Swooping into community science

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Full Story
Swooping into community science

by Heather Leggett

You’d be lucky to find a handful of Australians without a memory involving an ice-cream container as a make-shift helmet, a tall tree and a mad magpie. But South Australians are being asked to look at our black and white feathered friends in a different light this month, all in the name of science.

The colourful life of our monochrome mates will come under the microscope as part of Operation Magpie, a ‘citizen science’ initiative that represents the future of science – one where the entire community gets involved in scientific observation.

A venture between UniSA’s Barbara Hardy Centre for Sustainable Urban Environments, the Department for Environment and Heritage and 891ABC Adelaide, Operation Magpie is the latest in a trio of successful initiatives that aim to better understand the behaviour of our local wildlife.

While Operation Bluetongue in 2007 and Operation Possum in 2008 had an overwhelming public response, Professor Chris Daniels, Director of the Barbara Hardy Centre, believes that Operation Magpie will be the partnership’s most successful operation yet.

"It is common to see at least one magpie everyday," he says.

"That means that they are highly accessible and easy to observe in a natural environment. We’re asking for everyone to get outside and experience what it’s like to be an animal behaviourist for a day."

Adelaide local Meg Schwarz who’ll be getting involved in Operation Magpie this year, has a lifetime love of the cheeky birds. Now a magpie advocate, Schwarz had an experience six years ago that changed life as she knew it.

"I was driving home and saw an injured magpie in the middle of the road," she recalls. "Nobody was stopping for the poor little thing."

"We took him home, nursed him to health and fell in love. Six years on, he’s part of the family."

Other South Australians who want to get involved in the community science project, just need to log onto the Operation Magpie website where they can access useful information on magpie behaviour. After observing a magpie for 20 minutes, participants will be asked to complete an online survey about their findings.

Prof Daniels says that you might be surprised by what you see.

"We’ve all had our own swooping experience, but what you might not know about magpies is that they’re highly intelligent, eat common garden pests and have a glorious range of songs," he says.

"They’re funny too – they love to muscle in on things and interact with other birds. I’ve heard so many personal stories about them that are just fascinating," he says.

The beauty of citizen science says Prof Daniels, is in the volume and quality of data that can be collected.

"The way this data is collected is a world first. We’ll be able to compare city data with more regional data on a grand scale," he says.
"And while we get the benefit of the scientific data, people will get the benefit of feeling connected to the environment. There is a huge difference between passively seeing a bird in your backyard and actively observing and recording its behaviour. It’s a real awakening."

Schools can also get involved this year. The Barbara Hardy Centre has developed a broad range of educational materials for primary and middle school classes that can be accessed by teachers.

So this month, try something a little different. Put away the ice-cream bucket helmet, grab a notepad and head into your backyard all in the name of scientific discovery.

For more information visit the Barbara Hardy Centre homepage.
From the Chancellery

Anna Ciccarelli
Pro Vice Chancellor & Vice President: International & Development

New research shows that Australian university graduates earn $1.5 million more over the course of their working lives than their counterparts who stopped studying in Year 12.

Data extracted from a recent AMP NATSEM report - ‘What price the clever country?’ offers young people something significant to consider as they take their first steps beyond high school.

For example a male university graduate will earn an average of $1549 a week, compared with his non-graduate counterpart who can expect an average income of just $811 a week.

With SATAC applications closing at the end of this month (September 30), UniSA is preparing to welcome the next generation of professionals, leaders and decision-makers to our campuses.

UniSA’s successful Open Day last month, our largest community engagement event which this year attracted more than 11,000 people to the City West campus, demonstrated the involvement of parents and families in young people’s decision making about tertiary education.

We also welcomed many professional people seeking opportunities to re-skill and upgrade their qualifications.

What is very clear is that young people are savvy in their deliberations - along with what their parents and peers views and expectations are, they consider factors such as where the jobs of the future will be, which industries promise growth and what fields will be in high demand in the State.

But expediency and pragmatism alone do not necessarily guide the best choices. It is still true that personal interest and passion are vital in determining success and fulfilment in a chosen field.

Choosing an undergraduate degree is just the first of many career decisions students will make over a lifetime.

Universities today understand that more than ever before. We recognise it is important to provide the resources and training necessary to prepare students for the 21st century by offering innovative, flexible, and experiential learning programs.

UniSA’s approach is to educate for the professions and to give students the skills to build life-long careers so they can work anywhere in the world.

Our student mobility programs and the internationalisation of our curriculum along with the teaching and learning initiatives that Professor Lee wrote about in last month’s column, all ensure that our graduates can compete locally, nationally and internationally.

Fresh data from the 2008 Australian Graduate Survey shows 84 per cent of UniSA bachelor graduates were in full-time employment in 2008, a figure which compares well nationally (85 per cent); and with Flinders University (82 per cent); and the University of Adelaide (81 per cent).
This is great news for students choosing to study at UniSA.

But it is important to see what higher education delivers beyond individual prosperity.

When we talk about making a difference, it is an individual potential but it is also the whole potential of higher education to lift the social and economic wellbeing of communities and societies.

The current challenge for the South Australian community is to address recommendations on a range of issues including increased participation in and access to education for equity groups in line with the Review of Australian Higher Education Final Report (the Bradley Review) released in December last year.

The Bradley Review recommendations set significant targets for higher education participation, including a target for 40 per cent of Australians aged between 25 and 34 to have a higher degree by 2020.

Improving SA’s achievement from 22 per cent will be everyone’s concern in the years ahead.

Already UniSA draws 25 per cent of its domestic student population from low socio-economic backgrounds. We are striving to help lift the State’s participation rate and to build educational and career aspirations and opportunities for more and more South Australians.

UniSA will continue to play a major role in preparing individuals for 21st century careers and future employment patterns and in doing so, make a significant contribution to the State’s socio-economic development and a degree of difference in the wider world.
Classifieds

For sale

Adidas Fitness Watch - Brand new, unwanted prize, sports style, chrono, alarms, boxed with tags $60 neg.
Navman S200 Platinum Series GPS - Brand new, unwanted prize, Bluetooth, 1GB memory, 2009 maps, FM tuner (to listen to MP3s and navigation through car sound system). $350 neg.
2003 Suzuki Liana Sedan - Regrettable sale, immaculate condition, black-on-black finish with black tint, alloys, fog lamps, spoiler, body kit, power mirrors & windows, digital dash display, 1 owner from new, Japanese quality, extremely low 25,000 kms - suits new car buyer. $14,500 neg (serious offers only please). Email mj23@adam.com.au for the above three items.

Fridge/Freezer - Westinghouse, approx 220l. Six years old, excellent condition. $150 ono.

Cooks Uniform - Size large, new white cooks jacket with buttons, check pants, hairnet, new. Suit cook student. Paid $98. $50 ono. Call Hayden on 0410 929 129 for both above items.

Accommodation

Artists Studio - Spaces available for writers, painters, and other creative folk to join our friendly warehouse in the centre of Port Adelaide. All hours access, easy parking, close to transport. Spaces from $20 p/w all inclusive, short term if needed. Please call Diana on 8232 0310.

Services

Colgan’s Cryptic

Across
1. Terrorist organisation held holy crusade (5)
4. Irritable, missing out, but having only mediocre attributes (2,5)
8. 1967 movie involves fake jewellery and money (6,7)
9. Thin frame brings a clearer interior for pet budgie (5,8)
10. With leader of Lesotho absent, African queens joined parade for noblewomen (13)
12. Perhaps Yalumba label accepts one substantial cut (13)
15. Sent outside library, perhaps, for being svelte? (7-6)
16. Outlay covers American stay (7)
17. Glut made booze turnover increase ultimately (5)

Down
1. Wears down stones for jewellery (5)
2. They illegally enter harbour surf (13)
3. Femme fatale, about fifty, is called up (7)
4. Beaten, exhausted fellow’s direly overdue (13)
5. Terms adopted by the British on aid to the likes of Robert Mugabe (5)
6. Unthinking bureaucrat matches doctor (6-7)
7. Coverings for small shrubs (7)
10. Not having treatment initially, the price I’ve paid is fungal disease (7)
11. What married woman might do without western jewellery (7)
13. Invest last, ignoring start of recession (5)
14. Quickly move clear of vehicle (5)

Book voucher to win

For your chance to win a $40 book voucher, email your completed crossword to len.colgan@unisa.edu.au or fax (08) 8302 5785 by Friday September 25.

Solutions published online on Friday October 9.
New leaf

Sex in the Boardroom

Merydith Willoughby
Published January 2009
Purchase from www.amazon.com/Sex-Boardroom-Merydith-Willoughby/dp/1740085124

Award winning organisation development consultant Merydith Willoughby shares her secrets for success in the workplace in her new book, *Sex in the Boardroom*.

The book focuses on equipping workplace leaders with tools that will help them become powerful leaders in their own right.

The UniSA alumnus (post-graduate education and politics) gives readers a systems approach to leadership development that can be used as a tool to review what they are doing and to make minor or radical changes in the way they lead.

She says her book advises how to focus on what will give leaders the most gain for their organisation, instead of focusing on peripheral issues that take a lot of time away from what these people really should be doing.

"Being a powerful leader doesn’t just happen – it requires a lot of hard work, is time consuming and although some may have a natural tendency towards it, every leader has to continue to strive for excellence," Willougby says.

Willougby incorporates humour into the book, saying that driving and developing the process of leadership does not have to be hard, dry and boring.

"When you lead your people with a more playful attitude it can be infectious and resonate with everyone," she says. "This in turn helps to create a team who is on your side and who feel passion, enthusiasm and excitement for what they are doing."

Willougby is also the founder of IB Coaching, delivering services to workplaces across Australia and the US.

Sport Covered

Andrew Lines
McGraw-Hill $119.95

South Australian teacher, and UniSA graduate Andrew Lines, has written this manual as a resource for upper primary and secondary school physical education teachers.

With more than 15 years’ experience as a physical education teacher, Lines found that there was a need to provide teachers with an easy-to-follow manual.

"I wrote some student booklets which contained rules, tactics and assignments for the sports that are studied at various year groups," Lines said.
"When I had them printed, I found out that there was quite a lot of interest from other schools so I got in contact with McGraw-Hill publishers who did some research and found out that teachers preferred a book about teaching PE, rather than a book for students.

"The feedback I've received about the book is that it's user-friendly, covers a good range of well known and some lesser known sports, and that the wet weather activities come in handy.

"Teachers appreciate the games-based and play practice methodologies that the unit plans are based on, as well as the brief synopsis of rules...they seem to appreciate having all of this in the one book."

Sport Covered includes a CD-ROM that provides a graded assignment for each sport. It allows teachers to adjust the content of each assignment to suit the needs of the students they are teaching. The manual also includes a 'find-a-word' and crossword activities for rainy days.
Improving communities, enhancing student learning

by Katrina Kalleske

Key members of the Northern Summit Communication Team (from left) Neil Otway, Carolyn Bilsborow, Prof Kerry Green, Chancellor Ian Gould, Prof Hilary Winchester, Susan Luckman and Denise Wood.

UniSA’s commitment to community work was demonstrated by the high level of nominations in this year’s Chancellors Awards for Community Engagement.

Nine projects were recognised for partnering with communities in projects that provided positive outcomes for all involved.

UniSA Chancellor Dr Ian Gould said the nominated projects represent some of the best examples of community engagement activities that are taking place in the University.

"The initiatives are prolific throughout the University because community engagement is a part of the culture of our institution," Dr Gould said.

"Our engagement mission is not only one of our three corporate statements – it is actually enshrined in the establishing legislation of the University."

The overall winner was the Northern Summit Communication Team with prize money of $10,000 awarded to the project team from the School of Communication, International Studies and Languages.

The project stemmed from an existing UniSA project, the Northern Summit, which was held in August 2008 to bring together northern suburbs stakeholders in a bid to further develop and improve the area.

The School was approached to be involved with the summit, to research life and culture in Adelaide’s northern suburbs through a documentary project. The team involved students from three courses - Public Relations, Journalism, and Film and Television - to create two videos. Both were written and produced by PhD student Carolyn Bilsborow.

"We took up the opportunity to be involved with the summit by producing an introductory video for it called Look Again which encouraged participants to take another look at the positive things happening in the community," said Professor Kerry Green, Head of the School of Communication, International Studies and Languages.

"After the summit, the team developed a second documentary, Creating the Future, which investigated economic and cultural opportunity in the northern suburbs, and the summit’s role in effecting change.

"We contributed to a project that produced real change in the northern suburbs with Federal Government support committed to the region following the summit."
The prize money from the award will go towards pursuing further funding opportunities that will produce positive outcomes for the northern suburbs.

Another significant winner at the community engagement awards was the Mimili Community Tawara Watiku Student Design and Construction Project, undertaken by the School of Art, Architecture and Design.

With Federal Government funding, the School is designing and building new housing for single men in the Mimili community in the remote Anangu Pitjantjatjara Yankunytjatjara Lands of South Australia.

In line with cultural traditions, single men's housing replicates the traditional separation of single men from extended family groups, called tawara watiku. The camp provides a place for young men to learn traditional law and culture, commonly referred to as men’s business.

"The major benefit for the Mimili community, and potentially for other remote Aboriginal communities, is the opportunity to develop design alternatives for housing that current conventions and economies in housing provision cannot provide," said Jason Oaten-Hepworth, Lecturer in Architecture and project coordinator along with fellow lecturer David Morris.

"This needs to be done through extensive consultation and the University, with its research culture, is well placed to undertake the level of consultation and community engagement which housing providers are not able to budget for."

The project has involved numerous students from various degrees within the School and is part of a Student Design and Construction elective that students undertake during holidays.

Oaten-Hepworth said the educational opportunities it provides students is one of the biggest benefits.

The $7000 awarded to the Mimili project will go towards ongoing community consultation, engagement and research in Indigenous communities.

Two other projects were $7000 winners at the community engagement awards.

The Ehrenberg-Bass Institute won for its Community Panel project that is a joint initiative with the two city councils of Tea Tree Gully and Burnside. They established community-based online panels, giving the community a voice and a greater role in local decision-making, as well as building a sense of community and enhancing governance.

The other $7000 winner was the School of Education and the Centre for Regional Engagement (Whyalla campus) for its Place-Based Professional Experience Pilot Study. The project addressed the need for more graduate teachers in regional areas. The project team coordinated a unique work experience program in Whyalla for a group of students, and as a result, many indicated they will now seek a regional posting after graduation.

The $5000 winner was a team from the School of Nursing and Midwifery and the Centre for Regional Engagement for its Student, Children Interaction Project. Four other projects were given a commendation.
Indian engagement

by Michèle Nardelli

Australia’s Deputy Prime Minister Julia Gillard attended two significant functions in India at the beginning of September, both highlighting the depth of UniSA’s engagement in India.

In New Delhi, Minister Gillard launched the South Australian-based International Centre for Muslim and non-Muslim Understanding globally, with the aim of broadening the scope of the new research centre and attracting research engagement from India and the Asian region.

Dedicated to research that seeks to define, understand and transcend the divide between Muslim and non-Muslim cultures; the Centre has already attracted $10 million in funding from the Australian and SA Governments.

Ms Gillard said the launch of the Centre in India would help to encourage more of the world’s top researchers and thinkers to engage with its important research agenda.

"There is expertise here (in India) and in many countries across the Asian region that we can learn from," she said.

"The goal is to build a worldwide community of outstanding scholars with a commitment to understanding and exploring the cultural and sociological factors that influence Muslim and non-Muslim relationships."

UNESCO Chair in Transnational Diasporas and Reconciliation Studies, UniSA Pro Vice Chancellor for Education, Arts and Social Sciences and foundation leader of the Centre, Professor Pal Ahluwalia said the research agenda will go beyond religious differences.

"We want to move beyond basic religious dimensions to examine the complex cultural, economic, and sociological factors that affect tensions between Muslim and non-Muslim communities and to look at how notions of ‘otherness’ impact on media portrayals of the issues and influences the political dynamics worldwide," Prof Ahluwalia said.

Speaking at the launch UniSA Vice Chancellor Professor Peter Høj said plans for the Centre included 10 new PhD scholarships for study in South Australia over the next three years.

He said the structure of the Centre also emphasised international engagement, incorporating an international Advisory Board and Council of Distinguished Scholars that would include distinguished academics from around the world, including India.

And in Chennai the Deputy Prime Minister had the opportunity to get a personal view of one of UniSA’s longest running student-based collaborations in India, the exchange relationship with Madras Christian College (MCC).

Minister Gillard met and talked with four Australian exchange students from UniSA’s School of Social Work and Social Policy who are engaged in educational field placements in Chennai. She also met students from MCC who have returned from their stint at UniSA and heard from a group of six Indian students on exchange in Adelaide now.
The roots of this program date back to 1996 when UniSA's School of Social Work and Social Policy together with the Rural Unit for Health and Social Affairs (RUHSA) established a collaboration that saw the first UniSA students travel to India. Between 1996 and 2006 more than 80 UniSA students have studied and worked as part of the RUHSA collaboration and from 2007 UniSA has welcomed 22 students from Madras.

Prof Høj said all of the exchange students gained an enormous amount - developing an international perspective on their field of study and the experience of applying their learning in a new cultural context. And support for the program is being boosted with two new UniSA Presidential scholarships being offered for social work students from India to complete PhD studies in social work with UniSA.

[Read this page]
Water partnership flows on

UniSA and SA Water have just extended their highly successful research partnership taking the relationship to a full 10-year collaboration to find better ways to manage and re-use water in South Australia.

SA Water has invested $3.5m into the collaboration which underpins the SA Water Centre for Water Management and Reuse and has already delivered some significant outcomes across a broad range of water management applications, from models for low energy desalination using clean technologies, through to improved models for harvesting, treating and reusing urban stormwater.

Speaking about the research partnership, UniSA Vice Chancellor Professor Peter Høj said the strength of the Centre was its commitment to tackling the State’s water problems on many fronts.

"The research being carried out is wide-ranging, not only developing ways to better manage and use our natural rainfall, but also examining how sophisticated new technologies, including nanotechnology and new methods of filtration, can help to build a sustainable water supply future for the State," Prof Høj said.

"This kind of collaboration works especially well because we have a direct link with SA Water - the group with the best understanding of our water supply challenges. It means our researchers can work to provide solutions to real problems on an integrated scale."

SA Water CEO Anne Howe said the Centre for Water Management and Reuse had delivered some significant research and at the same time was acting as an important demonstration facility for industry.

"What is exciting about this work is that out at Mawson Lakes we have tangible evidence of how these innovations will work across the community," Howe said.

"This has become a focus for technology transfer to industry and a place where theories and innovations can be tested so that we can develop guidelines and systems that are practical and offer best practice for water capture, use, and recycling."
Tackling health priorities

by Kelly Stone

The University of South Australia’s flagship health and biomedical research institute will tackle key health issues identified as priorities both in SA and nationally.

The vision for the new Sansom Institute for Health Research was recently showcased at an event held at UniSA’s City East campus, attended by SA Health Minister John Hill and National Health and Medical Research Council (NHMRC) CEO Professor Warwick Anderson AM (pictured).

Institute Director Professor Kerin O’Dea said the new vision for the Sansom unites UniSA’s internationally-recognised research strengths in molecular medicine, pharmaceutical science and quality use of medicines, health economics, population health, Indigenous health, nutrition and physical activity.

"We have an overarching goal of building capacity across the ‘four pillars’ identified by the NHMRC as essential for Australia – biomedical, clinical, population health, and health services and policy research," Prof O’Dea said.

"The Sansom will also provide an excellent model for the new South Australian Institute for Health and Medical Research, which it is anticipated to bring together and amplify the health and medical research capacities and outputs from all three universities, the hospitals and the associated institutes.

"The future is both challenging and exciting. We want to build the Sansom into a flagship institute which is addressing health issues identified as priorities in South Australia and nationally, and to build our recognition and influence internationally."

The Sansom Institute was originally founded in 2004 and named after eminent Australian pharmacist Emeritus Professor Lloyd Sansom AO.

top^
Decades after the start of the Australian gold rush and some time before the infamous Boxer Rebellion, Yett Soo War Way Lee, the 22-year old son of a Chinese rice miller, arrived in Australia.

Against a backdrop of rising racism towards the Chinese, Way Lee (pictured), was to make an important impact on the budding Adelaide business scene, introducing the State to the notion of international trade with China and the benefits of multicultural engagement.

This year UniSA celebrated the 100 year anniversary of the death of Way Lee and took the opportunity to launch an important publication, *Way Lee - 100 Years On*, which documents his life and his contribution to business development in South Australia.

Published by UniSA’s Professor Roger Burritt, Dylan Walker and Amanda Carter, the idea for the monograph came from a simple question – who was Way Lee, the namesake of a UniSA building?

Professor Burritt, Director of the Centre for Accounting, Governance and Sustainability at UniSA, says when he asked the question very few people could give an answer beyond the most basic details.

Prof Burritt said he wouldn’t be surprised if many South Australians were completely unaware of the impact of Way Lee on both the business and community life of early Adelaide. He said that his story is rich with intrigue, success, endeavour, politics, prejudice and triumph.

"Way Lee was a migrant who adapted quickly to his environment," he says.

"He came to this country with very little and started up a small importing business Way Lee and Co, based originally in Hindley Street, selling tea, china and other goods, and then branching out to Currie Street, Quorn, Hawker and Millicent, and in NSW in Broken Hill, Beltana, Wilcannia, Wentworth and Menindie, and Daly River in the Northern Territory.

"He studied English at the Adelaide City Mission, married a local woman, expanded his business and his influence and maintained positive trade relations with China. Before long he was contributing to the wider community – supporting new jobs, public events and charities and pioneering and financing public celebrations such as the first Chinese New Year celebrations of 1886 for SA members of Parliament and their guests."

Prof Burritt says Way Lee’s story is iconic.

"The migrant experience is a deep and constant thread in the fabric of South Australia," he says.

"Just as his entrepreneurial approach and his determination to fit in and contribute to his new community are a hallmark of the migrant experience, so are some of the darker elements.

"Way Lee had to struggle to overcome prejudice and fought-off two false criminal accusations, mounted by anti-Chinese political forces.

"At the end of his life though, his persistence, his advocacy for fair acceptance and his commitment to his new home, to charity and community engagement, found him widely respected and honoured."
Way Lee fathered four children with his Australian wife Annie McDonald and many of their descendants, including his great-granddaughter, Patricia Monaghan-Jamieson attended the centenary event at UniSA.

The publication of the monograph and the anniversary celebrations were supported through the generosity of the Chinese Chamber of Commerce South Australia Inc, the South Australian Government’s Department of Trade and Economic Development, Tee Lee Travel, and PNG Consultancy and Associates.

Copies of Way Lee's monograph can be ordered by emailing Joanne Tingey.
Adelaide Festival partnership

UniSA has strengthened its contribution to art in South Australia, becoming a major partner of the Adelaide Festival’s 2010 Visual Arts Program, including Artists’ Week.

The Adelaide Festival is an annual event that showcases a diverse range of art forms ranging from opera, theatre and dance to visual art exhibitions, master classes and outdoor entertainment.

UniSA Vice Chancellor Professor Peter Høj said this was an important new partnership between the Adelaide Festival and UniSA.

"As a leading provider of visual arts education in South Australia, UniSA is an ideal partner for the Adelaide Festival," Prof Høj said.

"UniSA has an established reputation for excellence in visual arts education at both national and international levels. This, together with the stunning and popular Anne & Gordon Samstag Museum of Art on North Terrace, reflects the importance of visual arts at UniSA and our cultural role in the city.

"UniSA’s new relationship with the Adelaide Festival highlights a joint focus on the continued development of the arts in Adelaide and the surrounding area."

Artistic Director, Paul Grabowsky said like the Adelaide Festival, UniSA has a dynamic role in the life of the city of Adelaide but also has its sights firmly on the international horizon.

"Striving for excellence, pushing the boundaries in visual arts, and focusing on the involvement and empowerment of young people are goals we share," Mr Grabowsky said.

"Working together offers both organisations – and the community in which we operate – a host of new, exciting possibilities. We couldn’t be more delighted to welcome UniSA as a major sponsor of the 2010 Adelaide Festival in our 50th anniversary year."

The 2010 Adelaide Festival will be held from February 26 to March 14.
A priceless gift

by Heather Leggett

It has cost Adelaideans little more than their time, but UniSA’s Gift of Knowledge lecture series is giving those who sign up a wealth of information.

The free lecture series, which started in July, covers a fascinating range of topics that are already stimulating national debate.

From discussions about sustainable communities, to x-ray vision, human rights, the future of our water supply and obesity, the series has featured some of UniSA’s brightest researchers.

The remaining eight lectures will be no exception. Those who attend can expect to be involved in a discussion about climate proofing Australian cities, hear from a ‘recovering economist’ and be privy to new research that might change life as we know it.

The Gift of Knowledge series is part of UniSA’s drive to give the community access to valuable knowledge on key local and global issues.

For the full list of lectures still to take place from September to November, see the Gift of Knowledge homepage, and also check our events page.

X-ray vision a reality

Being able to see through solid walls sounds like the stuff of science fiction, but for researchers at UniSA’s Wearable Computer Laboratory, this is real life, only better.

As attendees at a Gift of Knowledge lecture in late July found out, it is called Augmented Reality (AR), where a combination of real and virtual data gives users a form of x-ray vision. The technology involves registered computer graphics being overlayed on real images in real time.

While the technology has applications in search and rescue, medicine, construction and entertainment, you’re most likely to encounter AR on your mobile phone. Professor Bruce Thomas, Director of the Wearable Computer Laboratory says that commercialisation of this technology isn’t far off.

"It’s very easy to get into the market," he says.

"Mobile phones, for example, are equipped with hardware components that support AR applications, like digital cameras, GPS and wireless internet connections. Hand-held and other movable forms of AR can bring digital information out of the workstation and into a person’s everyday life."
Top insider to lead health

by Michèle Nardelli

In a world where the competition for top jobs is definitely global it is not every day that a “home-grown” candidate is successful.

So when UniSA graduate, Professor Allan Evans, (pictured), won the position of Pro Vice Chancellor for the Division of Health at the University last month, it was a win in two ways. UniSA had captured the best candidate from an international field and at the same time confirmed that the institution delivers highly accomplished graduates.

"I am proud of my progression through the institution and really excited to be part of what I have always seen as a growing, developing and optimistic environment," Prof Evans says.

"UniSA is a place that gives you the freedom to choose your own pathway to success, and that doesn’t apply to every workplace. People are allowed to take ownership of their research and their careers, so we have an environment at UniSA where our people have real passion for their work which fuels innovation and achievement."

And there are not many people who know the University as well as Professor Evans.

Since 1992 his roles at UniSA have included course coordinator, program director, head of a growing research centre and most recently Head of the School of Pharmacy and Medical Sciences. He has also worked closely with more than 30 different companies in the pharmaceuticals sector and played a key part in the development of two important spin-off companies, PharmaQest Pty Ltd and CPR Pharma Pty Ltd.

Prof Evans graduated from the University’s antecedent, the SA Institute of Technology (SAIT) in 1982 with a Bachelor of Pharmacy.

Back then, before the institution had University status, he had to enroll at Adelaide University to compete his PhD under the supervision of academics working at the SAIT including the nationally respected, Professor Lloyd Sansom. SAIT couldn’t offer PhD programs back then.

He says one of his most valuable experiences was his postdoctoral years at the University of Manchester (1989-1991).

"It was as though a whole new world opened up – everywhere I looked was steeped in history and the accumulated knowledge and innovation of hundreds of great minds," he said. "I used to spend my lunch breaks just soaking that up by strolling through the University museums and exhibitions – it gave me a sense of the international scientific community and made me feel a part of something significant."

Prof Evans says the key challenges of the PVC role will lie in leading the continued growth of research that can be translated into health benefits; in improving the link between this research and the programs taught; and developing programs to ensure UniSA graduates can play ever important roles in improving health and medical care. He also sees wonderful opportunities for the Division to support the new SA Health and Medical Research Institute.

"I am keen to encourage and support the growth of strong discipline-based research including growing the numbers of students who come to UniSA to complete higher degrees by research," he said.
"There’s a huge demand worldwide for professionals who can contribute effectively to health care teams rather than focusing simply on their own discipline-based treatments, so inter-professional training is an important area for development at an undergraduate level.

"As a graduate, an academic and now a senior manager at UniSA, I think we are better placed than many to educate students who are prepared to work in multidisciplinary teams because we have a very strong understanding of what industry needs and we have led the way in defining for our students what qualities they’ll need when they graduate."

Professor Evans is an enthusiastic supporter of new ideas.

"We have about 400 staff in the Division of Health Sciences – 400 minds that together represent an enormous resource for innovation," he says.

"If nothing else, my role is to support and amplify the talent in others, and there can be nothing more satisfying than that."
Disability options at uni

The University of South Australia and the City of Playford hosted an expo last month to provide information for people with disabilities about the education, employment and training opportunities available to them.

The Positive Futures Expo featured 25 stalls and work-shops throughout the day.

Jenny Watts-Sampson, National Disability Coordination Officer at UniSA said the expo provided valuable information for people with disabilities.

"Some people might think university is not an option for people with a disability but with UniSA's support services, disability action plans are created to assist in overcoming any barriers students may face in achieving their learning goals," she said.

Stephen Manson, Senior Disability Adviser at UniSA has seen first-hand that tertiary education is achievable for people with disabilities.

"UniSA has more students with disabilities than any other Australian university and the success and retention of students with disabilities is comparable to other students," Manson said.

"There are currently more than 1400 students with disabilities enrolled in a full range of programs across the University, including professions such as teaching and engineering."
First military graduates boost defence

Masters of Military Systems graduates pictured with UniSA Defence and Systems Institute staff Mr Jock Thornton (centre) and Associate Professor David Cropley (far right). Inset: Jim Burnside receiving his degree.

UniSA has taken an important step forward in the development of Australia’s defence industry. Thirteen engineers from major defence companies in Adelaide are the first to graduate from UniSA’s new Masters of Military Systems Integration program.

They were among more than 1600 UniSA students who donned academic regalia at mid-year graduation ceremonies in August.

Associate Professor David Cropley, Deputy Director of UniSA’s Defence and Systems Institute, said the first 13 graduates represented an important step towards increasing the numbers and capabilities of world-class systems engineers in the Australian defence industry.

The graduates came from Saab Systems, BAE Systems and ASC. The three companies collaborated with UniSA to develop a unique industry-focused Masters program specialising in Military Systems Integration. The program was made possible with funding from Defence Materiel Organisation’s Skilling Australia’s Defence Industry (SADI) initiative.

Associate Prof Cropley said the program had been tailored to career defence engineers to accelerate their development and obtain superior Military Systems Integration skills.

“This will ensure Australian defence companies have access to the sophisticated engineering and project management skills required to manage complex defence projects,” he said.

Another 40 engineers are currently undertaking the program which has recently introduced a flexible mode of study so that people from outside the three developing companies can also study it.

ASC graduate Jim Burnside said the Masters program provided an opportunity to apply knowledge in a practical project.

"I found the program to be extremely relevant to the challenges being faced by industry when integrating large, complex military systems," he said.

UniSA’s mid-year graduations celebrated the conferring of degrees ranging from Masters and PhDs to Bachelor degrees and Graduate Diplomas.

Gabrielle Goodman, 23, has recently started a new job after receiving her Honours Degree in Interior
Architecture. She is a graduate interior designer with MPH Architects in Adelaide, applying the skills and knowledge acquired during her degree.

"I moved to South Australia from New South Wales to study at UniSA because it had the best interior architecture course and holds an excellent reputation around the industry," she said.

"I've got an amazing port-folio from the course and my honours degree brought out a lot in me that I didn't know I had…the course really encourages me to go beyond the basic job."

Four graduation ceremonies were held over two days, with guest speakers including Sunday Mail Editor Megan Lloyd, Information and Communications Technology entrepreneur Dr David Skellem, Baker IDI Heart and Diabetes Institute Director Professor Garry Jennings, and architect John Wardle.

UniSA has more than 34,000 students and currently graduates about 8500 students every year.

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UN looks to UniSA for sustainability

When sustainability is mentioned these days, many people’s thoughts automatically turn to climate change. However, that is just one aspect of this bigger issue.

UniSA Adjunct Senior Research Fellow from the Institute for Sustainable Systems and Technologies, Dr David Ness, can certainly attest to this. He is working with the United Nations (UN) on eco projects that focus on broad sustainability issues.

"Sustainability is not just about climate change," he said. "Poor and disadvantaged communities, for example, contribute little to emissions, and sustainability for them is about affordable access to energy, clean water, sanitation and transport.

"In this regard, locally distributed infrastructure rather than large scale central infrastructure can deliver a range of community benefits.

"For example in India, introducing solar lanterns to provide light has led to educational benefits like students being able to study at night; there have been less health issues with kerosene lamps no longer being used; the solar lights are non-polluting; and it has also created employment and business skills through establishing a local solar lantern industry.

"This is the kind of approach I am advocating which has been discussed at the UN."

His methodological framework for introducing eco-efficiency in urban infrastructure development has been accepted by the UN and will be applied to a significant UN project that spans many cities in Asia and Latin America.

"Most gains in eco-efficiency can be made by finding integrated solutions by looking at the wider system level such as through connections and synergies between transport, housing, water, waste and energy, involving coordinated planning between various infrastructure departments, agencies and sectors.

"In this way, infrastructure can deliver multiple benefits such as greater liveability, wellbeing, equity and environmental quality, coupled with reduced resource use, waste, emissions and less cost.

"I am interested in infrastructure systems where a range of benefits and services can be provided – doing more with less – including less resource use and less cost but with more affordability."

Dr Ness’s sustainability work has earned him a place at many UN meetings and workshops, including chairing sessions. But that's not the only hat he wears. He is Executive Chair of Ecological Development Union International, a China-based not-for-profit foundation that promotes the development of a clean, resource efficient and recycling economy, coupled with social development. He is also about to take up a role as senior advisor to the Chinese Government, focusing on its ‘Circular Economy’ policy which is central to its sustainable development, covering the whole of China.

Through these roles, he fosters cooperation between SA and China, evidenced by a recent visit by the financial adviser to the Chinese Government to introduce SA renewable energy and water treatment...
technologies to China; linking UniSA and Renmin University in Beijing; as well as student exchanges and collaborative research.

Dr Ness’s initial connections with the UN and China originated from Dr Barbara Hardy AO, a Fellow of UniSA and prestigious environment campaigner.

"It all began when Dr Hardy organised an international meeting of the Asia Pacific Forum for Environment and Development (APFED) in Adelaide in 2004," he said. "I am very much indebted to her, and it is a pleasure to meet regularly at her house with a local APFED group."

Dr Ness recently returned from a UN ‘Green Growth’ training workshop for policy makers from all ASEAN member countries that was held near Bangkok. There were around four representatives from each ASEAN member country and Dr Ness attended in his role as UN Consultant and represented UniSA, focusing on his area of expertise – sustainable infrastructure systems for poor communities.
New home for environmental research

by Michèle Nardelli

Senator for South Australia, Anne McEwen officially opened UniSA’s state-of-the-art Environmental Sciences building at the Mawson Lakes campus in August.

The $20 million building is the Australasian hub for research into environmental risk assessment and remediation, a problem with clean-up costs estimated at $5-8 billion in Australia alone. The building houses UniSA’s Centre for Environmental Risk Assessment and Remediation (CERAR) as well as the headquarters for the national Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE).

UniSA Vice Chancellor, Professor Peter Høj, said the building offers our leading researchers a physical focus for high level research, innovation and education for some of the most challenging aspects of environmental health.

"When you take a broad look at the data, the importance of this research facility is very clear," Prof Høj said.

"Australia has more than 100,000 contaminated sites and in Asia there are an estimated five million more. Contamination affects drinking water, crop quality and food production and the safety of the very land we live on.

"This century we are all squarely focused on the health of the planet and that in part will depend on how we clean up after ourselves, how we remediate the damage that has already been done and minimise future degradation and contamination of our environment."

He said the new facilities provided a one-stop-shop for industry and regulators to discuss and identify priority research needs and technology transfer.
Science spark

More than 1000 South Australian school children converged on UniSA’s Mawson Lakes campus during August for a major science event.

The Science at the Lakes event hosted children in grades 4 to 10 from more than 25 schools across the State, who undertook a variety of workshops and interactive displays.

The event was all about sparking their interest in science.

“Events where students can become engaged with the experience of doing science – experiments and active displays – are invaluable in recruiting new people to the field,” said former South Australian Scientist of the Year and UniSA Director of the Ian Wark Research Institute, Prof John Ralston.

“It is vital that we capture the imagination of the next generation and nurture tomorrow’s science leaders now.

“Careers in science and maths will burgeon as we move to solve key challenges such as climate change.

“In the biographies of great scientists, you will often find there was a teacher or mentor or an event in their early years that got them excited about scientific possibilities.

“As a scientist I know the joys of a career in science and I can recommend it highly.”

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