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THE MAGAZINE FOR ALUMNI AND FRIENDS

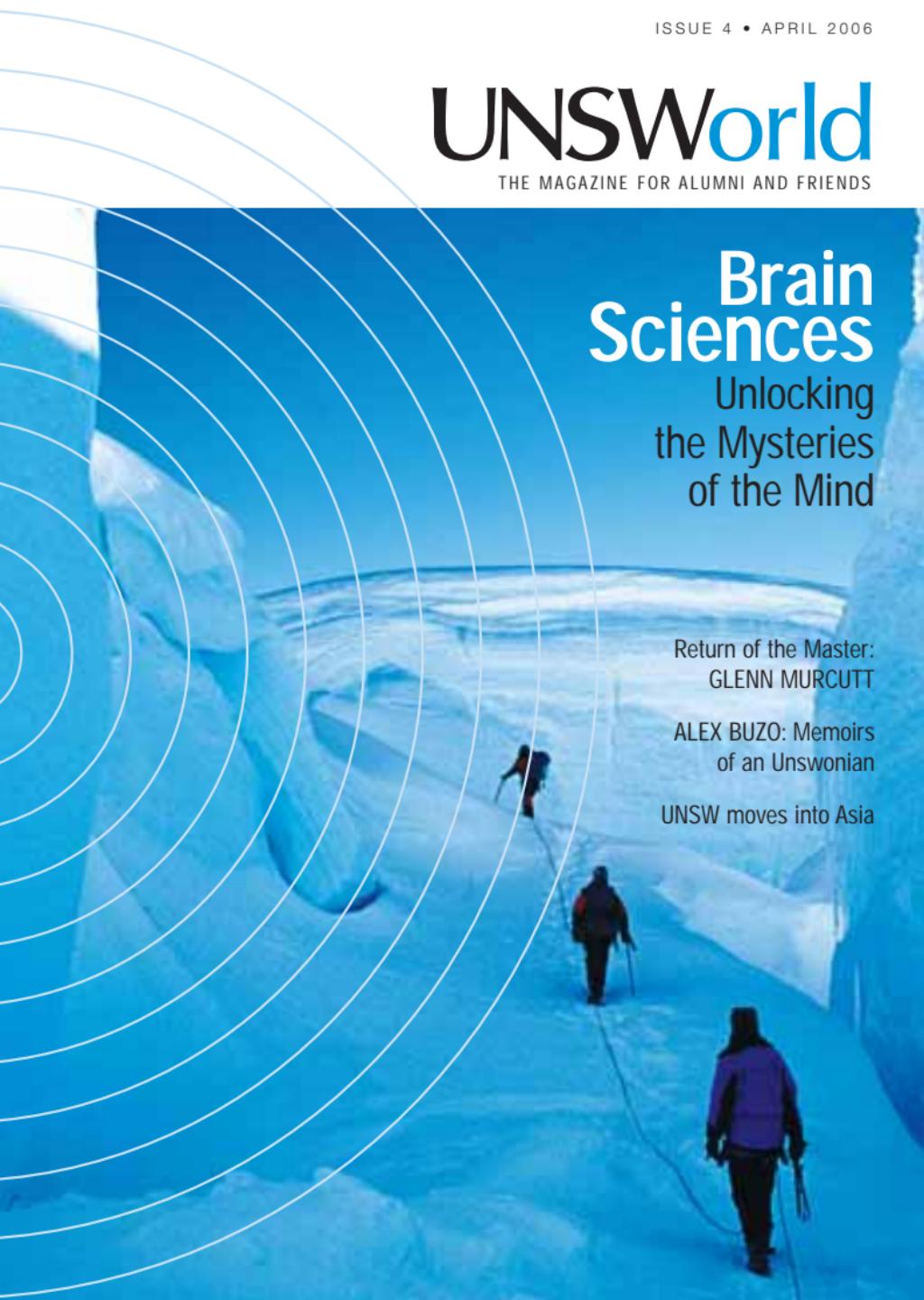
## Brain Sciences

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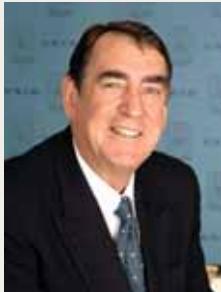
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# Welcome from the Vice-Chancellor



Welcome to the fourth issue of *UNSWWorld*. I would like to thank those of you who have provided such positive feedback for our new format. Our aim is to help alumni and donors maintain their connection with UNSW by keeping up to date with issues and achievements that are shaping campus life – whether in research, education or student scholarship.

In this issue we profile the work of our top researchers in the field of the "Brain Sciences" – neuroscience, psychiatry, psychology and neurology. These are major strengths of UNSW and our affiliated institutes. Our leadership in this area is evidenced by the international recognition for our breakthrough research into disorders such as schizophrenia, depression, bipolar disorder and Alzheimer's disease. The fact that UNSW and the Prince of Wales Medical Research Institute (POWMRI) have jointly secured the right to establish Australia's first professional Chair of Schizophrenia Research is an indication of our standing in this area.

Brain Sciences UNSW, launched in March last year, aims to capitalise on this extraordinary depth of research talent by providing opportunities for intellectual engagement and collaboration. It involves researchers from the Faculties of Medicine and Science, POWMRI, the Black Dog Institute and the Garvan Institute of Medical Research. As Vice-Chancellor, I was very pleased to support the creation of this network. It offers an alternative to a formal research centre as a model for facilitating collaborative research.

UNSW is opening a second front in terms of research excellence. UNSW Asia in Singapore will be the first comprehensive research and teaching campus to be established overseas by an Australian university. We are now working hard to set up the foundation research programs for UNSW Asia, and to ensure that it is a truly research intensive institution. I am particularly pleased by the support UNSW has received from the Government of Singapore for the campus' proposed research activities. This high level engagement has been exemplified by the appointment of the President of UNSW Asia to Singapore's National Research Foundation (NRF), along with the Presidents of other Singapore universities.

I will retire as Vice-Chancellor in June. I would like to take this opportunity to wish the new Vice-Chancellor, Fred Hilmer, every success in this exciting and challenging role. UNSW is recognised throughout the world for the high quality of its graduates and I know that Mr Hilmer – and Professor Whittred at UNSW Asia – will continue to ensure that our students have access to the highest quality educational experience and that as graduates, they will continue to make an extraordinary impact on all aspects of professional life in Australia and throughout the world.

I would also like to thank the individuals and companies who so generously help UNSW through donations in support of research, scholarships and prizes. With decreasing financial contributions from government and increased international competition for student places, the support of our donors is critical to our ability to create and sustain new research opportunities. The generosity of Gary Johnson, for example, and his company Jaycar has been critical to the establishment of a new Chair in Water Management. Another alumnus, Greg Rose, was instrumental in attracting funds from US company Qualcomm Inc. which greatly assisted in the establishment of the John Lions Chair in Computer Science. Many other alumni are playing key roles in our current fundraising campaigns for the Faculties of Commerce and Law.

Scholarships and prizes are another important way of providing opportunities, recognition and assistance for students to undertake either postgraduate or undergraduate study – and I am grateful to the many people who choose to "give back" to the University in this way.

Professor Mark Wainwright AM  
Vice-Chancellor

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# HIGHLIGHTS 2006

## To the ends of the earth

Experienced adventurer Associate Professor Rosemary Rayfuse of UNSW's Faculty of Law has negotiated some of the most dangerous and inhospitable terrain on earth. Aiming to become the first Australian woman to ski from the North Pole to Canada, she has put down her textbooks to take on "an amazing physical and intellectual challenge" in the process raising awareness of the need for regulatory responses to global climate change in the lead up to International Polar Year in 2007. Starting at Borneo, a temporary Russian ice station, located on the polar ice at 89 degrees north,

Professor Rayfuse and six others set out in April to attempt to ski right over the top of the world – 100 km to the North Pole and a further 770 km to Ward Hunt Island, Canada's most northern point. Her latest foray is just part of her interest in the future of the earth's polar areas. In addition to being the director of the University's International Law Programs, Professor Rayfuse specialises in the Law of the Sea. Her latest expedition raised funds for the Faculty of Law Endowment Fund that supports student programs. A practised "survival skier", she is driven by her passion

for the sustainability of the Arctic region. "It's not exactly glamorous hauling an 85 kg sled over tenuously frozen sea ice... you've got to constantly watch for ice shifting or disappearing," she said. Climate change issues, increasing human impact, and technological developments have direct relevance to Antarctica and Australia's interests in the region. Antarctica will also experience the changes that are occurring in the Arctic and it's incumbent on lawyers and political scientists to consider the implications and prepare regulatory responses now, Professor Rayfuse believes. ■



Rayfuse's party crossing Alex Fiord.

## The gift of scholarship

A long-term supporter of the Faculty of Arts and Social Sciences, Miss Marie Robertson, has made two endowments to reward outstanding students. \$25,000 has been donated to the School of Music and Music Education to establish a new 'Music Supporters Student Performance Scholarship'. A further \$25,000 will go to the Norman Hardy Scholarship awarded annually to a student who excels in academic performance and is entering first year in one of the faculty's degree programs.

No stranger to the faculty, Miss Robertson started her undergraduate studies in English Literature at UNSW as a mature age student and continued as a postgraduate being awarded her masters degree in the 1980s. Now retired, she remains a dedicated supporter of the University who prefers to remain anonymous. However, revisiting the University for the protocol signing ceremony of her recent donations elicited fond memories. ■



## Bright Sparks

While most 10-year-olds headed for the beach in the final week of their school holidays, Peter Targett was hard at work studying World War One as part of UNSW's summer holiday program for bright primary and secondary school students.

The University's Gifted Education Research Resource and Information Centre (GERRIC) runs programs over two weeks for children ranging from pre-kindergarten age to Year 10. Students come from around Australia, including regional and remote areas. Among this year's participants were Indigenous students from Werris Creek and Uralla. On-campus programs, Poppyseeds, Junior Scientia, Small Poppies and Scientia Challenge, see more than 900 children participate in workshops on topics such as genetics, Shakespeare, biology, performance poetry, polar expeditions, maths and forensics. ■

## The Apprentice

Now prominent alumnus Fendi Gunawan Liem, 29, took out the title of Apprentice Indonesia after competing with 15 others in an adaptation of the popular US reality TV show. After weeks of intense rivalry, a victorious Liem – a UNSW graduate with a Bachelor in Computer Science – left the show with the top prize, a car and a promising executive position in the Peter F. Gonda media company. His win became an unexpected profile raiser for UNSW in Asia as the educational background of Liem, who originates from the city of Solo in central Java, featured on the program's website and was covered in subsequent media interviews. Among family and friends who joined him for the final nail-biting episode were several former UNSW colleagues from his student days. "[The event] suddenly became a reunion for us," he said. ■

## UNSW Sports History

*The Pavilion on the Village Green, A History of the University of New South Wales Sports Association* covers the UNSW Sports Association from 1953 to 2005. The launch for the book at the Sam Cracknell Pavilion in December 2005 was attended by authors Associate Professor Richard Cashman, Anthony Hughes (BA '86, MA '88, PhD '04) and Zolton Zavos (BA '94, MA '99) and Professor John Niland who wrote the foreword. The book examines how the Sports Association has grown over the past five decades, and celebrates the involvement of international champions, unique characters, and selfless hardworking administrators and coaches. Included are past Blues winners, Sports Recognition Awardees, Ben Lexcen Scholars, Honorary Life Members and office bearers. *The Pavilion on the Village Green, A History of the University of New South Wales Sports Association* can be ordered through the Sports Association website – [www.sport.unsw.edu.au](http://www.sport.unsw.edu.au). ■



## Sydney Swans at study and play

AFL Premiers, the Sydney Swans have a number of players who are studying at UNSW. Star Irish import Tadhg Kennelly, Paul Bevan, Ryan O'Keefe and former Essendon player Ted Richards are all students at UNSW in 2006.

Pictured is Ted Richards in training at the UNSW Lifestyle Centre, receiving instruction from former Olympian UNSW Judo Coach Warren Rosser who has been contracted by the Swans to provide specialised coaching for Swans' ruckmen and defenders. ■

## AGSM and UNSW on track

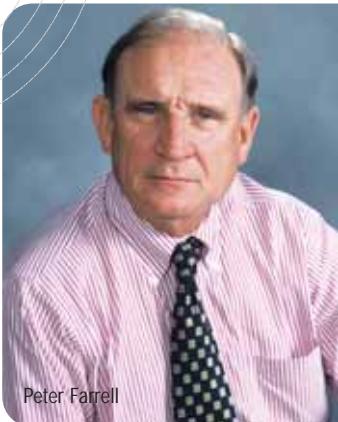
The Australian Graduate School of Management (AGSM) has returned to sole ownership by UNSW, ending a six-year joint venture with the University of Sydney. While the agreement has served both universities and AGSM well, it is now timely for AGSM to pursue new opportunities with a less formal arrangement, UNSW Vice-Chancellor Professor Mark Wainwright said. The return to 100 percent ownership will allow UNSW and AGSM to strengthen their links, in particular to build on the close relationship between AGSM and UNSW's Faculty of Commerce and Economics, which has an outstanding reputation in the Asia-Pacific region for undergraduate business education and specialist masters degrees. The University of Sydney will continue to collaborate with AGSM on joint initiatives. ■

## Designing success

Violinist and industrial designer Tricia Ho is drawing a good audience for her ergonomically designed pain-free violin. Ms Ho, who has just completed a Bachelor of Industrial Design in the Faculty of the Built Environment, designed her idea of the "perfect electric violin" using high-tech materials for her final year project. Dubbed 'EV' (for ergonomic violin), the prototype has won a German design award and is short-listed for this year's Australian Design Awards, to be announced in May. Made from a combination of carbon fibre and a 'shape memory polymer', the EV can be moulded to suit a player's personality and physique. ■



BRITTA CAMPION



Peter Farrell

### Wake-up time

Dr Peter Farrell, the co-founder and chairman of ResMed, now Australia's largest exporter of medical products, has capped off his long association with UNSW by supporting an initiative to establish a pioneering Centre for Innovation, Commercialisation and Entrepreneurship. With the promise of delivering a new generation of entrepreneurs, the new centre established with the Australian Graduate School of Management aims to accelerate the development of technology-based global companies by bringing together students from multiple disciplines across the campus. It will promote the development of market-driven innovation from research through the provision of award and short courses, the management of new ventures, intellectual property, and venture capital/private equity. Dr Farrell is providing seed funding of \$500,000 over five years with the hope that the centre will deliver the "cultural wake-up call" that Australia needs "to build a strong, viable entrepreneurial culture where innovation thrives". A chemical engineer, Dr Farrell founded UNSW's Graduate School of Biomedical Engineering before embarking on a 20-year entrepreneurial career funding research and development while commercialising products for obstructive sleep apnea. ■

### FBEOutThere!

The Faculty of the Built Environment (FBE) has formed a new community engagement program to bring together the teaching and research interests of academics with real-world projects. Current activities already underway for the FBEOutThere! Program include the Waterloo Redfern Community Development Program, the Sustainable Living Project and winter school Indigenous community projects in collaboration with Nura Gili. Recently FBE has formed an alliance with Architects Without Frontiers that will involve projects in socially disadvantaged communities and those affected by war, social conflict and natural disasters here and overseas. The projects have the potential to attract industry sponsorships and research grants, says FBE's Head of School, Linda Corkery. The community and outreach activities are anticipated to have strong alumni connections and to benefit international marketing and recruiting activities. ■

### Water World

The world's most beautiful harbour now has its own dedicated research centre: the new Sydney Harbour Institute of Marine Science (SHIMS). Researchers from the School of Biological, Earth and Environmental Sciences, with strong support from Vice-Chancellor Mark Wainwright, Deputy Vice-Chancellor (Resources) Alec Cameron and Deputy Vice-Chancellor (Research) Les Field, took a leading role in the creation of this unique initiative which has the potential to become one of the world's great marine research institutions. UNSW is partnering Macquarie and UTS in the venture, the first such centre to focus on urban marine science. Located in heritage buildings on former Navy land at Chowder Bay, it provides an ideal base for research, teaching and outreach activities. Speakers at SHIMS' official opening, including Senator Ian Campbell (Minister for the Environment and Heritage), praised SHIMS as an excellent example of socially relevant, cross-disciplinary and multi-institution research. It has direct access to clean, deep water and the extraordinary diversity of life in the harbour, which is home to some 600 fish species, penguins, dolphins and visiting whales. ■



Peter Smith

### The Dean of Persuasion

The power of the Dean is purely the power of persuasion, according to the new Dean of Medicine, Professor Peter Smith who is focused on balancing the University's important research role with the need to fund that research. Professor Smith draws on a 30-year career in clinical practice, medical research and leadership in his new position. From the outset, he intends to spend at least a third of his time on external relations putting in place plans to supplement government research grants by engaging closely with industry and alumni, as well as seeking donations from other sources. With research interests in molecular genetics, childhood cancer, and the measurement of quality outcomes in clinical practice and education, the former head of the University of

Auckland's Faculty of Medicine and Health Sciences said: "I reached the point in life where I realised I could make more of a difference by going into administration, rather than researching myself. I enjoy providing leadership for others. I see my success in the success of others." Professor Smith's success in funding research is well proven. On his final day as Dean in New Zealand, Prime Minister Helen Clark visited the University of Auckland to announce that the government would match \$9 million in industry funding to establish an Institute of Health Innovation. This is an achievement he hopes to better. "For me, the attraction of coming to UNSW is that it is one of Australia's leading research-led universities, one of the Group of Eight," he said. ■

# MEMOIRS of an Unswonian

BY ALEX BUZO



**W**hen I started at UNSW during the floods of 1963 we had to walk the plank to get to class. The Village Green was, as the poet says, "vividly verdant", and there were large puddles all over the lower campus. The administration took swift action and provided planks which bent in the middle and ensured that we arrived in class with wet feet. This was my introduction to Sydney's little Holland, Kensington, with its flat, almost concave streets, two hills and two convents, and what had been previously known as "Kenso Tech".

In contrast to Sydney University's "sandstone Gothic", much of the campus was spread out over a former racecourse and known as "Sandhill Nissen", among other epithets.

At orientation week we were welcomed in the science theatre and then a Students' Union representative asked us to go down to the Village Green for the funeral of a student who had died. When we had followed the coffin down to the Green we were told that the student had "died of apathy" and not to let this happen to us. It had been a successful hoax and they had, in the argot of the day, "got us a beauty".

It soon became apparent that this University was no ivory tower or "Little Europe" like some of its rivals. It introduced courses in Australian Studies and in History we were urged to do some Australian material because that was where the primary sources were. In English we did Phonetics and it taught us to listen to what people were saying before writing it down in sound language.

One of my classmates, Greg Lenthen, said "the University of New South Wales" is such a

mouthful, why not call a graduate from here an "Unswonian" – after all, people who went to Oxford are known as "Oxonians". [My play] *Macquarie* led to a wonderful Unswonian Moment when we presented the play at Government House in 1997. The Governor of the time was former Chancellor Gordon Samuels and he was the first holder of this office not to live at Government House.

*Macquarie* was the first play to be produced at this historic site and after a performance I introduced the Governor to the actor playing Macquarie, John Gregg. "You realise I'm the entrepreneur of this production," said Governor Samuels to Governor Macquarie, "If I hadn't agreed to move out you wouldn't have been able to move in."

This is a science university with the motto "Scientia", which of course means learning in general, and it has kick-started many distinguished careers with a science or economics base. In 1963, courses here had practical names like Wool Technology and Traffic Engineering and all arts students had to do two units of science. I studied Astronomy, taught by Jack Thornton, who had us out observing the heavens and tracking the planets. At the end of the year we gave him a standing ovation as a gesture of thanks for galvanising us into such Applied Science action. I will never forget lying full length in the backyard at midnight measuring the shadow of the moon and being asked by my grandmother what the hell I was doing.

With all the ego of the young, I had set out single-handedly to transform the Australian theatre into a truthful idiomatic reflection of the society around it. I failed, of course, but I take some comfort from the words of the

poet: "Say not that the struggle nought availeth." My first play, *Norm and Ahmed*, was premiered on campus at the Old Tote Theatre, and deals with the adventures of an Asian student at a university just like this one. When it was performed in Kuala Lumpur in 1989 I was flown over to advise on the idiom, and received a phone call from my old student friend Willie Lau, BA, who showed his flexibility by becoming an executive with a shipping company. We had a convivial dinner and then Willie came to see the show. "That was fantastic," he said afterwards, "and uncanny. A lot of those things happened to me."

"Well, you know, Willie, that's realism," I replied. It had been another Unswonian Moment.

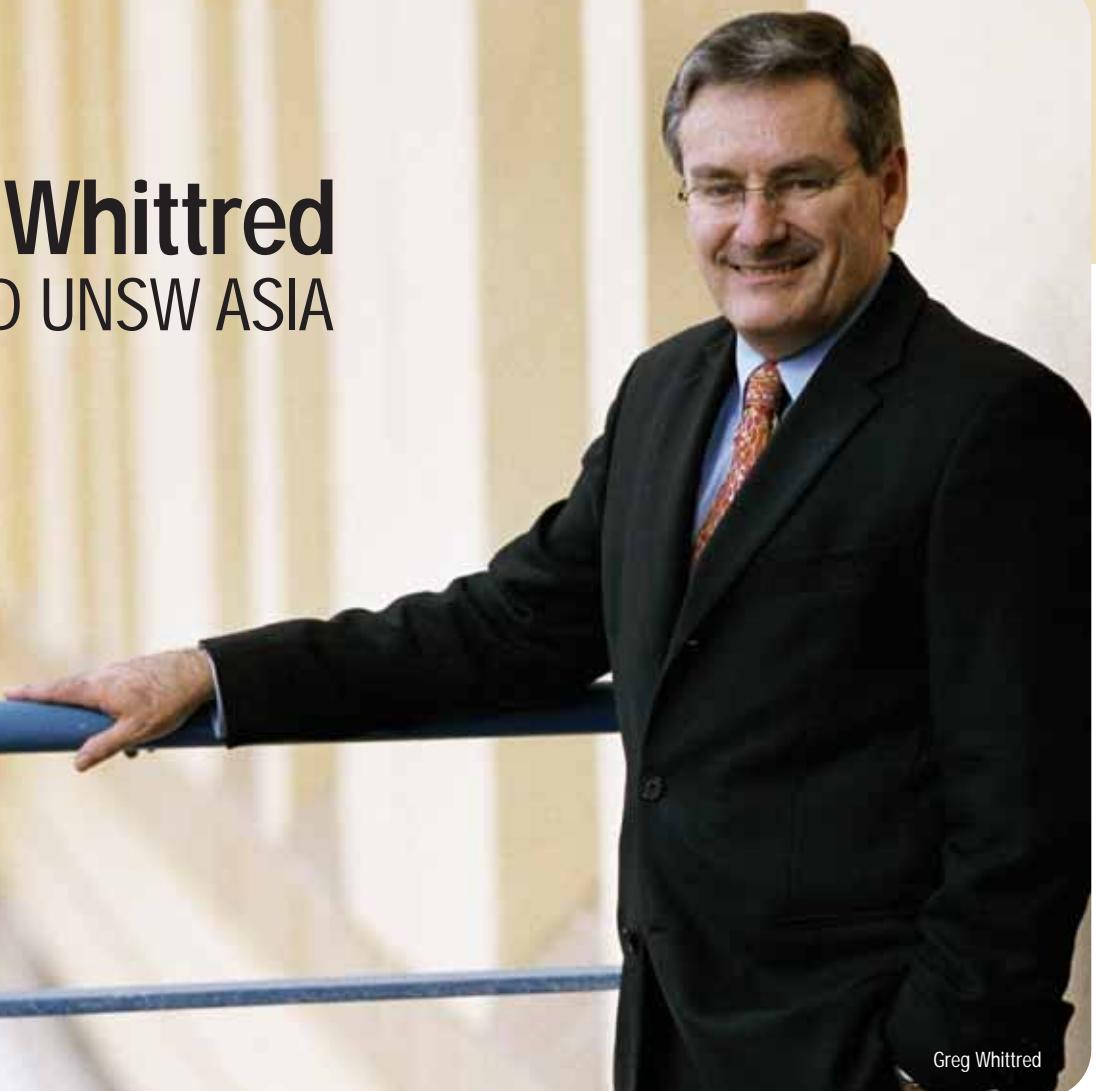
It was only after the *Macquarie* revival that I realised how much I had learned at this place and became more involved in alumni affairs. By this time, the former Kenso Tech had become number one in Australia and in the top 10 for Asia. In these ultra-dry days, with talk of desalination and unemployment, universities need all the help they can get in an atmosphere of cost-cutting, sponsorship and compromise. However long it takes to assimilate what has been confidence-building in the tertiary education today's graduates have received, it is to be hoped that the grateful eventually return to help out the alma mater. ■

Photos above: Left, Buzo as a student actor in 1967 and, right, with school and university friends after receiving his doctorate in December.

This is an edited version of the occasional address given by Dr Buzo at the graduation ceremony in December 2005 at which he received an Honorary Doctorate of Letters.

# Greg Whittred TO LEAD UNSW ASIA

MILK AND HONEY



Greg Whittred

**A**lumni will play a key role in the development of UNSW Asia, according to Professor Greg Whittred, who describes his appointment as the first President of UNSW Asia as "a once-in-a-lifetime opportunity".

"I see that reconnecting with our alumni in the region is just as vital as the bricks and mortar in building our new campus. They are a very important link in our foundation. UNSW is in a unique position of having alumni spread throughout the region in a range of key professions, from business to government. They can greatly assist our efforts to generate enrolments, build bridges into local and regional communities, and facilitate philanthropic support for research and scholarships."

Warming to his theme, Professor Whittred describes UNSW Asia as a truly ground-breaking initiative. "Singapore is the logical place for a hub of education excellence in Asia. For me it is an amazing opportunity to be able to lead the development of an Australian university in an environment where education is prized above all else."

As well as his distinguished academic career, Professor Whittred brings a wealth of management and leadership experience to his new role. Previous Professorial appointments include the University of Sydney and the Australian Graduate School of Management, where he was director of the Executive MBA Program, Associate Dean of MBA Programs and Acting Dean. More recently, his achievements as Dean of the Faculty of Commerce and Economics have been considerable.

"In many ways I see the job of UNSW Asia President as a natural extension of this position," he said. "Four years ago the faculty set out to achieve a vision to become the leading provider of business education and research in the Asian region. I think we have moved a long way towards fulfilling these goals."

His vision for UNSW Asia is equally strong. "Our objective is to build an innovative institution that is student-centred, industry relevant and research intensive. The academic model is cross-disciplinary, while the links between UNSW in Sydney and UNSW Asia will help remove barriers

between Australia and Asia. The dissolving of boundaries and borders in all senses is what we are setting out to achieve."

While he is clearly excited about the challenges ahead, Professor Whittred said that he is leaving his role as Dean of the Faculty of Commerce and Economics with real regret but he plans to be able to continue to support the faculty's initiatives in his new role.

**"Singapore is the logical place for a hub of excellence in Asia"**

"It is an exciting time. How often though does a person get to build a private university from scratch and to get it right from the start?" said Professor Whittred, who has already taken up his position and will relocate to Singapore later this year.

Opening in 2007, UNSW Asia is Singapore's first foreign university. It is also the first comprehensive research and teaching institution to be established overseas by an Australian university. ■

# Innovation PIPELINE

BY DENISE KNIGHT

**M**ark Bennett recently hosted NewSouth Innovation's first meeting of the Uniseed venture capital fund, "and the news is very positive for UNSW's researchers. Already we are presenting a series of prime investment opportunities to the Fund".

Uniseed was the first specialist pre-seed commercialisation fund for university technology established in Australia. NewSouth Innovation (NSI) is the newest member of the group, which was founded by the commercialisation arms of the Universities of Melbourne and Queensland. The fourth member is Westscheme, Western Australia's largest private sector superannuation fund.

"Under the partnership, Uniseed will work closely with NSI to invest in technologies from UNSW and affiliated organisations," Mr Bennett said. "The University's investment of \$10 million means there is now more than \$61 million committed to the Fund, 90 percent of which is dedicated to assist the commercialisation of projects through the formation of spin-off companies of its member universities."

In its five years of operation, Uniseed has been one of the most successful early stage venture capital funds in Australia. It has leveraged more than six times its initial investment from follow-on funders and government grants, said Mr Bennett. "That is a clear endorsement of their investment strategy."

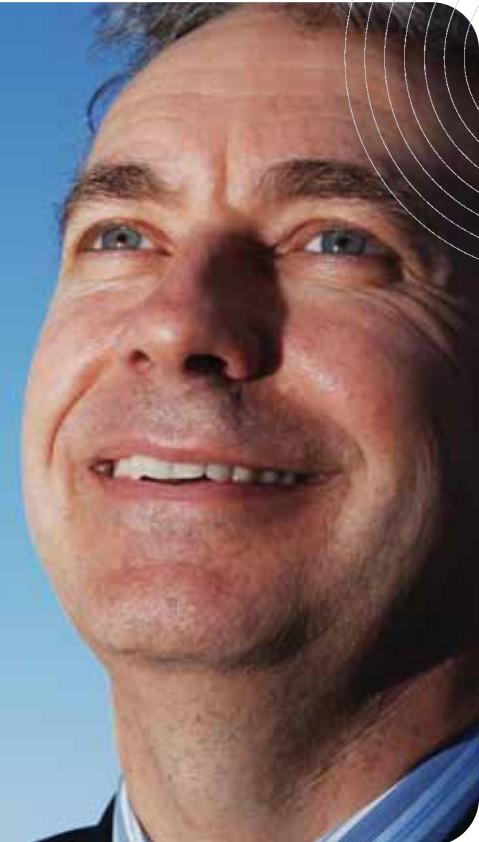
NSI's target is to form four to five new spin-off companies each year. Uniseed will

be given a priority right to back these new ventures. "UNSW's current patent profile is roughly 49 percent in engineering, 30 percent in medicine and 20 percent in science, with a small component in the humanities. This profile is very attractive to Uniseed and complements the pipeline of technology flowing from the other member universities in the Fund."

Mr Bennett said what makes the Fund user-friendly from a university perspective is that "it has a different risk approach, and it will fund projects at times and stages where other investors may not and this is of course very beneficial to us".

Professor Les Field, Deputy Vice-Chancellor (Research) and Chairman of NSI, says Uniseed will be an invaluable aid to NSI as it moves to forge closer relationships with academic staff. "By assisting NSI to take projects through the difficult early stages of commercial funding, it will help our innovators to see their work successfully developed."

Mr Bennett has been on board since November and he's confident that the new direction for NSI – born from the restructure of Unisearch – will deliver benefits to all partners. He has extensive experience in the field and has established spin-off companies and raised investment funds for university technology, most recently at the University of Sydney. He has also worked as a senior manager in the private sector, with a background in business innovation, product development and intellectual property management.



"NSI is operating under a new model and our business plan is now very focused indeed. We're looking at core assets in terms of the intellectual property (IP) that is being generated, how to facilitate that and how to foster funding."

"There were some problems in the past with IP commercialisation for UNSW," said Mr Bennett. "We are working hard to re-establish those links both on campus and with industry partners. I want to get the message out there loud and clear that the new structure offers many advantages to researchers."

**"Uniseed will work closely with NSI to invest in technologies from UNSW and affiliated organisations"**

"We all know you can live with the consequences of bad business models and deals for decades, where the inventors and the university get no benefit. We help to build an IP asset by applying the best possible commercial practice."

According to Mr Bennett, the questions that always need to be asked are: "What is the long-term benefit of a hot technology and are the royalty structures and other agreements set up properly?" And 'Do I have the right industry partners on board for the deal?'" The bottom line, he said, is that the researcher and university "must and should get a fair return". ■



## A Visionary's Work Lives On

The extraordinary achievements of Paul Trainor, a visionary entrepreneur and pioneer of Australia's globally thriving biomedical industry, will be recognised with a memorial Professorship in UNSW's Graduate School of Biomedical Engineering.

The establishment of the Paul M. Trainor Chair is a celebration of the vast contribution of a man who not only believed in the importance of developing medical technology in human terms, but who also had a strong understanding of the endgame of true innovation – how to commercialise medical devices and deliver them to the world.

Outstandingly Mr Trainor, who died in January this year, is remembered as the man who delivered the Cochlear hearing implant or 'the bionic ear', a device that has restored hearing to tens of thousands of people around the world.

However, Cochlear was just one of the Nucleus group of companies founded by Mr Trainor. Nucleus also developed dialysis equipment, ultrasound equipment, bone growth simulators and, at the time of its sale to Pacific Dunlop in 1988, held 15 percent of the global market in heart pacemakers through the Telectronics company.

At its peak, Nucleus funded more than 100 early stage research and development projects and, arguably, one of its most significant contributions was spawning a whole generation of industry leaders, both in the fields of biomedical engineering and entrepreneurship.

At a memorial service at UNSW in late February, Associate Professor Anne Simmons of the Graduate School of Biomedical Engineering who worked in a

range of strategic roles with Paul Trainor at the Nucleus group for 17 years, explained: "Few groups have ever done as much to bring health and hope to others around the world. Paul's contribution to this nation was immense."

In 1964 Mr Trainor left the medical distribution business owned by his father to become one of the country's earliest technology entrepreneurs. Fundamental to his success was the understanding he needed to put a global strategy in place from the beginning. "Paul was acutely aware from his experience that Australia barely represented 2 percent of the world market for medical equipment," said Professor Simmons.

For all his entrepreneurial finesse, he believed in profit-sharing, and described himself as more of a socialist than a capitalist, a believer in total honesty and trust in fellow humans.

Mr Trainor's approach to management also was unique. He abhorred titles and, despite overseeing a \$300 million "powerhouse", always referred to himself simply as the "Co-ordinator". He detested the term "manager". "It was never used from one end of the Nucleus world to the other," said Professor Simmons. "In his view, one did not 'manage' things, one found a solution to a problem, implemented a plan and fused a bond between two or three technologies to come up with a practical answer."

In 1978, Mr Trainor was approached by the Australian Government to examine the Cochlear implant, conceived and developed to a research prototype by Professor Graeme Clark and a team at the Department of Otolaryngology at the

University of Melbourne. The implant restores hearing to the profoundly deaf by making contact (through a series of electrodes) between the auditory nerve of the brain and the outside world. It remains the only successful biomedical link between stimuli from the outside world – sound waves – and the brain, to produce an effective safe replication of hearing.

**"Few groups have ever done as much to bring health and hope to others"**

Nucleus embarked on three years of research and business evaluation to determine whether this concept could be transformed into a reliable product, capable of manufacture, distribution and implant worldwide, meeting all regulatory requirements and including rehabilitatory training.

Mr Trainor personally headed "The Tiger Team" that was formed to turn the prototype into a reliable product, with FDA and European regulatory approvals. By 1985 specialist subsidiary companies providing marketing and rehabilitatory support were established in the United States, Europe and later Asia, and the worldwide success of Cochlear was under way.

Among the eminent Australians who gathered at the memorial service to pay tribute to Mr Trainor's exceptional foresight, tenacity and entrepreneurial abilities were bionic ear inventor Professor Clark, Westmead Hospital's head of cardiology Professor John Uther and present Cochlear CEO Dr Christopher Roberts. ■

# Creationism IN A TUXEDO: Archer leads the charge

BY DAN GAFFNEY

**S**hoehorning "intelligent design" into science classes would put Australia's future at risk by undermining kids' thinking skills and blunting the minds of the next generation of scientists. That's the warning from UNSW's Science Dean, Mike Archer.

So concerned is he that he spearheaded a coalition representing 70,000 Australian scientists and educators who condemned the proposal last year. "It's creationism in a tuxedo," Professor Archer says of intelligent design, which argues that some features of the natural world are so complex that an intelligent designer must have made them.

Intelligent design (ID) recycles a 200-year-old idea first proposed by British theologian William Paley. He likened a complex life form to a watch discovered on a beach, claiming that its inherent complexity implied the agency of a divine watchmaker – an intelligent designer. Alternative explanations for such elaborate aspects of the natural world were, in Paley's view, simply impossible. In his book, *Natural Theology*, Paley argued: "Design must have had a designer. That designer must have been a person. That person is God."

US President George W Bush gave the ID movement a boost by saying that intelligent design could be taught alongside evolution in science classes in American schools.

Shortly afterwards, then Federal Education Minister Brendan Nelson said that parents should have a choice about whether children were taught ID. (The minister later amended his initial comments to say that philosophy or religion classes might be a better place to teach ID.)

"The Minister was very humanly led astray by some slick marketing for intelligent design in the form of a US-funded DVD," Professor Archer said. "Once he became aware that this was gobbledegook and creationism in a tuxedo, he shut the door on suggesting that it should have a place in science classes."

Catholic Archbishop of Sydney, Cardinal George Pell, expressed his agnosticism about Darwinism during a speech to the National Press Club: "We don't want a simple dogmatic teaching of evolution," he said.

"We would want teachers to talk about the enormous, significant problems in the evolutionary history."

Professor Archer says Cardinal Pell's argument is based on a false dichotomy. "He assumes that if science hasn't found an explanation for particular structures in the world we must assume that God is the only other explanation," Professor Archer said. "But it's not a case of one or the other. A third alternative is that science hasn't yet discovered how that particular structure developed naturally."

Macquarie University's Paul Davies agrees. "The fact that scientists can't explain absolutely everything at this particular time doesn't mean that we need miracles," Professor Davies told ABC radio.

Scientists and teachers who baulk at the idea of admitting ID into science classes do so because it fails to meet any of the criteria that define science. "Intelligent design isn't science," Professor Archer said. "It relies upon miracles and intervention by supernatural beings. It isn't based upon scientific evidence or principles, and there is no way to test the idea because it is religion. To intrude this version of religion into science classes would corrupt the idea of what science classes are, and worse, potentially throw the door open to any number of other religions or unscientific ideas such as astrology, spoon bending or even alien abductions."

The pressure to adopt ID into science classrooms is coming from the Discovery Institute, a well-funded conservative Christian think tank in the US that uses millions of dollars, lobbying and public relations tools in a bid to sway public opinion and convince policymakers to admit its ideas into the school curriculum. It hopes to win a case before the US Supreme Court that would uphold the constitutionality of teaching ID in public school science classes.

Professor Archer noted a recent, internationally acclaimed test case in the US, where parents of students in Dover High School, Pennsylvania, challenged the largely conservative Christian School Board's decision to water down the teaching of evolution and

introduce intelligent design into the school's biology classes. The parents won the case with the judge declaring that despite the rhetoric of the promoters of ID, which was dishonest, it was clearly a religion masquerading as science and as such, because of the requirement for separation of church and state guaranteed by the First Amendment of the US Constitution, it should not be taught as science.

Professor Archer believes that the proponents of ID will fail in their efforts to get this religion into Australian science classes for the same reasons. Nevertheless, he views the public debate as an opportunity for science to re-engage with teachers, parents and the wider public to improve understanding about what is and isn't science. ■



# Mind Matters

## UNLOCKING THE SECRETS OF THE BRAIN

By combining its strengths in the brain sciences, UNSW is pushing back the next great frontier of medical research.

BY SUSI HAMILTON



BRITTA CAMPION

Understanding how and why the brain functions, and malfunctions, remains one of life's great mysteries. The emerging area of brain science is applying different approaches to tackling some of the most devastating conditions affecting humanity – from Alzheimer's disease and depression through to memory loss and other neurological diseases.

Over the past few months some of the University's leading researchers have made international headlines with their studies in the field. Head of Psychiatry in the Faculty of Medicine, Professor Philip Mitchell, is convenor of Brain Sciences UNSW, a network established last year to facilitate multidisciplinary research opportunities. It brings together experts in neuroscience, psychiatry, psychology and neurology.

"There is a palpable excitement about the neurosciences at the moment and we are at the forefront of that," said Professor Mitchell. "Brain Sciences UNSW capitalises on the existing research strengths of the University and affiliated institutes into disorders such as schizophrenia, anxiety, depression, bipolar disorder and Alzheimer's disease.

"What's driving us is an awareness of the arbitrariness of the boundaries. Increasingly, the major breakthroughs will be where the edges of disciplines overlap," he said.

And the work of the network is already making its mark, with a major study published in this month's *British Journal of Psychiatry*, showing a genetic link to depression.

According to the 25-year study, more than a fifth of the population has a genetic predis-

position to depression following exposure to multiple stressful life events. It found that people with a "stress-sensitive" form of a serotonin transporter gene are more than twice as likely to suffer from major depression than those with a "stress-resistant" form of the gene.

Professor Mitchell, one of several co-authors, said it's a very significant finding. "It proves that both nature and nurture are important in depression. You can't have one without the other."

The study is based on the DNA samples and life histories of a group of 128 school-teachers who graduated in 1978. Lead author Associate Professor Kay Wilhelm, of St Vincent's Hospital, established the cohort with Scientia Professor Gordon Parker, Executive Director of the Black Dog Institute.

"We've been catching up with the group every five years since, to see if there has been any onset of depression with any major life events," said Professor Wilhelm.

Professor Peter Schofield, Director of the Prince of Wales Medical Research Institute (POWMRI), says there is an 80 percent chance that those with a genetic predisposition will become depressed if there are three or more negative life events in a year.

"This contrasts with some people who have a genetic resilience against depression. Even in similar situations, there's only a 30 percent chance of them becoming depressed," he explained. The majority of the population – 53 percent – are somewhere between these two groups.

Of the 128 study participants, 42 percent met criteria for major lifetime depression, said Professor Wilhelm. "We already had a chart for each individual's life events and whether or not they had a depressive episode. Now the genetic tests back that up."

She said the research has some major implications for prevention and treatment. "Perhaps you could reduce the likelihood of depression among those with the vulnerable genotype, by training them up in terms of improving their coping styles and stress responses."

Other co-authors of the NHMRC-funded research, *Life events, first depression onset and the serotonin transporter gene*, are Heather Niven, Adam Finch, Lucinda Wedgwood, Anna Scimone and Ian Blair.

Brain Sciences UNSW has also been successful in attracting high-profile international researchers and winning much sought after funding bids.

Just four months after its launch, UNSW and POWMRI secured the right to establish Australia's first Professorial Chair of Schizophrenia Research. With support from NSW Health and the Board of the Neuroscience Institute of Schizophrenia and Allied Disorders (NISAD), \$8 million will be invested over the next five years to establish a joint program.

Another coup for the research network was the appointment of Australian biochemist Professor Lindy Rae as the inaugural NewSouth Global Professor in Brain Sciences. Professor Rae is internationally recognised for her expertise in magnetic resonance.



COURTESY MATTHEW JOHNSTONE

## "There is a palpable excitement about the neurosciences at the moment and we are at the forefront of that"

*– Professor Philip Mitchell, convenor of Brain Sciences UNSW*

One of her current projects is looking at the drug commonly known as GBH. Previously used in medical practice, it is now popular on the party scene, with sometimes fatal consequences. "While it was used as an anaesthetic in the past, we don't really know how it is operating on a neurochemical level. We hope our work will unravel that," said Professor Rae, who is based at POWMRI.

She will also be collaborating with Associate Professor Rick Richardson from the School of Psychology to find out more about another drug, DCS, and its effect on the brain. "DCS has been used for around 30 years to treat tuberculosis," said Professor Richardson. "Now there's increasing evidence that it can benefit those who are suffering from anxiety too." He is currently working on human trials to see if the drug helps with social phobias and other anxieties such as post-traumatic stress disorder.

The Head of the School of Psychology, Professor Peter Lovibond, said such collaborations have been made possible by Brain Sciences UNSW. "What psychology brings to the area is a sophisticated functional analysis of what the brain does," he said. "You can then discover the neural mechanisms that underpin particular functions, such as memory, attention or emotion. If you have a poor theoretical model, you can't interpret your neural data. We need to further understand both normal and abnormal brain functioning." ■

MAIN GROUP SHOT; From left: Kay Wilhelm, Peter Schofield, Philip Mitchell and Gordon Parker

## The quest for healthy ageing

One hundred years after the first description of Alzheimer's disease, a comprehensive global assessment of the prevalence of this and other forms of dementia has been published in *The Lancet*.

UNSW Professor Henry Brodaty, an international expert in psychogeriatrics, is one of the paper's authors.

The study predicts that the number of people affected by dementia will double every 20 years to more than 81 million by 2040. "Our research found that 24.3 million people currently have dementia," said Professor Brodaty. "There is one new case every seven seconds, which equates to 4.6 million new cases of dementia every year." While most people with dementia live in developing countries, the rates of increase are not uniform. "Developed regions start from a high base, but will experience a moderate to proportionate increase in the coming decades. The rate of increase is predicted to be three to four times higher in developing countries," Professor Brodaty said. According to the paper, by 2040 there will be three times more people living with dementia in China and Western Pacific countries than in Western Europe.

Meanwhile, Professor Brodaty and a team of UNSW researchers led by Professor Perminder Sachdev, have received a \$5 million NHMRC grant to study how lifestyle, social interaction, diet, exercise and other factors influence the way people age, both physically and mentally.



## Cultural intersections: MEETING AT THE CROSSROADS

A group of 18 COFA students and four staff members recently took part in a unique exchange, experiencing first-hand the realities of living in and designing for a culture other than their own. Joining the COFA team were eight students and two staff from Amsterdam's Willem de Kooning Academy and 25 architecture students from Beijing's Central Academy of Fine Arts, who spent two collaborative weeks taking part in COFA Adjunct Professor Richard Goodwin's latest *Porosity Project*, the first *Porosity Studio* to be held overseas.

Professor Goodwin said *The Parasite Car* studio at the Central Academy of Fine Arts (CAFA) in Beijing, was a great opportunity to combine COFA students of mixed disciplines with Chinese postgraduate students of architecture and sculpture, and Dutch designers and sculptors. "The results were exceptional and lots of fun," he said. "We well and truly infiltrated Beijing and managed to hold a closing exhibition at the Academy to much acclaim."

On his first impressions of Beijing, COFA participant Richard Wong wondered, "How does one begin to understand a culture rooted in centuries of history, let alone fit in, or expect that very society to willingly accept me with open arms, no questions asked? Unable to communicate or even pretend to know where we were going, we did what any foreign body does when invading a larger organism ... we latched on like parasites and hung on for dear life!"

The assembled students from Holland, China and Australia had to work together to

develop design solutions for Beijing's rapidly developing urban space. Delving into the social, economic, industrial and environmental problems associated with the car in a place of such density was a springboard from which to survey and explore a range of ideas, according to COFA student Marian Hertford: "The mix of international students, all with varied interests, including sculpture, design and architecture, created a climate not unlike the bright and bustling marketplaces of Beijing that are filled aisle upon aisle with goods including concertina Tibetan skirts, bamboo glasses, waving Mao clocks, beautifully crafted ceramics in every shape and size to fit every budget, and the sounds of bargaining and chattering. The students taking part in the *Porosity Project* bargained over ideas."

The students and their mentors used the car as a catalyst to understand the developing urban space. Catherine Hartung, another COFA participant, found the experience intense. "For the first time in my five years at COFA I felt completely saturated on every level by the design task at hand. Initially I was concerned that my background would not allow me the ability to fully delve into the problems associated with the city (which are so complex, overwhelming and intertwined with its culture). However, the lack of familiarity allowed me to notice various aspects of the city that I may have overlooked had I been too familiar with the environment."

Richard Wong saw the task as an opportunity to question existing conventions and models for urban transport networks.

"Rather than provide an immediate solution, my project explored how the roads and architecture could develop in conjunction with each other and instil or inspire the city to create its own sustainable mould to grow into. What eventuated was a futuristic track system using magnetic connections that wove around the architecture along with powered spherical vehicles, which would become more than just a means of transport. As crazy as my idea was, I found a willing partner in the form of a Dutch industrial design student, Guido den Teuling. Despite our different cultural backgrounds and degrees, the idea became a catalyst that fuelled both our imaginations and designs. Somehow the combination of a realist from Holland and a daydreamer from Australia worked extremely well."

COFA Dean Professor Ian Howard, who also took part in *The Parasite Car* workshop in Beijing, commented on the success of the project, "*The Porosity Studio* led by Professor Richard Goodwin was exciting, rigorous and ended with a significant exhibition of proposals. "In addition to the two-week studio work we organised a related lecture each evening in which COFA staff made major contributions to two formal lectures and 10 informal speeches during the period."

Richard Goodwin is currently working on a book about the *Porosity Studio* and is looking forward to organising the studio's next project. ■

Courtesy of the College of Fine Arts, this story was first published in Issue 15 of the COFA magazine.

# From the President of the Alumni Association



**I**t has been encouraging to note the positive reaction from alumni to the new *UNSWWorld* format. Several members have commented most favourably on the article in the last edition which featured the four Alumni Award Winners for 2005, citing the very positive way this reflects on UNSW and our fellow alumni.

The Association is extremely proud of the Alumni Awards program, which over the years has seen more than 40 of our alumni honoured in this way for their exceptional contributions to their fields of endeavour, as well as to the broader community.

Nominations for the 2006 Awards close on May 19 and I would encourage you to consider nominating business or professional colleagues whose work you believe warrants such high recognition. Details on the nominations process can be found on the Alumni website ([www.alumni.unsw.edu.au](http://www.alumni.unsw.edu.au)).

It is now just one year since the Association formally moved from a fee-based membership structure to one where all graduates of UNSW are automatically members of the Alumni Association. A consequence of this has been a dramatic increase in association membership, and I believe, a renewed level of interest in alumni activities.

Your association together with the university will this year offer an increased number of activities which we believe will be of interest to you. Last year we introduced a "Speaker Series" where leading academics from within UNSW addressed an enthusiastic and non-technical audience on aspects of their expertise. These were very well received, and this year the number of offerings in the "Brain Food 2006 Series" will double, with six speakers expounding on such subjects as diverse as "The History of Prostitution" and "Climate Change". For more details, see the Alumni website.

Those of you who joined fellow Young Alumni for networking drinks at the Art House Hotel in Sydney last year will be pleased to learn this popular session will be repeated several times throughout 2006. Increasing popularity may well oblige us to move to a larger venue!

Four Alumni Governors will complete their terms this year and nominations have already closed for these positions. With more than four candidates presenting, a postal ballot will be required, which will coincide with the election of four graduates to University Council. Might there be a contribution YOU could make as a Governor of your Alumni Association next time round? Think about it!

Peter Bergman  
President

## Upcoming Events for 2006 MAKE A NOTE IN YOUR DIARY...

**24 May** – Brain Food 2006: Dr Hazel Bateman (Faculty of Commerce and Economics) on Population Ageing, Retirement and Pensions.

**22 June** – Young Alumni drinks and networking (Art House Hotel, Pitt Street, Sydney).

**18 July** – Brain Food 2006: Professor Matthew England (Faculty of Science) on Climate Change.

**16 August** – Brain Food 2006: Associate Professor Rae Frances (Faculty of Arts & Social Sciences) on the History of Prostitution.

**21 September** – Young Alumni drinks and networking (Art House Hotel, Pitt Street, Sydney).

**25 October** – Brain Food 2006: Professor George Williams (Faculty of Law) on Terrorism.

**23 November** – Young Alumni drinks and networking (Art House Hotel, Pitt Street, Sydney).

**The Brain Food Speaker Series** will take place in the John Niland Scientia Building at UNSW commencing with tea and coffee at 6 pm before the lectures begin at 6.30 pm.

**The Young Alumni drinks and networking** will run from 5.30 pm to 8.30 pm in the Art House Hotel.

**Overseas:**  
Events will also be held for alumni in **Bangkok** (19 October), **Beijing**

(17 October), **Hanoi** (21 October), **Ho Chi Minh City** (25 October), **Hong Kong** (8 July), **Jakarta** (July), **Kuala Lumpur** (4 July) and **Singapore** (6 July).

For more details, please see the Alumni website ([www.alumni.unsw.edu.au](http://www.alumni.unsw.edu.au)).

### Please Stay In Touch

When your contact details change, please remember to let us know so that we can help you to stay connected with your university and to remain part of the vibrant international community of over 170,000 graduates in 125 countries. You can do this by mail, Alumni Relations, Room G35, The Chancellery, UNSW, NSW 2052, by email ([alumni@unsw.edu.au](mailto:alumni@unsw.edu.au)), by phone (to +61 2 9385 3279), by fax (to +61 2 9385 3278) or direct online ([www.unsw.edu.au/alumni/pad/updateform.html](http://www.unsw.edu.au/alumni/pad/updateform.html)).

# FLYING SOLAR



December 15, 2005, was a momentous day – not only for solar power pioneer Zhengrong Shi who rang the opening bell at the New York Stock Exchange (NYSE) and was pronounced the richest man in China with the float of his company, Suntech Power, but for Scientia Professors Martin Green and Stuart Wenham who were invited to see the former UNSW PhD student receive global acclaim.

"Few could have done what he has," according to Professor Green who recalls the NYSE's enthusiastic welcome to the listing of a technology company from China. The occasion put the estimated wealth of the "very talented" Dr Shi at US\$2.2 billion, a figure that places him among Asia's wealthiest. Dr Shi is Suntech's major shareholder, and the company's share price has doubled since listing.

Dr Shi left UNSW in 2001 after 12 years in which he completed his doctorate, supervised by Professor Green, and worked as a research scientist in Pacific Solar, a

cooperative venture between UNSW and the utility Pacific Power, set up to commercialise a cost-effective solar energy technology using the photovoltaic (PV) effect. He resigned to take his expertise back to eastern China, opening for business in Wuxi in mid-2002.

While Suntech was built using first generation technology manufacturing cells based on silicon wafers, the company's winning strategy has been in producing high-quality solar products cheaply and in volume. Along the way, Dr Shi has maintained strong ties with UNSW.

In a recent newspaper article, Dr Shi named Professor Green – who was awarded an Alternative Nobel Prize in 2002 – as his mentor. Professor Wenham was appointed to the role of Suntech's chief technical officer last year.

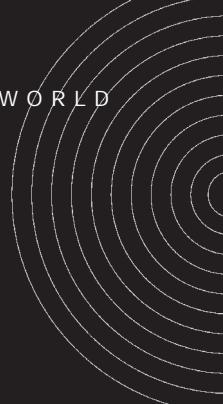
Professor Green said an exchange arrangement between Suntech and UNSW had proved mutually beneficial, enabling students to gain valuable industrial experience

working on the manufacturing line in Wuxi and in the Suntech research lab. "From the company's perspective, our students and training programs have helped to make up for China's shortfall of people with the right training and experience."

A commercial collaboration between Suntech and UNSW's Centre for Excellence in Advanced Silicon Photovoltaics and Photonics, has seen Dr Shi donate \$500,000 this year. The association brings Dr Shi back to Sydney to review the centre's activities and keeps him in touch with new research.

The second-generation solar technology for crystalline silicon thin-film solar cells on glass, conceived by Professors Green and Wenham, on which Dr Shi worked at Pacific Solar, is now being commercially produced in Germany by CSG Solar, a company founded by the Pacific Solar team. ■

Group shot above: Dr Zhengrong Shi with the Suntech team and Scientia Professors Martin Green (third left) and Stuart Wenham (second from right) at the New York Stock Exchange.



## Legal eagle



Darren Gardner is one of America's top lawyers. The head of law firm Minter Ellison's International Employment Law practice, and Managing Partner of its San Francisco office, who graduated from UNSW in 1996, received this accolade in a Forbes Radio program called Special Tribute to America's Best Lawyers which aired late in 2005. Gardner was named among the 'legal giants who are directly responsible for successful victories in all practice areas of the law and in the corporate world'.

Gardner's work in the US encompasses advising multinationals doing business in Asia. In his interview, Gardner noted the importance of understanding differences between employment law issues in the US and across Asia with the increasing impact of globalisation. He also touched on the effect of the legal and cultural idiosyncrasies of Asian countries on their employment laws and the issue of legal compliance as a key concern for companies doing business internationally. ■

## Academy for change



Geophysics professor Dr Kurt Lambeck, a former student of UNSW's School of Surveying and Spatial Information, has been appointed President of the Australian Academy of Science. Dr Lambeck, a UNSW university medallist in 1963, has been the head of the Research School of Earth Sciences at the Australian National University since 1984. Previously he worked in Europe and as a geodesist at the Smithsonian Astrophysical Observatory and Harvard College Observatory.

His more recent work on glacial rebound explores how the sea responds to changing

levels, its impact on civilisations and the future.

His research is of ancient structures in foreign lands, such as Roman fish tanks which tell their own story of shifting sea levels and climate change.

Dr Lambeck warned recently that our climate is changing at a far quicker rate than ever before. Measurements have been taken of past changes over hundreds of years. Now the changes can be measured in decades – a sign for concern.

The Australian Academy of Science has close links with the British Royal Society and has joined other international academies in warning of dire consequences of the failure to take action on climate change.

As academy president, Dr Lambeck succeeds Dr Jim Peacock who has been appointed Australia's Chief Scientist. ■

## Generational shift



The appointment of Gabrielle Upton as Deputy Chancellor brings more than a generational shift to the leadership team at UNSW. A lawyer with an abiding interest in community projects, Ms Upton landed in the role this year with an

abundance of fresh ideas. At a time when the University faces challenges in heightened international competition and the reduction of funds to the tertiary sector, Ms Upton is focused on the University's importance as a provider of research and knowledge, in tandem with the quality of experience it delivers to students.

Her days at UNSW Law School in the '80s are recalled as "a life experience". "It wasn't just about hitting the books and attending lectures." She is intent on preserving this vibrant quality for students in the future.

With extensive experience in the law and banking, including six years working in New York, Ms Upton is currently legal counsel at the Australian Institute of Company Directors, a job that keeps her keenly aware of the significance of corporate governance. The role of deputy chancellor may be honorary, she said, but it is a serious undertaking

encompassing strategic decisions as well as attending ceremonial events and promoting the University's activities to the wider world.

Ms Upton wants to see more female academic leaders on campus and, to this end, is championing a new program for promising female academics, providing them with networks and support to develop their leadership potential.

Apart from her active involvement with UNSW – she has served on the University Council since 2002 and became President of the Law School Alumni Chapter in 2005 – Ms Upton also holds a portfolio of community projects, including the Duke of Edinburgh Awards, the National Trust and the Taskforce on Care Cost, a strategic alliance formed to promote a better understanding of the cost of care and its impact on workforce participation. ■

## Staying connected



To better serve its graduates, UNSW now has a representative in the United States. Expatriate Australian Ben Phillips has taken on the role of strengthening and in some cases re-establishing relationships with

the University's 1000 plus alumni in the US and also with friends of the University.

"I will assist with networking opportunities, by hosting alumni functions, putting graduates in touch with other alumni and university events and fundraising for specific projects," said Mr Phillips who has been living in the US for the past six years and is based in Washington DC.

An economics graduate who also holds an MBA, Mr Phillips heads his own consulting company, Unlimited, that works with not-for-profit organisations in the US, Europe, Australia and New Zealand.

"Graduates are an important resource and can bring many benefits back to the university," he said. The same applies to friends of UNSW who may not be alumni but have an interest in Australia or work being carried out at the University. ■

# THE MASTER returns

**I**nternationally renowned architect Glenn Murcutt has been appointed an Adjunct Professor at UNSW. Professor Murcutt needs no introduction. A "living legend" was how the judges of the Pritzker Prize described him when he received architecture's highest honour.

In his long career Professor Murcutt has created a distinctive sense of place through his craft. His modernist buildings are not only deeply rooted in a specific site, but respond sensitively to the landscape and climate.

In a tremendous coup for UNSW, Professor Murcutt is returning to his alma mater this year to take up an appointment as Adjunct Professor in the Faculty of the Built Environment. In Session Two, he will lead the architectural design program for third-year students.

And his return to Kensington, from where he graduated in 1961, coincides with another significant milestone – his 70th birthday. Glenn Murcutt spoke to *Uniken* editor Denise Knight.

**How do you feel about the appointment at UNSW?** It's a great privilege in many ways and a very nice connection. When the Dean, Peter Murphy, asked me if I would consider it, I did so because it is my old university. I had a few very fine teachers from that time that extended my father's education for me in architecture. They set me on my career ... so to go back to UNSW is to return some of that. And I am a great supporter of young architects. I believe the faculty has some great staff, and that is very important to me. I have also been on the advisory committee selecting architects for campus developments such as The Scientia and the UNSW Asia campus in Singapore, so I have been involved with the University for quite a long time.

**How do you see your role as design master for the third-year program?**

We're setting a very wonderful program for the students, I believe. I've done it previously and it's been incredibly successful. I've just received reports from my students at Yale University who say the design program was the most important they had done at the school.

I'll take students to environments most likely they've never been – places like Mutawintji or Mungo National Park in the hot arid area of western NSW.

Most of the students would regard this as like being taken to the moon, it is that different. They have to respond to so many foreign things that it actually starts making them think about what design is.

**You've had chairs of design and visiting professorships at many of the leading architecture schools around the world, what do you enjoy about teaching?** Teaching combines both the giving as well as the receiving. The giving is you impart as much information as you reasonably can to the development of the mind of each of those students. But you also receive because you get surprises. You get kids who look at their work and say "I don't know how I did this". That's what I love, to see that surprise.

You know there's a great statement that I only learnt last year from a wonderful Aboriginal elder Max Harrison: You have to give it away to keep it. Sounds odd doesn't it, but you have to give culture, ideas or a way of thinking away to be able to keep it.

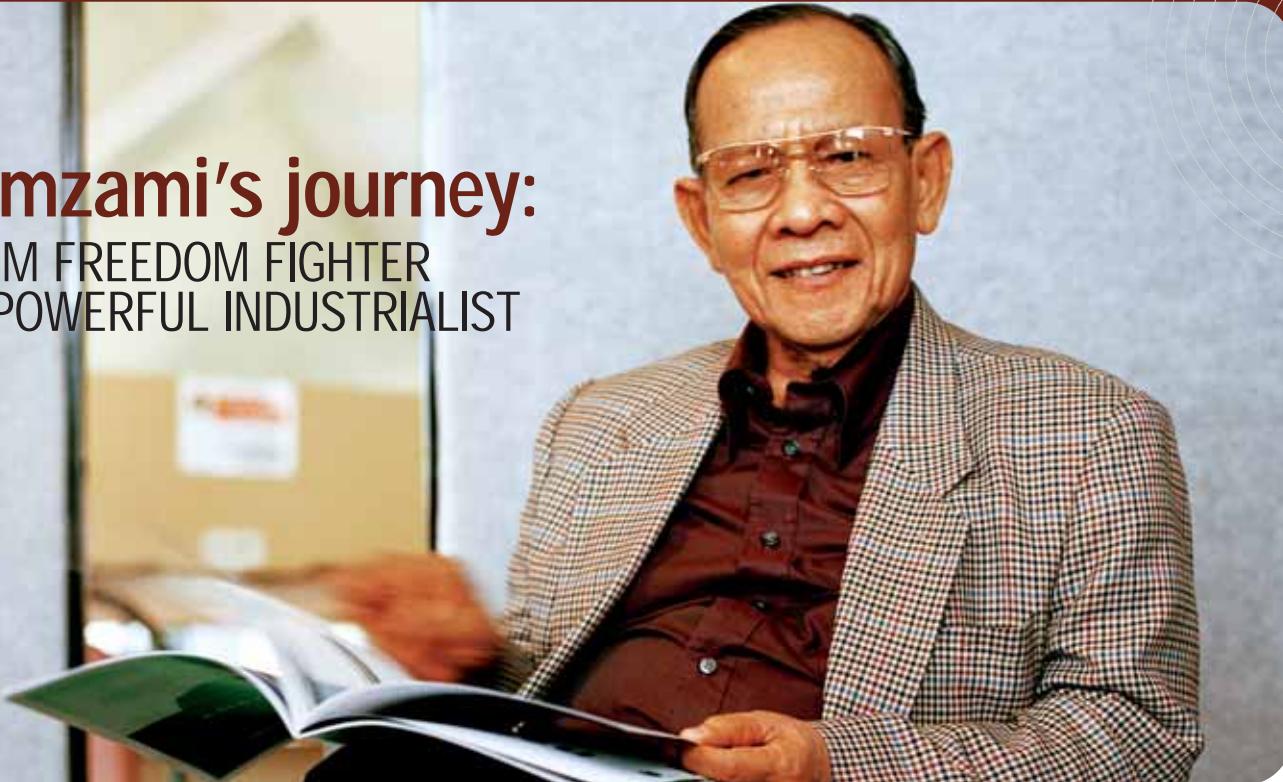
**How would you describe your teaching style?** I'm an extremely demanding teacher ... I've got to say that from the start. What I want to do is describe to the students a way of thinking about an architecture that is responding to the conditions that they are building in, on and within. So we'll be pushing them hard and involving them so they are immersed in thinking about the real issues when designing. ■

## The Future of Design

UNSW will run Connect 2007, an international conference on Design Education from 9–12 July 2007. A collaboration between the faculties of Engineering, the Built Environment and the College of Fine Arts, the conference aims to provide a platform for the discussion of research and strategies of design education that cross disciplinary boundaries. Creativity and innovation are at the core of design, and collaboration across disciplines is vital for design concepts to become reality. The emerging field of multidisciplinary design offers opportunities for new models of design education which will be addressed at the conference.



# Zamzami's journey: FROM FREEDOM FIGHTER TO POWERFUL INDUSTRIALIST



ANTHONY GEERAERT

**A**mr Zamzami's CV had an unusual twist – student abroad, government administrator and adviser, business leader and freedom fighter. Mr Zamzami's achievements, however, transcended the military.

Mr Zamzami who died last December is a distinguished addition to the University of New South Wales' business builders' honour roll, although he had fought some ferocious and real battles before he ever picked up a pencil at UNSW.

Born in 1929 in Aceh, his paternal lineage was linked to the province's aristocracy, while his mother's family were Muslim clerics. At 15, Mr Zamzami took up arms and prepared to face invading forces when the Dutch tried to reclaim power over Indonesian territories in 1945. "From my early years, idealism has always been moderated by pragmatism," he said in an interview last year. "I realised that independence for my country would only be gained through getting involved at the front line and fighting for it."

Like many entrepreneurs, Mr Zamzami was a risk-taker. At 18, he joined the Indonesian Military Academy ahead of commanding an artillery battery defending the city of Medan on the island of Sumatra against the Dutch army. In 1949, when Indonesia had secured independence and full sovereignty, he left the military and returned to complete high school, winning a Colombo Plan scholarship that led him to UNSW.

"The journey to Sydney to enrol at UNSW was my first trip outside Indonesia," said Mr Zamzami who graduated from the Faculty of Commerce and Economics in 1961 and

became the founder of the Indonesian Association of Alumni Students of Australia.

In combination with his degree, part-time work – a stint as a public transport conductor and, more specifically, 10 weeks spent at the Commonwealth Bank and the Imperial Chemical Industry plant in Sydney – provided invaluable background for building his career at home.

Mr Zamzami's career spans a remarkable era in Indonesian history. First employed by the Indonesian government, as general manager of State Enterprises in Tokyo where he enjoyed an early success boosting his country's exports to Japan from \$300,000 to \$3 million in one year, he was quickly moved on to higher promotions, international delegations, fact-finding missions and to become an adviser to bodies such as the Indonesian Foreign Investment Board.

In 1967 he was in the halls of power when President Suharto took control of Indonesia, a move that opened up opportunities for the country and entrepreneurial individuals.

Mr Zamzami's initial foray into private enterprise was as vice-president and finance director of the national holding company PT Krama Yudha Mitsubishi Motors Group in 1972, but just one year later he became its managing director, a position he held until retirement in 1997. In that time the company became one of the biggest automotive industrial operators in Indonesia.

In the 1980s, he took on other senior roles becoming managing director of PT ESABINDO PRATAMA, a joint venture with a Swedish company that makes welding electrodes and cutting machinery, and became adviser in Indonesia for

Commonwealth Industrial Gases, Australia.

Profit was not the overriding motive that enabled him to build successful businesses, Mr Zamzami said: "It was always important to me that our business operations took into account both the aspirations of the local community in which they were physically located and the surrounding natural environment."

Despite his outstanding business track record, Mr Zamzami was proudest of his contribution to his country's progress.

In 1998, he was an adviser to the Forum for Human Rights in Aceh and, in 1999, was appointed by presidential decree to chair the Independent Commission for the Investigation of Acts of Violence in Aceh.

The nation's security forces and the rebel Free Aceh Movement had been engaged in battle for years. In 2002, Mr Zamzami was a negotiator in Geneva when the warring groups agreed to a Cessation of Hostilities Agreement. "Regrettably, however, although a major breakthrough had been achieved at the negotiating table, and peace finally appeared to be in sight, mutual suspicion remained and implementation of the agreement fell through," he explained. His optimism soared in 2005 when a new agreement was struck which offered new chance for peace in Aceh. ■

This is an edited extract from an interview by alumnus Peter Switzer, first printed in *Savy: Understanding The Entrepreneur*, a book published for the 50th anniversary of the UNSW's Faculty of Commerce and Economics and available from the Switzer Group ([www.switzer.com.au](http://www.switzer.com.au)).

# A healthy dose OF HUMANITY

BY SUSI HAMILTON

**J**ohn Hirshman's life-long commitment to public health and social justice was born of a terrifying personal experience. As a 17-year-old Jew living in Austria when the Second World War loomed, he soon found out about life as a refugee. The family fled for Australia in 1938.

"My interest in rights certainly comes from that time," Dr Hirshman reflected, as he pored over tributes from his long association with UNSW and life memberships from dozens of international human rights organisations.

"Before that I had an interest in health services, but I didn't have much idea what I wanted to do," said the 84-year-old, who has been an Honorary Visiting Fellow at UNSW since 1983.

"I did some manual work for a year when I got here, but then I went to school again. After one year, I did the leaving certificate and was able to get a scholarship to study medicine at university."

It seems typical of Dr Hirshman's understated style that he says he was "reasonably intelligent". He graduated with first class honours in medicine, working in several hospitals and universities, until he took up a position as the Medical Officer for the City of Sydney in the mid-1950s. That role was his first taste of what was to become a career in public health.

"I saw it simply as a means of doing much more for the general population than working with individuals," he said of the role that involved implementing immunisation programs and ensuring health standards were adhered to. "Preventative medicine was really my idea of what a doctor should do."

**"Preventative medicine was really my idea of what a doctor should do"**

While Dr Hirshman insists he was never interested in a career as a medical researcher, he did write an influential paper during this period, proving that a painkiller commonly used at the time interrupted kidney function.

Many more publications and accolades came during Dr Hirshman's career with the World Health Organization (WHO). He was based in The Philippines from 1964 to 1980, where he rose from a public health advisory

position to become deputy regional director.

"The great thing about working for the WHO in that region was that it had a lot of preventable diseases which you could do something about, including malaria and the high infant mortality rate," he said.

"While malaria and tuberculosis are both still problems, the main thing is that we have been able to reduce infant mortality from diarrhoea and from respiratory disease. Good things did happen, but new problems have also arisen, like HIV," said Dr Hirshman.

Shortly after retiring from the WHO in 1980, Dr Hirshman started his long association with UNSW, while still juggling consultancies with organisations including AUSAID, the Asian Development Bank, The Red Cross and UNICEF.

Despite around 23 years with UNSW, he has never regarded himself as an academic. "I liked the student contact," he said. "Most of them were bright and interested. It was satisfying because I was able to influence people who went on to work in the international health arena."

Dr Hirshman ran a course about health in developing countries as part of the Master of Public Health until it ended last year. "My main contribution to the University was that I didn't charge for my teaching services," said Dr Hirshman. "In return, the University gave

me the facilities and friendship of the place. It made my life complete."

While he remains an Honorary Visiting Fellow at the University, his most recent passion is working with students who are not yet even enrolled in tertiary education.

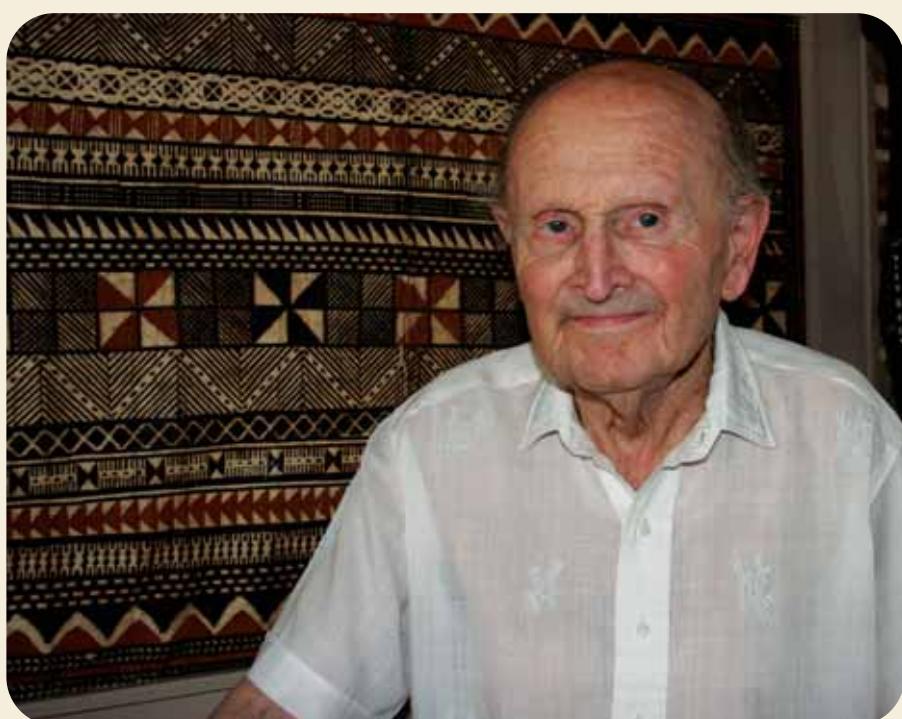
"Over the past seven years I've been working with gifted children through GERRIC (Gifted Education Research Resource and Information Centre) workshops," he enthused. "I decided to do a subject, the United Nations and its agencies."

The twice-yearly workshops for secondary school students involves one day of teaching about the UN, which Dr Hirshman still takes. The second day involves a tour around the UN agencies in Sydney, which he has since handed on to a colleague.

Dr Hirshman's many other contributions to UNSW include the sponsorship of several prizes through the John Hirshman International Health and Population Studies Fund and his continuing membership of the UNSW Foundation Board.

Somehow, he has also managed to remain active in dozens of other groups including the Australian Health and Development Group of which he is founder.

He was named Australian Humanist of the Year (1992) and made a member of the Order of Australia (AM) in 1993. ■



SUSI HAMILTON

# Connection {POINT}

## WARWICK NEGUS – MAKING THE RIGHT CONNECTIONS

**S**uccessful businessman, entrepreneur, alumni leader, Chair of the Faculty of Commerce and Economics Advisory Board, father of four and rugby coach to an under 8 team, Warwick Negus has found time to take on yet another important role. He is the Chair of Connection {POINT – the Faculty of Commerce and Economics' new Capital Campaign, which plans to raise over \$25 million for business education and research initiatives at UNSW over the next five years.

Mr Negus, the CEO of Colonial State Global Asset Management, has drawn together a Campaign Cabinet made up of some of Australia's most highly respected businessmen and women. All Cabinet Members have strong links with the faculty and are all UNSW graduates or, in the case of Professor John Niland AC, a former Dean and Vice-Chancellor of UNSW.

Paul Cave is well known as the founder and CEO of Bridgeclimb; Bob Mansfield is probably best known for his role as the Chairman of Telstra. Peter Mattick is the power behind Salmat, (the direct mail and data distribution giant). Other members are Peter Mason (Chair of AMP), Albert Wong (a highly successful investment banker), Dieter Adamsas (Deputy CEO of Leighton Holdings), Simon Poidevin OAM (Managing Director of Citigroup), and Faculty Advisory Board Member and Company Director Vickki McFadden.

As Mr Negus said, "the faculty is fortunate to be able to draw on people of this calibre. These busy highly motivated people are making time because they believe in the faculty and they wish to contribute. They have seen what a good business education and research can provide, both personally

**"The faculty is fortunate to be able to draw on people of this calibre. These busy highly motivated people are making time because they believe in the faculty and they wish to contribute"**

and for the greater good. They believe that the faculty has a major role to play in the region and the vision to do it.

"I know that as a student at UNSW, I relished the opportunity to broaden my studies in a business faculty with an enviable reputation. The learning experience was truly enjoyable and challenging. I am now happy to be giving something back to the faculty."

Recently Mr Negus opened his home to for the official launch of Connection {POINT. Professor Fred Hilmer (Vice-Chancellor designate) and UNSW Chancellor David Gonski joined forces with him for the evening. They stressed the importance of bringing the faculty and the University closer to the business world. Their audience – made up of more than 70 of Australia's most influential business and government leaders – strongly agreed.

During the evening, Professor John Piggott, Acting Dean, announced that over \$1.25 million had already been pledged to the new campaign. ■

At the launch party, from top, Chancellor David Gonski, Vice-Chancellor designate Fred Hilmer, Connection {Point Chair Warwick Negus and Acting Dean of the Faculty of Commerce and Economics Professor John Piggott.

**Connection {POINT}** is the new driving force of the Faculty of Commerce and Economics. It focuses on relationships with students, employers, research and business partners, schools and alumni.

Its ultimate aim is to transform business and the economy, securing the faculty's position in Sydney and Australia as a leading regional business and financial centre. In 2007 the faculty will consolidate and move into a new building that will provide state-of-the-art teaching and learning facilities and a focus for its schools, research centres, students and staff.

UNSW's new campus in Singapore also will open its doors in 2007 offering a comprehensive range of degrees – including a full portfolio of business degrees – with the same level of entry standards and of teaching and learning outcomes as UNSW Sydney.



# Engineering a new future

**T**hey came from the Northern Territory, South Australia, Queensland, New South Wales and Western Australia. Twenty school students attended the 9th Indigenous Australian Engineering Summer School (IAESS) in January and along the way met a former Prime Minister, heard an impassioned speech from television journalist Jeff McMullan and climbed the Sydney Harbour Bridge.

The weeklong experience, many later claimed, had changed their aspirations.

An annual event, the IAESS brings together high school students from across Australia for a residential program run by UNSW and the not-for-profit organisation, Engineering Aid.

This year eight female and 12 male students learned about various facets of engineering, from studying at university to the application of engineering in the real world. Participants scaled the Harbour Bridge to explore the secrets of its construction, and cruised beneath it. For many the IAESS presented their first opportunity to visit Sydney. Also on the program were visits to the RTA Crash Lab, Energy Australia and an inspection of the Lane Cove Tunnel construction site with Governor-General, Major General Michael Jeffery who hosted a reception for the group at Admiralty House.

There is so much to be done in remote Australia where both the need and possibilities are unlimited for bright young engineers – for example, in housing, energy, water, sanitation and medical facilities, the Governor-General told the students.

The aim of IAESS is to boost the number of Indigenous engineers by encouraging high school students to study the discipline at university. According to Professor Tim Hesketh, former Associate Dean of Engineering (recently appointed to head the School of Electrical Engineering and Telecommunications): "The lack of Indigenous engineers disadvantages not only the Indigenous community who then have no voice about the design of their living areas, but all Australians who would benefit from their input into infrastructure such as drinking water, roads, environmental planning and communications."

The 2006 program culminated with a graduation dinner where Senator Concetta Fierravanti-Wells announced the establishment of a new \$30,000 IAESS/Engineering Aid scholarship to be supported with further funds from UNSW. Former Prime Minister Bob Hawke, the Patron of Engineering Aid, seized the moment to emphasise the significance of the program telling participants he could think of few other professions, apart from medicine, that genuinely

improved our standard of living.

Australia requires about 4000 Indigenous engineers to be representative of the population. It currently has 10, Mr Hawke said. "As a society, we won't be able to hold our heads up high and say we are a civilised country until there is no need for this summer school."

After listening to Gladstone student Brendan Eden describe why many Indigenous students leave school early, journalist Jeff McMullan discarded his prepared speech and spoke passionately about the need for all Australians to abandon the idea "that education is only for whitefellas".

"I can understand why people in Indigenous communities would say that learning is a whitefella thing," insisted Mr McMullan, a director of Ian Thorpe's Foundation for Youth Trust which works closely with Indigenous communities.

"But how can knowledge be a whitefella thing if you are part of the oldest continuous culture on earth? How else did the ancestors survive climate change, the Ice Age, and learn hunting and fishing techniques, if not through knowledge?"

Mr McMullan blamed the status quo on a two-way cultural failure, impressing upon the students his message that "the mind is the greatest weapon". ■



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