

RESEARCH NEWS

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WELCOME

I am pleased to announce the appointment of Dr Peter Sefton as eResearch Manager at UWS who commenced 31 October 2011.

Peter has a PhD in computational linguistics from the University of Sydney. He has held a variety of roles involving Information Technology and Information Management, in support of both research and learning, including a great deal of involvement in implementing software services for research data management for the Australian National Data Service (ANDS) in partnership with the University of Newcastle and Swinburne University, as well as several years as a senior figure in the Australian institutional repository community, first on the RUBRIC (Regional Universities Building Research Infrastructure Collaboratively) project which was led by USQ, followed by two years as the senior strategic advisor to CAIRSS (CAUL (Council of Australian University Librarians) Australian Institutional Repository Support Service). Most recently Peter has been carrying out contract work for JISC in the UK.

I am sure you will join me in welcoming Peter to UWS.

Professor Andrew Cheetham
Pro Vice-Chancellor (Research)

NHMRC SUCCESS

National Health and Medical Research Council Project Grants for 2012

UWS has been awarded 4 NHMRC Project and 1 Partnership grants totalling \$2.4 million. In addition, newly recruited UWS researchers have also been successful with Project grants totalling \$0.806 million. Eight UWS researchers have also achieved success in collaboration with other universities.

Congratulations to our excellent UWS researchers and the Research Grants and Development Team

within Research Services on outcomes that continue to grow UWS's NHMRC achievements with a success rate of 17.4% which shadows the national success rate of 22.5% and an increase in project grant funding up from \$1.2 million in 2011.

Several of our grantees have also been previous recipients of UWS internal grants designed to build success in national competitive grants and strategic partnerships.

For full details see: http://www.uws.edu.au/research/ors/activity_strengths/external_outcomes

ARC SUCCESS

UWS has been awarded 10 Discovery Project grants and 2 of the inaugural Discovery Early Career Research Awards, Dr Emma Waterton, Centre for Cultural Research and Dr Jason Shaw, MARCS Auditory Laboratories. With grants valued at \$3,635,788 million, UWS continues its top 20 position in this scheme and has moved to 16th in the sector (out of 40) up from a ranking of 21st on 2011 dollars awarded.

UWS has also been awarded 2 Future Fellowships, Dr Paolo Bubbio and Dr Philip de Chazal, with funding of \$1.47 million over four years.

Newly recruited UWS researchers have also been successful with Discovery grants totalling \$0.290 million and our researchers have also achieved success in collaboration with other universities.

UWS researchers have also achieved success in collaboration with other universities, including with research infrastructure, equipment and facilities funding under the Linkage Infrastructure, Equipment and Facilities scheme.

Nationally, the ARC has awarded \$236 million under the Discovery Project scheme following consideration of 3544 applications with 778 grants awarded: a national success rate of 21.95%.

Congratulations to our excellent UWS researchers, the Research Grants and Development Team within Research Services and Research Program Coordinators in our Research Centres and Institutes.

THE IMPORTANCE OF IP PROTECTION

A case Study

UWS congratulates Anton Bogdanovych on recently placing 3rd at the 2011 Federal Virtual Worlds Challenge held by the US Army Research Laboratory – Simulation & Training Technology Centre, for his innovative work on the virtual city called Uruk. Anton contacted the team at UWS Innovation & Consulting about his invention the day before he left for the USA to accept his prize. To ensure that the intellectual property was sufficiently protected UWS I&C arranged for an urgent provisional patent application to be filed on the day of Anton's departure. Had Anton participated in the competition prior to notifying UWS I&C of his invention, the invention would have been considered a "public disclosure" and the intellectual property would have been lost and of virtually no commercial value.



Virtual agents interacting in the virtual world of Uruk

Because of the difficulty and lack of success so far in building physical robots, there has been a tendency towards computer simulation where virtual agents in a virtual reality world attempt to achieve intelligent behaviour. On February 16, NBC (a US television network) aired an episode of "Final Jeopardy" featuring Watson, an IBM supercomputer. Watson took on two human champions and the machine recorded a resounding victory over its human competitors. Watson's performance has caused scientists, academics and businesspeople to ponder what future applications and business solutions could be addressed by such artificial intelligence (AI).

Important research in this field is happening in 3D virtual worlds such as Second Life, where they are becoming a popular new medium for a vast variety of so-called "serious games" applications. These games tackle problems like education, commerce, tourism etc. Significant advances are being made and some people are now wondering if the rise of AI platforms like Watson and those incorporated into programs like Second Life will mean the end of the live business agent model in the contact centre and customer care industry.

The UWS research being conducted by Anton is at the forefront of this field, and it is hoped that his research into the ability of a virtual agent to better interact in a dynamic virtual world will lead to better and more life-like AI.

These agents can gather into crowds, perform autonomous actions, use objects, and communicate with other virtual agents or humans (e.g. through Instant Messenger with their human controlled avatars), interact with the virtual environment, learn, and so forth. This technology is capable of controlling these virtual agents in such a way as to make them seem believable and human-like. The agents are capable of believable gaze, obstacle avoidance, crowd simulation, agent communication and complex planning.

The technology is currently being employed in the virtual world of Second Life as part of an educational program that simulates the ancient Sumerian city of Uruk. However, the technology may have a variety of uses in applications such as in customer relationship management, virtual sales assistants, education, tourism, simulation, and gaming (e.g. serious gaming or recreational). These applications may be in virtual worlds such as Second Life, games or the general web, or even augmented reality scenarios.

Traditionally, the development of AI has focused on an agent's "perception" of environment, rather than "cognition". The invention focuses on "cognition", and this is where it is believed the greatest commercial promise lies.

UWS is commercialising this protected IP through its commercial arm, UWS Innovation & Consulting who can be reached at ip@uws.edu.au.

TAKING CARE OF YOUR INTELLECTUAL PROPERTY

It is vital that anything created during the course of your research, that you may consider to be an "invention", does not have the details disclosed outside the University before the IP has been registered and protected. 'Public Disclosure' includes conference abstracts, poster presentations, blog entries, external communications and any seminars where there are external attendees.

Detailed information can be located at: http://www.uws.edu.au/innovate/innovate/ip_management_and_investment and http://www.uws.edu.au/innovate/innovate/ip_management_and_investment/ip_faqs

If you have any questions please contact Dr Fiona Cameron – Associate Director, Innovation – contact details: http://pubapps.uws.edu.au/telidir/personprocess.php?id=9804&a_label=off

UWS STAFF MEMBER RECEIVES TALL POPPY AWARD

Associate Professor Hilary Bambrick from the University of Western Sydney's School of Medicine has been named a 2011 Young Tall Poppy at a gala for the prestigious science award in Sydney on 3 November.

Associate Professor Bambrick, who specialises in the health implications of climate change, has been recognised for her outstanding research and her ability to communicate the complexities of science to a broad audience.

"Higher temperatures, altered local rainfall patterns and other climatic variations will change the distribution of insect-borne diseases, some infectious diseases and parasites and have a direct impact on health through events such as heatwaves," says Associate Professor Bambrick.

"It's essential we build a better understanding of how our health could be affected by climate change. The changes are happening much more quickly than our genes can cope with, so we'll need to be forewarned of the potential consequences and be clever about how we adapt."

Associate Professor Bambrick and her fellow 2011 Young Tall Poppies will embark on a 12 month program to take their knowledge out to the community, especially schools, to help raise the awareness and understanding of science.

THREE MINUTE THESIS (3MT) COMPETITION 2011

UWS 3 Minute Thesis Finals

The UWS 3 Minute Thesis final was held at Parramatta on Friday 2nd September 2011.

The winner, and People's Choice, was Cherylea Browne of the School of Medicine.

Topic: *Understanding the Underlying Mechanisms of Tinnitus*. Cherylea won \$2,000 for first prize and \$500 for People's Choice.

Second prize winner was Greg Whiteley of the School of Natural Sciences.

Topic: *Assessment of New Methods for Monitoring Environmental Surface Cleaning and Hygiene in Healthcare Settings*. Greg's prize is \$1,000.

Third prize of \$500 went to Ryan Al-Natour Centre for Cultural Research.

Topic: *The Case of the Proposed Islamic School in Camden*.

Cherylea represented UWS at the Trans Tasman finals at the University of Western Australia on 29th September 2011 in Perth, there were 42 contestants with the winner Mathew Thompson hailing from the University of Queensland.



Assoc Hilary Bambrick (judge) with winner Cherylea Brown and special guest judge Ms Lucy Carter, Triple J News Director and ABC Youth Affairs Reporter.



Greg Whiteley, Cherylea Browne and Ryan Al-Natour

THE NATIONAL POSTGRADUATE RESEARCH EXPERIENCE QUESTIONNAIRE (PREQ)

All Australian higher degree research graduands are invited to participate in the national Postgraduate Research Experience Questionnaire (PREQ). UWS has again registered strong improvement almost across the board. Standout results are in:

- » The quality of UWS HDR supervisors – with 78.4% of students rating their supervision highly (compared to the sector average of 77.5%)
- » 94.2% of research students highly rating their skill development (sector 92.7%)

There continues to be improvement across the range of factors that PREQ assesses, with:

- » Improvements in ratings for intellectual climate – UWS 64.2% - Sector 63.8%
- » Goals and expectations being met – UWS 93% - Sector 92.7%

However, we need to know how more HDR students assess their candidature.

Participation rates are currently 49% and your support is sought to enable the University to work towards equalling the sector response rate – 62%. Supervisors, HDR coordinators and School Research Committees are invaluable champions of research and the PREQ forms critical data for UWS and all Australian universities to continue to improve the experience of HDR students and the quality of Australian research graduates.

ENHANCED RESEARCHER PORTAL

The Office of Research Services has developed new web pages which enable you to see information that is 1) aggregated by organisational unit and 2) the University's ERA 1 (Excellence in Research for Australia, 2010) data both aggregated and by individual contribution.

This new component of the Researcher's Portal is only available within UWS and should be treated as confidential to the University.

The data is static as it is based on historical ERA 1 submission related to those individuals whose performance was captured at the ARC's census date (31 March 2010). The data covers the ERA 1 Reference period 2003-2008.

The URL for this data is <http://research-internal/uws/Performance ERA1.asp> (no login required).

STAFF PROFILES

Louise Fazekas

Louise Fazekas is one of the newest staff members in the Office of Research Services. She is the Ethics Officer looking after the needs of the Animal Care & Ethics Committee and also the Biosafety & Radiation Safety Committee. Louise enjoys assisting researchers with some of those tricky ethics application questions, so feel free to call or email anytime. During her second week on the job she helped host the triennial inspection of UWS animal ethics projects and facilities by the NSW Department of Primary Industries Animal Research Review Panel inspectors– that was fun! Louise comes to UWS with recent experience looking after animal ethics for Westmead Hospital.

In her spare time Louise enjoys reading and singing along (badly) to favourite musicals. Her Hungarian heritage creates an interest in cooking with a European approach. Among other things, Louise loves to look at very old buildings, very tiny birds and eBay shopping sites.



Louise Fazekas

Jenny-Lee Heylen

Jenny-Lee is one of four Research Development Officers. Her primary role is to liaise with potential grant applicants, research partners and grant funding bodies to improve the quality and quantity of research grants and external research income for the University. She has special expertise in critical analysis of grant applications, and her red pen is both feared and loved by her clients.

Jenny-Lee's personal interests are best described as eclectic. She enjoys knitting, cycling to work, hiking, singing, writing (short stories and a couple of novels), calligraphy, medieval illumination, and a good robust argument.

She thinks she's in the perfect job.



Jenny-Lee Heylen