Clean water, clean clothes reap national engineering awards

by Lindy Brophy

A plastic and bamboo washing machine and a water filter won a national competition for two teams of UWA engineering students – against 14,000 competitors.

Our teams won three of the four prizes, including the overall champion, in the Engineers without Borders 2008 Challenge, presented in Melbourne in December.

But, despite beating 14,000 engineering students from 26 universities around Australia, the real winners are the people of Kandal Province, Cambodia, who will benefit from the students’ inventions.

All 632 students from the first year engineering unit, Introduction to Professional Engineering, entered the design competition, in 122 groups. Each team was given a list of 30 projects from which to choose.

UWA Team White invented a water purification system. Their supervisor, Chris Rowles (who shared the job with Brad Stappenbelt before he left UWA at the end of last year) said the problem with most of the water in Cambodia is that it is high in arsenic.

continued on page 2
"The water is clean and clear and has no odour but it can make people very sick," he said. "The students worked out a simple system of using rusty nails to leach the arsenic out of the water, then a filter of sand to clean it up. They built the filter which is fitted into a well, so the villagers just operate the pump as usual. Their system can clean about 200 litres an hour."

Team Black designed and built a simple hand-operated washing machine, with a plastic 44-gallon drum on a bamboo frame, with a bamboo structure inside, which is turned by a bamboo handle.

"The Easy Wash 4000 cuts washing time from two hours to 15 minutes," said Mr Rowles. "Given that it is usually the children who do the washing, this not only cuts out the drudgery and hard work, but allows them to go to school for another two hours a day."

Team White won the EWB Challenge Champion Award and the poster prize for their water filter, and Team Black won the BHP Billiton award for sustainable design and community engagement for the Easy Wash 4000.

Mr Rowles said winning the awards was particularly significant as they were academic prizes, not just design awards.

"The students had to write up to 20,000-word essays as part of the competition, which counted for 25 per cent of the total marks. Another 25 per cent was for the engineering of the invention, 25 per cent for the sustainability of the design and manufacture, and the final 25 per cent for the cultural appropriateness of the design.

"The students who did well exceeded our expectations," he said. "If you give them encouragement and space, they will absolutely floor you with what they come up with."

Mr Rowles ran three workshops last year to help the students with their designs: working with bamboo, water filters, and pumping mechanisms.

Team Black took their washing machine to the national finals in Melbourne and demonstrated it for the judges. Team White could not take their entry as the filter is made of brick, but they took a film of it, and one of the students, Tom Pope, took to the stage and drank a glass of water they had filtered and taken with them.

The winning team will go to Cambodia in January next year to work for two weeks implementing a project on which the students will start work later this semester.

Psychiatry academics Dr Johann Claassen (left), Dr Kellie Bennet (right) and Zaza Lyons (seated right) gauge the reaction to the diary from third-year students

If anybody is going to understand the power of incidental learning, it is psychiatry professionals.

Incidental learning, as used in advertising, is an effective strategy to improve the acquisition of knowledge. And it is this strategy that a teaching team from the School of Psychiatry and Clinical Neurosciences has used to produce a diary for third year medical students.

The paper (as opposed to on-line) diary has simple notes and colour diagrams on each weekly page providing the links of a part of the brain to certain behaviours and its possible associated clinical psychiatric condition.

The novel teaching tool has a Fascinating Brain Fact on every double page, some full-page diagrams, a recommended reading list and three pages of psychiatric terms.

The diary has been given, free, to every one of the 186 third year medical students. The team decided to target third year as it was the year that the undergraduates were joined by the graduate students.

"It is not a textbook," said Dr Johann Claassen, who came up with the idea of the diary. "Neuroscience textbooks tend to be thick and heavy, probably boring and not always up to date. This is a simple way of providing students with early exposure to clinical psychiatry. It integrates the jargon of psychiatry with everyday learning. The diary highlights the student’s journey from Neuroscience via Behavioural Science to Clinical Psychiatry."

The diary was paid for by Professor Osvaldo Almeida (of the West Australian Centre for Health and Ageing), whose introduction says: "You now have in your hands an instrument that offers you the opportunity of effortless long term learning if you use it regularly. Doesn’t that sound like music to your ears? So, enjoy the journey and remember to thank Johann for the free ride!"
Five endearing emus have won Len Zuk a new audience as well as the People’s Choice Prize at this year’s Sculpture by the Sea exhibition.

In a winning week, Len was also presented with a Chancellor’s Medal at a graduation ceremony, for his ‘outstanding contribution to the University over many years.’

Len is an artist, sculptor and tradesman with Building Services (Facilities Management). When he’s not loping around the campus in grey overalls, welding, fixing things and innovatively solving problems, he is scouting around looking for discarded materials for his larger than life sculptures.

He is as passionate a recycler as he is an artist and the emus that made up the winning creation Antipodean Recruits were made from old rubber tyres over galvanised steel frames.

The day before he was to receive his Chancellor’s Medal, he was searching the freeways and back lanes south of Perth, looking for blown out and abandoned tyres to make another two emus. All five from the exhibition have been sold and he has orders for another two.

Len’s career has spanned 25 years, with a highlight being his invitations to participate in the 2005 and the 2008 Beijing Biennale, China’s biggest art exhibition.

On his trip to Beijing last year, Len went out of his way to link his work and his presence at the Biennale to his connection with the University and he plans to find opportunities to build broader relationships with China for UWA.

He has used his twin passions for recycling and art to the direct benefit of the University, championing recycling in the workplace, and creating unique works of art with recycled materials, many of which, along with his paintings, adorn the School of Computer Science.

He almost didn’t enter this year’s Sculpture by the Sea. “I gave up – I’d been entering for years and hadn’t won anything. But my wife put a blank piece of paper in front of me just before I went to Beijing last year and said ‘Sign this’. I trust her completely, so I signed, and it was my entry for the exhibition.”

Len said he had started making emus at a workshop in Boddington years ago and saw the potential for something better. “So I made the frames from galvanised steel so they wouldn’t rust and started my quest for old tyres left by the side of the road.”

It turned out to be a winning combination.

It was a busy week for cyclists at UWA.

About 50 members of the UWA Bicycle Users Group (BUG) took part in the HBF Freeway Bike Hike for Asthma on Sunday March 22, then about 300 cyclists enjoyed the annual Bike Breakfast the following Wednesday.

The Bike Hike was a 60 kilometre ride from Kwinana to Joondalup and the BUG put on a breakfast at the end, in a marquee shared with the City of Joondalup and the Department of Planning and Infrastructure.

“Watch out! BUG on the freeway”

Transperth put on special bike trains every 15 minutes.

“We like to reward our cyclists,” said Matt Buckels, UWA’s transport planner, who also did the freeway ride. “More than 800 staff and students cycle to the Crawley campus each day and that saves UWA a lot of money in providing parking. So a couple of breakfasts is the least we can do.”

For information about the UWA BUG or any other cycling issues, call Matt Buckels on 6488 4693 or at matt.buckels@uwa.edu.au
The importance of accountability

For some months now, many staff across the University have been involved in our preparations for the visit next month of the Australian University Quality Agency (AUQA) as it conducts an audit of our activities.

More recently, we have taken the opportunity to initiate discussion with staff across the University about the importance of the audit process.

We have widely distributed the Performance Portfolio prepared for AUQA which outlines the University’s strategic direction and planning processes as well as emphasising our activities and performance in the two areas selected for audit – the student experience, and international activities.

Our own regular and ongoing review processes as well as the AUQA process are critically important to us for many reasons as we continue to pursue our ambition of achieving international excellence.

We have asked AUQA to recognise that our University has always placed a strong value on collegiality and collegial leadership and management. For us, this means a culture of consultative, transparent and evidence-based decision-making. It also means commitment to a performance culture, rather than a command culture, which values the professional autonomy and integrity of staff.

Our style of institutional management is therefore built upon setting clear strategic directions, systematically evaluating performance, and assigning appropriate levels of developed management autonomy to achieve operational goals and targets. It emphasises accountability rather than compliance.

Along with this approach, we have fundamental reference points for reviewing the outcomes of our activities.

Central among these is our “Cycle of Planning and Accountability”. Its significance is that it requires a disciplined and integrated approach to planning and accountability – and hence to quality assurance and performance management – by explicitly linking strategic and operational; academic and resource; and central and local planning and accountability.

It requires the systematic use of evidence-based performance evaluation at all levels, from individual staff to schools and faculties and the whole University.

These features are so embedded in University practice that they underpin all facets of management. The approach to the preparation of the pre-audit portfolio aligns well with AUQA’s preferred methodology. Our ‘P-model’ addresses principles, policies and processes, performance and priorities.

We will always welcome any review which will add value to the University’s institutional performance management and quality assurance.

The Performance Portfolio (February 2009) can be found at: www.qualityassurance.uwa.edu.au

Keen eye for a handover

The new managing director of the Lions Eye Institute, David Mackey, says he has big shoes to fill.

And the founder and retiring director Ian Constable says he is sure the Institute will continue in a safe pair of hands.

While their metaphors might focus on extremities, their research converges on eye disease, with Professor Mackey specialising in genetics.

He is a specialist ophthalmologist for genetic eye disease.

“The human genome project is revealing that genetics is involved with almost all aspects of disease, even events like trauma and infection,” Professor Mackey said.

“At LEI, I’ll continue my genetics work, but I’ll be involved in almost all areas of ophthalmology and eye care. I’m as interested in people and their eye problems as I am in working in the lab.

“Thanks to genetics, we have major advances in our knowledge of eye disease. We’re able to study the causes and work on treatments and our aim is to eradicate blinding eye disease,”

He said that, with blindness set to increase in the next 15 years, continued investigation and research was vital.

“The Lions Eye Institute is the place to be if you want to make a difference for people and their health,” he said.

Professor David Mackey
The western world is about to be hit by an ‘age quake’.

The Raine Medical Research Foundation’s Visiting Professor for 2009, Professor Lars Lidgren, has coined this phrase to emphasise the extent of the problem of an ageing global population.

“In Europe, 125 million people, or a quarter of the population of 500 million, will soon be sedentary in their old age,” Professor Lidgren said.

“The associated health problems, including osteoporosis and osteoarthritis, will have a huge impact on the economy. This is really going to hit us.”

But the leading orthopaedic surgeon has come out fighting. Rather than sitting back with his colleagues and preparing to treat the results of the age epidemic, Professor Lidgren met with the then UN Secretary-General Kofi Annan and the Director-General of the World Health Organisation in the late 1990s, then founded the WHO-sponsored Bone and Joint Decade nine years ago. He was at UWA last month to share his research findings with colleagues in the musculoskeletal field.

“One of the best things we’ve achieved over this decade is the coming together for the first time of patients, surgeons, rheumatologists, everybody concerned with the prevention and treatment of musculoskeletal conditions,” he said.

Professor Lidgren is the director of the WHO Collaborating Centre for Evidence-based Care in Musculoskeletal Disorders. (He is also Professor of Orthopaedics at Scandinavia’s biggest university, the University of Lund, Sweden; Chair of the Bone and Joint Decade and Chair of the Swedish Joint Registry.)

Musculoskeletal disorders are also the result of road traffic injuries, as well as the ageing process. “While the biggest impact in the western world is sedentary ageing, there is an absolute epidemic of road traffic trauma in Africa and China,” Professor Lidgren said.

“It was an Australian orthopaedic surgeon who introduced the idea of car seat belts, which had such a dramatic and positive effect on road trauma. And we are continuing that preventative approach in this decade.”

He said that musculoskeletal professionals attending a Bone and Joint Decade meeting in Mumbai last year took $200,000 worth of motorbike helmets and gave them out to motorcyclists in nearby Poona.

“Simple measures like that can and do make a huge difference,” he said.

Professor Lidgren was personally responsible for another simple measure that made a huge difference to hip and knee replacements.

“When the profession started doing total replacements back in the 1960s, one in 10 patients ended up with infections. Now, less than half a per cent of patients get infections.”

The dramatic improvement was due to Professor Lidgren’s regime of prophylactic antibiotics prior to surgery. The preventative system is now practised worldwide.

Professor Lidgren’s current research is in biomaterials, especially in relation to the interface of existing and new structurally-tailored surfaces, new biologically-active substances in calcium sulphate and phosphate bone replacements, and polymer degradation specifically in bearing surfaces.

He has also collaborated with his host Professor Ming Hao Zheng, the Director at the Centre for Orthopaedic Research, on the development of sea sponges from Australia as scaffolds for bone, cartilage and tendon repair and regeneration.
A major refurbishment of Engineering Lecture Theatre 1 has created a state-of-the-art collaborative teaching facility – at a saving of $175,000.

And it was all achieved through the efforts of Building Services and Teaching and Infrastructure Services, Facilities Management.

Connection to the access grid in the new lecture theatre allows communication via video and computer link between UWA and any site nationally or internationally that is also connected.

The possibilities for the future are almost limitless but employing UWA’s own building staff meant the bills were not! Neil Mason, Business Coordinator for Building Services said the estimated cost of the project (in July last year) was $765,000, based on the work being carried out by an external builder.

“But we actually saved $175,000 or about 25 per cent by carrying out the work internally,” Neil said. “And thanks to Building Services Manager Hugh McCaffrey the project was completed on time and under-budget – that’s unbelievable.”

This is a trend that has continued since refurbishment of lecture theatres over the summer break began three years ago.

“It’s a particularly impressive record when you consider we have our own Christmas shut-down, people taking leave and suppliers also shutting down,” he said.

Neil said that safety was paramount. “All contractors are inducted and the safety committee is active. We completed this job with only one minor incident.”

He said the staff who worked on the lecture theatre were proud to have their work recognised by the Vice-Chancellor, who attended a viewing and thank you event in late February.

The refurbishment included air conditioning, lighting, carpet and built-in desks. Intricate acoustic wall panelling was installed and the whole theatre repainted. The existing audio and visual equipment was upgraded and the theatre now has dual projection screens to enable communication via the newly-installed access grid.

The new facility will be used in a joint teaching initiative with Curtin University of Technology. It will be sponsored by the WA Energy Research Alliance for the collaborative delivery of petroleum engineering courses this year.

Garth Ilett, Project Manager Planning and Design, said Building Services staff had done exceptional work in refurbishing the theatre to such a high standard in a short time. This was the seventh lecture theatre to be refurbished by Building Services since the program to upgrade central teaching venues began in November 2005.
New chairs educating engineers

Our engineering graduates are still in demand, despite the economic downturn.

To further enhance their education, the Faculty of Engineering, Computing and Mathematics will soon have the University’s first Chair of Engineering Education.

Professor Caroline Baillie (pictured below) will join the University in June.

Professor Baillie’s most recent position was Professor and DuPont Canada Chair in Engineering Education Research and Development at Queen’s University, Ontario.

She has authored more than 160 publications in materials engineering and engineering education including 14 books.

And another Chair, the Woodside-Chevron Chair in Petroleum Geoscience, has also been created to address the industry’s need for even better tertiary education in petroleum geology and geophysics.

As Western Australia becomes a major hub for the petroleum industry, geophysicist David Lumley has been appointed as the inaugural Woodside-Chevron Chair in Petroleum Geoscience.

Professor Lumley (right), Director of Petroleum and Geoscience in the School of Earth and Environment, will develop the new Centre in Petroleum Geoscience into a world research leader.

Previously based in California as an energy and environment geoscience adviser, Professor Lumley has more than 20 years experience in research and operations.

The Centre in Petroleum Geoscience builds on existing strengths at UWA in biostratigraphy and sedimentology of petroleum basins and basin-scale tectonics and geodynamics and will work with UWA’s centres for Oil and Gas Engineering, Exploration Targeting and Tectonics Special Research as well as local industry.

German student Marlene Deines loves Australia so much she has come here twice on exchange.

Marlene is one of two winners of this year’s Gerald Frank Brown Scholarship, to promote the relationship between WA and the European Union.

The first time Marlene came to Australia on exchange, she was a high school student. This time, she is studying literature and language at Stuttgart University and is spending a semester at UWA studying Indigenous culture.

The other winner is Stelios Despotakis, who is studying engineering and mathematics at UWA for a year. He left his home in Greece to complete his degree at Bristol University and, after already spending second semester last year at UWA, he feels the Western Australian climate is more suited to him than the English weather.

Mana Kobayashi from Kansai Gaidai University has won the Endeavour Cheung Kong Student Mobility Subsidy. This exchange program is funded jointly by the Australian government and the Cheung Kong group of companies, based in Hong Kong.

Mana is studying the Indonesian language and international relations and will be at UWA for a year.

The scholarships were presented at the beginning of the sixth annual Student Exchange Fair, at which 13 universities and institutions exhibited, encouraging UWA students to study abroad.

It is the first time the European Commission to Australia and New Zealand has taken part in the fair and its representatives were joined by education experts from European, US and Singapore universities, the French Embassy, the German Academic Exchange Service, EducationUSA and the Australian Institute for Mobility Overseas.

Exchange students Stelios Despotakis, Mana Kobayashi and Marlene Deines get to know each other at the start of the Student Exchange Fair.
Hypoglycaemia in children with diabetes, the wellbeing of cancer patients and the best use for a dining table were all studied in the Bulsara household over the past several years.

Husband and wife Max and Caroline Bulsara (pictured above) received their PhDs together last week, after hundreds of weekends working side by side in their Bullcreek dining room.

“People asked us how we managed to keep working and studying and running a home with our three grown-up children living with us,” said Caroline.

“But it was very motivating having both of us studying at the same time. I must admit we had fewer dinner parties over the past few years, but I actually found cooking and the normalcy of family life kept me sane.”

Max began his PhD early in 2002. “Caroline was talking about doing a Masters but I had a cunning plan – to get her to agree to doing a PhD, so we could work together and encourage each other,” he said. Caroline started her PhD later that year and they submitted towards the middle of last year, within a week of each other.

While he was writing papers for his thesis, Max (who passed with distinction) was simultaneously supervising two PhD students. “Biostatistics is in demand and there are just a few of us to supervise these students, so I had to get special permission from the VC. Now I have my own PhD, it will be easier.”

His work was on the epidemiology of severe hypoglycaemia in children and adolescents with Type 1 diabetes. He was supervised by Professor D’Arcy Holman (Population Health), Clinical Associate Professor Tim Jones and Adjunct Professor Nick De Klerk, both from the Telethon Institute for Child Health.

Caroline’s research was into the role of empowerment in the wellbeing of cancer patients. It was supervised by Professor Jon Emery (General Practice), Dr Irene Styles (Education) and Clinical Associate Professor David Joske (Medicine and Pharmacology). She started her work under the supervision of Dr Alison Ward (General Practice) who left UWA for Oxford University soon after the research began.

“I loved the qualitative work, interviewing the patients,” Caroline said. “It might sound twee, but I learned so much from them about the priorities in life.

“I had to develop a scale to measure empowerment and that quantitative work has already had several queries from research groups at universities overseas, particularly in the area of psychiatric medicine and psychosocial research. I’m so proud of that, even though I’m still working on the full validation of the scale,” she said.

Her husband’s work too is already being used internationally.

“I wrote to one of the examiners thanking him for his comments and he replied to me from the US, saying that he knew my work before he was given my thesis to mark, and that he was already using some of my papers in his lectures,” Max said. “That amazed me.”

The Bulsaras met while doing undergraduate studies in England (Max from Zambia, Caroline from Belfast). They first came to UWA in 1991 and have both been working here since 1997. They said they had had great support from the University while working and studying.

PhDs on the menu

Hypoglycaemia in children with diabetes, the wellbeing of cancer patients ... and the best use for a dining table were all studied in the Bulsara household over the past several years.

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“It was very motivating having both of us studying at the same time ...”

Both of them kept working at UWA fulltime, Max as a research fellow in the School of Population Health, and Caroline as a lecturer in General Practice (Primary Health Care Research Evaluation and Development).

“People asked us how we managed to keep working and studying and running a home with our three grown-up children living with us,” said Caroline.

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The number of hours they devote to mathematics education is one sum the Stoyanovs don’t want to work out.

Dr Lucho Stoyanov and his wife Dr Elena Stoyanova (pictured) have had their passion and commitment to teaching maths rewar ded with a national prize, the BH Neumann award from the Australians Mathematics Trust.

A maximum of three awards are made across Australia each year and this year, two of them have gone to the Stoyanovs. Lucho is an Associate Professor in the School of Mathematics and Statistics. Elena works for the State Department of Education and Training.

After their 12-hour days on the campus and in the city, the Stoyanovs relax with a glass of wine and “often talk about education”. And most school and university holidays are spent organising extra curricular maths for bright school students.

They set up the UWA Academy for Young Mathematicians in 1995 and Lucho is still the director. Elena is involved with Mathematics Olympiads and was the WA Director of the Australian Mathematics Olympiad Committee for seven years to 2005. Over many years they ran the WA Mathematics Training Seminars, fortnightly enrichment sessions for elite students taking part in the maths olympiads. Lucho coached Hale School student Peter McNamara several years ago, helping him to win two Olympiad gold medals.

The BH Neumann award is for sustained service to the enrichment of mathematics learning in Australia.

“I think maths is the easiest core (school) subject ... the difficult part is for the teachers to make it simple.”

The Stoyanovs met in their home of Bulgaria when they were both studying undergraduate mathematics. They were actively involved with the International Maths Olympiad and in 1988, Elena was the deputy leader of the Bulgarian team which came to Canberra the first time Australia hosted the event.

“Little did I know that, in five years, I would call Australia home,” she said.

“I think maths is the easiest core (school) subject,” she said. “The difficult part is for the teachers to make it simple.”

Lucho said he thought primary school maths was far too easy. “For good students, it is too boring,” he said. His wife agreed. “This is what inspired me to organise primary school maths enrichment classes at Curtin University of Technology, when I was a teacher at Rossmoyne Senior High School,” she said.

“Sometimes extending a child just needs passion and devotion.”

But Lucho said it was difficult to get passionate about first year university mathematics.

“The classes are so big and most of the students are there not because they love maths, but they have to do the unit as part of their science or engineering or commerce courses.

“In subsequent years, you see students who are really inclined towards mathematics and that’s totally different.”

He said that his students probably saw him as serious and unsmiling. But Elena explained that smiling was not part of their culture in Bulgaria.

“When I came here, strangers would greet me in the street with a smile and I found it quite strange,” she said. “Then I started smiling back, and it makes you feel good.”

But her husband insists he only smiles if there is something smile about, and that does not usually include his work.

“But mathematicians do have good jokes – very witty and elegant ones,” they said.
A tower of strength for teachers

It’s hardly a fairytale existence in Winthrop Tower, high above the campus.

But Sally Sandover does have her hands on something akin to a pot of gold for academics who climb the stairs to her office, where she runs the UWA Australian Learning and Teaching Council (ALTC) Support Office.

Associate Professor Sandover and Project Officer Andrea Fraser provide support for university teachers who are after some national funding for their teaching projects.

“There is up to $350,000 offered by the ALTC in competitive grants, leadership support, priority projects and fellowships,” A/Professor Sandover said. “But most people at UWA have an Australian Research Council/National Health and Medical Research Council mindset when it comes to applying for grants. Many don’t think about teaching as a valid area of research.

“The council is interested in what you are going to do with your research, how it will impact on your teaching and learning, so evaluation and dissemination are crucial components of grant applications.”

And the benefit goes further than an individual or group winning a grant or fellowship.

“If people are doing research into teaching and learning, it will start to have an impact on the way they teach,” said A/Professor Sandover, who is the academic co-ordinator of the UWA ALTC Support Office in the Vice-Chancellorcy.

Another important area of assistance is ALTC award nominations. A/Professor Sandover works closely with UWA nominees to help them become more competitive in the national awards program.

“We need to start looking at developing an early career leadership group, so new teachers can be competitive for these grants in three or four years’ time. It requires a mind shift, a philosophy of change towards teaching and learning.”

She said UWA had already done particularly well making that shift, being one of the most successful in national ALTC teaching awards in 2008.

“But we need to keep the momentum going. And that’s the value of a dedicated office to support and advise academics on how to go about it,” she said.

Carol Newton-Smith, Medical and Dental Librarian, said A/Professor Sandover’s support had been invaluable in helping her team evaluate a new on-line postgraduate training program.

But it is not just high-end teaching that can benefit. One of the ALTC’s priority areas is the first year experience, underlining the importance of good teaching for new undergraduates.

“We have to be constantly evolving teaching and learning practice,” A/Professor Sandover said. “It’s crucial that we don’t get to a point and say ‘Now I have the perfect curriculum’, because, by then it’s time to start again!”

The ALTC support staff are eager to hear from anybody who wants advice on developing teaching and learning programs.

They are in Room T2 Winthrop Tower. A/Professor Sally Sandover is on 6488 5571 or sally.sandover@uwa.edu.au

Andrea Fraser is on 6488 5572 or andrea.fraser@uwa.edu.au

“If people are doing research into teaching and learning, it will start to have an impact on the way they teach”
Harmony Day was an opportunity for UWA to be proud of its equity and diversity programs and its legislated intolerance of racism.

Senior Deputy Vice-Chancellor Professor Bill Louden told 130 staff and students gathered in the Tropical Grove that it was important that one of the gifts this University gives to its young students is the ability to live in racial harmony with a culturally diverse community.

But, as senior Law lecturer Dr Daniel Stepniak said: “We have a long way to go before we come to grips with covert racism.”

Four Law students, all taking part in Dr Stepniak’s course *Law and Contemporary Social Issues*, took to the stage to talk about the racial autobiographies they had written during the course and the covert racism they had experienced while students at UWA. The event was billed as *Courageous Conversations about Race*.

Ebony, a 20-year-old Aboriginal-African-American, said she did not want to assimilate into white society and lose her identity and culture. “But it is very hard to deal with the way people look at me when I go into a shop, assuming I am going to steal something, just because of the colour of my skin.”

Michael (23) has an Indian-Malaysian father and an Anglo-Australian mother and recalled being in a car with other students in their first year at UWA. “They were having a go at Asians and I said ‘Hey, I’m Asian’ and they said ‘Oh we don’t mean you’. I just shut up, glad that they didn’t mean me, but now, some years later, I would have the confidence to speak up and defend other Asian people.”

Katie is a 19-year-old Anglo-Australian and said that her biggest worry was that she would not have anything to say in her racial autobiography. “But I found that race affects everybody, and now I think this unit should be compulsory for every student.”

Dennis (28) was born in Scotland to a white Irish mother a black Indian-Malaysian father and remembers being called a ‘Paki’ at the age of six, in the playground of a primary school in Glasgow. “I didn’t even know what a Paki was,” he said. “But later in life I found that I was constantly negatively stereotyped by authority figures, such as airport security guards and it gets very hard to deal with.”

After a discussion facilitated by Reverend Richard Pengelley, chaplain at St George’s and a lecturer in Sports Science, Exercise and Health, Ebony’s father, Dallas Hill, stood up in the audience and exhorted young people to fight against racism.

“It’s too late for me. Our generation is shot but you kids are the only ones who can get rid of racism,” he said.

Ebony said she was going to teach her children that they ARE different from the white majority in WA, but to be proud of those differences and to love other people for their differences. “To ignore the difference and pretend it isn’t there is not the way to deal with it – that’s just ignorant,” she said.

Dr Stepniak teaches his course with Malcolm Fialho, from Equity and Diversity. Eleven students’ racial autobiographies were printed and distributed to people who attended the Harmony Day event.
A new voting system for blind people should be in place for the next State election, thanks to the persistence of a UWA staff member.

Greg Madson, the receptionist for the Future Farm Industries CRC and the Centre for Legumes in Mediterranean Agriculture, has been blind for more than 20 years.

The last time he voted in a State election was about 1985, when he could still see.

“in State elections, if you’re blind or vision-impaired, you can ask a scrutineer to help you cast your vote, but that person is a stranger and it goes against the idea of being able to vote in a secret ballot,” Greg said. “That’s what our democracy is based on, so I have always chosen to register my protest by not voting.”

Each time he has chosen not to vote, Mr Madson has received a ‘please explain’ letter from the State Electoral Commission and each time he has outlined his reasons.

But this time (following the September 6, 2008 election) he asked the Electoral Commissioner Warwick Gately why WA voters were not able to use the Electronic Assisted Voting (EAV) system, used by the Federal government (for the first time in November 2007), the ACT and Victoria.

“I call on you to change this situation,” he wrote, “... and allow me and other people who are blind or vision-impaired an opportunity to exercise our natural democratic right to cast a secret, independent and verifyable vote.”

Mr Madson invoked the recently ratified Convention on the Rights of Persons with Disabilities, Article 29: “State parties shall guarantee to persons with disabilities political rights ... by ensuring that voting procedures, facilities and materials are appropriate, accessible and easy to understand and use; and by protecting the right of persons with disabilities to vote by secret ballot in elections and public referendums.”

Mr Gately responded saying the Electoral Commission was intending to trial a system that enabled an elector to mark a ballot paper in private on a computer by either using voice prompts through headphones or magnifying the ballot paper on screen.

“I will work to have such a system in place for the 2013 State general election,” he wrote.

Mr Madson said he was unsure whether that system was the same one used by the Federal Government. “If so, then it could be expanded to include facilities for people whose first language is not English, for people who can’t write because they don’t have arms or hands, for people who are dyslexic. It would also assist soldiers who are serving overseas, people who are in Antarctica or in remote bush locations, anybody for whom marking a ballot paper is physically impossible.”

He said the Electoral Commissioner had not indicated what would happen during the referendum on daylight saving, due soon.
Physics guru Jim Williams has been awarded the oldest and most highly regarded award from the Indian Association for the Cultivation of Science (IACS).

Professor Williams received the Endowed Hare Professorial Lecture Award for his contributions to physics and his promotion of science.

The award was established to honour the work of David Hare who laid the foundations for broad participation in education which led ultimately to the establishment of the IACS.

Professor Williams’ lecture on Angular Momentum Phenomena in Atomic Physics was delivered at the IACS, Kolkata. It traced how the spin of electrons and positrons has shaped our knowledge of the structure of materials.

During his long career Professor Williams has explored atomic and quantum physics, always spurred on by the challenges of problem solving and designing new instrumentation. Currently his research group is considering the angular momentum of positrons to answer questions such as: can a spinning positron track a radio-pharmaceutical transported in an artery? Will a spinning positron make PET scanning more sensitive and accurate?

Professor Williams said it is easy to generate excitement in India about physics.

“You just ask: Why does a moving bicycle not fall over? Why does the flight path of a spinning cricket ball curve?”

Professor Williams said it was it is easy to generate excitement in India about physics.

“India’s 11th Five Year Plan proposes a huge investment in science and technology research. The country has a very young population, with 70 per cent being younger than 29, and some tertiary institutions of high reputation across India are unable to cater to the rising demand for places.”

If India and UWA were people, you would say they were close to being best friends. The University’s relationship with the rapidly-developing sub-continent has deepened this year, with a dramatic increase in student numbers and two prestigious Indian awards going to UWA academics.

The pioneer of Australia’s chickpea industry, Kadambot Siddique, recently won a gold medal from the Indian Society of Pulse Research and Development.

Professor Siddique’s medal was presented in Kanpur by Dr APJ Abdul Kalam, a former President of India.

The award honoured Professor Siddique’s pioneering research at UWA into pulses for human consumption.

Until Professor Siddique began exploring their potential in 1981, there was no real pulse industry in Australia.

The Australian chickpea industry is now valued at more than $200 million annually. Professor Siddique’s work also created research links between UWA and Turkey, Bangladesh, East Timor, Iraq, Oman, China, India, the US and Canada.

“I am humbled and delighted to receive this award,” Professor Siddique said. “It also recognises the important contributions made by a team of scientists and postgraduate students with whom I have had the privilege to work and collaborate.”

Possibly encouraged by research connections, the number of Indian students enrolling at UWA has soared in the past four years, from four enrolments in 2005 to 250 in 2009.

Most students are enrolled in postgraduate courses in areas such as oil and gas engineering and engineering communications technology. Masters in micro-electronics, public health, infectious disease and forensic science are also popular.

“UWA has a very scholarly profile in India due to a high number of partial scholarship offerings,” Professor Sharda said. “There is a large Indian community in Perth, of about 30,000 Indian-origin families, with Indian restaurants and temples – and I believe this makes a difference.”

Director of South Asia Relations, Professor Hema Sharda, said awareness of UWA, affordability and closeness to home were some of the reasons why the University was increasingly popular with Indian students.

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“You just ask: Why does a moving bicycle not fall over? Why does the flight path of a spinning cricket ball curve?”

He said he was delighted to receive the award. “It is a wonderful recognition for more than 40 years’ interaction with the Asian region, and particularly with India. It has been an interesting experience to interact with physicists of all ages.”

Our close connection with the sub-continent
Musical treats on campus

Every aspect of classical music, from chamber music to opera, from a piano concerto to an orchestral and choral explosion, is featured on campus this year.

The School of Music has always run a varied program of concerts but this year, for the first time, they have brought details of all their seasons together in a beautiful brochure and the combined events are very impressive.

In UMS presents…2009 the signature season is Artistry! (formerly the University Music Society season). It began in March with a performance by the Australian Brass Quintet and the next event will be Beethoven 9, a presentation of Beethoven’s celebrated ninth symphony with the UWA Orchestra and Symphonic Chorus joined by the Winthrop Singers and three high school choirs to ‘lilt the roof off Winthrop Hall’ on April 24.

A chamber music program from Schubert and Prokofiev on May 31 will feature UWA’s Paul Wright on violin, with Andrew Rootes, a former member of the Vienna Symphony Orchestra, on double bass.

Musicians will share the stage with computer-generated sounds in Imagining Spaces at the Octagon Theatre on August 15. Then, in a complete change, UWA’s senior music students in string and wind will perform Mozart and Mendelssohn on September 5.

A concerto night, featuring the winner of the annual Vose Memorial Prize, and Mozart’s Piano Concerto no 23 will wind up the Artistry! season on October 2.

A season of piano recitals (Keyed Up!), free lunchtime concerts, music outreach programs and special events will fill 2009 with music.

A highlight will be a dawn choral recital from the top of Winthrop Tower on the first day of Spring, September 1, performed by the Winthrop Singers.

The brochure is available from the School of Music and bookings for all events can be made at BOCS at the Octagon Theatre.

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NOTICES

UWA NEWS EARLY EASTER EDITION

The deadline for editorial and advertising copy for the next issue of UWAnews will be a day early, as the working week is cut short by the Easter holiday. This new deadline is Tuesday April 7. This issue will be published on Monday April 20.

PHILOSOPHY CAFE

Tuesday, April 7 from 7.30pm
Fairweather's (front bar, the old Fremantle Hotel) Corner of High Street and Cliff Street, Fremantle. The question for discussion is: “Are We All Irrational?”
Check out the reading for the Cafe via the link on our website: http://www.philosophywa.com or directly at http://teach.valdosta.edu/chjames/jcs.htm

Everyone is Welcome!!! Bring a friend and join us for an interesting philosophical exchange.

Things to consider: What sort of reasoning would you offer to support your claim? Is there any kind of evidence that would be acceptable to another critical person.
How would you justify your response to any objections raised?

REDUNDANT EQUIPMENT

Schools are reminded that all university equipment available for sale must be advertised in UWA news. Receipts should be Peoplesoft account coded 490 (computing with barcode), 491 (non-computing with barcode) or 493 (items with no barcode). If equipment has an existing barcode please contact extension 3219 for details. Preference will be given to School bids. Please identify your bid as School or private.

2005 IMAC G5, 20 inch with i5gth/2.1ghz, 20 available. $500. 4 yrs old. Good condition.
2004, IMAC G5, 20 inch/1.8ghz, 10 available. $400. 5 yrs old. Good condition.
2004, IMAC G5, 20 inch/1.8ghz/dim screen, 1 available. $300. 5 yrs old. Servicable.
2004, IMAC G5, 17 inch/1.8ghz, 9 available. $300. 5 yrs old. Servicable.
2003 POWERBOOK G4, 15 inch/ 1.67ghz, 3 available. $500. 4 yrs old. Good condition.
2003 POWERBOOK G4, 15 inch/1.25ghz, 2 available. $300. 5 yrs old. Good condition.
2002 POWERBOOK G4, 15 inch/ 667mhz, 1 available. $150. 7 yrs old. Servicable.
2003, POWERBOOK G4, 15 inch/ faulty, 2 available. $50. 6 yrs old. Unservicable.
2006, POWER MAC G5, Quad 2.5ghz, 1 available. $100. 3 yrs old. Good condition.
2005, POWER MAC G5, Dual 1.8ghz, 400, 5 available. $400. 4 yrs old. Good condition.
2002, POWER MAC G4, Dual 1.25ghz, 2 available. $150. 6 yrs old. Good condition.
2002, POWER MAC G4, Dual 1ghz, 1 available. $50. 7 yrs old. Good condition.
2002, POWER MAC G4, Dual 867mhz, 1 available. $20. 7 yrs old. Servicable.
2007, SONY VAIO, VGN-TX7G-P/B, 1 available. $1000. 2 yrs old. Good condition.
2006, PALM TREO 680, 1 available. $150. 3 yrs old. Servicable.
2006, PALM TUNGSTEN TX W1, 2 available. $200. 3 yrs old. Servicable.

For all of the above contact Arts, Humanities and Social Sciences Email: corel@arts.uwa.edu.au Phone: extension 2196

RESEARCH GRANTS AND CONTRACTS

ARC LINKAGE INFRASTRUCTURE EQUIPMENT FACILITIES

Prof David Sampson, Winthrop
Prof Mark Barley, Dr Stephen Barnes, Dr Travis Barnard, Prof Peter Cowood, Dr James Cleverley, Prof Hui Chua, Prof Robert Gilkes, A/Prof Brendan Griffin, Prof Steffen Hapemann, Dr Steven Hinkler, Dr Robert Hough, Dr Matt Kilburn, Prof Yiong Liu, A/Prof David Mansfield, Dr Thompson McCook, Prof Neil McNaughton, Dr Janet Mulhing, Prof Birger Rasmussen, Winthrop Prof Colin Raston, Dr Alexandra Suvorova, Prof Arne van Riessen, Prof Simon Wilde, Mechanical Engineering, Biomedical, Biomolecular and Chemical Sciences, Microscopy, Characterisation Ctr, Earth and Geographical Sciences, Murdoch University, Edith Cowan University, QUT, Curtin University Technology, CSIRO, CSIRO Exploration & Mining, Alcoa World Alumina: “The Nanoscale Characterisation Centre of WA Electron Microprobe Facility” – $800,000 (2009)
Prof Timothy St Pierre, Prof Ralph Martins, Dr Steven Smith, Prof Susan Berners-Price, Prof Sarah Dunlop, Prof Alan Harvey, Winthrop Prof Caroline Raston, Prof Donald Robertson, Prof George Yeoh, Dr Ben Corry, Dr Lindy Fitzgerald, Dr Michael House, A/Prof George Koutsantonis, A/Prof Lee-Yong Lim, Dr Mohamed Makha, Dr Daniella Meyrick, Dr Giles Plant, Research Assistant Prof Jennifer Rodger, Dr Marc Ruitenbeek, Dr Killuigdi Swaminathana-Iyer, Dr Giuseppe Verdille, Research A/Prof Vincent Wallace, Dr Robert Woodward, Physics, Biomedical, Biomolecular and Chemical Sciences, Anatomy and Human Biology, Animal Biology, Edith Cowan University: “Nuclear Magnetic Resonance Microimaging and Relaxometry Facility” – $108,481 (2009)

ADVANCED GEOMECHANICS


FUTURE FARM INDUSTRIES CRC EX GRDC

Prof Timothy Colmer, Prof Edward Barrett-Lenard, Dr Rafiq Islam, Plant Biology, “Development of a Salt & Waterlogging Tolerant Wheat” – $114,650 (2010-11)

GREAT SOUTHERN DEVELOPMENT COMMISSION

Dr Geoff Woodall, Centre of Excellence in Natural Resource Management: ‘Development of Native Plant Industries for an Innovative Sustainable and Profitable Great Southern Region’ – $30,000 (2009)

MEDICAL & HEALTH RESEARCH INFRASTRUCTURE FUND

Dr Charlene Kahler, Biomedical, Biomolecular and Chemical Sciences: ‘MHRF Round 12 – Kahler’ – $10,977 (2008)

NHMRC CAREER DEVELOPMENT AWARDS

Dr Meri Tulic, Paediatrics and Child Health: “Ontogeny of Toll (TLR) Function in Normal and Allergic Children: The Impact of Microbial-Rich Environments” – $370,000 (2009-12)

PACKARD HUMANITIES INSTITUTE

Prof. David Kennedy, Aerial Archaeology in Jordan – AU$98,426.07 (2009)

SOUTH WEST CATCHMENTS COUNCIL (NHT)

Dr Evan Harvey, Ms Heather Taylor, A/Prof Gary Kendrick, Dr Jessica Martin, Plant Biology, “Nuclear Magnetic resonance Microimaging and Relaxometry for Marine Futures: Benchmark Study for the Southwest” – $163,284 (2009)

UNIVERSITY OF QUEENSLAND EX ARC

Dr Andrew Neil, Dr Gillian Yeo, Dr Elizabeth Braid, UWA Business School: “Developing & Testing a Dynamic Model of the Proximal & Distal Motivational Processes Responsible for the Regulation of Task Directed Effort” – $31,109 (2009)

UNIVERSITY OF QUEENSLAND EX ARC LIF

Prof Richard Fotheringham, Prof David Carter, Prof John Hay, Prof Joanne Tompkins, Dr Leigh Dale, Dr Euan Harvey, Ms Heather Taylor, Joanne Tompkins, Dr Leigh Dale, A/Prof Gary Kendrick, Dr Jessica Martin, Plant Biology, “Developing a 3D Movie Generation Facility – $108,481 (2009)

UNIVERSITY OF QUEENSLAND EX ARC RIEF

Prof Richard Fotheringham, Prof David Carter, Prof John Hay, Prof Joanne Tompkins, Dr Leigh Dale, Dr Euan Harvey, Ms Heather Taylor, Joanne Tompkins, Dr Leigh Dale, A/Prof Gary Kendrick, Dr Jessica Martin, Plant Biology, “Developing & Testing a Dynamic Model of the Proximal & Distal Motivational Processes Responsible for the Regulation of Task Directed Effort” – $31,109 (2009)

UNIVERSITY OF QUEENSLAND EX ARC RIEF

Prof Richard Fotheringham, Prof David Carter, Prof John Hay, Prof Joanne Tompkins, Dr Leigh Dale, Dr Euan Harvey, Ms Heather Taylor, Joanne Tompkins, Dr Leigh Dale, A/Prof Gary Kendrick, Dr Jessica Martin, Plant Biology, “Developing a 3D Movie Generation Facility – $108,481 (2009)

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Every 10 years the University prepares a Master Plan for the Crawley campus to guide future development and to meet our strategic plan and operational priorities. The main aim is to ensure there is sufficient land to accommodate teaching, research and other needs over the next decade; and to give the University the best advantage to meet external, mostly unforeseeable, situations over the next 50 years.

This year, as FM prepares Campus Plan 2010, we have to consider the physical planning consequences of issues such as declining University income from Government, changing learning environments, skills shortages, new technologies, climate change, fossil fuel depletion as well as the ongoing demand for additional accommodation and services for expanding student numbers.

University planners faced equally daunting problems half a century ago, and reflecting on these places today’s difficulties into perspective.

On his first visit in 1952, Gordon Stephenson (Foundation Professor of Architecture and Consultant Architect during the 50s and 60s) found a campus with few significant buildings. Increased migration after World War II, and the previous neglect of universities, hastened the need for a major building program, and Reid Library, Chemistry, Arts, Physics and Engineering were constructed in the 1960s. Good campus planning meant the qualities of the campus were maintained during this expansion.

Stephenson led the planning of WA’s only University, predicted to have 7,000 students by 1984. There was also the need to create more parking as trams were being phased out. The car was starting to have an impact on campus planning, though we set a 10 per cent maximum campus area dedicated to roads and parking.

More staff and students lived in the western suburbs and around Crawley then, though only Currie Hall and St. George’s College existed as residential halls. The ‘pub’ (University House) at 1 Cooper Street (unlicensed premises opened in 1959: you brought along your own bottle of wine) was a meeting place for staff. Crawley was virtually a self-contained village, with a sense of belonging for staff, students, visitors and nearby residents.

Though there were plenty of building sites remaining on campus, Stephenson, and his successor Arthur Bunbury, had the foresight to see the day when this would not be the case, and a program of acquiring properties between campus and Broadway started in the 1960s.

As in the 1950s, today’s Australian universities have endured a decade and more of reduced Government funding and are looking forward to a period of expansion, despite current financial difficulties. The Bradley Review has flagged the need to increase tertiary participation from 29 per cent to 40 per cent.

We need to have more investment in universities to increase the building stock, and we may have to consider other means of building procurement if Government funding remains inadequate.

Parking bays were capped at 4,250 in Campus Plan 2000, no matter how the student population increased, and the emphasis placed on using public transport. There are now five scheduled bus services from Perth and one from Subiaco, two of which are subsidised by the University. The previous Minister for Planning proposed the return of light rail, and the chosen routes were little different from the tramlines of the 1950s.

We are reaching a point where the main Crawley campus has no major building sites. Thanks to Stephenson and others, the University now owns 40 per cent of off-campus properties between Crawley campus and Broadway, and expansion into that area will increase.

The University wishes to pursue a residential university model like Yale and Harvard, requiring students to live on or near campus. We are planning to provide 300 student bedrooms near campus, as well as increasing the number of beds at residential colleges.

Assuming we choose not to become avatars in a university cyberspace, there is an opportunity to create a 24/7 learning village here at Crawley, and get back that personal sense of belonging to a community.