

Campus News

UNIVERSITY OF WOLLONGONG

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STRIKES GOLD** Page 4



PROFILE
Anne Pauwels **PAGE 5**

UOW triumphs in research grants

The University of Wollongong (UOW) has confirmed its place as one of the nation's leading research universities, outperforming significantly larger institutions in the latest round of hotly contested Australian Research Council (ARC) grants.

Proving size was no barrier to research excellence, UOW secured funding for two out of seven available Key Centres, matching the University of Sydney's effort.

The successful proposals were a Smart Foods Centre in the Faculty of Health and Behavioural Sciences and a centre examining global migratory issues in the Faculty of Arts.

In the ARC's Research Infrastructure Equipment and Facilities (RIEF) grants, UOW ranked fifth, behind the universities of Sydney, Melbourne, Queensland and the ANU.

UOW also ranked fifth in Strategic Partnership in Industry Research (SPIRT) grants, ahead of significantly larger institutions.

UOW ranked ninth nationally for ARC Fellowships, gaining four.

The universities of Wollongong and Newcastle jointly secured Key Centre funding to establish the Centre for Asia Pacific Social

Transformation Studies (CAPSTRANS), from 1999-2004.

It will respond to the needs of Australian business, government and other stakeholders for a high-quality research and teaching capacity dedicated to understanding social change in the Asia Pacific region and its consequences for Australia.

The Director of CAPSTRANS will be UOW's Migration and Multicultural Studies program director Professor Stephen Castles.

Professor Castles has earned an international reputation in this field of study and has a long record of policy advice and consultancy for the UN, governments and business. He is the co-ordinator of the Asia Pacific Migration Research Network: a 12-country research network associated with the UNESCO-MOST (Management of Social Transformations) program.

The Deputy Director will be Associate Professor Charles Stahl (University of Newcastle), a prominent scholar of human resource development issues in Asia and an adviser for APEC and other international bodies.

About 30 social scientists, including economists, sociologists, geographers, historians and

• Continued Page 11

Kirsten walks dog whelk from



ancient Rome to Wollongong

From fashion savvy ancient Romans, to the poetry of Browning and the sex life of shellfish, a casual conversation with Kirsten Benkendorff can go anywhere.

The young scientist, pictured above, quotes Browning with aplomb and good reason.

When Browning wrote:

*"for who has not heard how
Tyrian shells enclose the blue?
That dye of dyes
whereof one drop works miracles
and colored like Astarte's eyes
raw silk the merchant sells..."*

he was referring to a mollusc Kirsten has come to know better than most. *Diacathais orbita*, or Dog Whelk, is found along the Illawarra coast. It was also valued in the Roman empire as a source of deep blue or purple dye, still known today as Tyrian purple.

The dye was rare, difficult to extract and consequently, at times, worth more than gold to the Romans.

Its rich colour was only activated when exposed to sunlight.

Modern synthesised copies mean the molluscs are safe these days from plundering Romans but they are still vulnerable to pollution and destruction of habitat.

And it has taken Kirsten to bring new meaning to Browning's use of the word 'miracle'.

Kirsten hopes the bio-chemical precursor to Tyrian purple she has isolated in the egg capsules of the mollusc will 'work miracles', not just as a natural medicine, but as an impetus to protect endangered invertebrates everywhere.

See story page 4.

Season's greetings . . .

I would like to take this opportunity in the last *Campus News* for 1998 to wish all our readers a happy and safe Christmas/New Year period.

Thank you to everybody who forwarded their story ideas. The next issue will be published at the start of the academic year in 1999.

Bernie Goldie, Editor

'Hard call' pays off: UOW the State's best education exporter

Five and 10-year investment plans, links with the World Bank, AusAid and the OECD, are not concepts most people usually associate with the tertiary sector.

But such planning and relationships have, for almost a decade, been part of the strategic direction of the University of Wollongong (UOW).

The success of this approach was publicly acknowledged in October, when UOW won the Austrade-sponsored 1998 Education Export Award in the NSW Premier's Awards.

UOW consequently reached the national final on 1 December, where RMIT was announced the Australian export award winner in the education category at a gala dinner at Sydney's Star City Complex.

UOW won the NSW award for its outstanding export achievement in education, education services, facilities, expertise and curriculum.

The award recognised substantial achievement in the University's overseas earnings in 1997, which grew by more than 35 per cent.

"Innovation and risk are well-known terms for the University of Wollongong," according to Mr Jim Langridge, the Vice-Principal (International) and the Managing Director of the Illawarra

Technology Corporation (ITC), which is the University's private company.

UOW was the first university to establish a business relationship with the World Bank.

While other universities work with the World Bank, UOW remains the bank's largest partner in the Australian tertiary sector.

ITC adapts education products for offshore and distance delivery and tenders for international education and training projects.

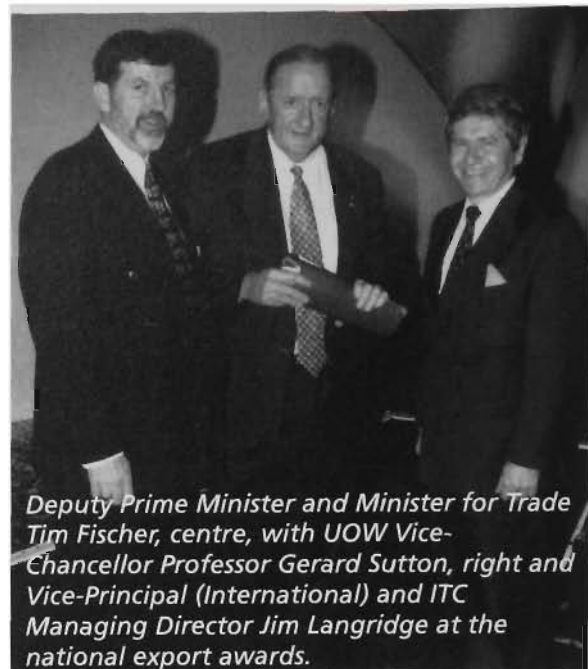
It has established strong links with education organisations and industry groups here and overseas through its base in Wollongong and offices in Sydney, Bangkok, Dubai and Tokyo.

ITC also works with the Asian Development Bank, UN agencies and the Asian private sector.

In 1993, UOW became the world's first university to establish itself in the United Arab Emirates, and its Dubai campus now delivers degree courses to 300 Middle East clients.

University amalgamations under the Dawkins administration, in the late 80s, were a watershed for higher education.

While UOW was not part of this process, as a direct result, its size in relation to other universities was significantly reduced.



Deputy Prime Minister and Minister for Trade Tim Fischer, centre, with UOW Vice-Chancellor Professor Gerard Sutton, right and Vice-Principal (International) and ITC Managing Director Jim Langridge at the national export awards.

In 1991 the University, through the ITC, took the strategic decision to compete in the difficult overseas education marketplace.

"We decided on this path even knowing that we would have little chance of successfully bidding for any tender contracts for at least five years," Mr Langridge said.

"Despite our limited resources, persistence has now paid off, not only for educational consultancy contracts but also in attracting full-fee paying overseas students," he said.

By recruiting these students, the University's export earnings grew from nothing in 1986 to more than \$20 million in 1997.

Teaching award successes

Two University of Wollongong academics were shortlisted in the recent 1998 Australian Awards for University Teaching.

Gordon Waitt, Geosciences and Caz McPhail, Mathematics and Applied Statistics, were among a small group of teachers who reached the final of the keenly contested awards, now in their second year.

The pair attended the awards ceremony with 300 people in the Great Hall of Parliament House in Canberra in late November.

While neither won their category, both shortlisted nominees were proud to have reached the final.

Meanwhile, the University of Wollongong's notable achievements in this year's ARC grants, UOW has also achieved excellent results in the 1999 teaching and development grants.

The Committee for University Teaching and Staff Development (CUTSD) has awarded four grants

to UOW. All are collaborative grants with other universities.

The University has received one Organisational grant — only nine have been awarded nationally from 85 applications. The grant is valued at \$189,894 which is about \$40,000 over the usual maximum for this type of grant.

The organisational grant has gone to Greg Hampton and his team at Student Services (Neil Trivett, Jan Skillen, Margaret Merten and Alisa Percy) for their project, "Development of interactive unlearning online resources". UOW are collaborating with the University of Western Sydney and the University of Melbourne.

UOW also won three Staff Development grants with only 12 awarded.

John McQuilton (History and Politics) is collaborating with Griffith University, University of Melbourne, ANU, University of Queensland and the University of

Tasmania in "Changing History Teaching". The grant is for \$127,705.

Sandra Wills and Richard Caladine in CEDIR are collaborating with Charles Sturt University, Southern Cross University, Griffith University, ANU and Central Queensland University on behalf of the National Council for Open and Distance Education on the project, "Staff Development for Flexible Learning and the Use of Resource Based Learning Materials: A National Initiative". The grant is for \$114,050.

Peter Rose in the University Foundation is collaborating with Swinburne University of Technology, RMIT and Central Queensland University on the project, "Unleashing the potential of work-integrated-learning through professionally trained academic and industry supervisors". The grant is for \$96,580.

Submissions for the 1999 Staff



•Pictured Caz McPhail and Gordon Waitt

Development and Organisational grants close in February. Contact Associate Professor Sandra Wills for further information.

Have voice, will travel...

Goknur Ray was singing before she could speak. The daughter of Turkish immigrants, she lived in a melting pot of musical extremes. Her mother's classical singing and cello, her brother's flute, vied with Aussie television.

As a toddler, she imitated jingles and commercials and as a young teenager, she wasn't inclined to embrace opera.

But a few years ago, Goknur, 20, took up classical singing in earnest.

In October she won Australia's most prestigious award for young singers, the Mathy Award.

Among other prizes, Goknur has won a trip to London and the Dame Joan Sutherland scholarship to study at the Royal College of Music.

*Michael Briggs reports.**

Two years into a Creative Arts degree at the University of Wollongong, Goknur Ray outclassed singers five years her senior to win the Mathy Award.

"It was a long process. It started in May and you had to submit application forms with a proposed

program of study and proposed repertoire," Goknur said.

"They accepted six or seven applicants from the whole nation."

After reaching the semi-finals, Goknur underwent two days of intensive interviews and performances to reach the finals in Perth in October.

The five finalists were judged on potential, personality, effort, learning and improvement, as well as performance.

"The image of opera has changed. They look for attitude, personality and basically healthy looks," she said.

It is a response to the growing expectations of audiences who will no longer accept a large 30-year-old soprano playing the role of a love-struck teenager.

"People want to believe what they see," Goknur said.

The judges liked what they saw and heard and when the Mathy winner was announced, like her soprano voice, Goknur found herself in the highest range.

"The Mathy's are a package of awards. Everyone in the finals got an award," she said.

"There is a whole heap of them, so on the night everyone was awarded one or more prizes.

"I just happened to get the big one."

"The big one" included \$25,000, plus the \$22,000 Dame Joan Sutherland scholarship to study at the Royal College of Music in London, a place in the quarter finals of the Irish Veronica Dunn Award and a solo engagement with the WA Symphony Orchestra.

"I didn't think I'd get it," Goknur said.

"The standard was so high and the other competitors were just incredible."

The Mathy award ensures national and international exposure and brings her one step closer to achieving her dream of performing in the opera houses of the world.

"Classical music has so many different mediums. What I want to be able to do is to get into opera," Goknur said.

The dream will not come easily. Practice and sacrifice are a constant part of her life.

She must eat properly, constantly research songs, keep her night life to a minimum and train her voice from two to three hours every day.

"It's underestimated how much work is put into this field. It's just



like sports and preparing for the Olympics," she said.

But singing is not a chore - it is her passion.

"If you enjoy what you do, it doesn't seem like work: it's more like an obsession," she said.

Goknur's operatic inspiration comes from *Madam Butterfly*, *La Boheme* and *La Traviata* and she feels optimistic about the direction Australian opera is taking.

"It's attracting a younger audience and starting to attract a lot of young singers," she said.

With the scholarship to London beginning in September 1999 or 2000 and her future engagement with the WA Symphony Orchestra, Goknur will have little time to bask in the glory of her achievement.

She has already begun preparing for Ireland and Veronica Dunn Award in January.

Goknur is humble despite her achievement.

"I'm not going in there with a great expectation to win or anything.

"I just think it will be a great chance to get some exposure and to get a fair idea of how much work I still have to put in."

**Michael Briggs is a student at the Graduate School of Journalism.*

Future environmental leaders in Australia

Future environmental leaders from East and South-East Asia visited Australia for eight days from 23 November with support of the United Nations Environment Programme (UNEP) and the Federal Government.

The 11 Young Environment Envoys were university students from Hong Kong, Malaysia, Philippines, Singapore, Thailand and Vietnam.

The party also included a UNEP representative and Asian television, radio and print journalists.

The initiative was established under the auspices of the UNEP for Asia and the Pacific and had the support of Federal Environment Minister Senator Robert Hill.

The University of Wollongong's Environment Research Institute hosted and coordinated the visit.

The Envoys met Australian students involved in environmental issues; attended workshops with 'green' leaders; and visited significant sites such as Sydney Airport and the Olympic Games site at Homebush Bay.

Vice-Chancellor Professor Gerard Sutton said the primary outcome of the program was to train future leaders in environmental protection and sustainable

management of natural resources in Asia and Australia.

Professor Sutton said there was no doubt environmental issues would dominate private and public sector agendas in the next millennium.

"Key partners involved in this program will play a strategic role in nurturing future environmental leaders in the Asian region," he said.

Senator Hill said it was important Australian universities were active participants in environmental education and this initiative complemented that objective.

One of the highlights of the visit was an International Forum on Environmental Education and Management, at the University of Wollongong on 27 November.

Its theme was *'Integrating science and social science research into environmental decision-making'*.

It involved the Envoys and Australian undergraduate and postgraduate students.

Professor Sutton hosted a dinner afterwards.

The program's major sponsors were UOW, UNEP, Environment Australia and QANTAS.

Bill Gates learns to spell Wollongong



• The StageStruck crew celebrates its win. (Picture courtesy Robert Peet Illawarra Mercury)

A small multimedia team from the University of Wollongong has outclassed Microsoft's millions, winning a British Academy of Film and Television Arts (BAFTA) award.

The Interactive Multimedia Learning Laboratory (IMLL) in the Faculty of Education shared the honour with its partner, the National Institute of Dramatic Art (NIDA).

Their entry, a CD ROM StageStruck, won the Interactive Treatment category of the BAFTA awards.

StageStruck was short-listed with

the latest interactive offerings from Microsoft and Douglas Adams.

It is the creation of designers and programmers in Wollongong's IMLL, with NIDA.

The awards were announced at a £160 per head ceremony in London, and simultaneously on the INTERNET.

StageStruck's earlier win in the Gold EMMA award in Dublin boosted the team's confidence, but they were still poised anxiously over their computer screens in Wollongong on the morning of the ceremony to see the results announced.

A representative of NIDA was in

London to receive the award.

StageStruck was designed to take users into the world of performance, with an on-stage and behind-the-scenes look at opera, musicals and dance.

NIDA is the publisher of StageStruck and other partners in the project included the Sydney Opera House, Opera Australia and the Australian Ballet.

It won the EMMA Education and Home Learning category for

12-18 year olds, before winning the Gold EMMA, for the most outstanding entry in all categories in Dublin.

The EMMA judges described StageStruck as "so excellent, its quality is evident from the very beginning.

"Easy to set up, easy to operate and easy to learn from, this is a product of the very highest quality.

"The navigation, graphics, sound and comprehensive detail and data render this package one of the very best," the judges said.

"The winning choice is a project so all-encompassing in its objectives

and execution that it represents a pinnacle of cooperation between art, culture, education and new media.

"In addition to impressive content, the technical goal of creating an educational experience for the 12-18 year old age group is achieved in a highly relevant and inventive way."

It takes the user through all facets of performances and allows them to design their own; to create a score, design sets, make costumes, produce the soundtrack and experience just what goes into a performance.

Players can write their own scripts, choreograph performances, watch auditions and rehearsals, and even meet famous actors.

Guided tours and histories of theatres and venues all over Australia are available, including a detailed look at the design and construction of the Sydney Opera House.

StageStruck has been developed as part of the Australia-on-CD multimedia program, one of the major initiatives of the Creative Nation policy. Creative Nation aims to provide greater access for Australians to a range of cultural life, artistic performance and national heritage.

Professor John Hedberg led the development team at Wollongong and Associate Professor Barry Harper is director of the Interactive Learning Laboratory.

Near extinction? Try antibiotics

Kirsten Benkendorff had two goals when she began her PhD: to discover an antibiotic and help conserve a species. In three years she has achieved both.

Kirsten's innovative study of marine molluscs has not gone unnoticed.

Her PhD supervisors Dr Andy Davis and Professor John Bremner nominated her as a Young Australian of the Year and she was named runner up of three NSW finalists in the Science and Technology division.

Kirsten, 25, says she is "a conservationist above anything else", using "bio-prospecting", the search for pharmaceuticals in natural organisms, to promote preservation.

Kirsten believes if she can identify antibiotics in an organism she can encourage its preservation.

Kirsten found antimicrobial compounds (antibiotics), more potent than penicillin and harmless to human cells, in the egg masses of marine molluscs along the Illawarra coast.

A potential new antibiotic is significant, given evolving resistance to commonly-used antibiotics.

"From the research I've done I can say marine molluscs are a valuable source of antimicrobials," Kirsten said.

"They have potential use for humans and I think this provides an incentive for conserving marine molluscs."

Dr Davis, who co-supervised Kirsten's PhD research with Professor John Bremner, said her work was impressive.

She had found 154 mollusc species, more than triple the number previously recorded in the region.

"It is impressive for a student with almost no

More potent than penicillin and harmless to humans

background in invertebrate zoology," Dr Davis said.

"The compound Kirsten has isolated - Tyrividin - exhibits extremely potent antimicrobial activity.

"Even more exciting is that its structure is quite different to any antimicrobial in current use.

"In short, this compound, or structural analogs of it, has enormous potential."

However, as with all drugs, there will be five to 10 years of clinical trials and tests on humans before a product reaches the market.

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Multi linguist communicates her future for Arts

Investigating, analysing and understanding how language works is a lifelong personal and professional passion for Anne Pauwels, who became Dean of Arts and Professor of Modern Languages and Linguistics at UOW in July 1998.

"My specific interest lies in the interaction between language and identity. Our identity shapes the way we speak and communicate with each other and it affects how we understand each other," she said.

"I am particularly interested in how gender and ethnicity affect our language patterns."

Linguistic and communication issues were probably always going to play a part in Professor Pauwels' life. She grew up in Belgium in a multilingual family where Dutch, German and French were spoken.

"We have always been a family who likes to spread its wings across Europe," Professor Pauwels said, "but I did venture the furthest by heading to Australia."

If language is a powerful tool then Professor Pauwels has a well-equipped armoury — she grew up speaking Dutch, French and German and learnt English along the way. Through study, she has

acquired a reading knowledge of Ancient Greek and Latin and later Swedish and Italian.

But it's an armoury she thinks falls short of the mark.

"I deplore not having an Asian language and I am now trying to rectify this by studying aspects of the make up of Asian languages."

Since coming to Australia, Professor Pauwels has also become interested in the study of Australian Aboriginal languages and in the contact between English and many other 'transported' languages.

Although Professor Pauwels continues to undertake research in languages and linguistics, her main focus is on guiding the Faculty through a strategic planning process to strengthen the role of humanities and social sciences in the University.

"The Faculty of Arts already has an excellent reputation for student-centred teaching and learning practices.

"But it is important that we also become known nationally and internationally for our innovative interdisciplinary and disciplinary teaching and research.

"We want to be a Faculty that equips graduates with knowledge and skills essential for active citizenship and for productive careers," Professor Pauwels said.

The new dean is quick to jump to the defence of an arts degree in a society which places increasing value on vocational degrees.

"An arts degree produces

students who are articulate, literate and intellectually inquisitive and who have a capacity for rigorous and disciplined analysis. These are extremely valuable attributes for people entering in today's workforce," she said.

Professor Pauwels did her undergraduate degree in Belgium. Her postgraduate work was done in Vienna and Melbourne. After gaining her PhD in Linguistics at Monash University, she became Associate Professor in Linguistics at Monash and held the Foundation Chair of Linguistics at the University of New England before coming to UOW.

A Fellow of the Australian Academy of the Social Sciences, Professor Pauwels was also Research Director of the Language and Society Centre, National Languages and Literacy Institute of Australia from 1991 to 1995.

For one who has held a lifelong interest in communication, it's apt the dean's new role is to communicate her vision for the Faculty of Arts at UOW.



• Professor Anne Pauwels

Major poetry award to Creative Arts student

A Creative Writing student in the Faculty of Creative Arts has won the 1998 Victorian Premier's Award for poetry.

Coral Hull won the C. J. Dennis Award, for her book, *Broken Land*.

The award was announced at a ceremony in Melbourne.

Coral was an undergraduate in

the writing strand at UOW from 1984 to 1986. After completing a Masters at Deakin University, she returned to Wollongong in 1996 to enrol in the DCA program.

Broken Land forms part of her thesis and is currently under examination.

Former Creative Arts student Bernard Sullivan designed the book's cover.

Pro Vice-Chancellor takes up new post



About 200 people attended the farewell function at the University on 13 November for the Pro Vice-Chancellor (Research), Professor Bill Lovegrove, who has taken up the position as Deputy Vice-Chancellor at Griffith University after 13 years at the University of Wollongong. Professor Lovegrove is pictured at the farewell with his wife, Desolie, sons David (left) and William and daughter Debbie.

SPRING Grad



A Vietnam war protestor in the 60s, Rowan Cahill has watched his son Damien's burgeoning political career with interest. Damien graduated on September 30 with a Bachelor of Arts (Politics) after an active role in student politics, and campaigns against cuts to higher education.



Adrian and Shirley Smith accepted a degree awarded posthumously to their daughter Natasha, who died suddenly of leukaemia in January this year.

Registered nurse Jennifer Heathcote, left, said her sensitivity to Aboriginal health issues has been enhanced by completing a diploma in Indigenous Health. Jennifer is the first non-Aboriginal person to work at Narooma's Katungul Aboriginal Corporation community Medical Service. She is pictured with UOW's indigenous health coordinator Marian Martin. Moruya's Ray Eldridge, who also works at Katungul, received his Masters of Indigenous Health.



Deanna Sacco offered thanks on behalf of 200 graduates at the Commerce ceremony. Deanna, who completed a five-year traineeship at UOW has since secured a job with AMP.

Indonesian surrealism was the subject of Martinus Dwi Marianto's PhD research. The prominent Indonesian artist and critic is pictured with his supervisor Associate Professor Adrian Vickers.



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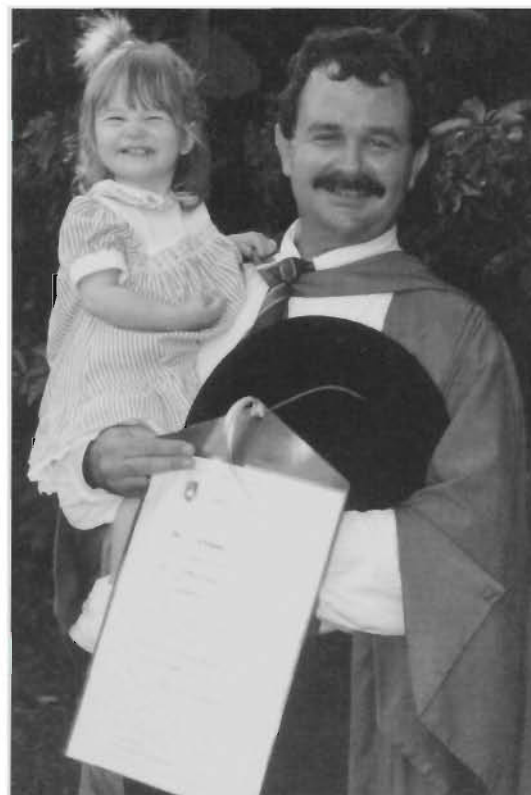
Commerce graduate Boseung Choi will remain with UOW as an international promotion and recruitment officer. She will work from South Korea, but intends to promote the University in Japan and Taiwan as well.



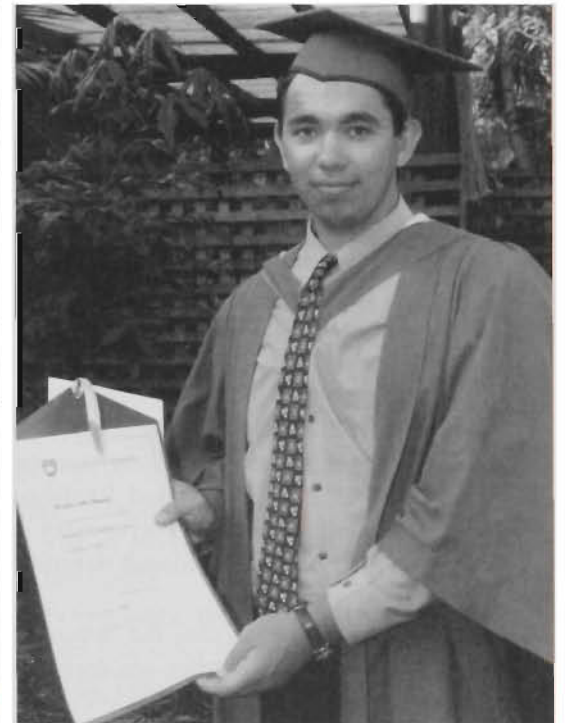
The sound of traditional clapping sticks greeted the first Koorie to receive a Doctorate in Creative Arts, Pamela Johnston Dahl Helm. Dr Dahl Helm was accompanied by her adopted mother, author Dr Ruby Langford Ginibi, who was the first of her people to receive an Honorary Doctorate of Letters from La Trobe University.



Archibald Prize-winning artist Guy Warren was awarded an Honorary Doctorate of Creative Arts. The Jamberoo artist won the Archibald in 1985 after honing his skills recording images of war as a soldier in Papua New Guinea. He is now UOW's art collection director.



Phillip Flentje's research into landslides came into sharp focus during the severe August storms. He was part of a geotechnical team surveying slip zones in the Illawarra in the wake of the downpour. He received his PhD, watched by daughter Jesse.



Brad Doonan's experience of living with a hearing disability and his technological expertise have equipped him to work on telecommunications for the deaf. Graduating with a Bachelor of Computer Science, Brad hopes to find work with Telstra working in the field. Brad's hearing was damaged after he contracted meningitis as a toddler.

Against the wind: students invent a sustainable future



Student inventors from the University of Wollongong and local high schools have built ingenious models which harness wind power in the interests of a cleaner planet and preserving dwindling resources.

A competition to see which students could invent the best device, powered via wind from an electric fan, produced excellent results at the final in October.

A group of UOW engineering students was overall winner of the 'Design and Build' event.

But they received tough competition from year nine students at St Mary's Wollongong.

St Mary's girls Emma Wypych and Jessica Tait outclassed the other high schools to win their division and come sixth overall, beating some engineers-in-training in the process.

Organiser Peter Wypych said the students had to "design and build a device that would convert wind energy (via a fan) to mechanical energy that would drive a device into the 'wind'.

"Winners were decided on performance criteria such as the distance each device started from the fan and speed of travel," he said.

The theme of the competition was Wind Energy Conversion and Sustainable Energy. Integral Energy donated \$500 and the Faculty of Engineering \$800 for prizes and trophies.

• Pictured above left, Wind-power winners, mechanical engineering students Matthew Southam, Benjamin Tillott, Christopher Vernon, Bradley Oborn and Alexander Nicholson.

• Pictured left Emma Wypych and Jessica Tait receive their trophy from Integral Energy's manager of renewable energies Anthony Patterson, watched by their teacher at St Mary's Chris Read.



Great debate first of many on campus

The university system would lose its credibility and become extinct if 'charlatanism' in academia was not identified and eliminated, argued Professor Philip Broadbridge at the University of Wollongong's inaugural invitational debate in October.

Professor Broadbridge from the School of Mathematics and Applied Statistics was arguing in the affirmative that "academic charlatanism should be identified and eliminated".

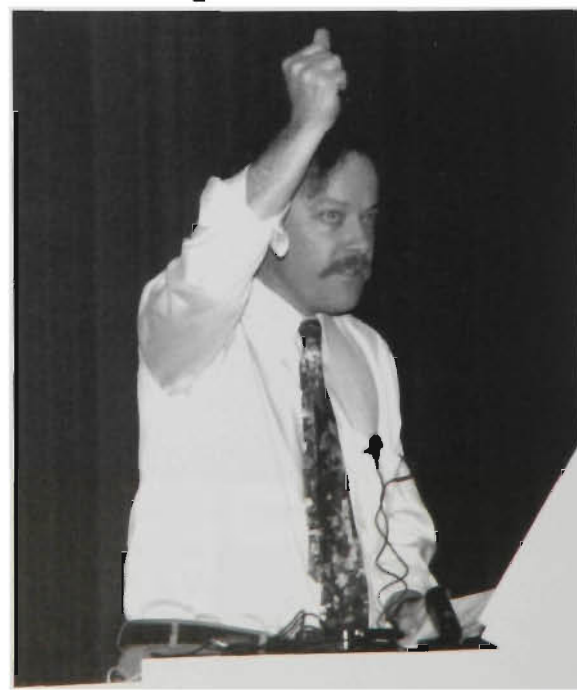
Professor Broadbridge helped organise the event but did not expect to find himself on stage.

On the morning of the debate he volunteered to fill the shoes of Professor Ian Plimer who was "stranded" overseas.

Professor Mark Diesendorf of the University of Technology Sydney, argued the negative case. A transcript of the text of both academic's arguments will be available on the University of Wollongong home page. Further debates are planned.



• Mark Diesendorf



• Phil Broadbridge

Exploring the virtual classroom

First multimedia courseware delivery over the Internet



University of Wollongong

Australia



The EDTLab: A Brief Tour

- Embedded RealPlayer Plug-in
- Pop-Up RealPlayer Application



The EDTLab: A 20-minute Guided Tour



**Take
the
Tour!**

Pack your suitcase to explore the virtual classroom

Many educators want to explore the potential of on-line teaching and learning, but are intimidated by the technology, or just don't know where to start.

Their computer-savvy friends are often the worst people to ask.

Even casual geeks can get so close to their technology, they lose sight of the real fears and hassles those with less experience face.

Dr Parviz Doulai, lecturer in the School of Electrical, Computer and Telecommunications Engineering, has become a kind of tour guide of

the potential of the virtual classroom.

Dr Doulai says a user-friendly interface for staff with limited technological background was essential, using tools like video and audio files in Web-based instructions.

He has applied for an ESDF grant to develop the project.

Meanwhile, UOW's first streamed multimedia course delivery over the Internet was launched on July 1998.

It was a one-hour lecture, designed to introduce the technology to educational

consultants at the Centre for Educational Development and Interactive Resources (CEDIR).

It showed how to synchronise video clips and audio tracks with blackboard work and other classroom activities (display of local or remote HTML files or images; Power Point slides).

This lecture is available on the EDTLab audio and video server (http://edt.uow.edu.au/cedir_lect/) and on CD-ROM, available at CEDIR reception.

Informatics students sample on-line delivery

Rather than replacing traditional higher education delivery, the Web has significant potential to enhance on-campus teaching and learning.

It can also supplement interaction among students and with instructors, even in the relaxed and friendly atmosphere of UOW.

In Spring Session 1998, a new Web-based Instruction package (WebCT) was used to prepare and deliver material to more than 200 first-year students in the Faculty of Informatics (IACT101, 206 students).

Project co-ordinator Dr Parviz Doulai said statistics collected in the first eight weeks showed student interaction and involvement was "phenomenal".

"A great deal of this can be attributed to the underlying pedagogically strong structure and flexibility of the WebCT," Dr Doulai said.

In the first eight weeks the IACT101 site had:

- * about 8,000 visits; approximately one visit per student per working day

- * more than 2,000 articles were posted to the

course Bulletin Board (about half related to course contents, where students helped each other with problems)

- * each student sat, on average, five timed on-line quizzes, mostly marked electronically

- * almost 800 on-line electronic submissions were made (short assignments/fortnightly Critical Thinking Tasks)

- * Overall, students, as a group, spent 1,800 hours accessing on-line course notes. Course notes account for 25% of the total IACT101 resources.

The WebCT is most likely to be introduced as the University's preferred Web-based instruction suite.

Dr Doulai said a co-ordinated approach to establish WebCT as a University-wide on-line platform was essential.

"If we are serious about this issue we must consider infrastructure; staff development and support; system administration; student training and support simultaneously.

"If we don't implement just one of these components properly, in relation to the others, than the whole system will fail," he said.

Dr Doulai said technology-driven support for on-campus education was very popular with students.

Feedback from 180 IACT101 students can be found on the EDTLab home page.

A dynamic Web-based learning environment gave students alternative study paths and more opportunities to engage in interactive exercises and collaborative work.

The Educational Delivery Technologies Laboratory (EDTLab) is an Internet and Web development centre, established in 1994 within the Faculty of Informatics.

It incorporates the latest Web technologies with dynamic and interactive processes, for two distinct applications: educational and industrial.

In the field of educational application, the EDTLab is making strong progress.

It uses emerging technologies to supplement traditional on-campus education, streamlining freely available or inexpensive tools and resources, and showing staff and students how to take advantage of them.

At almost no capital cost, a range of technology-driven educational resources were developed and implemented over the past four years, for classroom use and public demonstrations.

EDTLab founder Dr Parviz Doulai said, by using existing infrastructure, such as the campus computer networks and laboratories, the cost of providing on-line support services was negligible.

"For instance, the IACT 101 on-line support program (see story below) cost the Faculty just \$500," Dr Doulai said.

This year, the EDTLab completed two major projects:

- * implementing real-time streaming technology: delivering synchronised multimedia files (audio and video) over the Internet

- * using an interactive and dynamic Web environment, supporting a large class of more than 200 first-year students in the Faculty of Informatics.

45 Minutes Talking Head!!!!

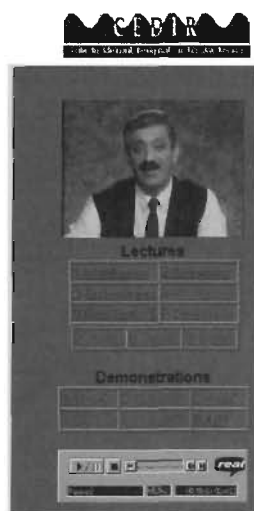


Aim:

To demonstrate new server and client capabilities in delivering and receiving synch. video/audio files over the Internet

1. What Stream Media File is?
2. What we need to have? and
3. How we can use it?

• Talking heads on-line.



Melanie's in front but are teenage girls watching?

Melanie Sykes, 21, was in the enviable position of having employers chasing her, even before she sat her final exams as an environmental engineer.

While other professions face downturns, young engineers are landing jobs before they graduate and attract higher starting salaries than first-year lawyers, according to the Graduate Careers Council of Australia.

Melanie had a welcome distraction from her final exams at the University of Wollongong: considering the merits of two attractive job offers.

One with structural engineering firm Ove Arup, the other with management firm Andersen Consulting.

While not an engineering firm, Andersen was attracted to the problem-solving skills gained in Melanie's course.

Apart from offering her a job, Ove Arup also gave Melanie \$1,000 as the winner of the NSW State Engineering Award.

But success stories like Melanie's are not reaching enough young women at high school. Despite a growing number of successful role models, many teenage girls fail to consider engineering as a career.

The University of Wollongong is running its annual Girls in Engineering Summer School in January in an effort to change narrow perceptions of the profession.

Melanie attended the summer school when she was a teenager, and it was instrumental in her career choice.

"I hadn't given engineering much thought at all before then," she said.

Melanie studied Environmental Engineering, but her course allowed a wide choice of electives, including economics and law.



• Melanie Sykes: job offers took pressure off final exams in November 1998

Melanie said this appealed to engineering and non-engineering employers alike.

The summer school is a four-day residential program held from Sunday 17 January to 20 January 1999.

It costs \$85 and scholarships and travel allowances are available to students in financial difficulties.

It is open to girls entering years 11 or 12 next year, studying Three-unit Maths and at least one Two-unit Science subject.

For more information contact Julie Romanowski, in the Faculty of Engineering on (02) 4221 3491.

Accountability at core of new book

NSW Treasurer Michael Egan returned to Parliament on 29 October to undertake a task he had never done before — launch a book.

Mr Egan was suspended from Parliament after refusing to hand over privileged documents on Sydney's water contamination crisis.

At the core of the dispute was public accountability.

And the book Mr Egan launched at Parliament House was ironically — *Public Sector Accounting and Accountability in Australia*.

The authors are Associate Professor Warwick Funnell, who has for many years taught public sector accounting and financial management to accounting and law students, and Dr Kathie Cooper, a Senior Lecturer in Accounting with more than 12 years teaching experience.

The book explains the purposes and

consequences of the dramatic changes within the Australian public sector over the past two decades.

They have come about as governments pursued greater efficiency and effectiveness in delivery of programs.

"In particular, it highlights the impact of these changes on the mechanisms used to ensure that governments are held accountable," Professor Funnell said.

He said the key word in the title is "accountability".

"Accountability is not restricted just to providing accounts. As we have tried to portray in the book, it is also about an approach marking the broader social needs of society.

"Readers will see why the adoption by governments of a private sector management ethos has expanded the duties and requirements of public sector managers, introduced new means to enforce financial accountability and brought new demands into conflict with traditional public sector values," Professor Funnell said.

Mr Egan said the book was "another feather in the cap for the University of Wollongong" and he



• At the Parliament House book launch are (from left): Dr Kathie Cooper; Auditor-General Tony Harris; Michael Egan; Professor Warwick Funnell; and Vice-Chancellor Professor Gerard Sutton.

had already purchased three copies for use in his office.

Member for Keira and Parliamentary Secretary Colin Markham hosted the launch and Upper House President Virginia Chadwick and other politicians attended.

Public Sector Accounting and Accountability in Australia, by Warwick Funnell and Kathie Cooper, published by UNSW Press, \$49.95 softcover, 328pp

Sexual behaviour and the workplace

The issue of sexual behaviour in the workplace has received extensive media coverage recently, eliciting a range of views.

The University of Wollongong's stance is found in the Sexual Harassment Policy and also the Guidelines on Conflict of Interest and Close Personal Relationships. Both documents are available to all staff.

The policy states: **"the University considers sexual harassment an unacceptable form of behaviour which will not be tolerated"**.

Sexual harassment may be defined as any verbal or physical conduct of a sexual nature, which would normally be considered offensive and that is unsolicited, unwelcome and unreciprocated. It can range from intimidating, sexist comments to criminal sexual assault and may include such behaviour as:

- sex-oriented comments on physical appearance, joking or abuse;
- deliberate and unnecessary physical contact such as patting, pinching or deliberate brushing against another's body;
- inappropriate displays of erotic or pornographic material;
- requests for sexual activity in exchange for favours in the workplace, good grades, etc;
- displays of nudity;
- sexual violence.

It is difficult to define sexual harassment without over-simplifying social relationships.

Mutual attraction between individuals is excluded from the above definition.

Sexual harassment is unlawful in employment and education under both the NSW Anti-Discrimination Act, and the Commonwealth Sexual Discrimination Act.

Employers may be held responsible for their own behaviour and the behaviour of the people they employ.

Supervisors too, may be held responsible for sexual harassment in their work units, particularly if they fail to take appropriate action to prevent its occurrence or continuation.

"AN ABUSE OF TRUST OCCURS WHEN THE STAFF-STUDENT RELATIONSHIP IS DESTROYED THROUGH ACTIONS, OR REQUEST FOR ACTIONS, OF A NON-PROFESSIONAL NATURE."

The other issue which should be considered in the context of sexual relationships in the university setting is the abuse of trust and/or a conflict of interest.

The NTEU Code of Ethics describes how "a sexual or other close personal relationship with a student is likely to involve serious difficulties arising from the power disparity inherent in the staff-student relationship.

"In general, such relationships should be avoided. Students have the right to expect that close interaction with university staff can occur without fear of demands for sexual favours.

"An abuse of trust occurs when this relationship is destroyed through actions or request for actions of a non-professional nature.

"In some circumstances, an initial sexual approach to a student, or engaging in a sexual relationship with a student constitutes sexual

harassment and can be the subject of a complaint under institutional sexual harassment procedures or to an outside body."

Similarly supervisors are in a position of authority and trust with subordinate staff and should be aware of the same issues as outlined for staff-student relationships.

The University's Guidelines on Conflicts of Interest in Close Personal Relationships guides staff dealing with actual or perceived conflicts of interest with students and other staff members.

Briefly, those guidelines require you to remove yourself from any decision-making, reporting, marking or approval role if you have such a relationship with a staff member or student.

Codes of ethics and guidelines are not designed to prohibit sexual relationships.

They are about stopping the serious problems which arise when those relationship involve conflicts of interest and abuse of trust.

Readers are asked to familiarise themselves with University policy and guidelines.

University documents referred to in this article have been issued to staff through the induction and training processes. The EEO, FOI & Privacy Unit also conducts Faculty and Departmental information sessions. Further copies and clarification of the issues raised are available from the EEO, FOI and Privacy Unit on extension 3917.

UOW triumphs in research grants

• From Page 1

management experts, will be involved in CAPSTRANS, making it a major centre of excellence in an important new area of study.

Meanwhile, Professor Peter Howe will lead the Smart Foods Centre, dedicated to assisting the Australian food industry in nutrition research and education.

The centre will support the industry in an area of national social and economic importance, by developing healthier value-added foods.

"This is a unique opportunity for the Wollongong team, together with its industry partners, to demonstrate the value of industry investment in nutrition-based R&D," Professor Howe said.

He said that while the industry had focused on improvements in production and processing, rapidly increasing consumer demand for foods which were compatible with dietary guidelines necessitated greater emphasis on nutrition in product development.

The Smart Foods Centre will introduce industry-oriented nutrition education and research programs to support the development and evaluation of novel foods with benefits to consumers in Australia and in export markets.

"There is a pressing need for the food industry to increase its knowledge of, and capabilities in, nutritional research to fully exploit the potential health benefits of its products," Professor Howe said.

"This is especially in the current climate where a more proactive regulatory approach to informing consumers about the health benefits of foods is under consideration and where a high demand for smart foods already exists in Asian export markets."

Working with Professor Howe will be assistant directors Professor Len Storlien, Associate Professor Peter McLennan and Associate Professor Linda Tapsell along with senior investigators Associate Professor Wayne Bryden (collaborating from the University of Sydney's Camden campus), Associate Professor Arthur Jenkins, Dr Ren Zhang, Dr Barbara Meyer, Dr Lee Astheimer, Dr Brin Grenyer and Professor Dennis Calvert.

The Key Centre grant, together with an ARC Strategic Partnership in Industry Research grant and contributions from the University and industry partners, should amount to a budget of about \$1 million a year to the centre over the next six years.

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Great idea but no money? Funds are at hand for innovative projects

What do a multimedia creation for teachers and students, 'power quality' problems and polymer processing facilities have in common? They are all separate projects funded by the University of Wollongong's Technological Development Fund (TDF).

And fund manager, the Illawarra Technology Corporation (ITC), is keen for more researchers on campus to contact it with any projects they believe have commercial viability.

Funding is allocated by the Technical Assessment Committee (TAC) under the chairmanship of Mr George Maltby who is also Chairman of ITC. The newly-formed UOW Intellectual Property Committee which Deputy Vice-Chancellor Professor Peter Robinson chairs, can also refer projects to the TAC.

A key project receiving ITC funding of \$275,000 this year is a multimedia creation for teachers and students called *MediaPlant*, a powerful new software tool for the classroom.

ITC deputy chairman Dr Brian Hickman said *MediaPlant*, created by the University's Interactive Multimedia Learning Laboratory (IMLL) had enormous marketing potential throughout the English-speaking world.

IMLL director Associate Professor Barry Harper and Dr Hickman recently went to the United States for negotiations with a major US publisher.

IMLL recently made world-wide news, outclassing Microsoft's millions to win a British Academy of Film and Television Arts (BAFTA) award for its CD ROM, *StageStruck*.

Other award-winning multimedia products

from IMLL are *Investigating Lake Illuka* and *Exploring the Nardoo*.

'Pollution' of the main electricity supply is a growing problem.

Modern electronic equipment, such as personal computers, produce undesirable interference which can quickly spread to other electricity users through the large interconnected electricity grid.

The Head of the School of Electrical, Computer and Telecommunications Engineering, Professor Chris Cook, said the power quality problem required considerable research and expertise to understand its causes, effects and cures. The TDF is being used to develop a commercial testing service in power quality.

The Power Engineering group in the School of Electrical, Computer and Telecommunications Engineering has a strong track record in this area.

As well as support from the TDF, Integral Energy has funded a substantial Power Quality Centre in the school for the past three years. The Centre has made considerable progress assisting industry.

The Centre's technical director Associate Professor Vic Gosbell identified many years ago the future importance of power quality, affecting the whole industry, at a time when most people did not even see it as an issue.

The Centre has also received funding from the



• Dr Rita Stella tests the 'electronic nose' at IPRI.

Australian Research Council and the Electricity Supply Association of Australia.

The TDF has also helped establish the polymer processing facility within the Intelligent Polymer Research Institute (IPRI), allowing large-scale production of processable conducting polymers.

Such advances are necessary if the true commercial potential of these materials is to be demonstrated in areas as diverse as sensors (electronic nose), membranes, corrosion protection and polymeric photovoltaics, according to IPRI director Professor Gordon Wallace.

Recent processing advances enable sensor devices to be produced using inexpensive fabrication techniques, such as ink jet and screen printing.

These processable polymers are ideal for spraying large surfaces, necessary for developing coatings for corrosion protection.

Anyone wishing to submit proposals to the TDF should contact Dr Hickman (via the University's email system) or John Weidemier on 4226 8827 or via University email.

Near extinction? Try antibiotics

• From Page 4

Kirsten will watch developments from a distance as her search for new antibiotics continues.

"Now I'd like to look at another group of organisms and see if I can do the same for them, and say these species are chemically valuable and we should be protecting them as well," Kirsten said.

And it has taken Kirsten to bring new meaning to Browning's use of the word 'miracle'.

Kirsten hopes the bio-chemical precursor to Tyrian purple she has isolated in the egg capsules of the mollusc will 'work miracles', not just as a natural medicine, but as an impetus to protect endangered invertebrates everywhere.

Her attitude is still uncommon in the natural-products industry.

She recently presented a paper on bio-prospecting to the NSW Natural Products Group, and many people admitted over-collecting species and saw the need for sensible prevention.

"I think the attitude is changing, definitely with a lot of the younger natural-products chemists and I hope that I can have an influence on the industry," Kirsten said.

As a PhD student, Kirsten has communicated to the community and the media on numerous occasions and prepared submissions on government policy.

This project was Kirsten's first on marine molluscs and she now has more knowledge of the marine molluscs on the Illawarra coast than anyone else.

"I think I've been so successful with this project because I'm passionate about it.

"I'm really fascinated by what I'm researching... nature is such a wonderful source of inspiration, there's a million things out there just waiting to be discovered," she said.

Robyn Ball

Robyn Ball is a student in the Postgraduate School of Journalism.

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