

ISSUE 6  
Nov - Dec 2006

# RESEARCH & INNOVATION NEWS

<http://www.uow.edu.au/research/news/raid-news.html>

University of Wollongong



## IN THIS ISSUE

- pg 2 >> The year in review  
(Margaret Sheil & Lee Astheimer)
- pg 2 >> Research Services Office
- pg 4 >> Research Student Centre
- pg 4 >> Innovation & Commercialisation
- pg 5 >> Library News
- pg 5 >> Publications
- pg 5 >> Faculty News, Awards and Achievements
- pg 8 >> Conferences and Workshops
- pg 8 >> Scholarships and Fellowships

# THE YEAR IN REVIEW

It has been an incredible year for research and innovation at UOW, and we would like to take this opportunity to thank all staff and research students who have made our successes possible and to highlight some of our 2006 achievements:

- Total Australian Research Council (ARC) funding awarded this year saw us placed 6th (relative to size) and 9th overall, compared with other universities. This firmly places us in the top tier of research intensive universities once again.
- UOW was awarded its first ARC Federation Fellowship to Professor Gordon Wallace, who will focus his research in the area of Nanobionics.
- The Higher Degree Research (HDR) Student Conference was another big success this year. It was well attended by students, industry partners and academic and general staff and showcased the diverse range of projects being undertaken by UOW research students.
- UOW's first spin-off company enikos has developed software technology which has enormous potential in news and entertainment sectors. enikos has recently received substantial investment from a venture capital pre-seed fund
- UOW recently signed a licence agreement to patent new technology with US-based company Hyper Tech - one of the largest licensing deals ever entered into by the university. It involves researchers at the Institute for Superconductivity and Electronic Materials (ISEM) and their development of superconducting wires. Leading the UOW team is Professor Shixue Dou.
- Finally, with news that the government will implement the revised Research Quality Framework in 2008, our success in research in recent years coupled with the implementation of the new Research Information System (RIS) and Research Online (RO), will enable us to respond effectively to the challenge of this new framework. The first stage of the RIS is now available and provides a comprehensive, online system for managing research publications. RO has averaged 2000 downloads a week and has recently celebrated the 1000th paper loaded to the system.

There are of course many other significant achievements by individuals and groups throughout the year, and we are sure we can continue on this path of research and innovation success in 2007.

Professor Margaret Sheil (Deputy Vice-Chancellor of Research) and Professor Lee Astheimer (Pro Vice-Chancellor of Research)



## RESEARCH SERVICES OFFICE (RSO)

<http://www.uow.edu.au/research/rso/>

### ARC/NHMRC FUNDING OUTCOMES

#### Discovery Project Scheme

Under the Discovery Projects Scheme, UoW researchers were awarded 19 grants totalling \$8.28M. This represents a 2007 success rate of 15.7% for UOW against a national average of 20.4%. Overall UOW was awarded the 9th highest level of Discovery funding, which is an excellent result for the University. The Discovery grants also included a number of fellowships. Professor Shi Dou was awarded an Australian Professorial Fellowship. Dr Guoxiu Wang was awarded a QEII fellowship, and we also received 6 APD Fellowship to the following researchers: Dr C. Jiang, Dr K. Westaway, Dr N. Thamwattana, Dr. W.A. Burt, Dr D.Stuart-Fox and Dr V. Crinis. More information at: <http://www.uow.edu.au/research/rso/grants/outcomes/external/>

#### NHMRC Projects Grants

This year, UOW was awarded funding of \$1.1M for two grants as the lead institution.

Congratulations to:

\* Prof Mark Walker and his team, Prof Gursharan Chhatwal, Prof Malak Kotb, A/Prof Victor Nizet, Dr Jason McArthur and Dr Marie Ranson for their project: Unified model for group A streptococcal invasive disease initiation. Total funding awarded was \$581,750.

\* Dr Nadia Solowij and her team, Dr Marc Seal, Dr Daniel Lubman, Prof Philip McGuire, A/Prof Brin Grenyer and A/Prof Steven Roodenrys for their project titled: Quantifying the neurocognitive impact of cannabis across the life span: The evolution of memory deficits. Total funding awarded was \$497,250.

Congratulations also to Prof Nicholas Dixon for a successful collaborative Project Grant with the University of

Newcastle for their project titled: Nucleic Acid Synthesis and Cell Division in Model Pathogenic Bacteria. Total funding awarded was \$740,250.

#### Linkage Projects

Funding for 2007 Linkage Projects Round One totalled \$0.8M with 4 successful grants. This represents a success rate of 40% for UOW compared with a national average of 42.9%. This is a much improved result from previous Linkage Rounds and reflects the University's concerted effort to focus on the quality of applications to this scheme and the research partnerships they support.

Congratulations to:

\* Dr SJ Blanksby and Dr PJ Barker - linking with Bluescope Steel Research (\$117,354)

\* Dr RG Clark, Prof RL Chambers and Mr P Sutcliffe - linking with Australian Bureau of Statistics (\$75,354)

\* Dr ZP Guo, Prof HK Liu, Dr JZ Wang,

Dr KK Konstantinov, Prof M Forsyth - linking with DLG Battery Co. Ltd. (\$310,000)  
 \* Dr G Wang, Prof HK Liu, Dr KK Konstantinov, Dr JZ Wang, Dr D Wexler, Prof O Savadogo – linking with LeadPower Battery Co., Ltd (\$300,000)  
 Project titles and other details can be found at: <http://www.uow.edu.au/research/rso/grants/outcomes/external/>

## Linkage International Projects

One Linkage International Award was successful in Round 1, representing a 50% success rate compared with the national average of 26.6%. Congratulations to Professor Mats

Olsson who received \$38,000 in funding over four years (linking UOW with the University of Gothenburg, Sweden).

Two Linkage International Awards submitted by UOW researchers were successful in Round 2 with a combined value of \$76,900. (This represents a 66.7% success rate compared with the national average of 28%). Congratulations to Professor Gordon Wallace (in collaboration with Dublin City University, Eire); and Professor Roger Lewis, Dr Rajind Mendis and A/Prof Rodney Vickers (in collaboration with the Technical University of Darmstadt, Germany).

In the Linkage International Fellowship Scheme, UOW was awarded two Fellowships with combined funding of over \$142,000, which reflects a success rate of 40% compared with the national average of 27.5%. Congratulations to Dr Chris Turney, who was awarded \$64,297 (linking UOW with Landcare Research, Crown Research Institute, New Zealand); and Professor Zhengyi Jiang and Professor Kiet Tieu, who were awarded funding of \$78,527 (linking UOW with Northeastern University, PR China). More at: <http://www.uow.edu.au/research/rso/grants/outcomes/external/>

## UOW Research Strengths

At its October meeting, the University Research Committee (URC) approved the following 15 Research Strengths for the 2007 – 2009 funding triennium

- ARC Key Centre for Asia Pacific Social Transformation Studies (CAPSTRANS)
- Centre for Health Service Development
- Centre for Medical Bioscience
- Centre for Medical Radiation Physics
- Centre for Medicinal Chemistry and Pharmacology
- Centre for Statistical and Survey Methodology
- Engineering Manufacturing
- Engineering Materials Institute
- Food and Nutrition
- GeoQuEST Research Centre
- Institute for Conservation Biology and Law
- Institute for Superconducting and Electronic Materials
- Intelligent Polymer Research Institute
- Oceans and Transnational Security
- Telecommunications and Information Technology Research Institute

Further information: <http://www.uow.edu.au/research/research-strengths.html>

The URC also approved the establishment of the University's first Research Network: the Sonic Arts Research Network (SARN) Lead by A/Prof Greg Schiemer. Guidelines are currently under development for networks.

## Funding Opportunity

The **IMB Community Foundation** is calling for applications for community projects to be funded in 2007. This year the Directors of the IMB have allocated \$450,000 to the Foundation to support community projects. The Foundation supports projects that reflect its objectives, which include enhancing the economic diversification and development of communities, promoting mutual and self-help philosophies and enhancing the economic self sufficiency of communities. The Research Services Office is holding an information seminar for applicants on Wednesday, 6 December 2006 from 10.30am to 12.00pm in Lecture Theatre 20.3. All interested applicants are encouraged to attend the seminar which will include a presentation by Stuart Waters from the IMB Community Foundation. ( Please confirm your attendance to Sue Dellit [sdellit@uow.edu.au](mailto:sdellit@uow.edu.au) by Monday 4 December ).

All applicants must submit a two page Letter of Request for funding to the IMB Community Foundation by 19 January 2007. Further information can be found at <http://www.imb.com.au/AboutIMB/Foundation.asp>

Need Assistance with your Grant Application? - Statistical Advice available  
 The **Statistical Consulting Service (SCS)** in the School of Mathematics and Applied Statistics provides UOW researchers with statistical advice. They can advise on planning surveys and experiments, statistical analysis, presentation of results and preparation of grant applications. For more information, or to arrange a meeting, see <http://www.math.uow.edu.au/scs> or email [statcon@uow.edu.au](mailto:statcon@uow.edu.au).

## RESEARCH ETHICS

<http://www.uow.edu.au/research/rso/ethics/>

### Agenda Deadlines and Meeting Dates for your diary

#### Human Research Ethics Committee (HREC) - Health and Medical

Final 2006 meeting December 12th (agenda deadline November 27th)  
 First 2007 meeting February 6th (agenda deadline January 22nd)

#### Human Research Ethics Committee (HREC) - Humanities, Social Science & Behavioural

Upcoming meeting November 21st  
 Final 2006 meeting December 19th (agenda deadline 4th December)  
 First 2007 meeting February 8th (agenda deadline January 24th)

#### Animal Ethics Committee

Final 2006 meeting December 7th (agenda deadline November 16th)  
 Gene Technology Review Committee  
 No more meetings for 2006

More information at: [www.uow.edu.au/research/rso/ethics/](http://www.uow.edu.au/research/rso/ethics/)



## PROFESSORIAL LECTURE SERIES

Thank you to all the academics who gave up their time to participate in the 2005/06 Professorial Lecture Series. The 2007 series includes some fascinating areas of research – hope you can make it along... Prof. Tony Hulbert will be kicking the series off with his talk: "Oils aint oils ... the importance of fats from seeds, leaves and meat"

**Wednesday 14th March**

Tony Hulbert - Science

**Wednesday 4th April**

Christoph Antons - Law

**Wednesday 2nd May**

Simon Ville - Commerce

**Wednesday 30th May**

Linda Tapsell - Health & Behavioural Science

**Wednesday 1st August**

Susan Dodds - Arts

**Wednesday 22nd August**

Diana Wood-Conroy - Creative Arts

**Wednesday 19th September**

Colin Woodroffe - Science

**Wednesday 17th October**

Will Price - Science

All lectures will be in 20.2 from 12:30 to 1:30pm

General and academic staff are welcome to attend these lunchtime lectures, to hear about the research work and achievements of academic staff members who have either been promoted to Professorial level or are recent appointments to the University.

Presentation abstracts will be available at: [www.uow.edu.au/research/proflectureseries](http://www.uow.edu.au/research/proflectureseries) early in 2007.

## RESEARCH STUDENT CENTRE

<http://www.uow.edu.au/research/rsc/>

### Graduation

There will be sixty one higher degree research students graduating in December this year. Congratulations to you all!



### Annual Progress Reports (APRs)

2006 APRs were released on SOLS the 30th October. Due Dates are as follows:

- **20 November 2006**  
HDR candidate should submit the final version of Section 1 of their Progress Report on to their Principal Supervisor.
- **11 December 2006**  
Principal Supervisor should complete Section 2 and publish to Student.
- **18 December 2006**  
HDR candidate should complete Section 3 and submit the Progress Report to the Head of Postgraduate Studies.
- **12 January 2007**  
The Head of Postgraduate Studies should forward the APR to the Dean of the Faculty.
- **31 January 2007**  
The Dean of Faculty should return the APR to the Research Student Centre.

Please read the guidelines for completing your APR – The APR website for further information: <http://www.uow.edu.au/research/rsc/hdrhb/annual-progress-reports.html>

**HDR Student Orientation and Enrolment Day** will be Tuesday 27th February 2007.

Information will be sent to students early in 2007. In the meantime, if you have any questions or would like further information please contact the research student centre on ph: 4221 5452

## INNOVATION & COMMERCIALISATION NEWS

<http://www.uow.edu.au/research/mic/>

### Licence Agreement for Superconducting breakthrough

The UOW has consolidated its standing as one of the world leaders in the development of superconductivity materials with the announcement that it has signed a licence agreement to patent new technology with US-based Hyper Tech. According to our Deputy Vice-Chancellor (Research), Professor Margaret Sheil, the agreement represented one of the largest licensing deals ever entered into by the University. Researchers at the **Institute for Superconductivity and Electronic Materials (ISEM)** have made a breakthrough in the fabrication of wires from the newly-discovered superconductor compound magnesium diboride (MgB<sub>2</sub>) by using nano-scale silicon carbide and carbon

doping. Leading the team at the UOW is Professor Shixue Dou who is the Director of the ISEM. The agreement will allow Hyper Tech Research Inc of Columbus, Ohio, to license UOW's patented technology for use in the superconducting wires. The MgB<sub>2</sub> technology will be commercially competitive because of its improved performance and its relative low cost and ease of production compared to other superconducting materials. Prof. Dou believes there was great potential for this emerging superconductor to be used for various practical applications such as in the wires in metal coils for magnetic resonance imaging (MRI) machines, fault current limiters, power cables, cryogenic motors, energy storage devices, generators, magnetic separators and transformers and could

lead to enormous energy savings and environmental benefits. More at: <http://media.uow.edu.au/news/2006/1113a/index.html>

### Publish?...Patent?...Why don't you do both!

Think you have something innovative? Written a paper and ready to submit for publication? Thought about patenting your ideas but considered it too hard or risky? – Well you can actually do both! By engaging your MIC early they can assess your idea and if appropriate file a patent before you publish – thus allowing the potential of academic and commercial growth. Both pathways are entirely complimentary so please engage your MIC early to assist you – you just never know what could happen! Further information: <http://www.uow.edu.au/research/mic/staff.html>

### Research Online (RO) hits 1000 papers!

The 1000th paper was loaded onto Research Online on 18 October 2006.

*S. Soltanian, M.J. Qin, S. Keshavarzi, X.L. Wang, & S.X. Dou, Effect of sample size on the magnetic critical current density in nano-SiC doped MgB2 superconductors, Physical Review B, 2003, 68, 134509.*

Research Online is an open access digital archive promoting the scholarly output of the University of Wollongong. Research papers produced by UOW academics and put on RO can be found via any search engine. To date RO has had more than 30,000 full text downloads (averaging 2000 a week) and over 53,000 hits to the site from external sources, including countries as diverse as Azerbaijan and Zambia. RO is playing an important role for researchers by assisting in gaining higher visibility for research outputs which leads to improved citation rates and enhanced academic standing. RO is managed by the University Library. Contact Michael Organ (ext. 3108) or Natalie Keene (ext 4787) if you would like assistance with loading your papers onto RO (<http://ro.uow.edu.au>).

### Grants Register 2007 has arrived

In the last newsletter we highlighted the database ResearchResearch. A useful supplement to this database is the printed volume, Grants Register 2007, with information on the availability of scholarships, fellowships and grants. Aimed particularly at awards for students at or above postgraduate level, it contains details of approximately 39,000 awards from 59 countries including Australia.

To access this tome, visit the Serials 2nd Floor in the Library, call number: S 378.305/2

Details on ResearchResearch and Grants Register 2007 are available from:

Library homepage / Researchers / Grants.

### Making it count - research time over summer

While summer is a good time to undertake new research, it's also the time to take a moment and ensure your 2006 research and publications receive the recognition they deserve. Information about your 2006 publications should be entered into the *Research Information System* and a copy of the publication handed to your faculty publication officer. This can be done now rather than waiting for the annual DEST publications collection in April 2007. In addition, submit an author's copy of the paper - final draft version post peer review - to *Research Online*, to maximise the visibility and accessibility of your research. It won't take long but the returns can be substantial.



## PUBLICATIONS

**Dr Eduardo Pol** (Commerce) and Professor Peter Carroll (now with the University of Tasmania) have published the following book: *An Introduction to Economics with Emphasis on Innovation*, Australia, Thomson Learning, 2006. This book (1) forms a major bridge between the economic society in which we actually live and the fascinating world of economics; (2) shows that a complete understanding of the economy is only possible with a thorough grounding in the world of business innovation; and (3) combines an easy to understand writing style with the use of non-mathematical diagrams.

## NEWS, AWARDS AND ACHIEVEMENTS

The **Illawarra Cancer Carers and Robert East Memorial Fund** have raised almost \$250,000 over the past year for cancer research. The UOW hosted an official function on Wednesday 15th Nov. which included a cheque presentation to recognise these significant donations. The money raised has already provided a major boost to the research at UOW into the new anti-cancer drug formulation project, which has shown considerable promise against cancer cells and is now being tested in animals. **Professor John Bremner** from the Faculty of Science and Honorary Clinical **Professor Philip Clingan** have been leading the project and, after the animal experiments, they hope to further develop this drug combination for use in humans. The donors function was attended by local MP, Sharon Bird; Mayor of Kiama, Sandra McCarthy; President

of the Illawarra Cancer Carers, Mr Rex Saunders as well as family and friends of Robert East.



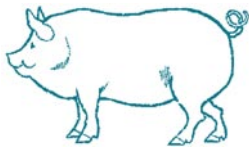
In the latest round of ARC grants the **Institute of Superconducting and Electronic Materials (ISEM)** received a total of \$3.67M with 7 successful grants out of 13 proposals: 3 Discovery Projects (including 3 ARC fellowships, APF, QEII and APD), 2 Linkage projects, 1 Linkage Infrastructure, Equipment and facility grant and 1 International Linkage Project. ISEM achieved more than 50% success rate which is higher than the national average, and establishes a sound basis

for one of their research areas: the fabrication of wires from the newly-discovered superconductor compound magnesium diboride (MgB<sub>2</sub>). This breakthrough technology has led to ISEM signing a licence agreement to with US-based company Hyper Tech (read more on pg 4 in the Innovation & Commercialisation section). Congratulations to ISEM!

**Associate Professor Naj Aziz** (Mining Engineering) has negotiated \$165 000 from BHP Billiton - Illawarra Coal to support research on mine gas drainage and hydraulic fracturing in coal seams. This funding will be used to support a PhD student in that research area for three years. The company will also provide additional in-kind support equivalent of \$35 000 towards the necessary equipment and field support.

**Dr Tracey Kuit (nee Burnett)** from the Science Faculty has received a 2006 Science and Innovation Award for Young People in Agriculture, Fisheries and Forestry (one of 20 granted across Australia). This award was granted by the Bureau of Rural Sciences (BRS) which is the scientific bureau within the Department of Agriculture, Fisheries and Forestry. Past recipients have also included other students and staff from the University of Wollongong. Tracy received an Industry award sponsored by Australian Pork Limited.

This award is to the value of \$10,000 and will provide her with the opportunity to conduct novel



research in Australia and Germany to gain an understanding of the progression of pneumonia in pigs. Pneumonia in pigs is one of the most economically significant diseases affecting pig production worldwide. More Information at <http://www.daff.gov.au/scienceawards>

### **UOW leads the way in developing Australia's Hydrogen Energy Infrastructure**

**Dr David Nolan** (Engineering Materials Institute) was recently awarded the University's first CSIRO Flagship University Collaboration Project (\$134,000) to develop a technology roadmap for Australia's hydrogen distribution infrastructure.

Hydrogen has the potential to play a major role as an energy carrier as we move toward a low emission future, as it can be used to store energy derived from renewable or fossil fuel sources (with subsequent CO<sub>2</sub> capture), and then be utilized either in combustion or fuel cell systems, with no emission of CO<sub>2</sub> or other polluting greenhouse gases. This principle is the basis of what has been referred to as the Hydrogen Economy. It is a matter of global significance, as demonstrated by the formation of the International Partnership for the Hydrogen Economy (IPHE), a 17-member association which aims to accelerate the cost-effective transition to a global hydrogen economy to enhance energy security and environmental protection. There are many national programs within member nations designed to promote hydrogen technologies, including the US Department of Energy's Hydrogen Program, and the European Union's Hydrogen and Fuel Cell Technology Platform. Australia is also a member of the IPHE, and has committed to preparing for the

hydrogen economy. However, Australian efforts to date in the development and application of hydrogen technologies have been largely uncoordinated on a national scale. In an attempt to create a more collaborative approach, CSIRO Flagship Cluster program has recently launched the National Hydrogen Materials Alliance (NHMA), a formidable consortium of 11 Universities, ANSTO and CSIRO, of which University of Wollongong is a founding member. This Alliance will focus primarily on hydrogen production and end use technologies, and is likely to make a significant contribution to the global research efforts. Dr Nolan's Flagship Project will augment the NHMA, by considering the technical and economic aspects of the large-scale hydrogen transportation and distribution that will be essential for the development of a cost-effective hydrogen economy.

The project has already enabled participation in major international research forums on hydrogen energy technology, (World Hydrogen Energy Conference in Lyon, France, and the US Department of Energy's Hydrogen Pipeline Workshops). This represents international recognition of the contribution that UOW researchers can make to the international effort in this field, and provides a key pathway for technology diffusion into Australia from the international scene. For further information, contact: Dr David Nolan, ext. 5549, [dnolan@uow.edu.au](mailto:dnolan@uow.edu.au)

### **Two Awards for 'Slowmotion'**

**Dr Gary Hoban's** (Education) research in and promotion of the use of a new form of animation, called "Slow Motion Animation" (Slowmotion) developed in his teaching over the last two years, has won a significant international award for developing this form of animation and using it in teaching to promote the learning of preservice students. The award "2006 Technology Leadership Awards" is presented annually by the Society for Information Technology and Teacher Education. This international society is a subgroup of the Association for the Advancement of Computing in Education (AACE) which is considered the largest Information Technology group in education in the world. Dr Hoban's award is for "Exemplary Use of Technology to Teach Content in a Teacher Education Methods Course" which recognises the value of preservice students making animations to learn about science concepts. The international society presented another award this year for the "Ex-

emplary Use of Technology to Teach Content in the Induction Years" which was won by **Kristy Kervin** (Honours student in Education) who has utilised "Slowmotion" in the area of teaching mathematics to year four students. Kristy is supervised by Dr Hoban and Mrs Ann Baxter. Examples of animations made by students can be seen at [http://edserver2.uow.edu.au/~ghoban/CITE\\_Garry/](http://edserver2.uow.edu.au/~ghoban/CITE_Garry/)

**Prof. Buddhima Indraratna** delivered a Keynote Address on "Soft Soil Stabilisation with Special Reference to Roads and Railways" at the 4th International Conference on Soft Soil Engineering, held in Vancouver, Canada in October. The Conference was hosted by the Canadian Geotechnical Society, The University of Hong Kong and The University of Alberta, and sponsored by Vancouver International Airport Authority and numerous multi-national construction firms. The very well attended 3-day Conference was focused on infrastructure development on problematic soils including mass transport systems, and also highlighted a tribute to Emeritus Professor Ralph Peck, the oldest surviving pioneers of Soft Soil Engineering.

**Jenny Halldorsson and Brianna Thompson** (PhD students with the Intelligent Polymer Research Institute (IPRI) were recently awarded the ARC Nanotechnology Network (ARCNN) Young Science Ambassador Awards for NSW. This scheme provides funding to promote science education and awareness of nanotechnology to high school aged students across Australia. Several schools from across the Illawarra were chosen to receive visits from the Ambassadors (Jenny and Brianna), who gave short presentations on Nanotechnology, as well as providing some hands-on demonstrations. Participating Schools were: Shellharbour Anglican College, Illawarra Senior College, Illawarra Sports High, Warilla High School, Oak Flats High School and Keira High School.



**Daniel Blinkhorn** (DCA in Composition, Creative Arts), was awarded Second Prize in the prestigious International Competition for the Electroacoustic

Music Composition Prize 2006 in Limerick, Ireland. The annual prize is administered jointly by RTÉ Lyric FM and The Centre for Computational Musicology and Computer Music (CCMCM). The CCMCM is an internationally-recognised leader in advanced music technology education and research and is part of the Department of Computer Science & Information Systems at The University of Limerick. More info at: <http://www.ccmcm.ie/>

**Dr Bridget Munro** from the Biomechanics Research Laboratory, has won the ASICS Award for Best Research Paper on the Lower Limb by a Young Investigator at the 2006 ASICS Conference of Science and Medicine in Sport, held in Yanuca, Fiji Islands, last October. Her paper: *Do 'light' landers display lower limb injury protective mechanisms?* was co-authored by J. Steele.



At the same conference, **Mr Dean Dudley** of the Child Obesity Research Centre received the The Wendy Ey, Women in Sport Award (\$500) for his presentation on *Engaging adolescent girls in school sport (a feasibility study)*. This is also the first time this award has been presented to a male. (Co-Authors: P. Pearson & T. Okely).

**Dr Tim Coltman** (Informatics) will receive an award for the Best Paper at the Australian and New Zealand Academy of Management (ANZAM) Conference recently. The title of the paper was: "Buyer Preferences for Outsourced Logistics Services (3PL)" and other authors include: Kate Hughes (Research Assistant UoW), Prof Timothy M Devinney – Director, Centre for Corporate Change, Australian Graduate School of Management (AGSM), and Stuart M .Whiting - Country Manager, Thailand. Dr Coltman's prize (a plaque) will be awarded at the Australian and New Zealand Academy of Management (ANZAM) Conference, in Rockhampton, Queensland in early December.

**Dr Prashan Premaratne** (School of Electrical, Computer & Telecommunications Engineering) was invited to conduct two interactive lecture sessions at the Magdalene Catholic High school in Narellan last September during their Robotic Investigation Day. The students were very keen participants. They had the opportunity to get hands on experience on some working robotic gear

which Prashan had supplied. This session was specifically aimed at students who intend to enrol in physics and mathematics streams next year.

#### **NEW XRD Facility Installed**

The **Engineering Materials Institute** has successfully commissioned a new state-of-the-art X-ray diffractometer, purchased through a recent Pool 2 Grant. The MMA (mini-materials analyser) from GBC Scientific Equipment in Melbourne is a highly versatile analytical device for performing investigations on materials using both parallel and focussed x-ray beams. The device addresses limitations in conventional X-ray analysis and also enables staff to perform new dedicated glancing angle investigations of surface films and coatings, layered nanostructures, and semiconductor interfaces. The MMA is located in the x-ray diffraction laboratory and will have a significant beneficial impact on key research teams in the Engineering Materials Institute and the ISEM, supporting current research projects and opening up new areas. Faculty and University workers are encouraged to employ XRD in their research because it is such a simple, yet powerful and productive way of obtaining structural and chemical information. For further information contact Dr David Wexler (4739).

The latest edition of RealTime Magazine features three highly-favourable reviews of recent performances by **Professor Julian Knowles** (Head, School of Music and Drama) in collaboration with vocalist/electronic music artist Donna Hewitt (<http://www.realttimearts.net/rt75>). A well-established composer/performer in the electronic music and media arts fields, Julian Knowles has recently been exploring the musical language of intelligent dance music, 'post-digital' music and VJ culture in contemporary composition contexts.

Knowles and Hewitt were invited to play the closing night of prestigious Sydney new music series *Impermanent Audio* as well as being chosen as feature artists for this year's *Liquid Architecture* national festival of sound arts, which took place at the Brisbane Powerhouse, The Performance Space Sydney, and ArtsHouse Melbourne. Prof. Knowles has also been invited to perform at the 2006 International Computer Music Conference in the USA from the 6-11 November.

**Dr. Rajind Mendis** (Research Fellow, Engineering Faculty) recently delivered an invited keynote talk entitled, "THz Waveguides: The Evolution", at the Joint 31st International Conference on

Infrared and Millimeter Waves & 14th International Conference on Terahertz Electronics 2006, held in Shanghai, China. He was invited to this major international conference on THz (terahertz or T-ray) science and engineering for his pioneering research in THz waveguides. He also chaired a session during the conference proceedings and was on the accreditation board for paper reviewing. Rajind has also been selected for inclusion in the 2006-2007 Edition of Marquis "Who's Who in Science and Engineering" that chronicles the biographies of today's leading scientists and technological achievers in the world.

**Shérine Micheal Antoun** (Informatics - SITACS) and his supervisor Professor Phillip McKerrow have co-authored a paper entitled: *Landmark Navigation with Fuzzy Logic* based on research for his PhD, which was accepted for presentation at the 2006 Australasian Conference on Robotics and Automation (ACRA) and for publication in the proceedings.

**Dr Alex Remennikov** (School of Civil, Mining and Environmental Engineering) received the Best Paper Award at the 5th Homeland Security Summit held in Canberra recently, which was organised by the Research Network for a Secure Australia (RNSA) and funded by the Australian Research Council (ARC). His paper was on designing anti-terrorist perimeter protection for critical buildings.

**Dr Katina Michael and Holly Tootel** (School of Information Technology and Computer Science) also presented papers. Ms Tootel's paper was also nominated for the Best Paper Award. The Homeland Security Summit is an annual event that brings together researchers and practitioners representing government, business and academic communities to discuss new trends that are shaping Australia's homeland security strategies.

**Dr MG Michael and Dr K Michael** (School of Information Technology and Computer Science) are the guest editors of a special edition of the journal *Prometheus* on the topic of National Security. This volume 24(4) also features papers by the editors and **Ms Holly Tootell**.

**Mr Hilary Johnson** was awarded the Australasian Society of Ecotoxicology (ASE) Best Honours Thesis award for 2005. The award was formally presented to Hilary by the ASE President Dr John Chapman at Interact 2006 (an international conference in Perth, Western Australia) last September. Hilary

2005. The award was formally presented to Hilary by the ASE President Dr John Chapman at Interact 2006 (an international conference in Perth, Western Australia) last September. Hilary completed his Honours (Environmental Chemistry) at the UOW in

2005 and was co-supervised by Dr Jenny Stauber, Merrin Adams (CSIRO Centre for Environmental Contaminant Research) and Dr Dianne Jolley (Chemistry, UOW). He is currently involved in the Graduate Development Programme in the Department of Agriculture,

Fisheries and Forestry in Canberra. Hilary is the second UOW student to be awarded this prize, with Ms Jacqueline Levy winning the award in 2003 for her research on arsenic transformations in marine microalgae.

## SCHOLARSHIPS & FELLOWSHIPS

<http://www.uow.edu.au/research/rsc/student/scholarships/>

### NHMRC Centre for Clinical Research Excellence Scholarships

Expressions of Interest are called from Aboriginal and Torres Strait Islander and non-Indigenous students to register interest in applying for a CCRE Scholarship to conduct research in Aboriginal and Torres Strait Islander chronic disease. The CCRE will offer scholarships to support CLINICAL, POPULATION and SOCIAL HEALTH, and HEALTH SERVICES research in chronic disease prevention and management with Aboriginal and Torres Strait Islander populations. Scholarships will be offered towards Honours, Masters, Professional Doctorate and PhD degrees, commencing in 2007. Vacation scholarships can also be supported. Expressions of Interest must be submitted by 29th November 2006.

### CSIRO Postgraduate Scholarship Program 2007

CSIRO is offering postgraduate students to undertake research aligned with National Research Priorities – Closing Date 30th November

**A PhD scholarship with DHL** (Delivery and Logistics Industry market leader) is on offer for a student interested in Supply Chain Management. The student will work within an interdisciplinary research team that includes researchers from the University of Wollongong and the Australian Graduate School of Management to develop and test a model of strategic fit.

**A 3-year PhD scholarship in the field of applied visual psychophysics** is available under the supervision of Dr Stephen Palmisano at the School of Psychology (Health & Behavioural Sciences), UOW. The successful applicant will be working on a 2007-2009 ARC-funded project that examines the visual perception and control of aircraft glideslope control.

## CONFERENCES AND WORKSHOPS

<http://www.uow.edu.au/conferences/2006.html>

### **FABULOUS RISK: Danger and Performance in Circus & Sideshow**

1st-3rd December 2006

The conference is coordinated by the UOW, the Centre for Canadian-Australian Studies, Circus Monoxide, and ACAPTA (Australian Circus and Physical Theatre Association) and will be held in Circus Monoxide's Big Top in Stuart Park, Wollongong.

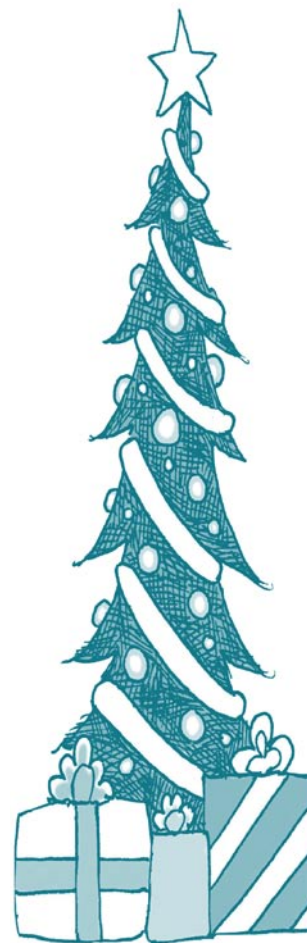
The **14th Annual RACI Analytical and Environmental R&D Topics** conference will be held at the University of Wollongong, from 5th to 8th December 2006.

International workshop on **Traditional knowledge, traditional cultural expressions and intellectual property law in the Asia-Pacific region** at the Centre for Comparative Law and Development Studies in Asia and the Pacific, 19-20 December 2006, Moot Court (67.202), Faculty of Law. This workshop will be organised in conjunction with the ARC Centre of Excellence for Creative Industries and Innovation and co-sponsored by the Max Planck Institute for Intellectual Property, Competition and Tax Law in Munich, Germany. The comparative and interdisciplinary workshop will feature speakers from ten different countries. For further information please visit the website of the Centre at <http://www.uow.edu.au/law/clsdap> or contact Mr. Gabriel Garcia (ext. 4272 or [gg996@uow.edu.au](mailto:gg996@uow.edu.au)).

The **Mathematics and Statistics in Industry Study Group Conference (MISG2007)** will be held at the University of Wollongong, 5-9th February 2007, with A/Prof.

Tim Marchant as director and Dr. Maureen Edwards as A/Director. MISG2007 is an industry clinic where around 150 mathematical and statistical experts tackle selected industrial projects, over the course of the week. Companies participating include Bluescope Steel, Integral Energy, DSTO, Trading Technology Australia and Transpower NZ. Interested University staff and students are encouraged to attend.

Registration is free for delegates and further details can be obtained from the web-site [www.misg.math.uow.edu.au](http://www.misg.math.uow.edu.au) or via email: [tim\\_marchant@uow.edu.au](mailto:tim_marchant@uow.edu.au).



Thank you to everyone on campus who provided information throughout 2006. Our first issue for 2007 will be available by mid February...Please send Research items by Wednesday 7th February to [vwallace@uow.edu.au](mailto:vwallace@uow.edu.au)  
Editor: Vicky Wallace (RSO) : Design and Layout: Gerard Toomey (Printery)  
Have a happy and safe holiday...See you in 2007!