

Adelaidean

News from the University of Adelaide

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Small group discovery experience

Acquiring a taste for superfoods

Strong student focus in Business School transformation

SURGE IN MEDIA STUDIES



THE UNIVERSITY
of ADELAIDE



INSIDE THIS EDITION OF ADELAIDEAN

Students are enrolling in ever increasing numbers in the Bachelor of Media at the University of Adelaide so they can be part of the new digital revolution which is transforming mass media.

Adelaidean takes a look at the University's restructured media degree which has been tailored to take advantage of these exciting opportunities.

Also in this edition we interview Vice-Chancellor and President Professor Warren Bebbington about the roll-out of the small group discovery experience which will deliver a challenging new learning environment for our undergraduates.

We also discover how soil is being used to solve major crime and hear from a University researcher about how ancient Scottish tribes used megaliths to observe solar and lunar cycles.

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>ADELAIDEAN



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LECTURE SERIES RETURNS FOR UNIVERSITY ANNIVERSARY



The University of Adelaide is marking its 140th anniversary this year by re-introducing a series of Inaugural Lectures to showcase the work of newly appointed or promoted academic leaders.

The series began on 25 March with a lecture by Professor Robert Saint, a graduate of the University of Adelaide with an international reputation in developmental genetics and cell biology.

Professor Saint returned to the University in 2013 to take up the new position of Pro Vice-Chancellor Research Strategy following senior appointments at other Australian universities and the Stanford University School of Medicine in the US.

Many universities celebrate major appointments or the promotion of staff to the professoriate with a keynote lecture and this was a tradition at the University of Adelaide from its foundation years.

When asked to deliver the first of the new Inaugural Lectures, Professor Saint was quick to rise to the challenge, pointing out a link with his work and the original lecture by the University's first Vice-Chancellor Augustus Short on 26 April 1876.

The lecture was criticised in the press for straying into 'inappropriate' territory, no doubt an allusion to the new and controversial theory of evolution by natural selection proposed by Charles Darwin.

"Darwin's theory only gained a rational basis when studies of the inheritance of genetic traits by Gregor Mendel were published just a few years before the founding of the University," says Professor Saint.

"The discoveries that ensued impacted on our understanding and treatment of diseases and led to major improvements in agriculture. In addition, they provided new ways of investigating the molecular and cellular basis of life."

Professor Saint's lecture presented a personal perspective on genetics, from its earliest concepts through to the ongoing genomics revolution, highlighting the major roles that University of Adelaide researchers have played.

Other lectures in the series will cover topics across the faculties. In May, Professor Renuka Visvanathan will outline some of the priorities in her pioneering work as Director of the Adelaide Geriatrics Training and Research with Aged Care (G-TRAC) Centre at Resthaven which she combines with Directorship of the Aged and Extended Care Services (AECS) at the Queen Elizabeth Hospital.

Then in June, Professor Alan Collins, Director of the Centre for Tectonics, Resources and Exploration (TRaX), who was recently appointed to a prestigious Australian Research Council (ARC) Future Fellowship, will speak about his long-term research on the reconstruction of ancient oceans in Australian Gondwana.

Lectures in the series will be recorded for podcast on a dedicated blog – blogs.adelaide.edu.au/inaugural-lecture/lectures. The blog page can also be used for people to register for a lecture. ▀

TOP Professor Robert Saint

"The discoveries that ensued impacted on our understanding and treatment of diseases and led to major improvements in agriculture."



“Small group discovery will be a key feature of university life, and will once again be central to our unique learning proposition.”

TAILOR-MADE TEACHING

“The importance of one-to-one lessons in music really does embrace the small group discovery experience philosophy of the University of Adelaide because there are so many aspects of technical and musical issues that can be addressed at that moment, face-to-face.

“We can trouble shoot ideas, discuss how to overcome problems of technique and address any obstacles in the preparation of study material and music repertoire. It is incredible how one-to-one lessons can set up a student for their career – it is tailor-made teaching.

“The teacher and student can collaborate to design short-term and long-term goals and design a series of practice sessions to directly target problems of that individual student. It is amazing how quickly improvement is shown.

“Time spent together one-to-one fosters the students’ capacity to work in detail and not gloss over difficult technical passages in their repertoire. The outcomes can be easily revealed at the end of each lesson.

“Students focus better when one-to-one, making it easier for decisions to be made, goals set and outcomes targeted.”

Associate Professor Elizabeth Koch OAM,
Head of Woodwind, Elder Conservatorium of Music

SMALL GROUP DISCOVERY EXPERIENCE UNIVERSITY ROLLS OUT NEW LEARNING INITIATIVE

Undergraduate students are being exposed to exciting new interactive learning experiences this year as the University of Adelaide takes an Australian lead in delivering small group discovery.

The new education focus aims to provide a more adventurous form of learning for undergraduate students to challenge and be challenged.

The roll-out follows 18 months of planning by University staff to turn back the clock on the massification of higher education over the past 20 years.

Vice-Chancellor and President Professor Warren Bebbington says a shift by universities towards huge, passive lectures meant some students never had the opportunity of meeting their lecturers.

"That's not what I remember about university. When I was an undergraduate, we met professors in small classes and I was fortunate to learn from exceptional teachers who inspired and challenged," he says.

"That's exactly what I want for our students at the University of Adelaide. Small group discovery experience will be a key feature of university life, and will once again be central to our unique learning proposition."

The roll-out is a fundamental component of the University's 10 year Strategic Plan – *Beacon of Enlightenment* – which was unveiled in 2012.

Professor Bebbington says he is delighted that teaching staff have fully embraced the concept with lecturers rethinking how they deliver their content and engage with students.

The new approach includes a return to undergraduate research so that every student in every program has an opportunity to experience the thrill of discovery.

For many undergraduates, this will take the form of an individual research project in their final year, with preparatory skills and experience built through smaller exercises in the earlier years of their course.

Students who demonstrate a readiness for independent work at admission will be offered an Advanced Bachelor program involving research projects from the first year.

Professor Bebbington says small group learning is not a formulaic response about setting specific class sizes.

"It's about our academics considering the best way to spend their week and finding the best mix of lecture content, online learning and making sure they have time for face-to-face teaching with smaller groups of students," he says.

"It will be different for each course and each teacher but the principles remain the same. What matters most is getting students in front of key professors.

"This will lead us back to a far more serendipitous, adventurous kind of education. An education based on questioning and on a discussion that can go in any direction. That's a far cry from the passive transfer of knowledge." ♥

LEFT Associate Professor Elizabeth Koch OAM with second year student Andrew Baird



SURGE IN MEDIA STUDIES DIGITAL MOBILITY CREATES WAVE OF NEW CAREER OPPORTUNITIES

Mass media is undergoing massive change with the rapid spread of digital technologies and mobile devices.

Not since the introduction of radio and television has the media landscape altered so significantly – and for young people entering the industry the opportunities have never been greater.

To ensure its students are prepared for this dynamic communications era, the University of Adelaide has restructured its media degree with various new study options – and enrolments are surging as a result.

First preference applications jumped by 25 per cent at the start of 2014 and this has translated into a substantial increase in students enrolled in the different streams.

Dr Kathryn Bowd joined the University in mid-2013 as a Senior Lecturer and is part of an expanding team of media educators recruited to deliver the new program.

A journalist for 17 years in Australia and the UK, Dr Bowd became a fulltime media lecturer and researcher in 2000 and has experienced first-hand the impact of new technologies on media delivery and consumption.

She says changes in the way people access news are among the most dramatic.

“Students joining our courses are all familiar with social media, but they don’t necessarily engage in the same way with traditional media such as newspapers or television news,” she says.

“People no longer have to sit down at a particular time every day to watch the TV news – they do it when and where it suits them.

“The fact that media is so much more mobile and immediately accessible is one of the big changes. It’s a real challenge for the business model of journalism and also the media more generally.”

The University’s restructured Media degree is designed to reflect these changes with the introduction of three majors offered as part of the new program.

Students now have a choice of doing the degree at a broad-based level plus the option of choosing from one of three majors: journalism, marketing or media production.

Production is run in partnership with the Creative Industries Centre at Tea Tree Gully TAFE, with students able to specialise in computer-generated imagery (CGI) and visual effects, game art, digital production, photographic imaging or graphic design.



There is a strong technology focus in the degree, an area which Dr Bowd says is changing all the time.

“That’s one of the real challenges of teaching and researching in this area – keeping on top of all the nuts and bolts of the new technology,” she says.

“From a teaching perspective it’s about the big picture and how to apply this technology, because students will always be at the leading edge of accessing it.”

And while technology continues to transform the media environment, Dr Bowd is regularly asked by students about the future of mainstream journalism. Her response is upbeat.

“Certainly there are fewer jobs in mainstream journalism than there were a few years ago, but on the positive side, media and communications more broadly is a hugely growing area,” she says.

“Today there are opportunities that didn’t exist a few years ago and for people starting their degrees there will be opportunities tomorrow that don’t exist now.”

Dr Bowd also says the fundamental principles of journalism - gathering and distributing news to an audience - have not changed. It’s just that people want to know about it immediately, no matter where they are.

In such a vibrant and instant media environment, traditional printed newspapers are facing some major challenges, but they appear to be retaining their central place in information networks in regional communities.

Like many journalists, Dr Bowd began her career in country newspapers. Their place in modern media was the theme of her PhD research project and continues to be a focus for her current studies.

“Interestingly, regional news media have a very different place in communities to metropolitan media,” she says. “We tend to think of newspapers as being on the way out, and they may be in the traditional printed form, but in regional areas they are still doing relatively well.

“There are many reasons, but a key one is their social context and their importance to the local community.”

Dr Bowd is currently examining how newspaper journalists make use of social media in their work and how their approaches differ in regional and metropolitan areas. ♥

“Today there are opportunities that didn’t exist a few years ago and for people starting their degrees there will be opportunities tomorrow that don’t exist now.”

ABOVE Media student Sharmonie Cockayne

MAKING SOIL TALK NEW FORENSICS DISCIPLINE HELPS SOLVE MAJOR CRIME

TRACKING DOWN BRUTAL KILLERS AND TERRORISTS HAS NEVER BEEN PART OF THE TRADITIONAL JOB PROFILE FOR PEOPLE WHO STUDY SOILS.

But then Professor Robert Fitzpatrick is not your average pedologist. He's a forensic soil scientist, a term he created to describe exciting new detective work using soil samples to solve serious crime.

Give Professor Fitzpatrick and his team at the Adelaide-based Centre for Australian Forensic Soil Science (CAFSS) the tinniest trace of soil on a piece of clothing, for example, and they can deliver investigators critical information.

A Professorial Research Fellow at the University of Adelaide's School of Earth and Environmental Sciences, Professor Fitzpatrick has helped pioneer this new forensic science, which has quickly gained acceptance around the world.

But he admits it's been a steep learning curve. He's had to build on his normal suite of pedological skills – such as the chemical, physical and biological analysis of soils and minerals – and venture into totally new specialist areas.

"Over the past 10 years I've had to become familiar with the intricacies of how forensics work, how the legal system operates and processes such as the chain of custody," he says.

"I've also had to learn how to communicate highly technical information to a jury and deal with hostile questioning from courtroom lawyers.

"It's tremendously challenging and satisfying to develop new scientific methods or modify existing processes to help police and the justice system to solve complex investigations."

Professor Fitzpatrick is now part of the first formal worldwide network of soil and forensic scientists, not only tackling some of Australia's highest profile crimes and cold cases, but using his expertise internationally to support Interpol and counter-terrorism operations.

It's been a fascinating journey, which began in 2000 when South Australian police detained Matthew Holding for the murder of his mother and grandmother.

Detectives were confident they had their suspect but they needed the bodies to help prove their case. They arrested Holding near Moonta on the Yorke Peninsula and spent three days searching the area after finding a shovel in his car boot.

Frustrated at their lack of progress, they took the unusual step of contacting soil scientists at the Commonwealth Scientific and Industrial Research Organisation (CSIRO) where Professor Fitzpatrick worked. While Holding was refusing to talk, the shovel spoke volumes.

Analysis back at the laboratory showed that material on the shovel was smeared and compacted in a way that indicated it had been used to excavate and tamp down soil in a wet location.

Factors such as the soil's mineralogical composition, acidity, electrical conductivity and salinity were consistent with quarrying in the Adelaide Hills.

The correct quarry was identified and the two bodies were ultimately recovered, remarkably within 15 metres of where Professor Fitzpatrick and his team had predicted.

Holding subsequently pleaded guilty to the murders and CAFSS was established as a national centre as a direct result of the successful investigation.

Since then CAFSS has been involved in more than 130 cases in Australia and overseas, with Professor Fitzpatrick working with Interpol and other agencies as far afield as China, Syria and Africa.

The centre has provided soil forensics for many high profile crimes, including the murders of Carly Ryan in South Australia and Corryn Rayney in Western Australia.



“Over the past 10 years I’ve had to become familiar with the intricacies of how forensics work, how the legal system operates and processes such as the chain of custody.”

Professor Fitzpatrick has also been asked to analyse soil on shoes and clothing belonging to several suspected and convicted terrorists from Kenya, Syria, China, Afghanistan and Bosnia.

Insightful clues on their overseas travels have been made possible by the discovery of small traces of unique soil types and even pine needles. The identification of gunshot residue in soil located on clothing has also indicated the type of ammunition they may have been using.

“We are usually contacted by police for support on serious and scientifically complex cases when their own forensic team is unable to provide the required breakthrough,” says Professor Fitzpatrick, who migrated to Australia 34 years ago from his native South Africa.

Today he travels the world delivering workshops and training on soil forensics and takes an increasing number of calls from young students interested in pursuing it as a profession.

Many are surprised that while forensic soil science is a new discipline, using soil to solve crimes has been around for some time. The difference is that crime agencies have never had access to the same level of specialist scientific expertise offered by CAFSS such as pedology, mineralogy, biogeochemistry and spatial analysis.

In the past police laboratories relied mostly on a light microscope to examine soil samples, a technique first documented back in 1856 when a German scientist helped work out which railway station was used during a silver coin heist.

The great fictional detective Sherlock Holmes also used the colour and consistency of soils splashed on trousers to identify different parts of London.

Professor Fitzpatrick is in good company indeed. ♥

ABOVE
Professor Robert Fitzpatrick, this photo is courtesy of Dr Paul Shand, CSIRO Land and Water

BELOW
Photo courtesy South Australia Police

“Looking back I now know that university was an extremely influential and critical time for me and affected the whole of my subsequent life.”

RIGHT
Catherine Branson



FIGHTING FOR THE RIGHTS OF OTHERS

COMING BACK TO THE UNIVERSITY OF ADELAIDE HAS CLOSED THE LOOP ON A REMARKABLE CAREER FOR NEWLY APPOINTED COUNCIL MEMBER CATHERINE BRANSON.

After graduating from the University of Adelaide with law and arts degrees, the former country girl rose to the top ranks of her profession, becoming Crown Solicitor, a Federal Court judge and a determined advocate for the underprivileged as President of the Australian Human Rights Commission.

An impressive resume for someone who never dreamed law could offer so much variety. But she credits much of her success to those early years on campus.

"It was the late sixties and early seventies and I was involved in the second wave of feminism which first really opened my eyes to structural disadvantage," says Ms Branson. "Looking back I now know that university was an extremely influential and critical time for me and affected the whole of my subsequent life."

Both her parents were fourth generation South Australians and Ms Branson and her elder brother, Lew Rayner, were the first from either family to gain a tertiary education.

She was determined not to waste her opportunity.

After graduating, her first "serious job" was as a tutor at the University of Adelaide's School of Law. Then she spent a year in the US doing voluntary legal aid work in Pontiac, a town just outside Detroit, Michigan, working mostly with extremely disadvantaged African Americans.

She admits it was a serious eye-opener.

"I was there not so very long after the race riots of the 60s and there were still vacant blocks where buildings had been destroyed," she says.

"I hadn't, as a fairly privileged young person, ever experienced disadvantage to the extent that I saw it in Michigan. My interest in human rights has been with me since that time and it was something that I took with me into the judiciary."

Discrimination law was among her speciality areas of law after returning to South Australia where she worked in private practice and also for the public sector.

Her career continued to blossom and at the age of 35 she was appointed to the dual positions of Crown Solicitor of South Australia and Secretary of the Attorney-General's Department.

From 1989 she practised as a barrister at the Adelaide Bar and was appointed a Queen's Counsel in 1992 prior to becoming a Federal Court Judge two years later.

Over the next 14 years she heard all types of cases, including complaints of discrimination and judicial review of decisions involving refugees.

As a Judge Ms Branson was not expected to be involved in public debate. Her next role as President of the Australian Human Rights Commission therefore presented numerous new challenges as she became a key spokesperson.

"While equality before the law, fair play, and respect for all is at the heart of all judicial work, becoming President was very different to any sort of job I'd done before," she says. "That's what attracted me ultimately to the position."

Ms Branson held the role for four years during which time Australia's treatment of its Indigenous people and asylum seekers was very much in the public spotlight. Today she remains both passionate and measured in her criticism.

"By any test the conditions in which some of Australia's first peoples live puts us at risk of failing to meet our obligations under international conventions, including the International Covenant on Economic, Social and Cultural Rights," she says.

"Our treatment of those who come to Australia by sea seeking asylum puts us, in my view, in breach of our obligations under the International Covenant on Civil and Political Rights. It is a serious thing to arbitrarily detain anyone."

Throughout her career Ms Branson has been active in the community, holding senior board positions in numerous organisations involved in human rights as well as her other interests in areas such as the law, health, education and the arts.

Now retired from full-time work, she is relishing the opportunity of experiencing university life once again.

In 2011 she received a Distinguished Alumni Award from the University of Adelaide and the following year was awarded a Doctor of Laws (honoris causa) from the University of Flinders. She is also an Adjunct Professor at the University of Adelaide Law School, using her wealth of experience to inform and inspire students with "cameo appearances" as a guest lecturer.

"It's lovely to be back at the University and to see how much has changed but also how much remains the same," she says. "For all sorts of reasons I'm getting a lot of pleasure from what I think is a fundamentally important South Australian institution – one that continues to play a very important role in this State as well as nationally and internationally." ▀

LANDMARK STUDY PROBES THE PLIGHT OF INDIGENOUS PEOPLE

The housing needs of Indigenous Australians living with a disability are being fully investigated for the first time in a groundbreaking multidisciplinary research program by the University of Adelaide.

Figures from the Australian Bureau of Statistics indicate that one in every two Aboriginal and Torres Strait Islanders live with some kind of disability or long-term health condition.

Because of chronic under-reporting the real figure is believed to be much higher.

Researcher Dr Elizabeth Grant says a paucity of research into the housing experiences of these people means there is a serious lack of information on how they cope.

“We know that housing and living environments are fundamental to a person’s quality of life, even more so when they have to live with a disability,” says Dr Grant.

“We also know that housing for Indigenous people is often of poor quality and overcrowded. What we don’t know is what their experiences and needs are and that makes it very hard to set appropriate housing policy.

“It’s imperative that we collect baseline data to better understand the issues for informed decision-making.”

A specialist in Indigenous education, Dr Grant is part of a six-strong research team which also has expertise in the key areas of Indigenous health and medicine, architecture, landscape architecture and geography.

The team has secured significant funding from the Australian Housing and Urban Research Institute (AHURI) for the 18-month research project.

The research will be focused on the living environments of three separate Indigenous communities:

- › Remote – Yalata Aboriginal Community in South Australia’s far west.
- › Rural – Raukkan Aboriginal Community on the southern shores of Lake Alexandrina in South Australia.
- › Urban – Geelong, Victoria.

Mr Alwin Chong, who works in the area of Indigenous health, says the study will examine the lived experiences of housing and infrastructure through the eyes of disabled individuals, their carers and families.

“We really want to give Aboriginal people a voice in our research,” he says. “Anecdotally we have some idea of the sorts of issues they face, such as mobility and lack of community infrastructure.



THE RESEARCH TEAM

Professor George Zillante, Head of School,
School of Architecture and the Built Environment

Dr Elizabeth Grant, Senior Lecturer,
Aboriginal and Torres Strait Islander Education: Wirtu Yaru

Mr Alwin Chong, Director,
Yaitya Purrana Indigenous Health Unit

Dr Jo Russell-Clarke, Senior Lecturer,
School of Architecture and Built Environment

Professor Andrew Beer, Director,
Centre for Housing, Urban and Regional Planning

Professor Justin Beilby, Executive Dean,
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"We've heard that some people are trapped in their homes due to a lack of housing modifications, sometimes the primary caregiver also has a disability and some individuals have been forced to move away from their family due to inappropriate housing."

The University study follows a report by the First Peoples Disability Network stating that the experiences of Indigenous people with a disability need to be urgently documented.

The type of disability can vary enormously from physical, which can include hearing and visual loss, to intellectual and cognitive impairments caused by alcohol abuse and glue sniffing.

In some Aboriginal communities hearing loss is reportedly as high as 60 per cent.

Another member of the research team, housing and planning specialist Professor Andrew Beer, says appropriate housing and infrastructure for people with a disability is a critical issue for all Australians, but particularly the Indigenous population.

"This is important research which has never been looked at before and is clearly a topic that is very important in closing the gap for Indigenous people," he says.

"The fact that it's funded and supported by AHURI means that there's a greater chance the findings will be put before policymakers who in turn will bring about change.

"It's also very timely with the National Disabilities Insurance Scheme being rolled out because funding is more likely to be made available for solutions in a whole range of areas."

The research team intends beginning its work in May with a questionnaire and interviews with key stakeholders, including community leaders and health service providers.

This will help identify some of the issues and also people with disabilities and their carers who are willing to talk about their experiences.

The information will be used to develop case studies in each of the three research areas. ♥

ABOVE Ngarrindjeri woman Gayle Rankine, Chairperson of First Peoples Disability Network Australia, at her home

“For some time now people have thought they understood these structures but the further I look into it I’m discovering it’s more and more complex.”

RIGHT Dr Gail Higginbottom

UNRAVELLING THE MYSTERY OF MEGALITHS

SINCE COMPLETING HER PHD IN 2003 DR GAIL HIGGINBOTTOM HAS CONTINUED HER STUDIES INTO THE ANCIENT MEGALITHS OF WESTERN SCOTLAND. HER WORK IS REVEALING THAT EARLY CIVILISATIONS HAD A REMARKABLE UNDERSTANDING OF THE CONNECTION BETWEEN THE SUN AND MOON AND THEIR OWN WORLD.

Extensive statistical analysis and advanced 3-D landscape models are proving that there was nothing random in the construction of hundreds of stone structures along Scotland's remote western region.

For the first time research by University of Adelaide PhD graduate Gail Higginbottom is confirming that ancient tribes had a complex and sophisticated system of observing solar and lunar cycles.

It's a conclusion which has left the archaeoastronomer excited and in awe.

She returned to the University in 2013 as a visiting researcher after some years trekking across islands and coastal regions to study a number of different stone structures.

By running her data on over 125 sites through a 3-D astronomy and landscape program developed by visiting Research Fellow Andrew Smith, she has discovered that the builders were meticulous in the selection of sites, placing them at precise distances from very specific horizon shapes.

Through this careful positioning the early astronomers were able to observe not only the summer and winter solstices but rare lunar events, and to watch the sun and moon setting and rising over particular landscape features.

Dr Higginbottom says carbon dating of some of the earliest megaliths shows they were built as long as 5000 years ago and she believes the science was then handed down through the ages and between tribal communities.

One of the most significant findings is that the majority of megaliths are closely aligned with the major lunar standstill – an event which takes place just once every 18.6 years when the moon reaches its maximum declination on the horizon and the new cycle begins.

"It's a complex process but these early civilisations knew exactly what they were doing," says Dr Higginbottom. "They carefully positioned their megaliths so that they could observe this rare event with the full moon rising and setting at its most northerly or southerly points along the slope or peak of a particular hill or range.

"Our analysis is proving that chance was not involved and it's very, very exciting. For some time now people have thought they understood these structures but the further I look into it I'm discovering it's more and more complex.

"These people were clearly very aware and capable."

The megalithic structures being studied by Dr Higginbottom were built between 1400BC and 800BC across Mull, Argyll, Lewis, Uist, Kintyre, and Islay and Jura.

Sometimes two or three are in sight of each other – between 50 and 1000 metres – and in these cases the positioning of one of these is often reversed with the most distant horizon found north of the site, instead of to the south. It's also quite common to have water in the south or, in the reverse sites, to the north.

"Added to this, one structure is usually oriented to the rising or setting of the solstitial sun and the others to the rising or the setting of the moon," says Dr Higginbottom. "Each of the sites within the group sees a slightly different version of where and when the sun and moon rises at these times.

"The closer horizons tend to curve around the monuments creating an amphitheatre-like affect, so when the moon or sun rises or sets they loom large and at night the moon can light up the local ground and bathe the stones in light. This is particularly common on the Isle of Mull."

Dr Higginbottom's studies also indicate that even when just one monument was erected, the landscape settings were carefully chosen by the megalith builders to allow a joint celebration of the summer solstice and accompanying full moon at opposite sides of the sky.

A possible link between megaliths and the sun and moon cycles was first statistically demonstrated by engineer Archie Thom in 1967 and then in 1984 by archaeoastronomer Clive Ruggles.

However, Dr Higginbottom says the phenomenon is far more widespread than previously realised and highlights a considerable degree of communication between geographically spread communities.

She says the 3-D landscape program developed by Dr Smith has enabled her to achieve extremely high levels of accuracy in her analysis and determine in much greater detail the reasons for the deliberate location of the sites.

"Andrew is a very pedantic kind of person and the software he has developed to look at both the landscape and astronomical orientation together is the best available," says Dr Higginbottom.

Further specialist support is being provided by Emeritus Professor Roger Clay, an astronomer and astrophysicist at the University of Adelaide.

Dr Higginbottom has her own theories on why these early communities went to so much effort.

"These people were living in harsh conditions and had to be very in tune with their environment to survive," she says.

"Whether you are a farmer or hunter gatherer you need to understand the seasons and maintain these cycles for stability and security. It's important to prepare for winter and to know that spring and warmth will follow."

When they have time Dr Higginbottom and her colleagues are hoping to use the 3D landscape model to finally resolve the mystery behind Stonehenge, one of the world's most intriguing and famous stone monuments.

"Stonehenge was definitely used for solar observations but the jury is out on whether it's lunar or solar. I suspect it's both – and our software should be able to confirm it." ♥



ACQUIRING A TASTE FOR SUPERFOODS

SUPERFOODS HAVE QUICKLY BECOME THE **FOOD FAD** OF THE **NEW MILLENNIUM** AS HEALTH-CONSCIOUS AUSTRALIANS SEEK TO **BENEFIT FROM A GOOD DIET.**

A variety of foods – many from exotic locations – have been elevated to special status because of their alleged disease-fighting properties.

But while many are new to our dinner tables, they are not newly discovered. Ancient cultures in various parts of the world have been tucking into them for centuries.

Curiously, the way western society prepares and eats the foods is often quite different to the original users.

PhD researcher Jessica Loyer is on a mission to unravel some of the inconsistencies and establish why Australians are attracted to eat particular foods in the first place.

“I often refer to them as displaced foods because they have landed in supermarkets and marketed as healthy products without any sense of how they were originally used in cuisine,” she says.

“Whenever a superfood becomes popular all these studies come out breaking it down into its individual components and explaining how it helps promote good health.

“That’s all very interesting but quite often it simply ends up confirming the way traditional societies have viewed the foods for thousands of years. I’m interested in the stories behind these local staple foods and how they suddenly become a global commodity.”

A committed food enthusiast and writer, Ms Loyer relocated from the US in 2006 to study a Masters in Gastronomy at the University of Adelaide. She is approaching her PhD from a social science perspective, focusing her research on four superfoods: cranberries, maca roots, chia seeds and quinoa grain.

There are two major elements which involve focus groups in Australia and fact gathering among people in the traditional home of the foods. She wants to gain an insight into people’s understanding of the health benefits and also compare how the foods are used in the different cultures.

Her initial focus group in Adelaide has shown that ‘superfoods’ are often people keen to take control of their health.

“We live in a society with industrialised food and medical systems and it seems these people want to take back some of the powers and are educating themselves about what they can eat to benefit their health,” she says.

Growing up in Massachusetts, Ms Loyer well remembers visiting a cranberry bog during a family hike in Cape Cod and discovering the link between the tiny berries and the Thanksgiving turkey sauce.

What she didn’t realise at the time was that cranberries were also harvested by indigenous Americans as an important part of their diet and for medicinal purposes.

It seems the knowledge was passed on because the alleged health benefits of cranberry sauce and juice was advertised in the US as far back as the 1920s. Today cranberry is marketed for its apparent ability to lower the risk of urinary tract infection, prevent certain types of cancer, improve immune function and decrease blood pressure.

Ms Loyer recently made a return visit to her home state to find out more from native Americans and is planning a field trip to Peru in June to research the home of maca. High in the Andes, the root has been a staple food of local people for centuries as a folk remedy for increasing stamina, energy and libido.

But whereas in the Andes it is eaten as a root, in the west it is typically taken as a processed dried capsule.

Ms Loyer eventually hopes to team up with someone specialising in nutrition or dietetics to research if treating the foods so differently has an impact on the health benefits. ♥

FOCUS GROUP

To join a superfood focus group
or take part in a survey visit
ua.edu.au/foodresearch
or email **Jessica Loyer** at
jessica.loyer@adelaide.edu.au

STRONG STUDENT FOCUS IN BUSINESS SCHOOL TRANSFORMATION

AN 18-MONTH **RESTRUCTURING** OF THE UNIVERSITY OF ADELAIDE **BUSINESS SCHOOL** IS ENTERING ITS NEXT **IMPORTANT PHASE**.

Three world-class academics have been selected to continue the transformation and position the School at the forefront of international business education and research.

Professor Lawrence Abeln recently arrived from the US to take on the role of Dean with ultimate responsibility for driving the academic program and strengthening the School's brand and visibility.

He is well credentialed for the task after holding senior leadership positions at two of the world's leading universities – the Massachusetts Institute of Technology and Cambridge – and founding three companies.

He sees the School's ongoing restructure as a perfect opportunity to increase the visibility, positioning and reputation of its academic programs, and to build on its research profile.

“At the end of the day, we need to provide a strong foundation for our students to lead and to manage the challenges of business, government and society in the future,” he says.

“And in terms of research, we need to contribute new ideas and knowledge with applications to improve the performance of both private and public sector organisations.

“Our mission is to not only produce leaders who have an economic impact but those who can change society.”

The Business School currently has 75 staff members and about 5500 undergraduate and postgraduate students representing one-fifth of the University's total enrolments.

But Professor Lawrence says given the stiff competition in business education – there are 55 schools in Australia and 15,000 worldwide – a clear strategy and vision are essential to reinforce the University's strengths.

His intention is to work closely with the business community to ensure the School's programs and research focus are closely aligned with market needs.

And, with the School's reputation directly impacted by the success of its graduates, Professor Lawrence intends refreshing many of its degree programs and creating experiences to support professional development.

“There are 5000 undergraduates in the Business School at Adelaide, and we need to provide a strong academic foundation, an interdisciplinary experience that supports the professional development of our Bachelor of Commerce students,” he says. “We will work on providing a pathway for those interested in further study to pursue one of our postgraduate specialised degrees.”

Other changes are likely to include new expanded formats and opportunities for postgraduate study for students across the University. Also on the agenda are new short courses for the community as well as bespoke offerings for organisations.

“In terms of our PhD students, I would like to work with them to increase our placements and find ways we can greater collaborate in research with international institutions,” he says.

“It's important that we support engagement in leading research and establish metrics around publications, citations and research output. The University is measured in rankings by research and it is an important component of our reaccreditation process with the Association to Advance Collegiate Schools of Business (AACSB) International.”

Professor Lawrence also wants to encourage interdisciplinary research between the Business School and other schools in areas such as economics, law, architecture, education, sciences and engineering.

“There are research opportunities in many areas such as smart data, entrepreneurship, system thinking, and we want to create a supportive environment for our faculty and PhDs to engage in research which is relevant and which adds to our overall reputation.” ♥



“Our mission is to not only produce leaders who have an economic impact but those who can change society.”

LEFT Professor Lawrence Abeln

NEW LEADERSHIP

As part of its restructure the Business School has made three new senior appointments:

- › **Professor Lawrence Abeln**, Dean – more than 20 years of academic leadership. Previously Director of the MBA Program at MIT Sloan School of Management and the Deputy Dean of the University of Cambridge Business School.
- › **Professor Manuel Becerra**, Head of Marketing and Management – extensive leadership experience in major universities overseas, most recently at the highly ranked IE Business School in Madrid.
- › **Associate Professor Paul Coram**, Head of School of Accounting and Finance – former Deputy Head of the Department of Accounting at the University of Melbourne with a strong research focus and links with the accounting profession.

“It’s about moving away from being just a user of technology to being able to create the new technology.”

RIGHT Associate Professor Katrina Falkner



TAKING COMPUTER SKILLS TO THE CLASSES

Associate Professor Katrina Falkner had very little exposure to computing when she first stepped foot on campus in North Terrace as a young student.

In fact, she was originally considering a career in science.

“It wasn’t until I chose computer science as an elective in my first year at the University of Adelaide that I fell in love with the subject,” says Associate Professor Falkner. “It’s a very creative field in which you can combine logical thinking and problem solving, and I found it all fascinating.”

So much so that the subject became a major part of her life, leading to a successful academic career at the University and her recent appointment as new Head of Computer Science.

That’s quite an achievement in an area that tends to be the domain of men. But that’s something Associate Professor Falkner is keen to change.

“There seems to be a lot of stereotypes surrounding computer science and sometimes young women aren’t getting the best advice,” she says. “There are perceptions that it isn’t about people and that’s wrong – you can’t build a software system without talking to people and understanding what they want.”

Education is the best way of changing attitudes and has been a major passion and research focus for Associate Professor Falkner. And it’s a two-way approach – helping educators to embrace computing but also using computing to support the teaching process.

This is a key focus of the University’s Computer Science Education Research Group under Associate Professor Falkner’s leadership.

She is also project leader of a new program being run in partnership with Google to help primary school teachers introduce the concept of computational thinking to their students. These are problem-solving skills which will feature in the new national digital technologies curriculum.

“We’re going to be one of the first countries that teaches computational thinking in the first year of primary and we need to make sure teachers are comfortable with the changes,” says Associate Professor Falkner.

“It’s about moving away from being just a user of technology to being able to create the new technology. Computer science is really not that difficult – it’s all about breaking problems down into individual steps.”

Associate Professor Falkner’s other big research interest is far removed from the classroom. She works in defence trying to predict how software systems will perform before they are actually built.

This is a major focus of the University’s Defence Information Group which is working closely with Australia’s principal defence research entity, Defence Science and Technology Organisation.

“The research has significant implications for defence,” says Associate Professor Falkner. “You need to know beforehand if a complex software system is not going to be fast enough for user requirements or take up more memory than the computer has to work on. The consequences of getting it wrong can be quite significant.” ♥

EARTH THE WINNER IN TRIPLE SCHOLARSHIP

As an undergraduate student Ben Mylius was pondering his future in law when he attended a lecture on 'Earth Jurisprudence'.

It was a defining moment for the budding lawyer and provided a new focus for his academic ambition which has resulted in three major scholarships.

His awards include a John Monash Scholarship, a George Murray Scholarship from the University of Adelaide and an SA Law Foundation Fellowship together worth about \$260,000 over the next three years.

The Adelaide Law School Associate Teacher plans to study at Yale University in the US where he will use the scholarship funding to study a Master of Laws and Juris Doctor.

He wants to research the ways in which legal systems can be reframed so they protect, instead of undermine, the ecological welfare of the planet.

"Our current legal systems are too human-centred, and view human communities and their interests in isolation from the interests of the natural world," says Mr Mylius.

"There's growing consensus that law has lost its ability to see ecological issues in the larger context that is needed for solutions to be found, and tends instead to approach them in small, fragmented ways."

Mr Mylius intends using the River Murray as a case study to highlight how ecologically focused legal frameworks could have practical outcomes. He views the Murray as one of Australia's most pressing ecological challenges and his John Monash Scholarship is sponsored by the Murray Darling Basin Authority.

Winning the three scholarships is allowing him to devote even more time to the subject.

"I'm overjoyed to get that kind of support – the most exciting thing is that I can be focused fully on the study of these sorts of questions," he says.

Intractable ecological issues are also providing inspiration for Mr Mylius's other great passion – creative writing. He is Deputy Chair of the Board of the SA Writers Centre and is in the process of writing a short novel. ♥



“Our current legal systems are too human-centred, and view human communities and their interests in isolation from the interests of the natural world.”

LEFT Ben Mylius

STUDY AT ADELAIDE.
LEARN FROM THE WORLD.



seek LIGHT



THE UNIVERSITY
of ADELAIDE