health workforce."

JOAN WITHERS [MBA 1991] The new chief executive of Fairfax New Zealand, the country's largest media company, Withers is in charge of a company that publishes nine daily newspapers (including the *Dominion Post* and the *Press* in Christchurch), two national Sunday papers, and a stable of mainly lifestyle magazines. It also owns more than 60 community newspapers, and has 41 per cent of the newspaper and magazine advertising market in NZ. Withers left school with School Certificate at 15 and the Auckland MBA, taken while working full-time, was her first experience of tertiary education. The two years of "incredibly hard work" demanded more sacrifice of her family than herself, she says. She has extensive media experience in both radio and newspapers. Her last executive role was as chief executive of the Radio Network of NZ. Withers has returned to management after spending eight years as a professional director. As well as being on the Australian Fairfax board she has served on the boards of large companies and remains on the board of Auckland International Airport Ltd. Having spent time on the John Fairfax Holdings Ltd board she has good insights into the Australasian media market and is looking forward to capitalising on opportunities as the market becomes increasingly dynamic.

These pages feature graduates who have chalked up significant achievements in academia, their careers or in the community. Suggestions for inclusion are most welcome. Please email them to wrs.williams@auckland.ac.nz

INTERNATIONAL ALUMNI NETWORK

The Alumni Relations Office is forming an international network of volunteer alumni coordinators to enable alumni to network and meet other alumni socially.

If you live in or near any of the areas below and would like to be involved, we encourage you to make contact with your local volunteer co-ordinator.

AUSTRALIA:
Brisbane
Allanah Johnston: a.johnston@business.uq.edu.au
Melbourne: Jeff Kerr-Bell:jeff@kerr-bell.com
PerthMargaret: Sims:m.sims@ecu.edu.au
Sydney: George Barker:BarkerG@law.anu.edu.au

CANADA:
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Hong Kong: Raymond Tam: tmkraymond@yahoo.com.hk
Shanghai: Frank Qiu: frank.qiu@chh.co.nz

DENMARK:
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Rosena Sammi: rosena_sammi@hotmail.com
San Francisco; Sue Service:sue@serviceconsulting.com

COMING EVENTS

FOR YOUR DIARY

Events for alumni and friends for the period ahead are:

November 10	Auckland, Golden Graduates event
March 3	Auckland, Annual Distinguished Alumni Awards Annual Dinner
March 3-4	Auckland, Alumni Summer Celebration
March 20	London
March 22	New York
March 24	San Francisco

Additional events may be held. For more information on these and an up-to-date alumni event listing, please visit **www.alumni.auckland.ac.nz/calendar**

AWARD WINNERS NAMED

Our Distinguished Alumni Award winners for 2006 are:

Dr Judith Aitken (Arts), former CEO of the Education Review Office and former CEO of the Ministry of Women's Affairs.

The Hon Justice David Baragwanath (Law), High Court judge.

Philippa Boyens (Arts), Oscar-winning co-screenwriter of *The Lord of the Rings*.

Dr Andrew Thomson (Medical and Health Sciences), Medical Officer, United Nations Medical Service and co-author, *Emergency Sex and Other Desperate Measures*.

Mark Weldon (Business), CEO, New Zealand Stock Exchange.

The Young Alumnus of the Year is **Dr David Skilling** (Business), Executive Director of the New Zealand Institute.

These alumni have all made a significant contribution in their fields. They will be honoured at the Distinguished Alumni Awards dinner on Friday March 3, 2006. Please contact the Alumni Relations Office for bookings.

HOW TO KEEP IN TOUCH

To ensure that you continue to receive *Ingenio*, and to subscribe to @auckland, the University's email newsletter for alumni and friends, please be sure to update your details at:

www.alumni.auckland.ac.nz/update

Contact us: Alumni Relations Office, The University of Auckland, 19A Princes Street, Auckland City, New Zealand
Post: Private Bag 92019, Auckland, New Zealand
Phone: +64 9 373 7599 ext 82246
Email: alumni@auckland.ac.nz
Website: www.alumni.auckland.ac.nz

OFFICE LINK FOR ALUMNI, FRIENDS

As a graduate of the University, you become one of our alumni – a community of scholars that now numbers over 100,000. The Alumni Relations Office provides you with a link back to the University even when you're no longer studying here. Through the office, the University now provides a range of services and benefits for all our alumni. To find out about the benefits and services, plus upcoming events for alumni, visit the Alumni & Friends website at: **www.alumni.auckland.ac.nz**

REVISIT AND RECONNECT

FIRST WEEKEND ALUMNI CELEBRATION IN AUCKLAND

Our Alumni Summer Celebration in March, 2006, is timed to coincide with the Distinguished Alumni Awards Annual Dinner on Friday March 3. It is a chance for all alumni and their families and friends to revisit the campus, reconnect with their intellectual home and revitalise their relationship with us.

Distinguished Alumni Award winners will be speaking and campus tours will be offered, along with gourmet food, jazz and a tasting of alumni wines.

New Zealand readers have a full programme of events and registration form attached with this issue. Overseas readers should visit **www.alumni.co.nz/celebration** for further details. We look forward to seeing you there.

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