FUTURE OF STUDY
THE VIRTUAL UNIVERSITY

IPAD AND ANDROID APPS AVAILABLE NOW
With the release of OP results fast approaching, it’s time to think about your future. No matter what OP you receive, attend UQ Options Evening and find out how to make the most of it. Talk to staff and current students about your interests, learn about entry pathways into your desired program, take a campus tour, and see the difference UQ could make to you.

Learn more at youruq.com/options
My first experience of Queensland was as a tourist in 1988, not long after I moved to Australia from my birth country, Denmark.

Returning 24 years later to lead one of Queensland’s most important institutions, I wanted to see more of the state on my way from Adelaide to Brisbane. Driving via Tennant Creek, crossing the border near Camooweal and passing through mining, farming and tourism centres including Mount Isa, Longreach, Barcaldine, Rockhampton, Gympie and Noosa, my initial sense was of a state transformed.

After several weeks living and working in Brisbane, I am forming a picture of Queensland that confirms my traveller’s impression, and I am gaining a feel for the drivers of change.

I admit that my perspective is coloured by my new position at UQ – but I do make a point of seeking frank opinions from thoughtful people beyond the University (including in the USA, where I recently held a series of meetings and met some of our 6400 unbelievably successful USA-based alumni).

So the view I am consolidating is not exclusively mine, and it is this: knowledge and innovation have been intrinsic to Queensland’s transformation, and a global top 100 university will be a key contributor to a more confident, competitive Queensland where joint investments will reap the benefits of past efforts to build a nation-leading innovation base.

Boasting a wonderfully staffed university that is the source of fantastic graduates as well as high-impact discovery sharpens Queensland’s edge in the tough competition to attract global corporations.

For one thing, it enables decision-makers to talk with world-class researchers about how independent discovery may help improve their business.

It also offers a pipeline of employees who are globally savvy, plus opportunities for customised professional learning to meet workforce needs.

Indeed, I have heard CEOs say that proximity to UQ graduates helped them commit to operating in Queensland.

The rewards for UQ students and alumni include access to internships and employment with leading international firms, with prospects of working overseas and helping tackle wicked global problems. Wherever in the world they choose to locate, they will always have “Queensland” on their CVs by virtue of their alma mater; and they will always be positioned to contribute to this state.

They will be able to make a difference, not only via the Queensland Government’s “four pillars” (agriculture, tourism, resources and construction), but also through industries such as engineering, services, and advanced manufacturing.

Simultaneously, the opportunities outlined in the Australian Government’s “Asian Century” white paper will be within their grasp, and Queensland-bred intelligence and innovation will be within reach of the world.

A STATE TRANSFORMED

Professor Peter Høj

A day in the life

NEW PROGRAMS – What’s on offer in 2013

GLOBAL CONNECTIONS – Professor Peter Høj shares his aspirations for UQ

SUSTAINABILITY – UQ reduces emissions and Green Cabs pedal on

Baby Boom – New hope for endangered echidnas

INSIGHT – Professor Margaret Barrett busts myths of creativity

Professor Peter Høj
A WORLD OF OPPORTUNITIES

IN AN INCREASINGLY GLOBAL ENVIRONMENT, IT IS IMPERATIVE THAT GRADUATES POSSESS THE SKILLS AND KNOWLEDGE TO MAINTAIN A COMPETITIVE EDGE. A GREAT WAY FOR STUDENTS TO ACHIEVE THIS IS BY PARTICIPATING IN AN OVERSEAS EXPERIENCE DURING THEIR DEGREE.

In 2012, a record number of UQ undergraduate students took advantage of the variety of exchanges and internships on offer, with more than 800 students participating in international activities in 51 countries.

Dr Jessica Gallagher, Acting Director of the Office of Undergraduate Education (OUE), said UQ recognised the importance of internationalising the student experience and thinking globally.

“We strongly encourage UQ students to explore the world, build international networks, and develop their understanding of cross cultural communication and the transfer of ideas and people across national borders,” Dr Gallagher said.

UQ provides opportunities for students to travel overseas through a range of programs and initiatives, including the UQ Abroad program, which allows students to study in an overseas partner institution and earn credit towards their degree.

Dr Gallagher said demand for global experiences had “grown considerably” over the past few years.

“An experience to remember

While becoming a teacher already involves a variety of work placements, Emily Smith yearned for a different kind of teaching experience.

Ms Smith, who is completing a Bachelor of Health, Sport and Physical Education at UQ, travelled to Samoa to visit schools and medical clinics, observe classes and teach.

“I was motivated to visit Samoa to see what education is like in a third-world country, and to compare and contrast their schools and teachers with what we have here in Australia,” she said.

“The highlight of my experience was working with the school children, and in particular a small school on the island of Vaisai.

“The smiles on the children’s faces were amazing and it was an experience that I will always remember,” Ms Smith said.

Ms Smith said she had gained a heightened level of cultural sensitivity through participating in the immersion program.

“I have a much greater understanding of the Samoan culture and would like to try and introduce some of the Samoan ways into my life and schools,” she said.

For more information about global opportunities, visit www.uq.edu.au/undergraduate/global-experiences
Suah Lee, a budding UQ Law student, was thrilled when he was invited to participate in a summer school at one of London’s most prestigious universities, the London School of Economics (LSE).

Mr Lee, who would like to work in the area of Intellectual Property Law upon graduation, said he felt the course would complement his UQ studies, as it would broaden his knowledge and understanding of intellectual property rights at an international level.

“I was keen to participate in the LSE Intellectual Property Law course as it would enable me to compare and differentiate the two jurisdictions (i.e. UK and Australia), as often litigations are made across borders,” he said.

While Mr Lee enjoyed academic components of the course, he admits that he was also drawn to the program as he wanted to travel, study and meet other students from around the world.

“In addition to all the studying, I visited Stonehenge and the Roman Baths, enjoyed watching the Phantom of Opera in Her Majesty’s Theatre (which was my first theatre experience), and visited all the London attractions, at the same time as the London Olympics!” he said.

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Michelle Ooi got up close and personal with sharks in South Africa.

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HAIR-RAISING ENCOUNTERS

Coming face to face with a great white shark isn’t everyone’s idea of fun, but for Michelle Ooi, it was a highlight of an incredible international volunteering experience.

Ms Ooi, who is studying a Bachelor of Veterinary Science at UQ, received a UQ Advantage Grant to participate in a volunteer program with Dyer Island Conservation Trust in Gansbaai, South Africa.

“The Dyer Island Conservation Trust supports several researchers who study marine species found in South Africa,” she said.

“During the time I was there, I was able to participate in ongoing research on shark parasites, the predator-prey relation between cape fur seals and great white sharks, and acoustics of the southern right whale, as well as help out with commercial shark cage diving and even dive with the great whites themselves.”

Ms Ooi said the hands-on experience in the animals’ natural habitat had reaffirmed her passion for conservation and further study.

“Seeing these wild animals up close and personal in South Africa and working with the researchers has inspired me to seriously consider taking the path of marine animal research after graduation,” Ms Ooi said.

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PUTTING KNOWLEDGE INTO PRACTICE

Bachelor of Archaeology student Jacob Davis cannot speak highly enough of how professional experience in the field has reinvigorated his commitment to coursework.

Mr Davis was among a group of UQ students who travelled to Karonga, Malawi, to engage in volunteer archaeological work for Malawi Early Middle Stone Age Project (MEMSAP).

The fieldwork allowed him to apply the knowledge he had gained in lectures and to develop useful practical skills.

“I supervised a crew of 10 local Malawians to excavate 21 test pits across the Karonga landscape, and then worked with other researchers to interpret our test pit findings,” he said.

“The complexities of the landscape and the archaeological record were intensely interesting, and our results gave us a great understanding into the diversification of the archaeology in this area.”

Mr Davis said that while he originally participated in the project to gain professional experience, he had come away with a renewed passion for his studies.

“My experience in Malawi has, without a doubt, renewed and intensified my passion for learning, especially now that I can see how important it is to implement archaeological practices correctly,” Mr Davis said.

Jacob Davis had the opportunity to apply his skills in Malawi.
NEW PROGRAMS FOR 2013

UQ AIMS TO DELIVER RELEVANT TEACHING THAT MEETS SOCIETY'S NEEDS: 2013 SEES SEVERAL NEW PROGRAMS ON OFFER.

MASTER OF CONSERVATION BIOLOGY

Designed as preparation for a career in conserving our natural environment, this streamlined program enables graduation within 13 months of enrolment and features more than 40 days field work in the outback, Great Barrier Reef, and rainforest. With a focus on generating new ideas and acquiring biodiversity technical skills such as statistics, geographic information systems skills such as statistics, the program will be taught and ecological knowledge, illustrated by case studies from around the world.

UQ Advantage: UQ environment and ecology ranked 5th in the world; extensive speaker/conference/cultural program

DIPLOMA IN ARTS

Available to bachelor degree graduates: either one major or two minors must be completed, which can contribute to professional development or be used as basis for further study.

See: www.uq.edu.au/study/program.html?acad_prog=2320
UQ Advantage: Choose from more than 40 majors, HECS-Help program

DIPLOMA IN MUSIC PERFORMANCE

Indulge your passion for music while studying your first choice program (previously known as Diploma in Music).

See: www.uq.edu.au/study/program.html?acad_prog=1605
UQ Advantage: Develop interests and skills in music ensembles

GRADUATE CERTIFICATE AND GRADUATE DIPLOMA IN ENERGY STUDIES

Two programs added to the suite (Masters already available) to address issues of climate change as it affects the energy sector.

See: www.eait.uq.edu.au
UQ Advantage: Addresses current gap in carbon management and carbon capture and storage study programs worldwide

GRADUATE CERTIFICATE IN, MASTER OF AND MASTER (ADVANCED) OF TOURISM, HOTEL AND EVENT MANAGEMENT

These innovative programs include a number of foundation and core courses that develop a comprehensive understanding of the tourism, hotel and event industries, and the wider context in which they operate.

See: www.tourism.uq.edu.au
UQ Advantage: No background in tourism required

MASTER AND MASTER (ADVANCED) OF BIOINFORMATICS

Programs developed in response to the world-shortage of graduates with specific skills to solve complex biological problems in the biotechnology and pharmaceutical industries.

See: www.science.uq.edu.au
UQ Advantage: Practical laboratory and computational skills acquired through immersion in a research laboratory

MASTER AND MASTER (ADVANCED) OF ECONOMICS AND PUBLIC POLICY

These economics-centred, multidisciplinary programs are designed to explain how government intervention affects the economy in an increasingly globalised world.

See: www.uq.edu.au/economics
UQ Advantage: Understand the rationale for government intervention and how public policies are designed and evaluated

MASTER OF SCIENCE IN PETROLEUM ENGINEERING

A joint offering by UQ and UK’s Institute of Petroleum Engineering (IPE) at Heriot Watt University, this program delivers advanced tools for extracting gas and oil.

See: www.eait.uq.edu.au
UQ Advantage: All courses taught only in intensive mode and non-standard teaching periods

MASTER OF TOURISM LEADERSHIP

Developed to provide the knowledge and skills required for positions in international tourism leadership, research, and consultancy with private, public or non-profit organisations.

See: www.tourism.uq.edu.au
UQ Advantage: A choice of four fields of study

DIPLOMA IN SCIENCE

Available to bachelor degree graduates: choose either one major or any combination of courses to suit own interests or career goals.

See: www.science.uq.edu.au
UQ Advantage: Ideal for those needing pre-requisites for other programs, or teachers needing professional development

For more information, see:
www.uq.edu.au/study
ENGINEERING AN EQUITABLE FUTURE

UQ has set its sights on becoming the university of choice in Australia for women in engineering with the launch of a major industry partnership.

UQ's partnership with Australian engineering leaders Rio Tinto, the Australian Power Institute (API) and the Australian Petroleum Production and Exploration Association (APPEA) will address the shortage of female engineering students by creating a unique position dedicated to improving this gender imbalance.

UQ Faculty of Engineering, Architecture and Information Technology Executive Dean, Professor Graham Schaffer, said both the University and the engineering profession would greatly benefit from a more equitable gender balance of qualified engineers.

"Quality is enhanced by diversity. At UQ, we are proud to be working towards a more equitable balance of male and female engineers, which will greatly benefit the University and the engineering profession," Professor Schaffer said.

As part of the partnership, Rio Tinto, API and APPEA have each invested $250,000 over five years, providing UQ with the financial support needed to increase female enrolments.

APPEA Chief Operating Officer Eastern Region, Rick Wilkinson, said the proportion of degree-qualified female engineers in the Australian labour force in 2011 was just 12.7 per cent.

"That figure needs to rise. Female engineers are an essential part of any technical team if it is to have the full depth required to compete in today's globally competitive markets," Mr Wilkinson said.

Currently, 19 to 20 per cent of UQ's first-year engineering cohort are female, compared to a national average of just 12 to 14 per cent.

Professor Schaffer said although UQ was above the national average for undergraduate engineering enrolments, there was "still much to be done".

"Our data shows that female students, on average, have higher retention rates once they have commenced their engineering degrees in comparison to their male peers," he said.

"The challenge we face as an educational institution is therefore the recruitment of women into engineering programs, not retention," he said.

UQ's new Women in Engineering Development and Communications Manager position will focus on recruiting, supporting and recognising women in engineering.

For more information, see: www.uq.edu.au/study

To find out more about studying engineering at UQ, visit www.eait.uq.edu.au

PROFILE

ROBYN O'CONNOR GRADUATED FROM UQ WITH A BACHELOR OF ELECTRICAL ENGINEERING (BE) IN 2009 AND NOW WORKS AS AN ENGINEER AT ENERGEX. HERE, SHE SHARES HER EXPERIENCE AS A FEMALE ENGINEER.

I chose to study engineering because I was drawn by the opportunity to positively contribute to society through solving technical issues and working in teams of analytically minded people.

As an electrical engineer, I have had lots of opportunities for development throughout my time at UQ and during my professional career at Energex.

At UQ, I enjoyed the support of fellow female engineers in other disciplines. Electrical engineering does not seem to be the most popular choice among females, but I could not have made a better decision. I had an enjoyable experience studying with a range of like-minded, driven students on technical projects and challenges.

As an engineer at Energex, I am able to add value to a range of customer projects, working in an inclusive, dynamic and rewarding environment where there is a support network of female engineers within the organisation. The graduate program provides excellent development opportunities and inclusion into the bigger part of the organisation.

Female engineers can often bring a different perspective to solving a problem or managing a situation. This is what makes females invaluable to team environments, enhancing technical communities and workplaces.
“Also held during the week was the 3-MT™ final, which was a fascinating exercise in self-discipline (RHD students must summarise their work to a lay audience in three minutes or less) and the Undergraduate Research Conference,” Professor Lawson said.

“We really do have a lot to celebrate,” Deputy Vice-Chancellor (Research) Professor Max Lu said. “UQ’s research and research-training performance consistently rank in the top three among Australian universities on most widely accepted measures, and UQ researchers compete favourably with the world’s best in many areas.”

Perhaps this can be partly attributed to the extensive range of development opportunities that were available during Research Week for graduate students, such as information sessions on searching for patents, reading and writing critically, and how to get published, along with personal management workshops on stress management and conflict resolution.

“We are proud to not only provide world-class experts and resources at UQ, but a wide range of support programs that help students realise their academic potential,” Graduate School UQ Advantage Senior Manager Sam Ferguson said.

Another highlight of the week was the publication of Discovery at UQ 2012, a compilation of current research being conducted at the University, with accompanying video footage (see: www.uq.edu.au/research-week).

“From madness to maggots, biofuels to business tools, or sea-life to social strife, UQ researchers have diverse interests,” said Professor Lu. “There is a relationship between the quality of research and its positive reverberations on the wider community,” he continued, “and we aim to attract the best people to UQ who will use their skills and collaborations, and our world-class research infrastructure, to enhance humanity.”

As a world-renowned research institution, UQ is proud of the quality and output of its researchers – both staff and students – and acknowledges their achievements each year during Research Week.

“We traditionally hold several events to celebrate and promote research at UQ, and this year I was proud to host the Research Engagement Dinner,” Pro-Vice-Chancellor (Research and International) Professor Alan Lawson said.

Other key note events included the:

– BrisScience/UQ Research Week Public Lecture (with presentations on Towards high efficiency microalgal biofuel systems by Associate Professor Ben Hankamer and Has science made religion obsolete? by Professor Peter Harrison)

– Annual UQ Foundation Research Excellence Awards and the Awards for Excellence in RHD Supervision (hosted by the Vice-Chancellor)

– Great Debate (hosted by Triple J presenter Steve Cannane on the topic of News, News everywhere: the 24 hour news cycle and citizen journalists: does it make us more informed or confused? and organised by the Office of Undergraduate Education in conjunction with the UQ Graduate School).

2012 RESEARCH WEEK WINNERS

UQ Foundation Research Excellence Awards
Dr Brock Bastian, School of Psychology
Dr Oliver Baumann, Queensland Brain Institute
Dr Tamara Davis, School of Mathematics and Physics
Dr Daniel Franks, Social Responsibility in Mining
Dr Richard Fuller, School of Biological Sciences
Dr Kerry-Ann O’Grady, Queensland Children’s Medical Research Institute
Dr Ryan Taft, Institute for Molecular Bioscience
Dr Da-Wei Wang, Australian Institute for Bioengineering and Nanotechnology
Dr Graeme Were, School of English, Media Studies and Art History

UQ Awards for Excellence in RHD Supervision
Professor Stephen Adkins, School of Agriculture and Food Sciences
Professor Richard Morgan, School of Mechanical and Mining Engineering
Professor Jenny Ziviani, School of Health and Rehabilitation Sciences

Commendations for Excellence in RHD Supervision
Dr Barbara Sullivan, School of Political Science and International Studies
Professor Bill Vicenzino, School of Health and Rehabilitation Sciences
Online learning, internationalisation and sustainability were the key themes at this year’s Teaching and Learning Week.

UQ welcomed four distinguished guest speakers, each highly regarded in their respective fields. Dr M.S. Vijay Kumar from the Massachusetts Institute of Technology (MIT) delivered the opening plenary address, where he discussed innovative activity at MIT and elsewhere in making quality higher education more accessible to a wider audience and the challenges and necessary transitions for educational institutions to transform education.

Professor John Hudzik from Michigan State University discussed the rationale and goals for comprehensively internationalising educational institutions, while Professor Geoff Scott from the University of Western Sydney discussed the capabilities and strategies required to successfully implement social, cultural, economic and environmental sustainability into higher education.

Professor Robert Hill from The University of Adelaide delivered the second day’s keynote presentation. As Executive Dean of the Faculty of Sciences, Professor Hill led a renewal of The University of Adelaide’s science curriculum.

Innovation in technology was also an important topic during the week, with sessions showcasing eLearning initiatives.

One of the highlights of Teaching and Learning Week is the annual UQ Excellence in Teaching and Learning Awards ceremony, which recognises some of UQ’s most inspiring and dedicated teachers.

This year, the University awarded five individuals with UQ Awards for Teaching Excellence and two groups with a UQ Award for Programs that Enhance Learning, with another five individuals and one team recognised with Citations for Outstanding Contributions to Student Learning. Four individuals and two teams also received Commendations.

Deputy Vice-Chancellor (Academic), Professor Mick McManus, said the awards honoured some of UQ’s most committed and inspirational educators and celebrated the high quality of teaching at the University.

“The awards provide an excellent opportunity to congratulate and thank all our teachers for their ongoing efforts in enhancing the student learning experience and giving every student the confidence to succeed,” Professor McManus said.

“Good teachers are the very essence of a good university and are an integral part in developing the next generation of leaders in our society and the world. “UQ is continuing to embrace the changes in education delivery as it moves towards an eLearning and technology-enabled learning environment, and we can see this highlighted through some of the teaching programs and teaching methods of this year’s award winners,” he said.

Another highlight of the week was the launch of two key publications for the University. Learning at UQ 2012 highlights key achievements and activities in teaching and learning throughout the year, while Global Strategy and Internationalisation at UQ outlines UQ’s global strategy and internationalisation initiatives.

To view these publications, visit www.uq.edu.au/teaching-learning and www.uq.edu.au/international.

2012 UQ EXCELLENCE IN TEACHING AND LEARNING AWARD WINNERS

Awards for Teaching Excellence
Dr Carlie Driscoll, School of Health and Rehabilitation Sciences
Mr Michael Jennings, School of Mathematics and Physics
Dr Sebastian Kaempf, School of Political Science and International Studies
Dr Gowendolin Lawrie, School of Chemistry and Molecular Biosciences
Associate Professor Shazia Sadiq, School of Information Technology and Electrical Engineering

Commendations:
Dr Craig Engstrom and Dr Peter Hay, School of Human Movement Studies
Dr April Wright, UQ Business School
Dr Rowland Cobbold, School of Veterinary Science

Awards for Programs that Enhance Learning
Leisure, Living and Learning Program (LINKS-MH)
Academic Integrity – referencing and avoiding plagiarism online tutorial

Commendations:
Bachelor of Biomedical Sciences
Bachelor of Pharmacy (Honours)

Citations for Outstanding Contributions to Student Learning
Associate Professor Frank Alpert, UQ Business School
Associate Professor Tom Baldock, School of Civil Engineering
The French Program Teaching Team, School of Languages and Comparative Cultural Studies
Dr John Kirkwood, School of Geography, Planning and Environmental Management
Dr Anton Rayner, School of Mathematics and Physics
Dr Richard Robinson, School of Tourism

Delegates got their first look at UQ’s new publications during Teaching and Learning Week.
Dr Hardner, congratulations on your Churchill Fellowship to trace the domestication of the Australian macadamia. Where will you be travelling to conduct your research?

In 2013, I will be leading an expedition of scientists to the islands of Hawaii to search for the original plantings of the first macadamias introduced to Hawaii in the late 19th century. Most of these plantings are on the islands of Hawaii and Oahu, but there are also records of important old plantings on Maui and Kauai. It will be tough but someone has to do it.

What are you hoping to achieve from your research trip?

After locating these plantings, we will collect their leaves and send them back to Australia for DNA paternity analysis. More than 70 per cent of the world’s commercial macadamia orchards are planted with cultivars developed in Hawaii, but the seeds for those first plantings actually came from Australia. Through this research, we hope to pinpoint the original plantings of the first macadamias introduced to Australia from which those seeds came, which will add to our heritage and assist ongoing research to produce improved cultivars for the Australian macadamia industry.

Why are macadamia nuts so important for Australia?

Macadamias are an iconic Australian plant and the only international food crop that has been commercialised from Australian flora. They were part of the Indigenous diet and are one of the few remaining rainforest genera of the ancient gondwanic family Proteaceae. The Australian macadamia industry is now the largest in the world, producing 40 per cent of the world’s supply and leading much of the crop’s innovation.

How did you become involved in macadamia nut research?

I was keen to work in the Australian bush, and my PhD was in eucalypt quantitative and evolutionary genetics after completing a Bachelor of Forest Science at the University of Melbourne. I applied for the macadamia breeding job as it allowed me to continue working with an Indigenous tree crop while extending my interest in quantitative and conservation genetics. Also, eating macadamias is much more pleasurable than eating eucalypt leaves.

How long have you been researching macadamia nuts?

I started with CSIRO in 1996 as a post-doc on the then newly initiated Australian Macadamia Breeding Program. Since 2007, I have been working at UQ and the Queensland Alliance for Agriculture and Food Innovation (QAAFI) on a broader range of mostly horticultural tree crops, but am still involved with macadamia genetics. Most of my research involves applied and conservation genetics, but I’m also interested in research along the production chain, particularly on the drivers of macadamia quality, i.e. what makes macadamias so good, and how can we make them better?

Where do you see Australia’s macadamia nut industry heading in the future?

I think the Australian macadamia industry has a very bright future. The industry has a strong export focus, even in these times of unfavourable international economic and currency conditions, and the world market for macadamias is grossly under-supplied. For example, at a recent international conference, it was reported that although China is intending to greatly increase production in the next 10 years, all of this will be consumed domestically. There are also many potential overseas markets that are not yet aware of the delights of macadamias.

Are there any opportunities for students who are interested in this field of research?

As a recently developed perennial tree crop, there are many areas of research that will impact the conservation and production of this plant. Much of the wild populations in South-East Queensland and Northern New South Wales have been cleared, so understanding how to better manage the conservation of this plant is important. Students may be interested in becoming involved in my Hawaiian research project. They could also undertake research on the inheritance of important current and new breeding traits, and there are opportunities to link-in with international trials. I am also keen to develop a project to better define and assess attributes of macadamia quality. This could involve eating a lot of macadamias, and interested students are welcome to contact me to discuss how they could become involved.

What do you enjoy doing outside of work?

I have three wonderful ladies in my life and I should spend more time with them. I also am very involved in AFL in the Brisbane area, having grown up in Victoria, and have been umpiring community AFL around Brisbane for the last five years. I also enjoy listening to live music and supporting 4ZZZ.
UQ’s Vice-Chancellor Professor Peter Høj Shares His Thoughts on What Makes a Great University and His Aspirations for UQ.

It is such an honour and a privilege to join a university as highly regarded as The University of Queensland. Whatever key ranking you look at, UQ is well inside the top 100 universities in the world, with an excellent global reputation for learning, research and outreach activities across a full spectrum of academic disciplines.

In my short time at the University, it’s already clear why so many choose to study here. In addition to our excellence in learning, research and engagement, we have wonderful facilities for domestic and international students, as well as great staff.

UQ has a solid foundation, and I believe we can use our resources to deliver even better outcomes for our students, staff, alumni and the local, national and global communities. I am looking forward to working with staff, in particular, to concentrate even higher proportions of our funding on the core academic goals of great teaching and learning outcomes, great student experience and great research.

Like most of the world’s top universities, UQ is also looking towards the future of technology-assisted and online learning, the next frontier for teaching. I do not believe this technology will throw out the old education model completely. Instead, it will allow us to focus on the best elements in the old model and free-up time so we can deliver more of these elements to our students.

I believe a successful university is one that is both relevant and high quality. Universities that have these attributes will be the preferred choice for organisations, government and business to invest in when they have a research or personnel need. To achieve this, you have to be globally connected. The key to any successful global strategy is establishing strategic partnerships with people and organisations across industry, government, sponsorship, philanthropy, alumni, higher education and research. My ambition is that UQ will measure up as Australia’s most globally connected university.

With that will follow the contacts that will make investment more and more likely. UQ recently had two chairs in Geosciences and Geomicrobiology funded by [Brazil-based mining company] Vale, and I’m sure that is due to our enduring links with Latin America.

Our strategic partnership with The Dow Chemical Company, which will see the establishment of the Dow Centre for Sustainable Engineering Innovation, is another example of the importance of our global partnerships that have been opened due to our excellence in research and graduate outcomes. This is Dow’s first such agreement with an Australian university, and signals the maturity of a relationship that began decades ago, when the company’s CEO Doctor Andrew Liveris studied at UQ.

To be a successful university, you also need to continue developing research-led teaching. UQ is in a position to do this better than almost anybody else, because we already have such strong research and committed teachers. The moulding of that, often in the same person, is what gives you the UQ Advantage. It’s an advantage that manifested itself clearly when UQ recently won more research funding from the Australian Research Council than any other university, an outstanding testimony to the excellence of our research endeavour.

As I cycle around Brisbane and travel the world, it is clear what a great community UQ is connected to. I look forward to establishing more linkages with the UQ community and further enhancing the University’s already excellent reputation and success.
Changing technologies and an increased focus on eLearning have meant the higher education environment is evolving rapidly. UQ continues to explore and leverage these changes in education delivery to ensure our students enjoy challenging and engaging learning experiences that will equip them with 21st century learning skills.

UQ students have already embraced the online and flexible learning options available to them, with more students accessing learning materials through the learning management system (Blackboard Learn) and their own smart devices than ever before. During a typical teaching week, more than 30,000 discrete staff and students use the learning management system each day. This number drops only slightly on the weekend, with more than 20,000 individual students still busy and active on the system on any given Sunday, engaging with lecture notes, lecture videos, quizzes, discussions and assignment submissions.

Simon Collyer, Manager of UQ’s Teaching and Learning Support (TLS) team, said the learning management system supported students around the clock.

“They [students] are just as busy at night when the campus is quiet,” Mr Collyer said.

By the end of 2012, all medium to large learning spaces at UQ will have wireless capacity available for all students at once. This will allow teachers to engage directly with students through their smart devices to enhance the in-class learning and mobile learning experience.

A recent survey conducted by ITS revealed that 98 per cent of UQ students own at least one smart device (i.e. an iPhone, smartphone, iPad, tablet PC or laptop). Currently, around 3000 UQ students access their learning materials from smart phones and mobile devices on any given weekday.

Rob Moffatt, Director of Information Technology Services, said the improvements to the University’s wireless and communication linkages were just the beginning, with a substantial investment in further upgrades and enhancements planned for 2013.

“Students have the devices – UQ is providing the infrastructure and applications so they can get the most out of their time at UQ,” Mr Moffatt said.

The University continues to expand its lecture recording capability by increasing the number of enabled lecture theatres and deploying a system that allows every lecturer to generate high-quality mini-lecture recordings from their desktop. Currently, around 100 lectures are recorded each day.

UQ has also deployed a virtual classroom system that allows students to engage with each other and their course coordinator online. This system provides access for remote students and is especially helpful for postgraduate students who can attend tutorials from the convenience of their workplace or home.

Deputy Vice-Chancellor (Academic) Professor Mick McManus said UQ was committed to continuing to explore online learning and technologies to further enhance student learning.

“The educational landscape is changing at a rapid pace, due partly to the evolution of the student body, and also the increased focus on eLearning,” he said.
“Online learning and technologies to enrich our students’ education present great opportunities to reinforce UQ’s standing as a top 100 global university, chosen by high-achieving students and staff.”

Professor McManus said UQ already had the people who would help it stay ahead.

“Our teachers are among the nation’s best, and they have the support of leading educational designers and dedicated centres. “We support our academics to embrace change and to implement innovative educational designs,” he said.

There have already been a number of developments supporting UQ’s commitment to good educational design, including the establishment of the Centre for Educational Innovation and Technology and the Centre for Innovation in Professional Learning, the creation of faculty-based educational designers, and the mandated use of BlackBoard Learn for all undergraduate courses.

In 2012, UQ launched a new first-year engineering course that delivers content primarily online, complemented by carefully designed face-to-face learning activities.

The course Engineering Modelling and Problem Solving (ENGG1200) is unique in engineering education in that it is based on a “flipped” classroom model. This model requires each individual student to manage their own learning while leveraging tutorial sessions and peer learning to achieve learning objectives.

An essential element of ENGG1200 is team projects, where students must apply the theory and knowledge they acquire through their online learning modules.

First-year engineering student Paula Tattam said the support provided in ENGG1200 was “exceptional”.

“Being given an authentic problem and having to work together as a team to come up with a solution was no easy task,” she said.

“However, the support provided by tutors and support staff was exceptional and allowed us to ask questions and receive answers quite quickly when needed.”

In anticipating how the University should position itself to maintain its high standards of teaching and learning, the UQ eLearning Strategy Committee has developed an eLearning blueprint.

Rather than attempting to predict which technologies should be adopted, the eLearning blueprint focuses on supporting academics by providing a framework to guide the ways in which they deal with and respond to changes in the technology that is consistent with good teaching practices and high-impact student learning activities.

Setting out nine key initiatives and recommendations, the eLearning blueprint will support the University to continue to innovate both in course design and delivery.

UQ students embrace flexible learning options at the Law Library’s new Student Learning Centre.

“Online learning and technologies to enrich our students’ education present great opportunities to reinforce UQ’s standing as a top 100 global university, chosen by high-achieving students and staff.”

“However, the support provided by tutors and support staff was exceptional and allowed us to ask questions and receive answers quite quickly when needed.”

To find out more about UQ’s eLearning initiatives, visit www.elearning.uq.edu.au

“We support our academics to embrace change and to implement innovative educational designs.”
A DAY IN THE LIFE...

As our thoughts turn to summer holidays by the sea, spare a thought for those at UQ for whom “life’s a beach” every day of the year— even if it is for work.

Nestled in the Great Barrier Reef, Heron Island is a small (230m x 700m) coral cay just off the north Queensland coast near Gladstone, and home to 140,000 birds (mostly noddy terns and mutton birds), plus a tourist resort. It also houses the UQ Heron Island Research Station, catering for up to 100 reef, ocean, fish and birdlife researchers at any one time.

Here we meet Maintenance Officer Brad Latimer and discover how he spends his time on this exotic tropical isle.

An electrician by trade, Brad has worked on Heron Island for two-and-a-half years (previously at the resort), and has been fixing and maintaining the UQ research station for 16 months.

“I love it here,” he said. “The people are friendly, the work varied, and I get to regularly indulge in my favourite activities of scuba diving, boating and fishing.”

As part of a team of nine, Brad is responsible (along with fellow maintenance officer and plumber Sam Chapman) for ensuring the marine research station runs smoothly and is in good working order. This can mean duties as basic as removing rubbish and fallen trees, or as complex as repairing the electronic motor system of the saltwater research water pump.

He also sometimes acts as an official welcoming party to the station and occasionally captains boats for researchers who do not have their own crew.

“Driving boats for unaccompanied researchers helps them conduct their dives safely— but mostly I just put the boats in and out of the water,” he said.

With visitors from all over the world, Brad likes to ensure that everyone enjoys the best experience.

So where does Brad escape to in his summer holidays? The city?

“No, I tend to visit my home town in New Zealand or some other country destination— I’m not really a city person.”

For more information about UQ’s Heron Island Research Station, see: www.uq.edu.au/heron-island-research-station/
BRAD’S DAY*

7am: Wake up; get ready for work, maybe go for swim or walk, or look at sharks in the water

8am: Start work: check station’s power and water readings for previous 24 hours to ensure pipes are clear and no leaks (gauged by comparing energy usage with number of researchers on-site)

9am: Run all sewerage pumps and check that none are topped or blocked; test return-water pumps and freshwater pressure pumps

10am: Smoko

10.10am: Check fail alarm and all electronic controls for the saltwater pump that comes straight off the reef to feed all research experiments (the most important job of the day; the water simulates the reef’s exact conditions)

11am: Check with manager to see if any “odd jobs” required, e.g., replacing light bulbs, repairing bunks, fixing power faults

12.15pm: Go home: make lunch, check emails

1pm: Meet passenger boat and welcome all new researchers to station, help with luggage pick-up and delivery, conduct safety and general orientation

3pm: Gardening: weeding, clearing trees, mulching

4pm: Finish work: go for snorkel off the jetty or take boat out for sunset cruise

7pm: Have dinner, do household chores, catch up with friends

10pm: Bed

* Brad works a 10-day on, four-day off roster and, barring any emergencies, this is what a typical working day may bring. However, once every two-and-a-half weeks, he loads and unloads the supply barge that delivers all supplies including food, fuel, gas bottles and any research equipment larger than a handbag. Days off may mean island-hopping, or going scuba diving or deep-sea fishing.
Senior Research Fellow in UQ’s School of Chemical Engineering, Dr Steven Kenway (picture), really practises what he preaches when it comes to sustainability.

Dr Kenway and his business partner, David Burgin, established Green Cabs in 2008, offering pedal-powered cabs with high visibility in the Central Business District (CBD).

“Reducing consumption and cycling rather than driving is a great way for individuals to contribute to sustainability,” Dr Kenway said.

“Green Cabs currently provide the only public transport across the river using pedestrian bridges, along cycleways beside the river and through major sites such as South Bank and the Botanic Gardens.”

Dr Kenway and Mr Burgin both rode Green Cabs during Expo ’88, when the pedal taxis last operated in Brisbane. However, Dr Kenway said the cabs gradually disappeared due to the lack of provision or consideration for bicycles in the city at that time.

“It has only really been with the support of South Bank Corporation and the investment in green infrastructure (cycleways) in the city, that it has been possible to conduct a cycle-based taxi and VIP tours business again,” he said.

At UQ, Dr Kenway’s research focuses on the development of water and energy efficient cities.

The ZEVs have their own specially built recharge stations located on the St Lucia campus in multi-level car park 2 and are powered on electricity generated by the solar photovoltaic array located on the roof of the same building.

P&F Deputy Director Geoff Dennis said the achievement is further evidence of how serious the University is in addressing its carbon footprint.

“Environmental sustainability is an integral part of our academic curriculum and we are actively embedding sustainability across all campus operations,” he said.

UQ has developed a Climate Action Plan that sets out proposed actions to reduce its carbon footprint by 2020, and reducing car fleet emissions is just one of many sustainable initiatives.

“We are focusing on all areas where the University emits greenhouse gas, from energy to transport, waste and the built environment,” Mr Dennis said.

“For example, two new buildings currently being constructed, the Advanced Engineering Building and the Global Change Institute, are both designed to meet strict environmental objectives and will both receive the national green star tick of approval from the Green Building Council of Australia,” he said.

UQ has already installed Australia’s largest solar photovoltaic array and continues to work on revitilising campus biodiversity.

To find out more about UQ’s sustainability practices, go to: www.uq.edu.au/sustainability

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Based on 2008/2009 figures, UQ’s P&F Fleet Services has this year reduced its hire fleet’s greenhouse gas emissions by 25 per cent – quite a remarkable achievement given that the University has grown significantly in both area and population over the past four years.

Mark Kranz, UQ Manager Transport Systems, Property and Facilities (P&F), said the reduction had been achieved in several ways.

“We have replaced older vehicles when they’re due for retirement with fit-for-purpose hybrid or electric models, including our new zero emissions vehicles (ZEVs) that replaced many traditional internal combustion motorcycles and vans damaged in the 2011 Brisbane floods,” he said.

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PEDAL POWER

“Many people don’t realise that water management in cities indirectly influences about 10 per cent of Australia’s greenhouse gas emissions, largely through the use of water,” he said.

“How we manage water could have a big influence on energy use and the design of our future cities.”

Dr Kenway, a 2010-11 UQ Fulbright Scholar, recently secured an Australian Research Council Linkage project and Australian Postdoctoral Award (Industry) in collaboration with the Melbourne Water Sector, and Victorian Government, and also has a research project in collaboration with Seqwater to model water-related energy in cities, focusing on households.

He said he had always had a passion for the environment, so there was a certain inevitability in him now researching in the area as well as establishing Green Cabs.

“My view of sustainability is an ecological one. Many people consider sustainability largely from an economic side. While I accept this is part of it, the quality of the environment globally and locally is the most critical yardstick for me.”

To find out more about UQ’s sustainability practices, go to: www.uq.edu.au/sustainability

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Emission Control

One of UQ’s zero emissions vehicles

PEDAL POWER

SENIOR RESEARCH FELLOW IN UQ’S SCHOOL OF CHEMICAL ENGINEERING, DR STEVEN KENWAY (PICTURED), REALLY PRACTISES WHAT HE PREACHES WHEN IT COMES TO SUSTAINABILITY.

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Dr Sean Tweedy (pictured) from the School of Human Movement Studies serves the Paralympic movement in multiple ways – as lead researcher, accredited international classifier and Head of Classification for IPC Athletics – but all of them relate to classification.

As a researcher, Dr Tweedy is Chief Investigator on the International Paralympic Athletics Classification Project, which aims to develop a new, evidence-based method of classification to replace the current methods that are based principally on clinical judgment.

The first of the project’s two stages has been completed and was implemented internationally for all Paralympic athletics meets immediately after the 2012 London Paralympic Games.

"This first stage aimed to develop objective, valid methods for determining which athletes are eligible for Paralympic sports," Dr Tweedy said. "Classification is a critical element of Paralympic sport but, because it is so important to the results, it can sometimes be quite controversial."

"Although classification is also used in Olympic sport, the challenges associated with classifying athletes according to sex or body mass are relatively minor."

"Classification in Paralympic sport is more challenging because athletes must be classified according to how much their disability impacts on their sports performance – and the range of disabilities varies enormously, including spinal cord injury, cerebral palsy, limb deficiency, brain injury and vision impairment."

"A key objective of the system we are working on is to reduce the number of controversies and increase the level of certainty about classification decisions."

The London Paralympic Games, held from August 29 until September 9 this year, were the fourth at which Dr Tweedy has worked as a classifier. In this role, he works as part of a team to assess any new athletes (e.g., athletes who achieved qualifying standards late in the season), monitor athlete performances and rule on classification protests.

"The London Games were a phenomenal success, particularly from the public engagement perspective. Not only were attendances huge – a record 2.7 million tickets were sold, with more than 1.4 million of these attending the Athletics – but more than 10 million unique users visited London2012.com more than 25 million times during the Games," Dr Tweedy said.

Although Dr Tweedy is a keen follower of the Olympics, his real passion is for the Paralympic competition.

"To make it to the top in any sport is incredibly difficult, but I think Paralympic sport is the toughest of all," he said.

"The Paralympic Games are a tremendous sporting event with truly inspiring performances."
UQ prides itself on the quality of its research and how it benefits the general community – no more so than in the health field where new discoveries can often mean a vastly improved quality of life. The aptly named BRAVE-ONLINE is a perfect example of this. A revolutionary approach for treating childhood and adolescent mental health disorders, this online program encourages young people to be brave when facing fears that may otherwise lead them to suffer anxiety and depression.

**BRAVE's Cognitive Therapy Strategies**
- B (body signs)
- R (relax)
- A (activate helpful thoughts)
- V (victory over fears)
- E (enjoy yourself)

"Anxiety disorders are the most common reason for adolescents to require psychological help," said lead researcher Professor Sue Spence, "yet as many as two-thirds of them cannot access professional support."

"The BRAVE program, which is based on UQ’s cognitive behaviour research, enables young people to book sessions for themselves and their parents with an online therapist in the privacy of their own home. "With its weekly skills-building tasks, BRAVE has been shown to be just as effective as meeting a therapist face-to-face for dealing with problems such as Separation Anxiety Disorder, Social Phobia, Specific Phobia and Generalised Anxiety Disorder," she said.

UniQuest has arranged a licence deal with UK-based online healthcare company CCBT Limited that enables BRAVE to be accessed by young people in Europe and North America. BRAVE has attracted interest internationally from health services, health insurance providers, healthcare professionals and community organisations.

Another health issue currently under investigation by UQ researchers is changes in DNA affecting Body Mass Index (BMI). Working with colleagues around the world, scientists at the Queensland Brain Institute and UQ Diamantina Institute have found that a single change in the FTO gene sequence can have a significant effect on the variability of BMI.

"We have discovered that if the gene sequence of one DNA unit is replaced by another known as a single nucleotide polymorphism (SNP), it can have a small but significant effect on variation in BMI." Professor and Chair of Quantitative Genetics Peter Visscher from the Queensland Brain Institute and UQ Diamantina Institute said.

"So, as a group, people with two copies of the weight-increasing variant are a few kilograms heavier and vary more in the standard deviation of weight."

Scientists had previously seen the variability of specific traits in many plant and animal species but had not identified specific genes or mechanisms to explain the phenomenon.

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Exploring the impact of exercise may be the next question to be answered...

**HEALTH BLAZES A TRAIL IN UNIQUEST AWARDS**

Congratulations to Dr Fiona Simpson from the UQ Diamantina Institute who won the staff category of the 2012 UniQuest Trailblazer competition...

The annual ideas competition, which attracts hundreds of competitors each year, is a way to identify and reward original, entrepreneurial and innovative ideas that have the potential to benefit the community, industry or business and generate a financial return. Trailblazer is open to all UQ staff and students as well as partners at the Mater Medical Research Institute, James Cook University, University of Technology Sydney and University of Tasmania.

Dr Simpson will be using her $25,000 prize-money to develop a new diagnostic tool and drug candidate for Squamous Cell Carcinoma (SCC), a type of skin cancer affecting more than 80,000 Australians each year.
With no known causes and no public screening programs, pancreatic cancer has the highest mortality rate of all the major cancers and is one of the few for which survival has not substantially improved during the past 40 years.

But a breakthrough from UQ’s Institute for Molecular Bioscience (IMB) has brought hope to many, with researchers finally “cracking the code” for pancreatic cancer through the largest and most comprehensive investigation to date into this complex disease.

Teaming up with The Kinghorn Cancer Centre’s Professor Andrew Biankin, IMB’s Professor Sean Grimmond (pictured) led an international team of more than 100 researchers that sequenced the genomes of 100 pancreatic tumours and compared them with normal tissue to determine the genetic changes that lead to cancer.

The breakthrough is the first of Australia’s contributions to the International Cancer Genome Consortium (ICGC), which brings together the world’s leading scientists to identify the genetic drivers behind 50 different cancer types.

Professor Grimmond said the study had discovered a new marker of pancreatic cancer that can be used to more accurately diagnose cancer.

“We found a set of genes called the axon guidance pathway that is frequently damaged in pancreatic cancer patients and is associated with a potentially poorer outcome for those patients.

“It is a new marker of pancreatic cancer that will help to better detect and effectively treat the disease,” he said.

Tragically, more than 2400 Australians are diagnosed with pancreatic cancer each year, with many dying within a year of diagnosis and fewer than five per cent surviving beyond five years.

With statistics like these, it’s easy to see why so many people across the world have embraced Professor Grimmond’s discovery with open arms.

“Every day, we know more about pancreatic cancer than we did before, but there is still more work to do and more investment needed as we play catch-up with a cancer that has been overlooked for too long.

“Pancreatic cancer deserves more than a one-size-fits-all approach, and we will continue to rally our research colleagues and the community to ensure our local research has a global impact on the fight against cancer,” he said.

Cancer advocate and CEO of the Avner Nahmani Pancreatic Cancer Foundation, Caroline Kelly, said the research findings had brought hope to all Australians affected by the disease.

“There is so much we must do to bring pancreatic cancer out of the shadows and this breakthrough is a big step in the right direction.

“This research is happening in our own backyard and we should all be proud to support it in every way we can,” Ms Kelly said.

For more information or to donate to Professor Grimmond’s research, go to: imb.uq.edu.au
In a lifetime devoted to **research** and **innovation**, two days can help you find out how to share it with **the world**.

**Two Days** = a UniQuest Research Commercialisation Workshop devoted to helping you

- protect the intellectual assets of your research
- leverage commercial research funding for publication opportunities
- connect with industry and investors
- broaden your career horizons
- and even gain credit towards a Graduate Certificate in Research Commercialisation.

UniQuest is one of Australia’s leading university commercialisation companies, generating benefits for researchers, UQ, and the wider community.

Research staff and postgraduate students from all UQ faculties and academic disciplines are welcome.

**Date**

Thursday & Friday 11 - 12 April 2013 / or Thursday & Friday 11 - 12 July 2013

**Venue**

Radisson Resort, Gold Coast

**Cost**

Free (conditions apply)
Places are limited.

The impossible has been proved possible with the arrival of four baby echidnas as part of an echidna study program run jointly by UQ and Currumbin Wildlife Sanctuary.

The four babies (called puggles) were all born in the past two months, joining two that were born last year.

The births have confirmed the breeding program as a world leader, with hopes it could help save the monotreme’s critically endangered cousins.

Reproductive biologist with UQ’s School of Agriculture and Food Sciences, Dr Steve Johnston, says echidnas have been notoriously difficult to breed in captivity.

However, having bred the species two years in a row, Dr Johnston believes the centre now has a sustainable captive breeding program.

“It was only a few years ago that it was thought to be almost impossible to breed echidnas in captivity and most births were somewhat accidental and unplanned,” Dr Johnston said.

“We had two puggles born last year and this year all five of the females have mated and four have produced puggles so far – we are still waiting for one more.”

While Australian native short-beaked echidnas, like those born at Currumbin, are relatively common in Australia, time is running out for their cousins, the endangered long-beaked echidnas found only in Papua New Guinea.

Researchers hope that the breeding program’s success will lead to a similar program for the critically endangered species.

UQ PhD student, Andrea Wallage, is hoping to solve some of the echidna’s mysteries with her research on their reproduction.

“Although echidnas are common in Australia and are found from the highest mountains to the middle of the desert, they are very shy and there are still many unsolved mysteries about their life-cycle,” Ms Wallage said.

“For example, we don’t know how to tell what gender they are without expensive DNA testing until they are a few years old, we don’t know when they become sexually mature and we know very little about their reproductive cycles.

“It was thought that the females only have one puggle every three years, but we have now had a female produce a puggle two years in a row.

“We also discovered that the females can go through multiple ovulation cycles each season – one of our females showed signs of mating activity three times this season.”

Video cameras have been installed in the echidna enclosures to monitor this very shy species 24-hours a day to learn more about them and their breeding behaviour.

UQ PhD student Andrea Wallage (left) and Currumbin Wildlife Sanctuary Senior Mammals Keeper, Lauren Clark, with puggles from the breeding program.
Beefing up research

In October, Queensland Premier Campbell Newman joined UQ Vice-Chancellor Professor Peter Høj, Dr Greg Harper from the CSIRO, and the Minister for Agriculture, Fisheries and Forestry, John McVeigh, at Customs House to launch an important new research alliance for Queensland.

Comprising scientists from The University of Queensland, the Queensland Government and the CSIRO, the Northern Beef Research Alliance (NBRA) is designed to help boost the fortunes of the $5 billion northern beef industry. UQ’s Queensland Alliance for Agriculture and Food Innovation (QAAFI) will coordinate research efforts with colleagues from the Queensland Government’s Department of Agriculture, Fisheries and Forestry (DAFF) and Australia’s national science agency, the CSIRO.

Mr Newman said the NBRA would improve the coordination of scientific expertise that would drive the prosperity of a vital Queensland industry.

“The Queensland Government is delighted to be partnering with UQ and CSIRO to deliver state-wide returns for beef producers through a more coordinated approach to research,” Mr Newman said.

“The NBRA will identify shared research projects to improve the productivity and profitability of Queensland’s beef industry and will bring together the nation’s leaders in beef cattle genetics, reproduction, nutrition, health, welfare, husbandry and grazing land management,” he said.

“This work will help meet the Government’s target of doubling food production by 2040.”

Professor Høj said applied research had a proven record in stimulating economic growth, and the alliance would pool the expertise of about 100 researchers with a focus on the northern beef industry.

“UQ’s standing as a top global university includes a ranking of 12th in the world for agriculture and 18th for plant and animal science, and we are pleased to lend this strength to improve the competitiveness of a key industry in a tough trading environment,” Professor Høj said.

With an estimated total gross value of $5 billion annually, the northern herd accounts for nearly 70 per cent of the Australian beef industry and three-quarters of Australia’s live export cattle.

Minister for Agriculture, Fisheries and Forestry John McVeigh said the development of Queensland’s beef industry was vital, not only for Queensland but for the nation generally.

“The NBRA is one of several new strategies which will underpin Queensland’s wider economic growth, resulting in a more productive and resilient economy,” Mr McVeigh said.

Collectively, NBRA members are currently responsible for some $9 million in northern beef research projects, forming a strong foundation for future scientific investigation targeted at the needs of industry.

To find out more about the NBRA, visit www.qaafi.uq.edu.au/nbra
Honours candidate in the School of Biological Sciences, Gurion Ang, recently won first runner-up at the inaugural Australasian Conference of Undergraduate Research – as well as a “highly commended” award at the UQ Undergraduate Research conference – for his work on butterflies, moths and wasps.

And American Fulbright Scholar Ms Cecilia Prator is visiting the Institute for Molecular Bioscience (IMB) at UQ St Lucia to study the venom of particular spiders, scorpions and centipedes.

Both are exploring the possibilities of turning bugs against each other to reduce the impact of insect-ravaged food crops.

“I want to learn how to manipulate this behaviour so that we can apply it as a natural pest control for the agricultural industry,” Mr Ang said.

Mr Ang’s supervisor is Dr Mike Furlong.

Ms Prator, a recent biology graduate from Occidental College in Los Angeles and a Howard Hughes Medical Institute Research Fellow, is working with Professor Glenn King to uncover compounds known as peptides that are found in the venom of spiders, scorpions and centipedes.

“The peptides I am searching for have insecticidal properties and so would be well suited for large-scale environmentally friendly pest control,” she said.

“We already know that many spiders produce a cocktail of peptide toxins, as IMB is in the process of developing a potential commercial insecticide,” Ms Prator continued, “but I want to tap into the largely unexplored realm of centipede and scorpion venom.

“With continued resistance to chemical insecticides, I believe I can safely help eradicate many arthropod pests (insects, ticks and mites) responsible for spreading disease and destroying much of the world’s food supply.”
EAT, LEAP AND BE MERRY!

With Christmas holidays just around the corner, it helps to have a few stocking fillers for the festive season. Whether for friends, family or colleagues, UQ has a range of options available across our St Lucia, Gatton, Herston and Ipswich campuses.

Top five stocking fillers from UQ News:

**EAT:**
- Gift Vouchers available and redeemable at Main Course, Physiol, Darwin’s, U-Sushi, Drunken Noodle, On a Roll Bakery, Secondhand Texts & Stationery, Pizza Caffe, Schonell Theatre, Lolly Shop, Red Room Bar & Grill (St Lucia); Herston Medical Bookshop, Club Med Café (Herston); and Three Limes (Ipswich)
- Two movie tickets and one pizza from the Pizza Caffe – $25
- Breakfast, lunch or dinner at Saint Lucy Café et Cucina, near the Tennis courts
- Breakfast or lunch at Genies Café
- Burger Urge combo from less than $14

**LEAP:**
- UQ Sport Summer Pass from 26 October 2012 to 17 February 2013, just $2 a day, or $228 for 114 days!
- Tennis Club Membership – $99 annual fee (+ season competition fees)
- UQ Staff Bootcamp Term Enrolment at St Lucia – $132 for 12 sessions
- UQ Staff Fitness at Gatton – $100 for 12 sessions
- 10 Visit Swimming Squad Pass – $120
- Athletics Club Annual Fee – $125

**BE MERRY:**
- Mini iPad at NextByte
- Wednesday Markets at St Lucia for a range of goodies e.g., clothing, sunglasses, phone case covers, fish tanks etc.
- UQ Sport First Aid Course – $145
- Book voucher from Co-op Bookshop

OTHER OPTIONS:

- UQ Sport Photography full-day workshop - $275
- UQ Pilates at Herston – $120 for 12 weeks
- $8 Movie Tickets at Schonell Theatre
- UQ Lead and Follow five-week dance course for partners - $50
- UQ Coffee Cards redeemable at Physiol Eatery & Cafe, Darwin’s, Pizza Caffe, Schonell Theatre Candy Bar, Three Limes Cafe (Ipswich) and Club Med Cafe (Herston)
Summer Fun and Fitness

The purple haze of Jacarandas and red blur of Poincianas can only mean one thing: summer is coming!

 Quieter Time around UQ Sport

Group fitness classes.

Mr Clayton said that November through to February was a prime opportunity to try something new.

“Our Lifestyle program has a bunch of outstanding short courses running over summer, including Swing Dance, Kickboxing, Tango, Mixed Martial Art Fitness, Musical Theatre, Cabaret, and Jazz.

“We will also be encouraging newcomers to give personal training a go, especially post-Christmas feasting! A personal trainer is the perfect way to find that extra piece of motivation everyone needs from time to time. “Our big hope is that members of the UQ community will discover a new hobby or passion they can carry into 2013,” he said.

To find out more about UQ Sport’s summer offerings go to: www.uqsport.com.au/summer
Sculpture: If Pain Persists: Linde Ivimey

Exhibitions

UQ Art Museum

Upcoming Events

UQ News TV

Library Opening Hours
Please check vacation opening hours at: www.library.uq.edu.au/hours

UQ News Survey Winners
Congratulations to the winners of our UQ News Reader Survey who have each won a $50 Co-Op Bookshop voucher: Gavin Richardson, Sammy Florczak, Mark Starkey, Guisselle Castillo and Michael J Adam. Thanks to everyone who took the time to complete the survey.

ICTE-UQ Homestay Hosts Needed
Do you live in an English-speaking household, close to public transport and have the Internet? Why not consider becoming an ICTE-UQ homestay host? Welcome people from all over the world into your home for short or long-term placements, discover other cultures and forge lifelong friendships (remuneration provided). Please call 07 3346 6737, email homestay@icte.uq.edu.au or visit www.icte.uq.edu.au/homestay for more information.

Scholarships

AE Brooks Travelling Scholarship in Architecture
For UQ Architecture graduates (Bachelor or Masters degree) who have graduated in previous two years and wish to obtain special experiences abroad to benefit the development of architecture in Queensland. Information: (07) 3365 3537 or k.leafmilham@uq.edu.au. Closes: 2pm, 31 January 2013

Travel the World to Benefit Australia
Applications are now open for the 2014 Churchill Fellowships, a remarkable opportunity to travel overseas, study a topic or an issue that you are passionate about, and return to share your knowledge and experience for the benefit of Australia. Value: 100 scholarships worth more than $20,000 each. Closes 20 February 2013
DiD you know thAt there Are only ArounD 12-15 inDustriAl glAssblowers in AustrAliA, AnD three of them Are At uQ?

So rare is this skill that apprentices (of whom Jarred Wright is one) have to be accredited under the British Society of Scientific Glassblowers training program.

"Most of our production here is for the School of Chemistry and Molecular Biosciences," Workshop Manager Robin Berlyn said.

"We produce things like beakers, flasks and custom-built research materials, but we also do some work for pharmaceutical and petrochemical laboratories."

UQ's fully equipped workshop mostly creates and repairs pieces in borosilicate (the same sort of glass used in pyrex cookware), as this is best for laboratory apparatus.

"But sometimes we do quartz for microanalysis (also used for semiconductors) and soda-glass work (the soft glass used for lightbulbs and tumblers)," recent Scottish émigré and glassblower David Marshall said.

"It all depends on the client."

For more information, contact Workshop Manager Mr Robin Berlyn on (07) 3365 3904 or r.berlyn@uq.edu.au

Pictured: A selection of glass products at UQ's glassblowing workshop

DO YOU NEED glASSWARE fOR yOUR TEACHING OR RESEARCH?

Stock and custom-built glass apparatus, including custom-built glassware, repairs to glassware, quartz work, sintered glassware, vacuum systems and glass components, are available on-site at UQ St Lucia from the School of Chemistry & Molecular Biosciences.
Professor Margaret Barrett, Head of the School of Music, believes that we are all capable of creative thought and practice from birth, and that creativity can be learned.

On reflection, creative thought and practice have been central concerns for me from my earliest experiences as a learner and musician. As a piano student, I was often more interested in playing the music I was hearing in my head than the notes on the page. Later, as I worked as a music teacher in primary schools, I found that setting composition tasks – even with the youngest of children – was a powerful means for them to learn about music from the inside.

Conventional wisdom sees creativity as a mysterious gift bestowed on a lucky few at birth. My experiences working with children as composers as well as performers of music has demonstrated that creative thinking and practice can be learned. Creative thinking in music arises from our earliest communicative practices – those fragments of song and speech that are part of children’s interaction with their worlds.

In a recently completed Australian Research Council-funded project, I worked with children (aged 18 months to four years), and their families, to capture their musical practices in daily life. Parents filmed video diaries of their child’s singing of known and invented song, and their musical play. These data have revealed an extraordinarily rich picture of children’s early musical generation.

The findings suggest that children’s invented song-making is fundamental to their early identity work. Song-making is a resource they draw on to establish a sense of belonging and relationship with others, to comfort themselves, and to communicate. At a very practical level, children’s invented song-making provides a means for them to explore and practice the elements of music and language. This research has demonstrated that children come to the school setting with a rich experience in music-making, and that we are all capable of creative thought and practice from birth.

In an attempt to understand more about creative thought and practice at developed levels, over the last three years I have been working on another Australian Research Council-funded project that investigates the pedagogy of creative thought and practice in music composition. My approach has focused on case studies of advanced music composition students working with eminent composers who teach. The study explores three different approaches to teaching and learning composition. These include early career composers working with a professional symphony orchestra, a professional vocal ensemble, and with an eminent composer teaching in a one-on-one composition studio.

I draw on cultural psychology theory to understand the ways in which the various dimensions of the environment and the cultural and social structures in which teaching and learning occur shape the students’ thinking and their practice as composers.

An orchestral environment is very different to that of a small vocal ensemble, or a one-on-one studio practice, and the strategies the composers draw on in their teaching reflect these differing affordances and constraints.

Fundamental to all these settings is a pattern of work that is collaborative and creative. While this study is located in music, its focus on the affordances and constraints of environmental factors, and the role of creative collaborations and collaborative creativity, holds potential to inform our understandings of creative practices beyond music.