

12. PRTLI 10 <sup>10</sup> years of investment

### Health and wealth in old age

UCD Geary Institute on Health, Ageing and Retirement in Europe

# **stoday**

# what's inside...



Dr Liam Delaney (pictured above) from UCD Geary Institute, talks to Shane Hickey about how policy makers will use the Survey of Health, Ageing and Retirement in Europe to plan for our futures

Claire Belcher (pictured above) from UCD School of Biology & Environmental Science, explains to Claire O'Connell how her experiments are fuelling the debate on mass extinction

Aidan Grannell (pictured above) Head of UCD Buildings & Services, tells Declan Cashin about the many projects underway to create a modern, sustainable, healthy and living campus for the future

Dr Karen Brown (pictured above) UCD School of Art History and Cultural policy shares with Deirdre Mulrooney her fascination with the interplay between Literature and the Visual Arts

### **Reputation helps rankings**

The Times Higher Education World University Rankings show continued improvement in the position of University College Dublin and place the university at 108 for 2008. This represents a climb of 69 places since 2007 and a leap of 111 places since 2006.

UCD's performance reflects an improvement in all metrics. In particular, the academic survey rank – which is based on how a university is viewed by 6,000 academics worldwide – shows increases across all five subject area categories. The compilers of the survey give the highest weighting to this measure so improvements here moved UCD well up the overall rankings.

Subject Area Rank	2008	2007
Arts & Humanities	73	104
Engineering & IT	196	243
Life Sciences & Biomedicine	175	222
Natural Sciences	238	298
Social Sciences	75	135

Of course, our improvement this year is undoubtedly a consequence of wider knowledge of our activities amongst the international community and this takes time to form. Building an international reputation is hard fought and easier lost. The funding of Irish universities has reached a crisis point that can no longer be quietly absorbed. The hope must be that the perceptions of these international peers do not worsen as a result.

It is essential that our universities now receive the level of investment required to sustain this year's improvement. Rankings, whether you like them or not, are increasingly viewed as important considerations for both top quality students and staff when choosing their university. **Eilis O'Brien** 

**Director of Communications** 

#### Cover Image

Faced with the dramatic ageing of population over the coming decades, which will impose a major financial burden on public pension and health service provision, the EU Commission and the US National Institute for Ageing, alongside other national research funding agencies, have established a pan European, multi-disciplinary investigation of the over 50s. The UCD Geary Institute has reported on the Irish section of the Survey of Health, Ageing and Retirement in Europe (SHARE) that may inform policy for future generations

CD thanks...

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In the compilation of this publication, every care has been taken to ensure accuracy. Any errors or omissions should be brought to the attention of UCD University Relations (communications@ucd.ie). We also welcome your suggestions for articles in future editions.

This publication is also available online at www.ucd.ie/ucdtoday



#### **UCD** Focus

# **Planning for health in retirement**

The Survey of Health, Ageing and Retirement in Europe (SHARE) is expected to provide data that can accurately identify the differences and similarities in the ageing process across Europe. Dr Liam Delaney talks to Shane Hickey about how policy makers could use this information to plan our futures.

The next 40 years will see a stark change in the world's, and most particularly in Europe's, demographic profile. It is expected that by 2015, the death rate will exceed the birth rate, which in turn will result in a significant ageing of the population, to such an extent that by 2050, every second person will be over 50.

While Ireland is expected to buck the trend with projections of a population increase, as opposed to the rest of the EU's expected reliance on migration, the challenges of an ageing population will have to be faced here as in other countries.

Faced with the pressures, particularly on the public pension system and health service provision, a multidisciplinary, international study of the over 50s has been launched, with the first Irish results released at the end of October.

Led by the UCD Geary Institute, the Irish section of the Survey of Health, Ageing and Retirement in Europe (SHARE), has gathered detailed information on health and well-being, the use of services, financial circumstances and social engagement which is now being analysed. Within the UCD Geary Institute, Prof Colm Harmon and Dr Liam Delaney spearheaded the study after a €250,000 grant was secured from the Irish Research Council for the Humanities and Social Sciences with the Centre for Social Gerontology at NUI Galway also taking part in the research.

According to the results, about 60% of people in their 50s rated their health as excellent or very good, which reduced to 30% for those over 80

"There is a lot of very good data in the survey and the task now is to go through it and look at elements like retirement patterns in Ireland - Why do we retire at the age we do? How does that depend on the policies that we have? What would happen if we have the same kind of policies which they have in other countries?" said Dr Delaney.

According to the results, about 60% of people in their 50s rated their health as excellent or very good, which reduced to 30% for those over 80. Arthritis, hypertension and high cholesterol were listed as the most common diseases. However, it is when the figures from Ireland are compared with those which are being gathered around the world that the full benefit can be gained, said Dr Delaney, particularly focusing on the interplay between finance, health and social networks.

> "There are hard hitting questions there like 'what do we do?' if you do find that there are hard patterns of financial distress when someone has a chronic illness, what system does that not happen in and what can we do to mimic those systems?," he said.

"People can be poor but if they have social support, a lot of European studies are showing that that can mitigate all sorts of bad outcomes."

Understanding the connections between money and health can determine what policy actions may be necessary to change a system in the future, according to Dr Delaney.

"One story is that if you are poor, you get sicker because you don't have as much access to health services, you are under stress, your diet isn't good," he said.

"Then the other story is that you end up with low income because you are sick. People who are sick generally tend to retire earlier. They can work less hours, they have to pay more in medical costs - so those types of issues are things that can be looked at, the interaction between health and wealth across your life.

"One principle that people are looking at is that when you are really young, your resources determine your health but when you start getting into your 50s and 60s your health determines your income. If you are sick you end up running down your assets, your money or you can't work.

"When you can understand those connections, you can start to understand what sort of insurance can work better and what other countries have done."

Irish figures from SHARE show there is a very strong link between arthritis and self-reported mental health problems.

Understanding the connections between money and health can determine what policy actions may be necessary to change a system in the future

"Your intuition is that one explanation is people would get arthritis and the chronic pain of being unwell makes them depressed," said Dr Delaney. "You couldn't rule out that the two of them are present at the same time."

Other issues which have been examined in the report are the retirement patterns among men and women, which are subsequently compared to other European countries.

"40% of men between 60 and 64 are active in the labour market but the interesting thing is if you look at it compared to France, it is almost 0% there because they have a mandatory pension law," said Dr Delaney.

"Sweden is almost as high as 60%. One project, which is going on, is to try and understand why it is that people retire at different ages. "We know from the initial data that health is a big factor in Ireland but what you want to do is understand all this variation - how these systems in other countries are influencing one of the key variables - the quality of the work environment, whether they find it stimulating.

"Certainly our generation is going to have to think about it. I believe that we will probably work a little later than we do now so it is trying to craft work environments where people don't actually feel so bad doing an extra year or two."

Called a "continuous research process" by Dr Delaney, SHARE will not end in one final report, which is subsequently left on a shelf. "It will definitely highlight the connections between finance, chronic illness and psychological health and put forward a lot of scientifically robust pieces of information about how these areas are linked and maybe get people thinking in a policy sense about the linkages between them," he said.

"At the most basic level, it is just seeing what other people are doing, whether it is working, whether it could happen in Ireland and the data set allows you to estimate the effects of different policies."

Shane Hickey (BA 1999) is an Irish Independent journalist.

# International rankings

The UCD School of Economics and the UCD Geary Institute are currently ranked in the top 5% of economics research institutions in the world, according to the Research Papers in Economics (RePEc) database which includes 3,917 economics institutions and 17,707 registered authors from across the globe.

RePEc ranks the UCD Geary Institute at 17 in Europe and 67 in the world. And the UCD School of Economics at 47 in Europe and 135 in the world.

Institutions like the Centre for Economic Policy Research in London, the European Central Bank, and the Bank of England, are included in the RePEc database, explains Professor Rodney Thom, Head of the UCD School of Economics. "If the comparison was based on Schools of Economics that offer a full compliment of undergraduate and postgraduate programmes, then the UCD School of Economics would sit comfortably in the RePEc European top 30 and the world top 70."

"The RePEc positioning is a significant achievement for the UCD School of Economics and the UCD Geary Institute which was established just 10 years ago under the Irish government's Programme for Research in Third-Level Institutions (PRTLI). It's encouraging to see the international profile of our economics research improving over time," says Professor Colm Harmon, Director of the UCD Geary Institute.

### **Stoday**

#### Old English and new technology

Students of Old English may soon be taking their studies online with a new e-learning package that introduces them to Modern and Old English grammar.

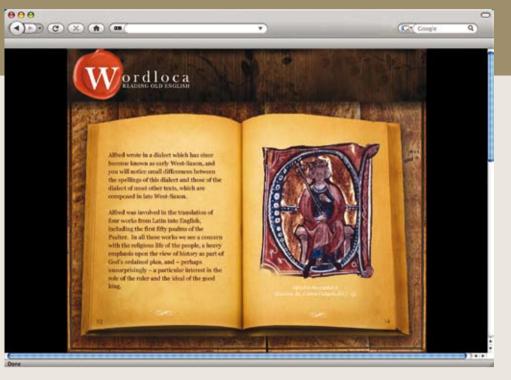
Wordloca is an online learning resource that resembles an Anglo-Saxon manuscript. As students turn the pages of the "manuscript" to work through each lesson, they encounter comprehensive grammatical explanations and an introduction to the cultural and literary context of Anglo-Saxon England. Also included are original manuscript illuminations, cartoon images and audio recordings, bringing the language to life.

Wordloca uses both ESL (English as a Second Language) and CALL (Computer Assisted

Language Learning) learning methodologies and was developed by Katie Long from UCD School of English, Drama & Film and Juliet Mullins from the Department of English, UCC.

The project, which takes its name from an Old English term that translates literally as 'a storehouse of words', received a President's Award for Teaching and Learning in 2007. In addition to this initial award, the project received further funding from NAIRTL (National Academy for Integrating Research and Teaching and Learning).

Wordloca currently being piloted in UCC and the University of Birmingham, with plans for use in UCD in the future. For further information, please visit www.wordloca.com



Wordloca provides students with an introduction to the cultural and literary context of Anglo-Saxon England alongside original manuscript illuminations. This image shows the figure of Alfred the Great, illuminated within a capital letter E

#### Hepatitis C transmission not reduced by C-sections, says new study

O'REILLY HALL

Planned cesarean sections do not help to reduce the chances of a pregnant mother with Hepatitis C (HCV) transmitting the infection to her unborn baby, according to new findings by the UCD School of Medicine and Medical Science and the National Maternity Hospital in Dublin.

Hepatitis C is the most common cause of chronic viral infection in the Western World today. It affects an estimated 170 million people worldwide. It is a viral infection of the liver which is mainly transmitted through contact with contaminated blood or blood products.

Infant infection rates are linked to the number of mothers infected with the viral infection and the risk factors associated with the transmission of the infection to their unborn children in the womb. The results of a new 5-year study of 559 mother-child pairs in Ireland, one of the largest such studies of its kind, published in the American Journal of Obstetrics & Gynaecology, show that vaginal delivery and planned cesarean among mothers infected with Hepatitis C display almost equal transmission rates of Hepatitis C from mother to child (4.2% and 3% respectively).

"The mode of delivery itself was not shown to have a significant influence on the transmission rate of hepatitis C from mother to child," says Professor Fionnuala McAuliffe from the National Maternity Hospital and the UCD School of Medicine and Medical Science, one of the co-authors of the report.

"The main risk factor associated with the vertical transmission of hepatitis C was the presence of detectable hepatitis C virus in the mother's bloodstream, a condition where viruses enter the bloodstream and hence have access to the rest of the body."

"Mothers who demonstrated detectable hepatitis C virus had a significantly higher transmission rate (7.1%) to their infants compared to the transmission rate (0%) for those in whom the hepatitis C virus was undetectable during pregnancy," explains Professor McAuliffe.

"According to these new findings, if the Hepatitis C virus is undetectable antenatally despite the mother being antibody positive the patient can be reassured that the risk of vertical transmission to their child is minimal, and this is a significant development for patient counselling."

#### 'Music of Life' at UCD Conway Festival of Research

Shown at the UCD Conway Festival of Research are (I-r): Professor Ralf Baumeister, University of Freiburg; Professor Denis Noble CBE, University of Oxford, Professor Nicholas Turner, Manchester University at the 8th annual UCD Conway Festival of Research The 8th annual UCD Conway Institute Festival of Research was held O'Reilly Hall in September.

As one of its key speakers, the Festival welcomed renowned scientist, Professor Denis Noble CBE, who spoke about his book, *The Music of Life: Biology beyond the Genome*.

Author of the first popular book on the new scientific discipline of systems biology, Professor Noble uses the analogy of music to explain his thinking. Like music, biological systems are much more than simply the sum of the molecules or 'notes' that are part of their structure.

Since scientists have discovered how to sequence the human genome, there has been immense excitement about the possibilities arising from understanding human biology at the molecular level. By identifying the genes responsible for a variety of illnesses or conditions, scientists believe that they will be able to develop new targeted drug therapies.

This potential holds enormous promise for the healthcare industry in particular. But progress on this has been far slower than first imagined. Denis Noble sees this as a result of a nearly too-intense focus on science at the molecular level.

Noble told delegates, "We now have a very good understanding of many biological molecules - how they're made and what they do. But we have been less successful in seeing how these molecules interact together in processes that govern entire living systems. It is time to take the approach of integration rather than reduction. We need to scale up rather than down."

This approach underpins systems biology, an area where UCD and the UCD Conway Institute are working to establish critical mass in Ireland. Professor Noble can rightly be regarded as the pioneer of this scientific thinking, which involves using mathematical and computational methods to help understand enormously complex biological systems.

In addition to Dr Noble's address, plenary lectures were also given by Professor Nicholas Turner of the Manchester Interdisciplinary Biocentre, and molecular geneticist Professor Ralf Baumeister of Freiburg University.

Postdoctoral researcher Lydia Lynch from the obesity research group in the Education and Research Centre, St. Vincent's University Hospital won the 2008 UCD Conway research medal, sponsored by Roche. Her abstract, entitled "The policeman of the abdomen no longer undercover: the humun omentum reveals itself as a unique immune organ, which is compromised in obesity", was shortlisted from over 160 submitted for the conference, which aimed to highlight the research being conducted within the Institute.



#### UCD architect co-curates Ireland's exhibit at Architecture Biennale

Professor Hugh Campbell, UCD School of Architecture, Landscape and Civil Engineering, co-curated and commissioned Ireland's exhibition at the 11th International Architecture Biennale in Venice this year. The Biennale is the most prestigious international showcase for architectural design, theory and research.

Produced in collaboration with Nathalie Weadick, Director of the Irish Architecture Foundation, and supported by Culture Ireland, the Arts Council and the RIAI, the Irish exhibition, entitled *The Lives of Spaces* occupied the first floor of the Palazzo Giustinian-Lolin, on the Grand Canal in Venice.

The scale, character and decoration of its typically Venetian rooms provided a setting which amplified the exhibition's theme. Primarily using film and moving image, the nine pieces in *The Lives of Spaces* explored the central role of space in our society, how it frames and structures the patterns and practices of our collective life, from domestic to civic, from personal to public.

Among the exhibitors were a number of architects who contribute to UCD's Architecture programme. Gerry Cahill showed a film about his sheltered housing project on Cork Street. Shelley MacNamara of Grafton Architects exhibited two recently completed buildings an office building on Merrion Row, and The Bocconi University building in Milan. Simon Walker contributed a film on Bothar Bui, the summer house designed by his father Robin Walker. Tom de Paor exhibited an installation based on a current project for the Picture Palace in Galway. The Gaeluras building in Derry was the subject of an animated model produced by O'Donnell and Tuomey. John Tuomey took his position as UCD's inaugural Professor of Architectural Design in September.

Visit www.thelivesofspaces.com for more information.

#### **Towards Zero Energy Building**

On 22 October, the 25th Passive and Low Energy Architecture (PLEA) conference was opened at UCD.

Against a timely backdrop of national moves towards zero carbon and zero energy building, the conference was brought to the university by the UCD Energy Research Group in UCD School of Architecture, Landscape and Civil Engineering. Over 400 experts from 47 countries came together to consider topics under the theme of *"Towards Zero Energy Building"* in one of the largest ever gatherings of its type.

Architects, engineers, planners, scientists, academics and policy makers dealt with topics ranging from Low Energy Communities and Neighborhoods and Passive Solar and Daylight Design through to Water and Waste and The Role of Education. Delegates also learned of new technologies in areas such as heat-recovery from waste hot water and passive houses that could use up to 75% less energy than current low-energy homes.

Keynote addresses came from Greek architect Alex Tombazis, who spoke about natural lighting provided to the Church of the Most Holy Trinity in Fatima, and Professor Alison Kwok, from University of Oregon.

Passive and Low Energy Architecture (PLEA) is a global community engaged in a continuing discourse on sustainable architecture and urban design. It actively exchanges ideas and information through annual international conferences, workshops and publications. Since 1982, PLEA has organised international conferences across the globe and now represents the longest running such forum addressing passive and low energy building design and realisation.

#### Green City Guidelines provide advice for urban planners

With increasing awareness of how human activity affects the natural environment, we must rethink how we provide our housing, transport and sanitation, according to new advice guidelines launched by the Minister for the Environment, Heritage & Local Government, Mr John Gormley at UCD in September.

The new 'Green City Guidelines' provide easy-access and practical ways that local authorities, planners and property developers, can protect and enhance biodiversity while developing medium to high-density urban schemes.

The idea is to in effect give nature a voice in the planning of our urban areas, by raising the awareness of the value of biodiversity within urban developments. The amenity and recreational benefits of natural environments are obvious, but these environments also support our basic requirements of clean water, fresh air and food supply. The well balanced and functioning natural environment of the 'Greener City' also offers a more attractive place for people in which to live and work - the restorative and psychological benefits of nature have long been acknowledged.

Cities and urban areas are often located where biodiversity resources are concentrated - on rivers, hilltops, and along the coast. In many cases the environment has been so heavily altered that its ability to support the original diversity of life located there is severely diminished.

Biodiversity features include: trees and woodland, hedgerows and shrubs, grasslands, watercourses and ponds. These guidelines review key stages in the planning system, existing guidelines on biodiversity integration and examine case studies from a selection of urban areas in Dun Laoghaire-Rathdown County Council and Fingal County Council. "Ultimately we would hope that every planner and property developer in Ireland is encouraged to consider ways that they might incorporate biodiversity management into developments and as a result help to improve the quality of urban life," says Frank Convery, Heritage Trust Professor of Environmental Policy at UCD and Director of the UCD Urban Institute, the leader of this project.

"Although Ireland has made a number of commitments to reduce biodiversity loss, it is often difficult to provide practical examples of how this might be done in the urban setting," says Larry Stapleton, Director, EPA Office of Environmental Assessment.

"The Guidelines draw on international research and examples from Irish urban areas to demonstrate good practice in the planning and design of urban residential development so that biodiversity loss can be protected and where possible enhanced accordingly as areas mature."

To develop the new advice guidelines the report examined the leading international standards and investigated a range of development sites within the administrative boundaries of Dun Laoghaire-Rathdown County Council and Fingal County Council.

The Green City Guidelines project, is part of a wider Urban Environment Project (www.uep.ie) project involving NUI Maynooth, TCD and ERA-Maptec Ltd., and it is funded by the EPA under the National Development Plan. The Steering Group acknowledge the work of Natura Environmental Consultants who were commissioned to produce the report on which the Guidelines are based.

Shown here at the launch of the Green City Guidelines with Minister for the Environment, Heritage & Local Government, Mr John Gormley (centre) are Dr Brendan Williams, Deputy Director Urban Environment Project (left); and Professor Frank Convery, Director of the UCD Urban Institute Ireland (right)

#### News

### UCD Foundation Day Medal for leading innovator and entrepreneur

Distinguished UCD Alumnus, Dr Pearse Lyons, founder and president of Alltech, was awarded the UCD Foundation Day Medal in recognition of his outstanding contribution to science and industry.

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"Pearse Lyons is a scientist, innovator and entrepreneur. Long before the term became fashionable, he was engaged in forging the knowledge economy," said Dr Hugh Brady, President of UCD, presenting the award.

Alltech is a global animal health company that employs more than 1,900 people and has a presence in 113 countries around the world.

"I am honoured to accept this prestigious award from a university that I have had a long standing relationship with. Since graduating in biochemistry from University College Dublin, I have continued to work closely with the university through Alltech and our numerous collaborative initiatives such as the Mini MBA and student internship programmes. I applaud UCD's outstanding academics who nurtured my passion for science and are continuing to inspire today's young minds," said Dr Lyons.

The first Alltech-UCD-University of Kentucky lecture and awards ceremony was held at UCD in September. The keynote speaker for the event, which was attended by over 250 people, was Dr Charles D Smith from the Alzheimer's Disease Centre and the Sanders-Brown Centre of Aging, University of Kentucky.



# Scientists inhibit cancer cells from spreading, new research shows

The results of new international research published in the latest edition of PNAS (the official journal of the United States National Academy of Sciences) show that cancer cells can be prevented from metastasising in models of the disease. Through further investigations, scientific researchers will analyse whether these models are transferable to humans, and if so they could provide new potential therapeutic avenues for the disease.

What makes cancer cells so lethal is their ability to metastasise, or spread, beyond the initial tumour site to almost any other part of the body. Often, when a patient is diagnosed with cancer, it is found away from the initial primary tumour. Once a cancer has metastasised it usually indicates a later stage of the disease with poor treatment outcomes. Metastasis is responsible for 90% of deaths in patients with solid cancer tumours.

The team of EU and US scientists who conducted the research were able to inhibit the spread of cancer cells by using a specific series of miRNAs – small non-coded strands of RNA (ribonucleic acid).

"We treated three representative human cancer cell lines established from lymph node metastasis from colon, melanoma, and head and neck. When we reintroduced relevant miRNAs, tumour growth was reduced and the progression of metastasis was halted," says Professor Liam Gallagher from the UCD Conway Institute, one of the co-authors of the report.

"By understanding the role of miRNAs in gene expression, we were able to disrupt the processes of metastasis," explains Professor Gallagher. "Metastasis is the result of sequential, interrelated steps whereby primary tumour cells are able to invade the adjacent tissue, enter the systematic system circulation, translocate through the vasculature, arrest in distant capillaries and finally lead to secondary tumours."

According to Professor Gallagher, once scientists can influence which genes are 'expressed' or 'switched on,' there are better opportunities to target the specific cells in any therapeutic situation.

The research, led by Dr Manel Esteller from the Catalan Institute of Oncology, was part funded through the Health Research Board, EMBO and an IRCSET PhD studentship grant.

# Lecture to mark 150th anniversary of Newman's resignation

John Henry Newman resigned, finally and formally, as Rector of the Catholic University of Ireland on November 12, 1858.

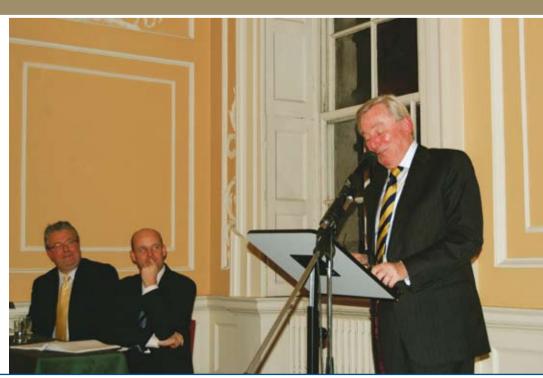
To mark the 150th anniversary of this event, on November 12th, 2008, Dr Pádraic Conway, Director of the UCD International Centre for Newman Studies, delivered a lecture "When Ideas Fail?" to a packed audience in Room 5 of Newman House. Newman House was the location where Newman opened the doors of the Catholic University on November 3, 1854, an event itself commemorated in the UCD150 celebrations of 2004-05.

In the course of his lecture, Dr Conway sketched the circumstances of Newman's actual resignation, its roots in his relationship with the Irish hierarchy of the time – and with the internal struggles within that body, particularly between Archbishops Cullen and McHale. He considered the question of how the current UCD relates to Newman's university, steering a middle ground between the view that there is no relationship (because UCD as we know it started in 1908) and the very strong sense of continuity espoused by earlier UCD figures such as former President Michael Tierney.

He concluded with some reflections on the recent exhumation of Newman's remains and how both this fact and Newman's own writings on the theme can help us hold together the ideas of continuity and change.

Professor Maurice Manning, President of the Irish Human Rights Commission, responded to the lecture and the event was chaired by UCD Deputy President Dr Philip Nolan.





#### **UCD** Focus

### Fuelling the debate on mass extinction

Every researcher needs to get fired up about their work. Dr Claire Belcher, UCD School of Biology & Environmental Science, explains to Claire O'Connell how her experiments are more igniting than most.

Her investigations of wildfires around times of mass extinction in the earth's history have challenged previous assumptions about the planet at critical times when extraordinary numbers of species were wiped off the record.

Most recently, Dr Belcher's discoveries have somewhat snuffed the notion that oxygen levels in the air plummeted to around 12 per cent (compared to the present 21 per cent) during a mass extinction 200 million years ago.

How did she work that out? It's thanks to the fossil record, where the presence of charcoal indicates that plant material had burned.

"To have a fire you need a sufficient amount of oxygen in the atmosphere. Charcoal itself is formed in low oxygen but this is because a fire burns once it has enough oxygen and it eliminates oxygen in its base, which then causes it to form the charcoal.

So we can use charcoal in the fossil record as a proxy for wildfires," she explains.

The Marie Curie post-doctoral fellow has been looking at charcoal in rocks from Greenland that date from the Triassic-Jurassic (T-J) boundary 200 million years ago, when a mass extinction event saw enormous biodiversity loss of 50 per cent in marine invertebrate species and 95 per cent for terrestrial plant species in Northern Europe. Meanwhile 42 per cent of terrestrial vertebrate families in North America died out.

#### I'm looking at the charcoal to help identify periods when there was low oxygen

Previous work by UCD's Dr Jennifer McElwain - who collected the Greenland material when she was based at The Field Museum in Chicago - shows a global rise in temperature and carbon dioxide over that period, and Dr Belcher's work builds on that picture.

"I'm looking at the charcoal to help identify periods when there was low oxygen," explains Dr Belcher, describing how a drop in atmospheric oxygen levels has been put forward as a possible theory in the T-J mass extinction.

As part of her experiments, she has been trying to burn material at different levels of atmospheric oxygen in room-sized chambers where she can tightly control conditions.

Getting pine needles and moss to burn without using matches or an accelerant was tougher than she expected, and her work suggests that for lightning to spark wildfires around the T-J mass extinction, oxygen would have had to be more plentiful than previously assumed.

"Previous work has put the lower limit for combustion at about 12 or 13 per cent, those are the figures out there. But we have revised this based on what we feel are more realistic situations for burning to being closer to 15 per cent, or perhaps even higher, 17 per cent to get frequently occurring fires," says Dr Belcher, whose work was published in Science earlier this year.

Of course even a drop in oxygen to 15-17 per cent would still be a problem, notes Dr Belcher. "I had to wear breathing apparatus under 18 per cent oxygen," she says. "Some animals, particularly reptiles and amphibians fare particularly badly in lower oxygen environments, especially when it's so warm. So even a slight drop in oxygen from our present day ambient level would cause quite a lot of problems for many animals."

Dr Belcher also explains that so far her approach has sampled periods in the fossil record that are relatively far apart, so she doesn't rule out that oxygen may have dipped further over shorter time-scales. That's why she is currently looking at charcoal traces at closer time points in the Greenland record to see if gaps could pinpoint times when fires became scarcer.

Dr Belcher's work forms part of a multipronged approach, with UCD colleagues looking at carbon dioxide levels, pollen and changes in leaf fossils over the T-J boundary, as well as experiments to test how ancient plant species that still exist today respond to environmental stress. Ultimately they hope that knowing more about a global catastrophe of old can inform current strategies to mitigate the effects of global warming.

"We are looking at the boundary to see how the vegetation coped with that global warming, and to see how we may be able to mediate against this and ecosystems changing in the world today," says Dr Belcher.

Even a slight drop in oxygen from our present day ambient level would cause quite a lot of problems for many animals

And while her recent data have shaken up previous notions about oxygen, it's not the first time that Belcher has used fire to shed new light on old thinking about mass extinction.

Her doctoral thesis at Royal Holloway University of London took the heat out of theories that the "dinosaur killer" asteroid 65 million years ago sparked global wildfires. She looked at fire evidence in the fossil record across the US and Canada, sampling rocks at points moving away from the crater in Mexico where the asteroid hit.

"Previously people thought that there were global wildfires but I actually found less fire at the boundary than after, so it suggested that that thermal radiation wasn't powerful enough to ignite wildfires," she says. "And previous estimates for ground temperatures were 800 to 1000 degrees Centigrade, but my work revised that to about 325 to 545 degrees at the very most. Which is still plenty hot enough."

"It's interesting trying to unravel the things that have led to evolution and extinction of life and better understanding the earth's system," she says. "Fire is generally not something people pay much attention to, but it has much more feedback to the earth's system than most people realise. It releases toxins and carbon dioxide and it denudes landscape, and all those things cause more effects than people realise. So I want to look at fire's effects on biogeochemical cycling, which hopefully people will then be able to build into models of atmospheric oxygen and carbon dioxide to improve them."

Claire O'Connell (BSc 1992, PhD 1998) is a freelance journalist.



#### **UCD** Focus



### It's a living campus and you're all invited

Aidan Grannell, Head of UCD Buildings & Services tells Declan Cashin about the many projects underway to safeguard a modern, sustainable, healthy and living campus for the future.

'Change' has become the great rallying cry of the modern era, and nowhere does it reverberate more right now than in University College Dublin. Over the next 10 years, the university campus will continue its great leap into the future, underpinned by a confident, innovative development plan that will physically and culturally transform UCD into a truly 21st century entity.

The current campus development plan, drafted in 2005, is subtitled "Sustainable, Healthy and Living Campus", and it clearly lays out an exciting vision, not just academically and environmentally, but also in terms of engaging with the surrounding community and greatly enhancing the extra-curricular attractions of the Belfield campus.

The flagship project is the Gateway at the Belfield entrance off the N11. This new complex will comprise buildings covering almost 100,000 square metres, and incorporate student accommodation, a conference hotel and spa, a medical centre, exhibition space, an art-house cinema, a supermarket, a crèche, and the John Hume Institute for Global Irish Studies.

According to Aidan Grannell, Head of UCD Buildings and Services, the Gateway will be a pioneering eco-sustainable structure in terms of its building design and energy performance. "The energy plan is taking into account all the phenomenal resources out there with an eye towards creating an 'intelligent' building – one that is able to respond in terms of effective and efficient lighting, heating and ventilation," says Grannell.

"Wind turbines are being considered for the roof of the building to generate energy," he explains. "Two mega-watts of electricity are currently co-generated on the campus by burning gas at the energy centre, and cogeneration of heat and electricity will also be a feature of the Gateway. Depending on research and suitability, geo-thermal heating for the building is also being considered."

The plan is to protect the landscape of the college forever more, making it a timeless resource

The Gateway, however, will not just be an architectural and educational boon for the college. It also brings with it an extensive, long term strategy to preserve and protect, and indeed, enhance the environmental beauty of the campus. The design places an emphasis on linking up the campus by creating open green spaces – a belt-walk – featuring distinctive wooded walk-ways, and pedestrian and cycling paths in and around UCD.

Great care has gone into the landscaping plans, and, indeed, preparations have already been made to relocate trees from one part of the campus to another. "When the planning for the Gateway started nearly five years ago, the trees in the area were identified for relocation," says Grannell. "The plan is to protect the landscape of the college forever more, making it a timeless resource. The landscape is an academic resource that's used for teaching purposes. Some of the species of trees found here are not found anywhere else in Ireland."

So how exactly does one move a tree? "By excavating around the base of the root, a root ball can be formed," he explains. "This in effect creates a pot around the root, and plastic sheeting can be inserted around it, with plenty of aeration and water control."

"When it comes time to move the tree, a large machine-operated spade is used to grab the root and lift up the tree, moving it to its designated location. It's done tree by tree, and they are being transplanted to create the belt-walk and strategic wooded walking areas."

There are 30,000 people using this campus so it's the equivalent of a small Irish town in terms of activity

Another essential facet of the campus' sustainable development plan is transportation – namely, building on the public bus access to the college, and hence reducing the future reliance on cars. Furthermore, as Grannell points out, the expanding campus can only be sustainable as an educational and cultural resource if students and members of the public have easy access to it.

"There are 30,000 people using this campus so it's the equivalent of a small Irish town in terms of activity," he says. "It's essential to open up the wider city area."

"We've been championing for orbital bus routes to combine that because the South Dublin area is undeserved and it is a residential area for a significant number of students who want to come to UCD."

There are also exciting plans for the main existing bus route to the campus. "The Quality Bus Corridor [QBC] on the N11 is a critical resource to UCD from a sustainability point of view," Grannell explains. "It's become a national strategic resource as it out to Bray, and it actually carries the same level of traffic as the Luas."

"It even has the potential to eventually become what's known as a Bus Rapid Transit system, comprised of low-energy buses that run on magnetic strips that are articulated in such a way that they don't require any change to the existing road network and junctions. They exist in many cities on the continent."

Aidan Grannell and his team in UCD Buildings & Services are working to create the modern, sustainable, healthy and living UCD campus



Future research and development also promises good things in terms of waste management, Grannell states. "The waste management market in Ireland has improved significantly, so with each new contract comes new cleaning and waste opportunities," he says.

"Right now, there's a strong interest in integrating the cleaning operation more deeply with the waste management. But already 82% of our waste is recycled, and a significant proportion of that is actually changed into fuel pellets, shipped across the Irish sea, and is sold for use in a district heating system in England."

#### If it feels like home, people visiting the campus will treat it as they would their own front garden

The ultimate aim of all of these projects is to create a campus that is not only sustainable and healthy, but one that is living and, more importantly, lived in. "In the US, for example, most students go to college hundreds, thousands of miles away from home, so they live on the campus," Grannell explains.

"That's one of the great successes of American university campuses: students live there 24/7. The aim is to make the UCD campus a 24/7 campus for our students, staff and the wider community. If it feels like home, people visiting the campus will treat it as they would their own front garden."

Declan Cashin (MA European Studies, Dublin European Institute, UCD '04) works as a freelance journalist, writer and sub-editor and is based in Dublin.



#### Dublin Chemistry - Ireland's First Collaborative Graduate Programme

A pioneering collaborative graduate programme in chemistry between the schools of chemistry at University College Dublin (UCD) and Trinity College Dublin (TCD) was launched in September by Chief Scientific Adviser, Professor Patrick Cunningham.

The new programme, Dublin Chemistry incorporates over 40 research group leaders and 180 postgraduate research students, providing enough critical mass for the programme to compete with leading universities in the US and Europe.

"Organised coursework from a range of specialists has become essential together with experience across different institutions and cultures. All of which requires organisation, planning and cooperation beyond what has been the norm," said Professor Cunningham. He welcomed the initiative of UCD and TCD in launching Dublin Chemistry not only for the new strength that it would give to Irish science, but also for the model it provided for other disciplines. "Our focus needs to be on higher value development activity which can only be delivered through well trained competent people. It is critical that Ireland focuses on developing the talent capable of delivering on this and we need to do this quickly as we run the risk of being left behind by other areas such as Singapore. The Dublin Chemistry Graduate programme is an excellent example of the type of initiative we should be adopting in this area," said Dr Paul Duffy, Vice President of Pfizer Ireland who attended the official announcement event.

Dublin Chemistry will strengthen the research excellence of its PhD chemistry students by providing a structured educational programme designed to enhance the research experience, according to the Directors of Dublin Chemistry, Professor John Kelly (TCD) and Professor Michael McGlinchey (UCD). It will also generate highly skilled graduates who will fuel the economy based on emerging technologies.

# History and Philosophy of Science at UCD

An interdisciplinary group of academics from UCD are currently involved in an initiative to establish the subject of History and Philosophy of Science at UCD. Coming from the natural sciences, the social sciences and the humanities, the group aims to explore some of the assumptions, foundations, and implications of scientific scholarship.

A weekly lecture series has commenced, and has included contributions from four of the UCD Colleges - with speakers ranging from the UCD School of Sociology through to the UCD School of Electrical, Electronic and Mechanical Engineering. External perspectives were offered from Professor Daniel Burston of the Psychology Department of Duquesne University, Pittsburgh, who spoke about, *"The chemical colonization of childhood"*. A website has also been created, at http://hps.ucd.ie/

History and Philosophy of Science seeks to understand the nature of science and its standing in the context to other types of knowledge (e.g. religious belief). The area is a popular subject in other countries and many major American and UK universities have departments or programmes in this field. Currently, no university in Ireland offers a degree in this subject. Where the subject is long-established in an institution, the area tends to be called, "History and Philosophy of Science" while newer departments and programmes tend to be called, "Science Studies" or "Science and Technology Studies" in recognition of the fact that disciplines other than history and philosophy (e.g. sociology and anthropology) are contributing to the understanding of science.

The group is also exploring the opportunities for a taught MA in History and Philosophy of Science, which, if realised, would be the only one of its kind on the island of Ireland. For more information on the initiative, contact Dr Adrian Brock in the UCD School of Psychology.

#### Opportunities and Challenges 4th Level Education

TIUA

### Major upgrade of Newman Building teaching technology

The teaching technology in all seven lecture theatres in the UCD Newman Building has recently been completely overhauled as part of works to refresh these busy teaching facilities.

Each theatre now has an upgraded teaching station that provides standardised, reliable teaching technology to support the hundreds of lectures and seminars that take place in the rooms annually.

After a competitive EU tender, the work was co-funded by each of the five UCD Colleges

according to their use of the theatres. Ms Aishling Kennedy, Facilities Manager for UCD Buildings & Services delivered the project with UCD IT Services.

Speaking about the upgrades, Ms Clíona De Bhaldraithe Marsh, Chair of the UCD Newman Building Renovation Committee said, "These new technologies offer huge benefits for teaching staff and their students, and they open up great opportunities in the use of new media."



The new teaching technology in Theatre P in the UCD Newman Building will have far-reaching benefits for staff and students

#### IRISH UNIVERSITIES' PhD Graduates' Skills



The "Irish Universities' PhD Graduates' Skills' document describes the desired learning outcomes and skills that PhD students may develop during their studies

*Skills*' This skills statement, a key output of the IUA strategic innovation fund 4th level Ireland project, describes the desired learning outcomes and skills that PhD students may develop during their studies. This will inform the development of more structured support for PhD students during their studies.

The first session included presentations from Professor Frances Ruane, Director of the Economic and Social Research Centre (ESRI) who provided an economic and social background to the topic of the conference. International perspectives were provided by speakers from France, Germany, U.K. Finland, Malaysia and the U.S. Other speakers from Ireland included the industry perspective from Paul Rellis, Managing director of Microsoft Ireland and Chair of the American Chamber of Commerce in Ireland, the funding agency perspective from Professor Frank Gannon, Director General of Science Foundation and Dr Eucharia Meehan of the HEA.

Professor Michael P Ryan, UCD Dean of Graduate Studies and Postdoctoral Training gave an overview of developments in PhD programmes in Irish Universities. The developments included the Dublin Region higher Education Alliance (DRHEA) in Graduate Studies and the Dublin Chemistry Programme. Professor Dolores Cahill, Chair of the Science Advisory Council Research Careers Task Force outlined the findings in their recently published report. The conference concluded with a feed back session from the six interactive workshops and concluding remarks from Martin Hynes Executive Director of the Irish Research Council for Science, Engineering and Technology.

UCD hosted the 6th Annual Irish Universities Quality Board (IUQB) conference in October. Delegates debated the theme of 'Opportunities and Challenges in Developing 4th Level education'.

The theme was chosen because of the intense interest in this area during a period of significant challenge for and ongoing reform of Irish higher education. IUQB, the IUA and the Universities are conscious of the challenges that exist in relation to the target outlined in the Government's Strategy for Science Technology and Innovation (SSTI) of doubling the number of PhD graduates while aiming to maintain and improve the quality of PhD education in our institutions.

The President of UCD and Chair of the IUA, Dr Hugh Brady opened the conference and also launched the document entitled 'Irish Universities' PhD Graduates'



# Food science publication and awards

The ability to trace and authenticate a food product is a major concern to the food industry, as consumers increasingly demand reassurance of the origin and content of the foods they are eating. On the other hand, the rising requirements for foods to align with religious, health, taste or moral preferences necessitates food manufacturers to ensure that they can confirm the authenticity of components such as meats, fish and plant material. In the meantime, foods must comply with legislation and be free from contamination. For these reasons, the food industry has been pushing for modern techniques to confirm food product authenticity. In order to reflect these demands and market needs, a new 720-page book edited by Professor Da-Wen Sun of UCD School of Agricultural, Food Science and Veterinary Medicine entitled "Modern Techniques for Food Authentication" has recently been published by Academic Press / Elsevier.

"Protection of the rights of consumers, genuine food processors, and prevention of fraudulent or deceptive practices and the adulteration of food is an important and challenge facing the food industry. As a result, rapid scientific and technological advances in the determination of food authenticity have taken place in recent years, and this new title focuses on many of these novel techniques and offers expert insights into the most current techniques help identify the most appropriate authentication option based on specific situation., said Professor Sun, the editor of the book.

'Modern Techniques for Food Authentication' provides an international resource on the latest developments in techniques available for food authentication, including various spectroscopic technologies, methods based on isotopic analysis and chromatography, DNA, enzymatic analysis, electrophoresis and thermal methods. The publication will provide engineers and technologists working in research, development and operations in the food industry with critical and readily accessible information on the art and science of food authentication technology. It should also serve as an in-depth complement to more general books on food safety to undergraduate and postgraduate students and researchers in universities and research institutions.

UCD research in agricultural engineering was highly recognised with the top two awards at the 2nd CIGR (International Commission of Agricultural Engineering) International Conference on Agricultural Engineering held recently in Igassu Falls City, Brazil.

Professor Da-Wen Sun received the CIGR Recognition Award in recognition of his achievements as top one percent of Agricultural Engineering scientists around the world according to the ISI Essential Science Indicators (ESI) database.

PhD Student Patrick Jackman, also from UCD School of Agriculture, Food Science and Veterinary Medicine, received the CIGR Armand BLANC Prize for his paper entitled "Prediction of Beef Palatability from Digital Image Features".

#### Quickening the Earth: Soil Minding and Mending in Ireland

A new book, documenting how our ancestors maintained and restored soil fertility has been published by Dr James F Collins, retired UCD Soil Science lecturer.

In the book, which was launched by Minister for Communications, Energy and Natural Resources, Mr Eamon Ryan TD in November, Dr Collins looks at how our forebears used all available natural materials, both mineral and organic.

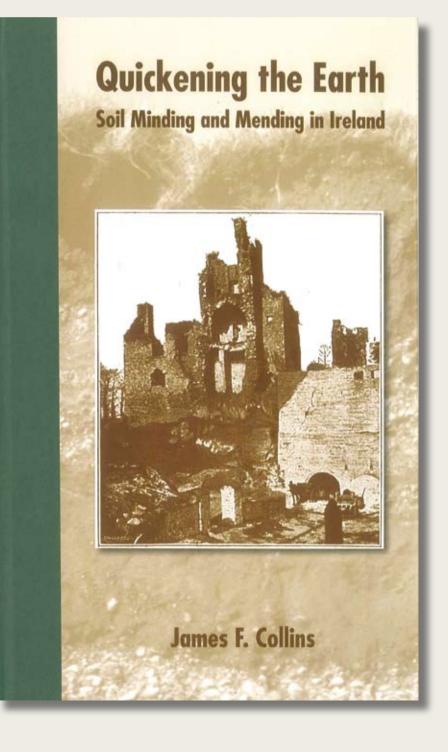
The story ranges from the use of corals and clays to gravels and sands and from dung and composts and to sods and seaweed. While liming activities dominated - burnt lime later switching to pounded – all treatments were aimed at protecting and enhancing soil nutrient reserves and boosting land productivity.

The traditions are recounted in the words of pamphleteers, essayists, journalists, scientists, teachers, visitors - all those who documented

the progression in knowledge about how to manage a limited reserve of soil. At times, it is a story of contrasts: of greed and generosity, of ignorance and innovation, of hope and despair, but mostly of triumph over adversity.

This is a well-referenced account of agricultural history at the interface between the earth sciences, the husbandries and the economic and social sciences. It shows that Irish agriculturalists kept themselves up-to-date with what was happening in Britain and on the continent, and it rescues from obscurity many who worked for the betterment of mankind. Aided by illustrations, it should appeal to everyone interested in the rural environment, in the past and in the future.

The book is dedicated to the late Professor William Brickley and is available from the UCD School of Biological and Environmental Science.



#### Role of the State in social equality

Mr Brian Lenihan TD, the Minister for Finance was at UCD in October to chair the inaugural lectures of Professor Brian Nolan and Professor Tony Fahey from the UCD School of Applied Social Science.

In their lectures, Professor Nolan and Professor Fahey considered the interplay between social (in)equality and policy.

Professor Nolan considered the current and historical Irish experience of economic inequality and its implications for social cohesion and economic performance.

In his lecture, *Inequality and Public Policy* he asked, "Is Ireland locked into a relatively high level of inequality by institutional legacies and choices made in the past?" He suggested that while some modest reductions are possible within the framework of Ireland's current socio-economic model, that: "Achieving a level of income inequality much below the (EU or OECD) average, much less one close to the levels of the best performers, would require such a significant enhancement in the Irish Welfare State, and its corollary of substantially higher taxation, as to represent a radical departure from our current socio-economic model."

Professor Tony Fahey, Head of UCD School of Applied Social Science, looked at the European perspective in his lecture entitled *The Welfare State, National Identity and European Integration.* 

Professor Fahey asked if the feature of "national boundedness" in the welfare state is good or bad, either in itself or in its implications for European integration. He considered the question of identity and integration in the context of a multi-state union, and dealt with the historical significance, and legacies of this fragmentation.

In his conclusion, Professor Fahey presented two perspectives on the question and suggested that: "Europe's welfare states looked at from a European point of view raise questions that are easy to miss when looking through national eyes but that may become more difficult to avoid in the years ahead."



### A Decade of PRTLI at UCD -The Power of Leveraged Philanthropy

Ten years of the Programme for Research in Third Level Institutions (PRTLI) investment has not just made a difference to the Belfield campus; it has enabled UCD academics to make a difference to the world in which we live. Steps towards new therapies for fighting disease, tackling issues relating to world poverty, growing bacteria to covert polystyrene into biodegradable plastic, generating green city guidelines, advising policy on health, ageing and retirement, and capturing the historical significance of the Good Friday Agreement are just some of the outputs at UCD made possible through dedicated investment in research over the past ten years.

A total of €164 million from public, private and matching funds has been committed to UCD through the PRTLI. €99 million of this was invested in dedicated research buildings (15,000 square meters) and equipment on the Belfield campus.

Among the major capital projects funded by PRTLI are the UCD Conway Institute for Biomolecular and Biomedical Research; the UCD Geary Institute, which looks at public policy impact across economic, political, epidemiological and social issues; UCD Urban Institute Ireland, which carries out research in the areas of environment, transport and energy; the UCD Humanities Institute of Ireland which concentrates on culture and identity issues; and the UCD Centre for Synthesis & Chemical Biology. In addition, UCD is a lead partner in Molecular Medicine Ireland, along with TCD, RCSI and now UCC and NUIG.

It will be the quality of our graduates and our ability as a society to generate, absorb and harness new knowledge that will determine whether Ireland succeeds or fails in the years ahead

More recently, PRTLI funding has been awarded to the development of the UCD Science Centre South which will become the home of the Centre for BioNanoInteractions and the UCD Institute of Food and Health. Also funded through Cycle IV, the UCD John Hume Institute for Global Irish Studies, has been founded to engage and connect with this diverse global community.

Most projects funded by PRTLI are collaborative and aim to create a critical mass of expertise and resource for Ireland. The Irish Virtual Research Library and Archive for example, will form part of the national Digital Humanities Observatory which will preserve and present university digitised collections in an accessible format for researchers and the general public.

Building on the educational benefits that emerge from strong research, PRTLI represents a significant platform for the creation of "4th level Ireland" which is designed to provide the knowledge leaders and underpin a climate



Aerial view of the UCD Belfield campus. PRTLI investment has contributed some 15,000 square meters of research facilities. Photograph Irish Independent

of innovation for Ireland's further economic growth. In this context, PRTLI reflects Government policy and specifically supports quality graduate education. UCD trains 30% of all PhD students in the Irish university sector. The university currently has over 1,600 and is well on the way to doubling PhD numbers from 2003 levels by 2013. Without investments such as PRTLI, Irish universities could not provide facilities for graduate education and postdoctoral training.

"It will be the quality of our graduates and our ability as a society to generate, absorb and harness new knowledge that will determine whether Ireland succeeds or fails in the years ahead," the President of UCD, Dr Hugh Brady said. "We recognise that the Irish universities must compete and win on the world stage if Ireland is to sustain its competitive edge. And we fully recognise that UCD must be central to this effort and must play smarter and more successfully than ever before, to do so."

High calibre students and staff will gravitate towards centres of excellence and discovery and we are beginning to see the benefits of this long-term investment policy. "If you ask any student at any level whether they would like to learn from those who have read the books or those who have written them, your answer will be unanimous. Better research feeds directly into a better learning experience for all students."

Acknowledging the support of both Government and private bodies, Dr Brady paid special tribute to Atlantic Philanthropies. "When the history of Irish higher education at the turn of the millennium is written, the name of Chuck Feeney will hold an honourable place. It would be difficult to exaggerate how bleak the Irish research landscape looked when I returned from the USA in 1996. A decade later, it has been totally transformed, thanks in large part to the catalytic initiative shown by Atlantic Philanthropies in relation to the PRTLI. Atlantic's contribution to UCD is evidenced in the research institutes, along with many other capital and academic developments across the campus."

#### Transformations -Programme for Research in Third Level Institutions

Regarded as one of the most important building blocks for Irish research over the past decade and funded by the Department of Education & Science through the Higher Education Authority alongside private and matching funds, mainly from Atlantic Philanthropies, and the university's own resources, the PRTLI has invested €865 million across 47 higher level institutions spanning four cycles of competition.

Just over 60% of the funds have been invested in capital projects to provide buildings and equipment which have opened further opportunities for investment from SFI (Science Foundation Ireland) and other significant public and private funders.

### UCD Conway Institute of Biomolecular and Biomedical Research

The Conway Institute was founded in 1999 and received €92 million in funding across the first three cycles of PRTLI. A substantial proportion of this went towards the development of the building itself and its state-of-the-art core technologies such as nuclear magnetic resonance (NMR), confocal microscopy, flow cytometry and a transgenic facility.

stoday

Funding was also used to recruit leading researchers in the biosciences, and to establish collaborative links with other institutions such as TCD and RCSI through Molecular Medicine Ireland (previously Dublin Molecular Medicine Centre). The National University of Ireland Galway and University College Cork are now also part of this alliance.

The building opened in 2003, providing approximately 11,500 square meters of dedicated research space for bioscientists.

With over 60 principal investigators and their teams of postdoctoral and postgraduate researchers, there can be upwards of 400 people in the building at any one time. Over 185 PhD students have graduated from the Institute since its inception, while more than 2,000 peer reviewed publications have been issued during the first three cycles of PRTLI.

Research in the Conway Institute is largely organised around a series of themes: Infection, Immunity and Inflammation; Cell Biology and Neurobiology; Mechanisms of Disease, including Diabetes, Vascular Biology and Cancer. The UCD Conway Institute has also forged a number of alliances with research groups and teaching hospitals, and this has enabled the Institute to position itself to the fore of 'translational' research, or as it is sometimes called, 'bench to bedside' research, aimed at driving discoveries from the lab to therapeutic viability in as short a time frame as possible.

The American Oncological Society recommends as standard the test developed by UCD Conway and St Vincent's University Hospital researchers to establish the rate at which breast cancer patients might develop metastases

Is also a key partner in the Clinical Research centres at St. Vincent's University Hospital and the Mater Misericordiae University Hospital – and its relationship with the hospitals will be further strengthened through the Dublin Academic Health Care.

The Conway also enjoys close collaborations with industry, and Wyeth Discovery has based a research lab within the institute building in order to capitalise on the research expertise available there. When this opened in 2006 it was the first off-site Wyeth laboratory outside the United States. A proactive policy for the translation of research has seen many of the principal investigators within UCD Conway Institute establishing links with the biotechnology and pharmaceutical sectors through collaborative programmes, contract research and campus companies. Spin out companies involving UCD Conway Institute principal investigators include Analytical Drug and Data, Celtic Catalysts (with CSCB), Cytrea, Enzolve, Ildana Biotech and Berand. In 2007, three priority patent applications were made by Conway Investigators.

The UCD Conway Institute of Biomolecular and Biomedical Research is currently under the interim directorship of Professor Des Fitzgerald, UCD Vice-President for Research. Professor Fitzgerald's own research interests are in vascular biology, with a particular focus on platelets and thrombosis.

Experts at the UCD Conway Institute work to understand the causes and consequences of diseases such as diabetes, arthritis, Alzheimer's disease, cardiovascular and lung disorders as well as breast and prostate cancer

#### **Centre for Synthesis and Chemical Biology**

Set up under PRTLI Cycle III, the CSCB received  $\in$ 26 million and opened its doors in 2005 with a mission to promote knowledge, health and economic advancement through excellence in the chemical sciences of synthesis and chemical biology. This was the largest single investment in chemistry research ever made by the Irish Government. In Cycle IV, the institute was awarded a further  $\in$ 4.6 million to further the development of the (Bio)pharmaceutical and Pharmacological Sciences Programme (BPS).

The centre, which is closely aligned with the UCD Conway Institute, is home is 270 active researchers; 43 Principal Investigators, 47 post doctoral researchers and 182 PhD students. Since 2005 a total of 130 PhD students have graduated from CSCB, and researchers have produced 760 peer reviewed publications.

The building provides 2,000 square metres of dedicated research space including six stateof-the-art laboratories for synthetic chemistry and mass spectrometric and nuclear magnetic resonance (NMR) spectroscopic facilities.

Three interrelated research themes run through the CSCB's work: Bioactive Molecule Synthesis; Synthetic, Biosynthetic Methodology, Process Development; and Analytical, Structural & Computational.

One major expression of this research engagement comes through the Centre's work on the synthesis of medicines. 60% of medicines have natural products as their origin. Nature has created a multitude of biological compounds that have one purpose in their host plant but can have extraordinary effects on diseased human cells. So, for example, a natural source of aspirin is to be found in willow bark, penicillin on mouldy bread and anti-cancer drugs in a marine sponge.

The challenge for scientists is to isolate and identify the active compounds from nature and apply them correctly in patient treatments. Drug discovery requires input from a range of disciplines. Chemists and chemical biologists have managed to synthesise many naturally occurring medicines in the lab and are also striving to discover new molecules with enhanced biological activity and better ways

Worldwide, more than 14 million metric tons of polystyrene are produced annually and it is so durable that it takes thousands of years to decompose - at the CSCB, researchers have discovered how to use bacteria to turn it into biodegradable plastic

to make them. This research leads to a better understanding of disease at a molecular level. One of the reasons it is so important

to the pharmaceutical industry to be able to chemically synthesise the natural effect is that Nature cannot produce sufficient quantities to treat patients.

If the success of spin-out companies Celtic Catalysts, Enzolve and Cytrea are a barometer for the expertise fostered in the centre, then our next generation of medicines may well originate from the CSCB. The Centre for Synthesis and Chemical Biology is a collaboration in the chemical sciences between University College Dublin (UCD), Trinity College Dublin (TCD) and the Royal College of Surgeons in Ireland (RCSI). Professor Pat Guiry (CSCB Director) runs

a research programme to develop new and efficient catalysts for synthetic chemistry with

Former Taoiseach Mr Bertie Ahern (pictured here left, with Prof Pat Guiry) opened the Centre for Synthesis and Chemical Biology in 2005. The facility is a collaboration in the chemical sciences between University College Dublin (UCD), Trinity College Dublin (TCD) and the Royal College of Surgeons in Ireland (RCSI) an emphasis on stereoselectivity and efficiency. Professor Guiry's group are also synthesising an important class of compounds, called lipoxins, which exhibit anti-inflammatory properties and have potential therapeutic and commercial value.



#### UCD Urban Institute of Ireland

The Institute investigates the development of new policies, technologies and ideas to improve the quality of the living and working environment. It was awarded almost  $\in$  6.2 million under PRTLI cycles I and II.

85 Principal Investigators have been hosted at the UII since it opened. There are currently 27 PhD students and 5 postdoctoral students working within the UII. Over 500 publications have been presented by researchers from the Institute's since 2002.

UCD Urban Institute of Ireland is located in UCD Richview. The facility provides 820 square meters of research space for engineers, planners, architects, geographers, economists and scientists to collaborate on the challenges of sustainable development.

#### The UCD Urban Institute of Ireland

produced Green City Guidelines to provide easy-access and practical ways that local authorities, planners and property developers, can protect and enhance biodiversity while developing medium to high-density urban schemes

The work of the UCD Urban Institute of Ireland looks at Energy & Indoor Environment; Transport, Infrastructure & Land Use; Urban Environment; and Environment & Rural Policy. The Developing World Group looks at how a comprehensive, holistic and cross-sectoral approach could be used to tackle issues of poverty and global justice. The Landscape Architecture Group operates on a range of areas including rural sustainability in contemporary Ireland and Irish designed landscape history.

The building that houses the UII is itself an energy-efficient complex, employing goodpractice environmental control methodologies, with a Building Management System in place. This system involves a feedback chain whereby temperature levels, carbon dioxide levels and energy consumption can be kept in check. A collection of sensors and thermostats and automatically controlled windows and fans are part of this system.

Designed to facilitate and support the collaborative work, the building is made up of two layers. The two-storey ground layer is stratified in the east-west direction, establishing layers of privacy between the Built Environment Laboratory and the private research 'cells'. The 'sky' layer of roof-lights works in the opposite, north-south direction visually and volumetrically stitching the spaces together. The URBIS GIS system of accessing and manipulating spatial data provides a powerful resource to researchers.

Professor Frank Convery is acting Director of the UCD Urban Institute of Ireland (UII). His current research focuses on European Union Environmental Policy with particular reference to the use, potential and effectiveness of market-based instruments.



The UCD Urban Institute aims to lead research and debate on

**UCD Geary Institute** 

The UCD Geary Institute received an award of  $\in$  3.68 million under PRTLI Cycle I, the majority of which was invested in the building of the Institute facility. Subsequent research programmes have been facilitated by a grant of  $\in$  3.4 million under Cycle III.

The UCD Geary Institute currently houses 9 principal investigators who conduct research on life-course issues. In particular, the way public policy influences areas such as early childhood outcomes, youth inequalities, retirement behaviour and educational choices. There are currently 32 PhD students working within the Institute and a further 7 postdoctoral researchers.

With the UCD School of Economics, the UCD Geary Institute is currently ranked in the top 5% of economics research institutions in the world, according to the Research Papers in Economics (RePEc) database which includes 3,917 economics institutions and 17,707 registered authors from across the globe.

The "Preparing for Life" programme, which aims to improve levels of school readiness in three designated disadvantaged areas of North Dublin, was devised by the Northside Partnership and the UCD Geary Institute

The 1400 square metre UCD Geary Institute houses the new Dynamics Lab, which supports research and training in the fields of Social Network Analysis, Group Social Processes and the Computational Social Sciences.

The Institute is one of Europe's foremost centres for social and economic policy research. US Nobel Laureate in Economics, Professor James Heckman, is Professor of Science and Society with the UCD Geary Institute. This is a joint chair hosted by the Geary Institute and the Conway Institute, reflecting the opportunities for interdisciplinary research made possible through PRTLI funding.

Within the UCD Geary Institute, the Centre for Behaviour and Health (CBH) research

group looks at behavioural aspects of health and welfare. The work of the UCD Human Development Initiative brings together medical, social and environmental scientists to work on the thematic priorities of Irish Aid's work on fighting poverty. The Marie-Curie funded "Youth Inequalities" project considers the education of young people, particularly those from disadvantaged or minority backgrounds.

The Institute also runs the Irish Universities Study, which was launched in April 2008 and is funded jointly by the HEA Strategic Innovation Fund (SIF) and the seven Irish universities. The research is a longitudinal study to capture information on education experience, economic expectations, personal development and health from undergraduate and postgraduate students and postdoctoral researchers in universities.

In collaboration with the Centre for Social Gerontology at NUI Galway, researchers at the UCD Geary Institute conducted the Irish section of the Survey of Health, Ageing and Retirement in Europe (SHARE). (See extended profile on page 3 of UCD Today.)

The Director of the UCD Geary Institute is Professor Colm Harmon, whose research interests cover Labour Economics, Behavioural Economics, Econometrics, and Health Economics.

Nobel Laureate in Economics, Professor James Heckman, is Professor of Science and Society with the UCD Geary Institute, where he works in the area of Early Childhood Intervention



the urban environment

The HII was set up in 2002 under PRTLI Cycle III, when it received  $\in 6$  million. The centre is home to 5 principal investigators, and there are currently over 30 postgraduate scholars and postdoctoral fellows working at the Institute.

270 peer reviewed publications have been produced by HII investigators since the establishment of the Institute. The HII has enjoyed a 95% completion rate on the part of its doctoral scholars.

The 560 square meters of the HII provide a unique locus for interdisciplinary research in the humanities and social sciences in the university and nationally.

Recent PhD submissions from the HII included a study of famine monuments in Ireland, a fresh look at the prehistoric landscape of Ireland, and a study of ghost-sightings in Edwardian and Georgian culture

The HII has undertaken a major interdisciplinary research programme on the theme of identity, memory and meaning in the twenty-first century. This overarching strategy translates into streams looking at Gaelic Identities; Identity, Memory and Meaning in Europe and Beyond; and Realms of memory: The commemoration of the Golden Jubilee of the 1916 Rising.

The Institute is committed to developing a dynamic range of programmes centred on cultures and identities in Ireland while concurrently seeking to enhance the role of the humanities and social sciences in the development of a knowledge society in Ireland.

In 2005, PRTLI funding facilitated the founding of the Irish Virtual Research Library and Archive, the IVRLA. This is an innovative digitisation, cataloguing and IT project that has digitised over 160,000 items to date, preserving the archive collections of UCD in a format that makes them accessible to researchers and the interested public. The IVRLA, together with Trinity College's Long Room Hub, the collections of the National Library, and other digital archives throughout the country, will form part of the Digital Humanities Observatory. The IVRLA has brought together content from 5 different UCD repositories into a single virtual environment, and it contains material dating back to the 17th century. Some of the highlights of the repository include 125,000 scanned images relating to the former Irish President, Eamonn de Valera; documents of the poet Gerard Manly Hopkins, including a 'doodle'

of Simeon Stylites; and the largest folklore collecting scheme in the world.

The UCD Centre for Canadian Studies and UCD Press are also affiliated to the HII.

The UCD Humanities Institute of Ireland (HII) is led by Dr Marc Caball, former Director of the Irish Research Council for the Humanities and Social Sciences (IRCHSS). Dr Caball is a research policy expert whose own research interests centre on the cultural history of early modern Ireland and antiquarianism in nineteenth-century Ireland Shown here at the launch of the Migration and Citizenship Research Initiative in 2007 were, (l-r): Dr Alice Feldman, UCD School of Sociology; Conor Lenihan TD; Dr Mary Gilmartin, formerly of UCD School of Geography, Planning & Invironmental Policy; and Dr Marc Caball, Director of HII. The Migration and Citizenship Research Initiative was established at the HII in 2006. It aims to develop cross-sector collaboration among academics, civic organisations and government bodies engaged in Irish immigration and integration research, policy and practice. The Initiative is one of the projects facilitated through the HII's interdisciplinary facilities





#### **Researchers from** all around UCD were represented in the 2008 UCD Images of Research competition.

The top twelve images were chosen from some 315 entries from 23 different Schools and Institutes. They vividly bring to life the work of some of UCD's researchers, and will be featured in the 2009 Images of Research calendar.

The annual UCD Images of Research competition aims to discover the most compelling and imaginative research images that convey the depth and diversity of research conducted by UCD researchers. It is open to all UCD researchers including academics, postdoctoral fellows, postgraduate students and technical officers, as well as staff of UCD's affiliated teaching hospitals.



#### **Images of Research**

This year's winning photograph shows the intricately shaped iris of a spotted ray from the Irish Sea. The photograph taken by Edward Farrell from the UCD School of Biology and Environmental Science, during a survey aboard the RV Celtic Voyager, shows the physical adaptation of the ray's iris (the pupillary operculum) which makes it very sensitive to movements within a large visual field.

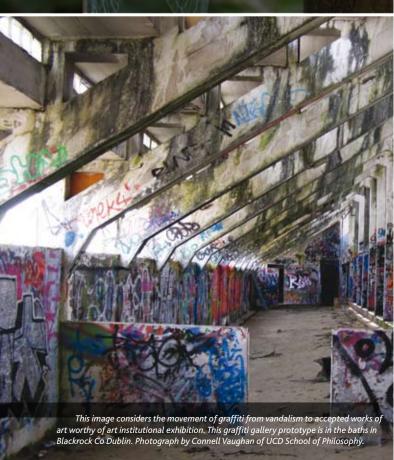
"I am currently investigating the life-history and population structure of the smoothhound sharks, Mustelus asterias and Mustelus mustelus, in the North-East Atlantic Ocean," says Farrell.

'These species are relatively small, bottom dwelling sharks which feed mainly on crustaceans. In Irish waters they are common on the east coast, particularly off the Wexford beaches. Very little is known about their basic biological characteristics and even less about their distribution and movements."

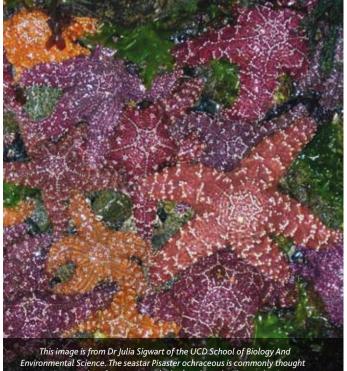
According to Farrell, this is the first detailed investigation of these species in the NE Atlantic and will enable an assessment of their abundance, distribution and status. This type of information is vital for identifying population trends and to establish future conservation and management plans.



Second place in the competition went to 'Just born!' by Mr. Sebastien Puechmaille from the UCD School of Biology & Environmental Science which vs a Cicada drying its wings just after emerging from its exuviae







to occur in two colour forms: orange (ochre) and purple. The mechanism for colour expression (genetic or environmental) is not currently known. Assemblages such as this one, photographed at one of Sigwart's field sites in the remote Pacific coast of British Columbia, Canada, show a wider range of possible overlap between 'purple' and 'orange'.



Taken by Prof Patrick C Brennan of UCD School of Medicine & Medical Science, this image illustrates how fragile human beings are and how imaging can be used to demonstrate that fragility. The materials used in the making of this model allow an exploration of the X-ray attenuation characteristics of substances that can be used as radiation filters, image receptor components and contrast agents. By matching the X-ray beam energy (kVeff) to the k-edge of contrast agent, body parts and image receptors, attenuation is maximised and image contrast enhanced. This is the focus of much current research activity in imaging, particularly with the advent of digital imaging acquisition devices.

#### Scientific breakthrough in young neutron star research

With the assistance of the 'Watcher' robotic telescope which was designed, built and is operated by staff and students from the UCD School of Physics, a team of international scientists has uncovered new ways of understanding young neutron stars.

The findings, published in the leading scientific journal Nature, show how, over the course of three days, a source, believed to be a neutron star, experienced 40 optical flares before disappearing.

Initially the bizarre source – SWIFT J195509+261406 - misled its discoverers. It first showed up as a gamma-ray burst, pointing to a stellar death in the distant universe. However soon after, it exhibited unique behaviour which indicates its origin in our own galaxy, the Milky Way. After the initial gamma-ray pulse there was a three-day activity period during which 40 optical flares were observed followed by a brief near-infrared flaring episode 11 days later.

According to the scientists involved, the main difficulty in studying this source is that it hibernates for decades before entering a brief period of activity. Following the observations, the source is now believed to be a young neutron star. These stars are created following a supernova explosion inside a massive star somewhere between 8 and 15 times the mass of the sun, which has expelled its outer layers following the explosion. They are made up of a very dense, solid crust and an inner core filled mostly with neutrons.

"Although small, 'Watcher', which is located in South Africa, can re-orient itself very quickly and in this case, re-pointed to the new source 23 seconds after receiving the information via the internet, only 53 seconds after the source discovery at gamma-ray energies by the NASA Swift satellite," says Dr Lorraine Hanlon from the UCD School of Physics. "As the larger more sensitive telescopes require longer times to change their pointing direction, Watcher obtained unique coverage of 6 of the flaring episodes, including one where the brightness increased by a factor of 100 in 2 minutes."

The international research team, led by scientists at the Astrophysical Institute of Andalucía, is composed of 42 scientists who used data taken by 8 telescopes worldwide. One of the co-authors of a separate Nature paper devoted to this source, UCD graduate Dr Sheila McBreen will be joining the UCD School of Physics staff in November 2008.

Initial funding for the 'Watcher' telescope project was provided by IRCSET and the project is currently funded by SFI.



### Honorary doctorate for Tiffany & Co. President, Jim Quinn

The President of Tiffany & Co., Jim Quinn was awarded an Honorary Degree of Doctor of Laws by UCD in November.

Since 1837, Tiffany & Co. has been the world's premier jeweller and America's house of design. Its current President, Jim Quinn is one of the most successful and influential Irish American businessmen in North America, with all four of his grandparents born in Ireland.

"Jim Quinn receives this honour in recognition of his consistent support of the value of education, both in his native New York and internationally, through his membership of the North American Advisory Board of the UCD Michael Smurfit Graduate School of Business," said Professor Tom Begley, Dean of Business at University College Dublin.

As president of Tiffany & Co., Jim oversees retail sales in Tiffany & Co stores worldwide, with responsibility for the company's global expansion strategy, including such notable store openings as the Tiffany & Co store in Beijing, China, in 2002; and very shortly the new store opening here in Dublin.

Tiffany & Co. has a proud record in doing business in a socially and environmentally responsible way. Initiatives include: Tiffany & Co. not using any gemstones originating in Burma and playing a leading role in eliminating the trade in conflict or blood diamonds; Tiffany & Co. campaigning for the protection of corals and participating in Seaweb's 'too precious to wear' campaign against the use of natural coral in jewellery; Tiffany & Co. promoting responsible mining practises with partners such as Oxfam and Earthworks; and the adoption of a social accountability programme which it applies not just to itself but also its suppliers.

## **Stoday**

#### **Humanities Institute**

#### **Bodies and books – UCD HII/Worth Library conference**

UCD Humanities Institute of Ireland (HII) and the Worth Library at Dr Steeven's Hospital co-organised a conference in September to mark 275 years of this famous Dublin institution which is currently the HSE headquarters.

Dr Steeven's houses a unique book collection assembled by Edward Worth (1678-1733). Worth, a physician, was particularly interested in books on science and medicine. The collection not only holds fine examples of sixteenth-century typography but it is also considered to house the best collection of early modern bookbindings in Ireland.

The demise of the humanities?

A large audience attended a lecture on the future of the humanities by Professor Sheila Slaughter at UCD Humanities Institute of Ireland (HII) in early September, writes Dr Marc Caball, Director of the HII.

Slaughter, an expert on higher education policy, is the Louise McBee Professor of Higher Education at the University of Georgia, Athens. During the course of her fascinating and often provocative talk, Slaughter argued that the profile and importance of the humanities had diminished progressively during the course of the last century, while the same period witnessed the rise of science and technology. Defence research in particular had underpinned the expansion of science and engineering within US universities. The provision of public research funding was largely centred on these areas at the expense of the humanities and to a lesser extent, the social sciences.

Universities are now defined as engines of economic development and are seen, rightly or wrongly, as key drivers of the knowledge economy. A culture of academic capitalism characterised by networks that mediate public and private sectors and the growth of extended managerial capacity have transformed universities in the last twenty years. Ironically, the humanities in the United States have managed to retain a measure of prestige through general education and the liberal arts formation. The humanities in Europe must now reconfigure and reinvent themselves to face these new challenges.

A lively debate took place after formal responses to Dr Slaughter's lecture by Professor Michael Cronin (DCU) and Professor Kathleen James-Chakraborty from the UCD School of Art History and Cultural Policy. The lecture was organised by UCD HII and the Centre for Public Culture at Dún Laoghaire Institute of Art, Design and Technology.

Shown at the Prof Sheila Slaughter lecture (I–r): Dr Marc Caball, Director, UCD Humanities Institute Ireland; Dr Kathleen James Chakraborty, UCD School of Art History and Cultural Policy; Professor Sheila Slaughter, speaker from University of Georgia, Athens; Professor Michael Cronin, School of Applied Languages and Intercultural Studies, DCU, Dr Paula Gilligan, Institute of Art, Design and Technology; and Dr Mick Wilson, National College of Art and Design/ GradCAM



The Worth Library is one of Dublin's less well-known cultural treasures. This conference, which was

opened by Professor Brendan Drumm of the HSE, focused on aspects of the Hospital's history and

T.D., Minister of State at the Department of Finance. The event further developed UCD's research

capacity in "The History of the Book".

architecture and on the Worth Library itself. Proceedings on the day were closed with the launch of

UCD Press's reprint of T.C. Kirkpatrick's 1924 history of Dr Steeven's Hospital by Dr Martin Mansergh,

#### New look and new books for UCD Press website

The UCD Press website, www.ucdpress.ie, has been re-launched to better showcase titles, and allow users to browse and purchase books in a more user-friendly way.

UCD Press publishes a diversity of academic titles, with particular emphasis on history, literary studies, politics and sociology. The Press has special expertise in research relating to historic and contemporary Ireland.

New history titles for 2008 include *The National University of Ireland*, 1908–2008: Centenary Essays and *The History of Dr Steevens' Hospital*, Dublin 1720-1920 (See above.)

In November 2008, UCD Press launches the Historical Association of Ireland Life and Times series, to place the lives of leading figures in Irish history against the background of new research on the

#### Celebrating the Flight of the Earls in St Isidore's College

In September 1607, Hugh O'Neill and Rory O'Donnell, the earls of Tyrone and Tyrconnell boarded ship in Lough Swilly and left Ireland in haste and secrecy. Their departure paved the way for the plantation of Ulster. A unique Irish language travel diary kept by Tadhg Ó Cianáin who travelled with the earls is preserved among the Franciscan 'A' manuscripts in UCD Archives.

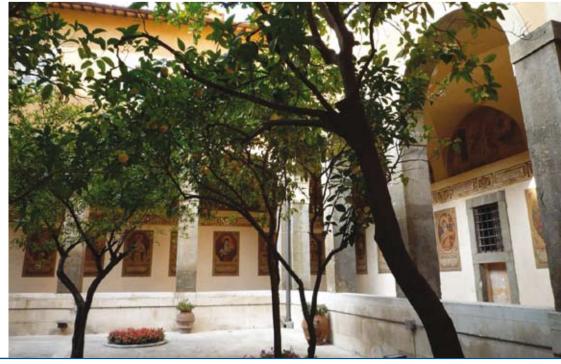
The earls reached Rome in 1608. To commemorate the 'Flight of the Earls' the UCD Mícheál Ó Cléirigh Institute in conjunction with the Franciscan Province of Ireland held an international conference in St. Isidore's Irish College, Rome, from 24-27 October 2008. Almost one hundred people heard papers on the theme of 'Tadhg Ó Cianáin and his world' by UCD academics Professor Liam MacMathúna, Dr Edel Bhreathnach and Dr John McCafferty. Other speakers came from NUI Galway and the University of Edinburgh.

Exquisite performances of contemporary music by the DIT Conservatory of Music took place in the frescoed chapel of the College. Attendees were also guests of HE Noel Fahy, Irish Ambassador to the Holy See at his official residence in the Villa Spada. The conference was sponsored by Culture Ireland, the Department of the Taoiseach and the Irish Franciscans.

> The cloister, St. Isidore's Irish Franciscan College Rome. Photograph by Dr John McCafferty

problems and conditions of their times and modern assessments of their historical significance. This series will initially include works on Thomas Kettle, John Mitchel and Denis Guiney.

The UCD Press catalogue also includes the *Classics of Irish History*, a paperback series which is noted especially for its reprints of little-known works of Irish political, social and literary history, many of which were controversial at the time of writing, and which sometimes express unfashionable or extreme views. Also included in the series are previously unpublished memoirs of particular interest as well as some more recent classics of historical writing that have become unavailable. The series includes An Essay on Irish Bulls by Maria Edgeworth and The Open Secret of Ireland by Thomas Kettle. UCD Press is affiliated to the UCD Humanities Institute of Ireland.



#### Maoiniú Rialtais d'oiliúint iarchéime i scileanna teanga sa Ghaeilge

Tá maoiniú €3 milliún tugtha ag an Roinn Gnóthaí Pobail, Tuaithe agus Gaeltachta tríd an Údarás um Ard-Oideachas do Scoil na Gaeilge, an Léinn Cheiltigh, Bhéaloideas Éireann agus na Teangeolaíochta, UCD, le tús a chur le sainchláir iarchéime dírithe ar scileanna teanga.

Soláthróidh UCD sraith cúrsaí Gaeilge ag leibhéal dioplóma iarchéime agus máistreachta, ag tosú le haistriúchán agus eagarthóireacht 2008/09, agus ag leathnú amach go riarachán, ateangaireacht agus dlí ina dhiaidh sin. Freastalóidh na cúrsaí seo ar riachtanais na n-earnálacha poiblí agus príobháideacha araon i gcothú na Gaeilge mar theanga inniúil oibre.

'Dearbhaíonn an maoiniú seo tiomantas an Stáit don Ghaeilge', a deir an tOllamh Liam Mac Mathúna, Ceann na Scoile. Is é aidhm an tionscnaimh ná tabhairt faoi shainriachtanais teanga i gcomhthéacs Acht na dTeangacha Oifigiúla, ach dar leis an Ollamh Mac Mathúna go dtabharfaidh sé tacaíocht do stádas na Gaeilge mar an 23ú teanga oifigiúil san Aontas Eorpach chomh maith.

'Ón uair a bronnadh stádas oifigiúil agus oibre ar an nGaeilge i mí Eanáir 2007 aistrítear eochairreachtaíocht uile an AE go Gaeilge. Déantar ateangaireacht ar an nGaeilge ag cruinnithe comhairle rialtais agus ag seisiúin iomlánacha Pharlaimint na hEorpa, agus ar leibhéal praiticiúil, is féidir le hiarrthóirí, a chuireann isteach ar phoist in institiúidí AE, an Ghaeilge a liostáil ar cheann den dá theanga oifigiúla atá riachtanach.'

De réir an Roinn Gnóthaí Eachtracha, tá idir 20 agus 30 aistritheoir riachtanach in institiúidí éagsúla an AE. 'Tá deiseanna den scoth ann do na céimithe a thagann amach as na cláir seo', a deir an tOllamh Mac Mathúna leis.

> Taobh amuigh dá fócas traidisiúnta taighde, tá béim mhór leagtha ag Scoil na Gaeilge, an Léinn Cheiltigh, Bhéaloideas Éireann agus na Teangeolaíochta, UCD, ar scileanna gairmiúla teanga. 'Tá fás ag teacht i gcónaí ar líon na mac léinn a bhfuil suim acu sa dá shraith: taighde agus an teanga fheidhmeach', a deir an tOllamh Mac Mathúna.

Ag tógáil ar an rath atá ar chlár máistreachta na Scoile a dhíríonn ar na meáin agus ar chúrsaí cumarsáide, MA: Scríobh agus Cumarsáid na Gaeilge, agus ar an Dioplóma sa Ghaeilge Fheidhmeach, cuirfear an tsraith nua de chláir iarchéime ar fáil faoi choimirce Lárionad de Bhaldraithe do Léann na Gaeilge. Nuair is gá, beidh taithí oibre ina cuid de churaclam na gclár.

'Agus tá borradh feicthe againn i líon na mac léinn ag leibhéal fochéime. D'ardaigh líon na mac léinn atá ag glacadh modúl Teanga na Gaeilge sa chéad bhliain go 250 i mbliana. Thugamar Gaeilge ab initio isteach do mhic léinn gan aon eolas acu ar an teanga agus leibhéal bunchloch isteach do mhic léinn a bhfuil suim acu inti ach gan líofacht iomlán acu sa teanga.'

Glossary	
ateangairacht	interpreting
eochair-reachtaíocht	key-legislation
leibhéal bunchloch	foundation level
maoiniú	funding
sainchláir iarchéime	specialist programmes
seisiúin iomlánacha Pharlaimint na hEorpa	European Parliament plenary sessions
teanga fheidhmeach	applied language
tiomantas	commitment

### **Hidden Treasures of UCD**

#### A seventeenth century law book

UCD Special Collections contains the libraries inherited from UCD's antecedent institutions, the Catholic University of Ireland, the Museum of Irish Industry and the Royal College of Science. This is a significant collection of over 20,000 books, printed between 1450 and 1850 and covering subjects as diverse as history, literature, classics, industry, botany, medicine and engineering, reflecting the specialities of the institutions from which they came.

Special Collections also holds important archival collections including the literary papers of several 20th century Irish writers such as Patrick Kavanagh and Edna O'Brien, the Irish language manuscripts of scholars such as Eugene O'Curry and Henry Morris, and the book collections of various notable individuals.

One such collection is that of Christopher Palles, the last chief baron of the exchequer of Ireland. The Palles collection consists of books and journals of a legal nature covering the period from the 17th to the early 20th century. It is most useful for the study of Irish legal history for this period. The collection was donated to UCD by William Walsh, Archbishop of Dublin, in 1921 and at that time formed the nucleus of UCD's law library.

The item pictured here is Anno Regni Jacobi II Regis Angliae, Scotiae, Franciae & Hiberniae Quinto, Parliament begun at Dublin the seventh Day of May Anno Domini 1689...This item was printed by the Dublin printers Andrew Crooke and Samuel Helsham in 1689. It contains a number of acts passed by the parliament of James II which sat in Dublin between May and July 1689, commonly referred to as the Patriot Parliament. The most notable act printed here is an Act for Liberty of Conscience. The parliament was declared illegal by joint monarchs William and Mary with whom James II was at war and the aforementioned acts were declared invalid. Most records of the parliament were destroyed, making this publication all the more interesting and significant.

UCD Special Collections is located on Level 1 of the UCD James Joyce library.

#### **Foreign Direct Investment seminar**

Senior economic advisor to Barack Obama and former U.S. Under-Secretary of Commerce for Economic Affairs, Dr Robert Shapiro has declared that Ireland must 'wean itself from dependence on Foreign Direct Investment'.

Anno Regni JACOBIII. REGIS. Angliæ, Scotiæ, Franciæ & Hiberniæ

At the Parliament begun at Dublin the feventh Day of May, Anno Domini 1689. In the Fifth Year of the Reign of our moft Gracious Soveraugn LORD 7 A MES, by the Grace of G O D, of England, Southand, France and holond KING. Defender of the Faith dec

the Grace of GOD, or England, commun, Ireland KING, Defender of the Faith, Or.

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Speaking at a seminar hosted by UCD Business Schools, Shapiro predicted that a highly skilled, English speaking workforce is the key to giving Ireland an advantage over all other states competing for Foreign Direct Investment (FDI).

"Ireland is the greatest economic success story in the last fifteen years and it will continue to be an attractive site for FDI as long as it continues to provide the calibre of

graduate that foreign investors have come to expect," said Shapiro.

"A low corporate taxation rate is not the most important factor moving forward, it goes beyond that," he explained. "The next stage is not FDI, but a series of policies that actively promote spillovers from FDI corporations to Irish indigenous firms."

According to Shapiro, the best way forward is for young Irish people to become entrepreneurs and force existing business to compete and become the best in the world. "If you look at the Chinese model, FDI is a transitional strategy, not an end game strategy, that creates a lasting impact. The key to Ireland's next stage is to make the entire economy a modern economy and not one that depends on the success of foreign companies."

"The ability to develop ideas is the single most critical factor and source of wealth and growth for advanced economies today, replacing physical assets and this is what Ireland needs to focus on."

Executive VP of Wyeth Biotech, Dr Michael Kamarck, who also addressed the seminar on Foreign Direct Investment, outlined how increased costs are starting to eliminate the advantages of Ireland's 12.5% business-friendly rate.

"Utility costs have increased 100% in the last couple of years. This, plus increased healthcare costs, erode the tax advantages of doing business here and will result in employment being cut," said Dr Kamarck. "It will be important to make sacrifices to keep Ireland an attractive location for FDI."

Speaking at the same seminar in UCD on 04 November 2008, Aidan Brady, Country Officer, Citibank Ireland agreed that countries must reconsider their approach to FDI. "Globally, industry will have to rethink models. Consolidation will mean major job losses of about 15-20% across the board," he said.

# **stoday**

### Looking beyond Numbers during National Maths Week

UCD played an energetic role in National Maths Week in October, with over 375 secondary school students and their teachers attending a series of interactive maths talks at the UCD Conway Institute.

#### Maths behind iPods

Professor Gary McGuire from the UCD School of Mathematical Sciences and the Claude Shannon Institute gave two talks about the maths hidden in everyday life.

"Each time we use an ATM machine, buy something online, watch a satellite TV show or play a song on our iPods we're using maths," explained Professor McGuire. "This talk aims to introduce students to some of the mathematical concepts behind text messaging, how the random shuffle on their iPods work as well as why a QuickPick in the National Lottery can mean more wins."

The students were taken on a journey from Roman times when soldiers sent encrypted messages, to World War 2 when teams of code breakers worked to interpret messages sent across enemy lines. Interpreting an encrypted message using a secret number key was easy for this enthusiastic audience.

"I loved the piece on sending secret messages. I'm sure that will be used in the classroom by both teachers and students," said Maths teacher Mr Michael Murphy from Loreto Secondary School Dalkey.

There was some surprise among the students to learn that mathematical concepts such as error correction improves our satellite TV reception and ensures that if there is dirt on our DVDs it won't impact the sound or picture quality. One of the students summed up her experience of the talk by saying that "It was the best lecture I have ever been to – no doubt."

#### **Computing the Weather**

Professor Peter Lynch from the UCD School of Mathematical Sciences and the UCD Meteorology and Climate Centre gave a talk on the complex mathematical calculations carried out by super computers to forecast our weather.

"Weather forecasts save lives on land, sea and air," said Professor Lynch. "The most sophisticated method for forecasting is known as Numerical Weather Prediction (NWP). This uses mathematical models to forecast future weather states from current conditions."

Professor Lynch explained how the amount of weather data collected globally is staggering. Current observations are made in weather stations, on ships and aircraft, from satellites and by launching weather balloons.

"Data is then relayed around the world on a global telecommunications system," continued Professor Lynch. "Super computers analyse the data and draw maps to help us interpret weather patterns."

Professor Lynch concluded by saying that the accuracy of forecasting is improving over the years as a direct result of the power of mathematics.

The students all enjoyed the enlightening talk and Ally Scott, a 6th year student from St Thomas's Community College in Bray commented that it was "a different way to learn how maths is used in the real world."

Transition year students Rachel Fitzpatrick and Deborah Skeffington from Alexandra College said that "They never knew there was so much maths involved in meteorology and that [maths] could be fun."



Hundreds of prospective students visited the UCD Quinn School of Business' "Business Of" series in autumn 2008. Speakers from L'Oreal, XBOX Ireland and Universal Music came to the UCD Quinn School for three separate events outlining the diversity of potential careers for Business students

#### UCD students fly the flag at Higher Options

UCD's Student Ambassadors were out in full force at the *Irish Times*/Institute of Guidance Counsellors annual third-level Higher Options exhibition in September.

The Student Ambassadors, both undergraduate and graduate, spanning a wide range of degree programmes, were on hand to tell secondary school students of their own unique UCD experience.

"It's great to get a chance to speak to secondary school students about UCD at this crucial decision-making stage in their lives," commented Patrick Ryan, a Stage 3 Chemical Engineering Student Ambassador. "I remember being in their position not too long ago, being both anxious and excited to be progressing to third-level. It makes it much easier to relate to them. They love hearing about university life, about the personal freedom and academic opportunities that come with it."

Staff from various programme areas throughout the university manned information stands throughout the three-day event, answering specific questions from secondary school students and highlighting the wide range of options within each programme area, which they can choose to study from.

"The reaction has been very positive. All the students who've come to Higher Options are very focused and know the courses that they're interested in," said Dr Orla Donoghue of the UCD Science Programme Office.

"Some of them are at a point where they're trying to decide between two universties and maybe two different subjects. Their questions are very pointed – they want to know what it's going to be like studying at the university, detailed knowledge about the subject, and particularly the career opportunities they'd have afterwards."

Over 22,000 secondary school students visited the RDS in Ballsbridge for the 3-day event in September. *The Irish Times* and the Institute of Guidance Counsellors have collaborated for 22 years in organising Higher Options – the largest showcase of third-level and career opportunities in Ireland.

#### Access to Arts & Human Sciences programme in Dublin city centre

In September, UCD Registrar and Deputy President Dr Philip Nolan welcomed 25 mature students to the UCD Access to Arts & Human Sciences programme.

For the first time, the programme is being offered in the city centre, in the Citibank Building in the IFSC. This space was provided through a unique partnership with the Institute of Bankers.

Dr Nolan was joined by Dr Anthony Walsh, CEO of Institute of Bankers in greeting the students. The UCD Access to Arts & Human Sciences programme is designed to prepare adults who may not have formal qualifications, for successful study at university, particularly in the area of the Arts and Human Sciences.

The programme aims to equip students with the skills such as study methods, writing and research techniques and wider communications and personal skills.

Deborah Skeffington from Alexandra College; Professor Peter Lynch UCD School of Mathematical Sciences

Pictured during Maths week at UCD were (I-r) Rachel Fitzpatrick and

#### Irish Seal Sanctuary website

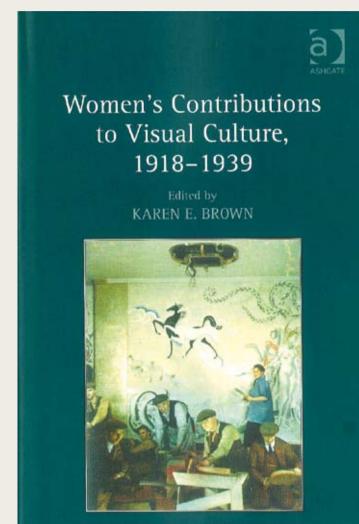
A UCD student has helped create an online resource that advises vets on the initial treatment of injured seals, seabirds and other marine wildlife.

Sarah Keegan, a Stage 4 veterinary medicine student worked on the Irish Seal Sanctuary's *Marine Wildlife - Oil Spill Response* website with guidance from: the founder and Director Brendan Price; Oil-Spill coordinator Pauline Beades; Professor Stephen Carrington from UCD School of Agriculture, Food Science & Veterinary Medicine and the UCD Centre for Teaching and Learning. Sarah worked with content providers from around the world to create a resource that puts best international practice at the fingertips of many remote coastal vets.

For over 20 years the Irish Seal Sanctuary has been Ireland's only full time wildlife rescue and rehab facility. With support from UCD Veterinary Medicine and the Marine Institute, the Sanctuary has developed a professional and international reputation for its work, bringing it to its current position, co-launching a National Marine Conservation and Education Centre for Ireland, at Balbriggan in Co Dublin.

# Reclaiming the histories of lesser-known artists

Dr Karen Brown, UCD School of Art History and Cultural policy talks to Deirdre Mulrooney about her fascination with the interplay between the Arts, in particular between Literature and the Visual Arts.



With her forthcoming book *The Yeats Circle and Visual Culture* (working title) due for publication in 2010, Dr Karen Brown, IRCHSS Post-Doctoral Fellow in the UCD School of Art History and Cultural Policy, has been exploring the National Library's Norah McGuinness archive; the National Gallery of Ireland's Yeats archive; the New York Public Library, and Trinity College Library's Early Printed Books and Manuscripts Collections.

#### It's the little things which bring the puzzle togeher that are the most rewarding

A scholar through and through, Brown relishes the whole research process. "I get a kick out of doing archival research and love finding things that people don't seem to have discovered before - this subconscious bringing together of ideas – reading material, taking notes, intuitively knowing what will and won't be useful in the long-run." "Sometimes you can search for days, and one paragraph in a letter which ends up as a tiny footnote is a huge triumph for your research," she attests. "It's the little things which bring the puzzle togeher that are the most rewarding."

While Brown is "primarily interested in reclaiming histories of lesser-known artists, and aspects of canonical artist's careers, irrespective of gender", her forthcoming monograph rescues people like Evelyn Gleeson, founder of the Cuala Press, from obscurity. "The Yeats sisters get a lot of attention, but Evelyn Gleeson was the founder of the industry and little is known about her. There was quite a lot of archival retrieval work involved."

The Yeats Circle and Visual Culture opens with WB Yeats in the late 19th century London world of "pre-Raphaelitism, and the Arts and Crafts movement, looking at what he had to

say about the interrelationship of the Arts and how he was affected by that milieu."

There were some lovely photographs of Norah McGuinness's shop window designs from Brown Thomas in the photographic archive

"There is a feminist current through the monograph - thinking about whether these women have been accredited as fine artists, and distinctions between the arts," says Brown. Thomas McGreevey, who was known for promoting women artists, and for his poems about paintings also features strongly in the forthcoming work.

Brown's major focus is on the relationship between images and words. "My real passion is for the interplay between the Arts, in particular between Literature and the Visual Arts. The relationship intrigued me even before I started my primary degree. My PhD, which I completed at Queen's University Belfast, focused on word and image interactions in the Yeats circle from 1880 to 1945".

Now, mentored by Dr Paula Murphy from the UCD School Of Art History & Cultural Policy, Brown is further developing her research at post-doctoral level. After WB Yeats, the Yeats sisters, Evelyn Gleeson and The Cuala Press, in which Brown's favourite artist Jack B Yeats was involved: "I look at WB's collaboration with Norah McGuinness as an illustrator". This grows out of her own essay in *Women's Contributions to Visual Culture 1918 – 1939*, the 2008 book Brown edited for Ashgate Publishing Company.

But everything becomes real again when you can communicate the research to students.

"I don't start by going out looking for people to accredit", she explains of her methodology and approach. "I wouldn't claim greatness about an artist that I didn't like at all. For example, while some people like Norah McGuinness's paintings, I don't personally. But I think her illustrations are wonderful. I can validate her contribution to the visual culture, but I wouldn't go around trying to canonise artists as being particularly good, if they are not".

Like every true scholar, she is delighted to have unearthed some special images to share with a new public. "There were some lovely photographs of Norah McGuinness's shop window designs from Brown Thomas in the photographic archive". They depict "fashion and papier mâché moving toys. She got the idea from seeing Dali's work in New York, and brought it back to Dublin. They were quite nice designs".

At school in Northern Ireland, Browne was encouraged to study History of Art rather than go to Art college. Now she does some life drawing, "but the research has taken over". She is also a keen sailor. Her father and uncle were boat builders. They designed and built the Ruffian 23 in the 1970's – there's a strong fleet of them in Dunlaoghaire and Hong Kong. "It's in the family I guess," says Brown. "We've been sailing all our lives. These days I sail inshore and offshore races on a wooden classic yacht."

In the New Year, Brown will be contributing to a new undergraduate Museums Studies module in the UCD School of Art History and Cultural Policy. She is keen to get involved in teaching again after several years of pure research on *The Yeats Circle and Visual Culture*.

"The fellowship is fantastic, because it frees you up from all other commitments to just get your work done", she says. "I'm hugely grateful for it. But everything becomes real again when you can communicate the research to students. To see the students taking something real from it and developing new ideas and thoughts."

"I find that really rewarding - collegiality within a School, contact with students, and seeing my own research bubbling over".

Deirdre Mulrooney, BA ('90), MA ('91) and PhD ('98), is the author of Irish Moves, an illustrated history of dance and physical theatre in Ireland, published by the Liffey Press, and writes about culture for various Irish publications.

Dr Karen Browne



#### "Performance and diversity – keys to success", Sutherland

Former Attorney General, Peter Sutherland gave the HEA's Erasmus Inaugural Lecture in October.

As EU Commissioner, Sutherland was a key initiator of the Erasmus programme for student mobility, which since 1987 has had an uptake of almost 2 million students internationally. Speaking about the programme, Mr Sutherland said: "It hopefully has fostered a sense of European identity too. Ireland's universities and students have already benefited greatly from the Erasmus Programme. Some 25,000 Irish students have spent time on the programme in other countries and 50,000 foreign students have spent time here."

In his address, Sutherland spoke of "an inflection point in terms of deciding on future policy." He spoke on funding challenges in second-level, acknowledged the service to education by religious orders, and reiterated the imperative to address underperformance in teaching standards, where they arise. He also endorsed the need for Continuing Professional Development for teachers and for the provision of mechanisms to effectively serve students of varying academic abilities.

Mr Sutherland opened his comments on third-level education by acknowledging

progress made to date, particularly in terms of participation rates - some 57% of Irish school leavers go on to third level. He then went on to commend moves towards a clear accreditation programme for PhDs.

In the context of international rankings, Mr Sutherland noted that the metrics provide a starting point for discussion about Ireland's international standing. He went on to outline the need for the transparent assessment of teaching quality, and noted that, "while Irish graduates are perceived by employers to compare well with their Northern and Eastern European counterparts, they are not perceived as well on maths and accounting skills."

Mr Sutherland also spoke on the issue of funding, noting the possibility of fees or graduate loans for those who can afford them, and a potential increase in fees payable by non-EU students. He went on to say: "Ultimately the point is a simple one: either we increase spending as well as increasing efficiency or our Universities will not be able to produce the best no matter how hard they try. If the Government cannot allocate additional resources then we will have to get funding elsewhere. If you deny this – and we would all love to avoid the issue – you are forced to admit that our system will not remain fit for purpose." Mr Sutherland also stated that investment comparable with the top level of the OECD would require a 47% increase in funding, and to achieve parity with Finland (a widely-raised knowledge-based economy), a 23% increase would be required.

He suggested that a "Tallaght strategy" approach was required to deal with the fees question. Politicians might "rise above the immediacy of re-election concerns to bring about radical, if unpopular, change."

Mr Sutherland praised the binary system of universities and institutes of technology, believing there to be great strength in specialisation and variety. Indeed he advocated a more diverse system with room to prioritise areas of expertise. "We should actively avoid creating homogeneity in Irish universities with everyone doing the same thing and getting the same resources based on the numbers of undergraduates. The reality must surely be that everyone should not do everything and diversity based on excellence should be promoted and rewarded," he said.

Mr Sutherland advocated a rational, objective basis for funding in higher education. "All levels build in performance and track record as key components in funding and at the same time advance diversity remembering always that things measured always improve."

He concluded that in the context of good governance and transparency, academic institutions should retain autonomy and decision-making authority, within generally agreed confines. This autonomy, combined with an advance in philanthropic giving and alumni engagement, along with clear progress in terms of fees, efficiency and excellence through diversity, may provide responses to the challenges in the third-level sector.

Mr Peter Sutherland is chairman of BP and of Goldman Sachs International. He is former chairman of AIB Group, and he currently serves on the boards of Investor AB and The Royal Bank of Scotland Group plc.

He was Attorney General between 1981 and 1984, EU Commissioner responsible for Competition Policy between 1985 and 1989 and Director General of GATT between 1993 and 1995 and then the first Director General of the World Trade Organisation.

Mr Sutherland is a former tutor and visiting professor at UCD, and in 2007 made a major leadership gift of  $\in$ 4 million towards the development of a new law school at University College Dublin campus at Belfield.

#### All-island study of Traveller health



A major study examining the health status of Travellers throughout the island of Ireland has begun in the UCD School of Public Health and Population Science. The research will assess Traveller health and the factors associated with it, including the impact of current health services on Traveller health and the degree to which the community's socio-economic circumstances, culture and lifestyle impacts on their health.

The findings from the study, jointly funded by the Department of Health and Children, Ireland, the Health Service Executive and the Department of Health, Social Services and Public Safety, Northern Ireland, and with the support of Traveller organisations and FAS, will provide a framework for policy development and practice in relation to Traveller health.

"I am delighted to have jointly commissioned this study with our partners in Northern Ireland," said the Minister for Health and Children, Ms Mary Harney TD. "It is the culmination of considerable work undertaken in consultation with Traveller organisations, health service providers and other interest groups."

"Traveller health has been a priority area for health services over many years and this has led to a considerable investment in traveller health infrastructure. The findings from this study will provide evidence and insights to inform future policy and service provision."

"This study is for, with and by Travellers" said Professor Cecily Kelleher, Head of the UCD School of Public Health and Population Science, who is leading the research. "We have had over a year of detailed consultation and planning to get to the fieldwork stage and now have a really remarkable electronic questionnaire to ensure the best quality information can be collected with nearly 10,000 families across the country. We hope quite literally to give Travellers themselves a voice in their future health".

The Traveller Health research project is led by UCD, in collaboration with researchers from the School of Nursing at Dublin City University.

Pictured at the launch of the all-Ireland Traveller Health Study are: (back row l-r) Dr Philip Crowley, Deputy Chief Medical Officer, Department of Health and Children; Jill Turner, Project Director, UCD; Brigid Quirke, Assistant Project Director, UCD ; Missie Collins, Public Health Care Worker, Pavee Point; Claire Kelly, Project Researcher, UCD; Professor Cecily Kelleher, Head of the UCD School of Public Health and Population Science; (front row l-r) Minister for Health and Children, Mary Harney TD; and Mary Brigid Collins, Co-ordinator for Peer Researchers

#### New Dean at UCD School of Law

The UCD School of Law recently appointed new Dean. Professor John Jackson of Queen's University, Belfast has taken up the position of Head of School and Dean in succession to Professor Paul O'Connor, out-going Dean and his interim successor, Joe McMahon. During his time at Queen's John was Head of School of Law from 1997-2000 and Director, Institute of Criminology and Criminal Justice, 1999-2006

Professor Jackson is a graduate of the University of Durham and completed his LLM at the University of Wales. He was subsequently called to both the Northern Ireland and English Bar. He was appointed Lecturer in Law at Queen's University Belfast in 1980, became Reader in Law in 1990 and Professor of Public Law in 1995.

Professor Jackson has taught at other law schools, including Cardiff, the City University London and the University of Sheffield. He has also held Visiting Professorships at Hastings College of the Law, University of California and at the Faculty of Law, University of New South Wales. John's research interests have been in the areas of Evidence, Comparative Criminal Procedure and Human Rights and he has published widely in this area.

From 1998-2000 he was an independent assessor on the Northern Ireland Criminal Justice Review which was established under the Belfast Agreement to review the Northern Ireland criminal justice system. He is currently a Life Sentence Review Commissioner for Northern Ireland.

# UCD spin-out company sold for \$60 million

Amdocs, the US-quoted technology company (NYSE: DOX), and the leading provider of customer experience systems has signed a definitive agreement to acquire ChangingWorlds Ltd, a spin-out company from the UCD School of Computer Science and Informatics.

ChangingWorlds is a provider of personalisation and intelligent portal solutions for mobile service providers. Under the terms of the agreement, Amdocs has agreed to acquire all of ChangingWorlds' shares for \$60 million in cash, net of cash on hand, subject to postclosing adjustments. Additional consideration may be paid later based on the achievement of certain performance metrics. The acquisition is subject to conditions customary to such transactions, and is expected to close during Amdocs' fiscal quarter ending December 31, 2008.

ChangingWorlds' technology, combined with the Amdocs CES portfolio, will enable better customer experiences by allowing end users to quickly get relevant information based on what they use most, making it easier to navigate the Internet on their phones and reducing the time they spend looking for content. ChangingWorlds' technology currently addresses mobile devices, and Amdocs intends to expand the technology to three screens (mobile, PC and television) to personalise the customer experience across all touch points. ChangingWorlds and Amdocs share several customers including Sprint, the Vodafone Group and Telefonica O2.

ChangingWorlds was co-founded in 1999 by Professor Barry Smyth and Paul Cotter to commercialise their research into personalisation and artificial intelligence technologies. ChangingWorlds maintains a strong strategic link with the university as its ongoing R&D activities are taking place in NovaUCD, the university's Innovation and Technology Transfer Centre.

"Personalisation is a cornerstone of Amdocs' strategy to offer Customer Experience Systems and ChangingWorlds is a recognised global expert in this area," said Dov Baharav, chief executive officer of Amdocs Management Limited. "ChangingWorlds' dynamic portal offerings surpass the traditional 'one- size-fitsall' approach, and no single vendor can match its range and sophistication of personalisation services."

ChangingWorlds' patented technology automatically builds subscriber profiles based on user behaviour and usage patterns that require no user input or action to make finding relevant content faster and requiring less clicks. For example, a sports enthusiast will see the link to latest information about his favourite football team on their home page, while a classical music fan will see the link to the upcoming concerts in their area.

"Amdocs and ChangingWorlds recognise the power of the customer experience and the potential for service providers to further exploit their place in the digital value chain," said David Moran, chief executive officer of ChangingWorlds. "Both Amdocs and ChangingWorlds will continue to aggressively execute on the shared vision of enabling service providers to offer the most compelling customer experience, to grow revenue from data services and retain customers."

Welcoming the acquisition of ChangingWorlds, Professor Mark Keane, UCD's Vice-President for Innovation said, "That the return to UCD from this acquisition will be reinvested in future UCD spin-out companies for the general good of the Irish economy."

Dr Pat Frain, Director, NovaUCD speaking about the acquisition said, "The success of ChangingWorlds will be an inspiration for academic entrepreneurs who are interested in establishing new ventures to commercialise innovative ideas emerging from university research." He added, "Such ventures are of critical importance; particularly in the present economic climate where there is an increasing need to generate opportunities for the creation of highly skilled employment."

# New website to provide flexibility in jobs market

Flexitimers.com, a new concept in the job recruitment market was been officially launched. Flexitimers.com was established to address the needs of professional people who want to work flexibly and employers who wish to recruit staff with experience and skills but not on a permanent basis.

Flexitimers.com which is located at NovaUCD, was established in 2007 by two entrepreneurs, Dervla Cunningham and Joy Redmond, who saw a niche in the market which they needed themselves.

According to Dervla Cunningham, "Until now the recruitment industry has ignored professionals who want to do something different than the usual nine-to-five, five-daysa-week job."

Flexitimers.com caters for all professionals for whom the usual 9-5, 5 days a week is not what they want. Examples include professionals who want classic part-time employment, or freelancers who prefer to work on a project or contract basis, or mothers who wish to keep their careers alive while raising a family.

Joy Redmond and Dervla Cunningham, co-founders of NovaUCD-based Flexitimers.com Also included are retired individuals who wish to continue to exploit their experience and expertise or professionals who are just looking to supplement their income.

Unlike other jobs boards on the market, Flexitimers.com's unique selling point is its matching technology which matches professionals seeking flexible positions with employers offering flexible work. "Flexitimers. com is about matching on skills and experience in today's changing marketplace", Cunningham added.

Professionals can register on the website for no charge, upload their profiles, set their 'flexibility' and receive emails of flexible positions which match their requirements or they can browse the database and apply directly for advertised positions and projects. At the same time employers pay a nominal fee to post a position or project on the website. Flexitimers. com is simple to use and allows the recruiter to screen, shortlist and contact candidates directly.



Dr Steve Collins, co-founder of Havok, which was acquired by Intel in September 2007 for \$110 million launched the 11th NovaUCD 'Entrepreneurs Live!' seminar series in October. Havok is the premier provider of interactive software and services for digital media creators in the games and movie industries.

The aim of these seminars, which continued over 6 weeks, and which were organised by NovaUCD in association with the Dún Laoghaire-Rathdown County Enterprise Board was to promote a spirit of entrepreneurship among the academic, research and student population at UCD.

At the NovaUCD 'Entrepreneurs Live!' seminars the entrepreneurs talked about their experiences of setting-up and running their businesses emphasising the highs and lows encountered along their entrepreneurial journey and shared the secrets of their success.

According to Dr Pat Frain, Director, NovaUCD, "The 'Entrepreneurs Live!' seminars attract a large and diverse audience which stimulates a lively and enthusiastic debate on issues relating to entrepreneurship and innovation and the establishment and development of technology-based companies in Ireland."

Previous speakers at NovaUCD 'Entrepreneurs Live!' seminars include, Anne Heraty, CPL Group, Eamonn Fallon, Daft.ie, Stephen Flood, Gold Investments and Oliver Tattan, Vivas Healthcare.

> Dr Steve Collins, co-founder Havok, prior to launching the 11th NovaUCD 'Entrepreneurs Live!' Seminar Series.



#### UCD Choral Scholars celebrate 10 years of music

The UCD Choral Scholars' Decennial Year Programme of Events was launched in Memorial Hall, UCD Richview in September. The Scholars, led by their Artistic Director Mr Desmond Earley, were joined by Dr Martin Butler, UCD Vice-President for Students and trustee Dr Dennis Jennings along with former Scholars and Friends of UCD Choral Scholars.

The UCD Choral Scholars were founded in 1998 by Desmond Earley and Kieran McDermott. Since then they have become cultural ambassadors for UCD, achieving significant recognition on campus and in the wider music-community for their standard of performance and versatility. Their repertoire ranges from the medieval to the contemporary.

Each year scholarships awarded by a panel of professional musicians. Successful students from all academic disciplines have the opportunity to enjoy the challenge of participation in UCD Choral Scholars.

To mark the 10th anniversary of the UCD Choral Scholars, an expanded programme of events is planned for the coming academic year, including "A Choral Celebration of Christmas" in University Church, St. Stephen's Green on 16th/17th December.

For more information on the Winter/Spring schedule please visit www.ucd.ie/choralscholars

#### **Selling Politics**

The UCD John Hume Institute public lecture programme for 2008/9 began with a round table discussion on the theme of "Selling Politics". The panel of Mark Little, Mark Mortell and Martin Mackin led a stimulating and provocative discussion on the past, present and future of Irish political discourse

This series of events is supported by Denis O'Brien and the Communicorp Group. The series has been curated under the general rubric of "Communication, knowledge and the citizen in the global environment". It is intended to provoke public interest, engagement and debate on a number of themes implicit in the rapid transformation of and access to the communication and transmission of knowledge.

Malcolm Gladwell, author of *The Tipping Point: How Little Things Can Make a Big Difference* (2000), will examine the nature of "Success" later in the series.

The series is being recorded and will be made available online. For more information johnhumeinstitute@ucd.ie

### Executive part-time MBA in top 20 in Europe

Give it a Swirl Day 2008

A group of 25 volunteers from UCD staff and students participated in a painting project in Rosemount Court Flats in Dundrum as part of Give it a Swirl National Volunteering Day in September 2008. The UCD group joined with volunteers from the local community, Dell and Bank of America to paint stairwells, playground railings and shed doors in the flats complex on the day.

Orlaith McGourty, Manager of the UCD Centre for Service Learning, Community Engagement & Volunteering said, "The day was a great success overall. The weather was fantastic and everyone worked as a team to get as much painting done as possible. The local community were very welcoming and refreshments were provided to volunteers in the Rosemount Family Resource Centre. I was delighted with the positive response from UCD staff and students and look forward to similar events in the future".

In addition, volunteers from the UCD St. Vincent de Paul Society will be working with the local community over the coming weeks to complete any painting not finished on Give it a Swirl Day.

Give it a Swirl, an initiative of Volunteer Centre's Ireland, is a national volunteering day that concentrates on hands-on involvement in projects and activities with a "community makeover" theme. The aim of the day is to highlight volunteering and to show that volunteering, even on a once-off basis, makes a difference and can be a lot of fun.

Shown here are (l-r) Mary Finlay, Quinn School of Business; Ms Rachel McKinney, 2nd year Neuroscience student; Dr. Martin Butler, UCD Vice-President for Students; Ms. Munirah Zeidun, 2nd year Medicine student; Ms. Hazel Carrick and Ms. Leona McGarrigle, 2nd year Psychology students



The UCD Michael Smurfit Graduate Business School has been ranked 19th in Europe and 61st in the world by the Financial Times ranking of the world's top 100 Executive part-time MBA programmes. The ranking lists the School as the only Irish business school amongst the top 100 business schools in the world, up from 88th place in 2007.

UCD School has also been ranked 38th in Europe by the Financial Times Masters in Management ranking. The Community of European Management Schools (CEMS) Masters in International Management programme, of which UCD Smurfit School is one of 27 academic members, was ranked 3rd place in Europe.

The School was also ranked 16th in Europe and 40th in the world by the Economist Intelligence Unit's assessment of the world's top 100 full-time MBA programmes. The Economist ranking lists the UCD Michael Smurfit Graduate Business School as the only Irish business school amongst the top 100 business schools in the world, up from 44th place in 2007.

Professor Tom Begley, Dean of UCD Business Schools, commented on the results, saying: "We are delighted to be amongst the global elite in the prestigious Financial Times and Economist rankings. We will continue to devote resources to making UCD Smurfit School a centre of excellence in business education in Ireland and globally."

#### Irish record set at Paralympics cycling in Beijing

Michael Delaney and David Peelo set a new Irish record in the cycling sprint in the Loashan Velodrome at 13th Paralympic Games. David Peelo, the sighted pilot rider, who has been racing competitively since 1984, is a member of staff in UCD Registry. The parallel cyclists are due to compete in several more cycling events over the course of the remaining days of the 2008 Paralympics in Beijing.

Olympic style games for athletes with a disability, the Paralympics were first held in Rome in 1960. By 2004, when the games were held in Athens, the number of participants had increased from 400 athletes from 23 countries to 3,808 athletes from 136 countries. More than 4,000 athletes from 150 nations will compete in the 13th Paralympics in Beijing. The Paralympics concentrate on the athletic achievements of the participants rather than their disability.

According to the parallel cyclists, any or all of their success is due in no small part to their strong working and training relationship - Michael Delaney who has peripheral vision rather than straight, and David Peelo who is the sighted member of the cycling duo.

"A sighted pilot rider needs to be a good match for the other person, with similar technique. Both members of the team have to be comfortable pedalling at syncronised speeds and be capable of communicating effectively with each other," says Peelo. "The team flew out to

Beijing for training two weeks before the start of the Games to see how we would fare with the conditions over there." And having just set a new Irish record, it would appear that the cycling duo have settled in just fine.

Michael Delaney with David Peelo from UCD Reg set a new Irish record at 13th Paralympic Games

### UCD claim 'A Championship' title

JCD team celebrate clinching A Championships title in November.

UCD and Bohemians had contrasting seasons in the Eircom League of Ireland and went head-to-head in November to decide the overall winner of the A Championship. UCD finished triumphantly for the fourth time in six seasons after an entertaining match in UCD Bowl. Brothers Dave and Evan McMillan scored the goals as UCD came from behind to win 2-1 against a Bohs side which finished the game in extra time with eight men.

Aside from the chance to win silverware, the clubs were also competing for a prize of  $\in$  20,000, which would be handed to the winning team.

Bohemians went ahead through the boot of Paddy Madden before half-time but the students recovered well, as David McMillan scored late on before Evan McMillan sealed the game late into extra time.

UCD had started strongly and they had the game's first real chance after nine minutes when Bohemians failed to clear a corner and the ball fell to UCD striker, David McMillan who made space in the box and his powerful, goal-bound effort was well saved by Bohemians keeper, Chris Konopka.

UCD's John Reilly almost opened the scoring after 25 minutes when Sean Harding delivered a pin-point, in-swinging free-kick into the penalty area and Reilly rose highest but his effort was just over the bar.

David McMillan was causing havoc in the Bohemians defence and almost broke the deadlock after 35 minutes, when the UCD attacker collected the ball on the right wing and beat three defenders on the way to the box. However, his potent effort went inches over the Bohemians bar.

Bohemians were ahead against the run of play two minutes later. Philip McDonagh took a short free-kick from 30 yards to Ryan McEvoy who raced towards the end-ball line and crossed to Bohemians striker Paddy Madden who had a simple tap-in from six yards out, giving Billy Brennan no chance in UCD's goal.

UCD continued to dominate proceedings after the half-time break as they searched for the much deserved equaliser. Bohemians keeper, Konopka was called into action once again as he saved a powerful free-kick from Sean Harding on the hour mark. UCD defender, Evan McMillan thought he had equalised for the students after 70 minutes when his effort powered towards the top corner of the net but Konopka once again denied UCD with a marvellous save as he pawed the ball past the post.

UCD were level after 85 minutes, Keith Ward delivered a low cross into the box and David McMillan produced a delightful scissorkick from 15 yards which gave Konopka no hope in goal as they game went into extra time.

UCD grabbed the winner with 107 minutes on the clock, substitute Michael Kelly whipped in a corner from the left and Evan McMillan rose highest in the box and glanced his effort into the back of the net.

Bohemians pushed forward in search of goals but they had Robbie Ryan and Daniel Ennis sent off with minutes remaining to all but end their hopes of picking up their second Eircom League of Ireland title of the year.

UCD: Brennan, Harding, McMillan, Stevens, Boyle, Bolger, King, Ward, Nangel, Reilly, McMillan. Substitutes: Barron, Matthews (on for Nangel), Kelly, Cahillane (on for King), Purcell (on for Harding.)

Bohemians: Konopka, Clerkin, Lawless, Ennis, Ryan, Mulcahy, Nolan, McEvoy, McDonagh, Madden, Crowther. Substitutes: O'Flaherty, Foy, Farrell (on for McDonagh), Hughes, Dargan (on for Mulcahy.)

### Basketball success continues

On November 10th, UCD/Marian consolidated second spot in the Northern Conference, and pulled out a 24 point hammering of Ulster Elks.

US star, David Ryan, who is enjoying a terrific season, hit 26 points for the winners. With all players giving top class performances, both on defence and offence, it is no surprise that the boys now are 5 and 1 in the Northern Conference.

UCD settled much the better in the first quarter and raced to a 9-2 lead thanks to 3's from David Ryan and Conor Meany and an opening basket from young Scholarship Student Conor James. Elks finally got into it with Nagle and Ian O'Boyle's attempt at basket. Although it may have seemed that Marian had the upper hand, Bentley and Nagle kept the Elks right in there and it was a mere 17-16 at the end of the first.

At the start of the second quarter, an impressive double from Bentley saw Elks take the lead. UCD then were forced to up the pace. Fast breaks and exciting interplay from Meany, Finn, Parker and Ryan saw UCD push out to a twelve point lead which they maintained until half time. (46-34)

The third quarter started with young Daniel James, another UCD Scholarship student and brother to Conor, who hit a big 3 from the corner. This was followed by a two by Elks' McGahrant, which was answered even more impressively by a double break by Parker and a fine shot by Conor Meany. UCD's confidence grew as Elks turned the ball over and was beaten on the break and despite Gareth Maguire's attempts to restore parity; Marian led 79-57 at the end of the third. Daniel James continued to impress in the fourth, with McCrone and Parker.

A big crowd, including 50 budding stars from the 5 to 11 year old UCD-Marian Nursery programme, witnessed this excellent team performance from a UCD team that is going from strength to strength with each game of the season.

In the end, five UCD players made double figures (Dave Ryan - 26, Michael Parker 19, Luke McCrone 12, Conor Meany 10 & Conor James 10) and young Conor James also had an outstanding defensive display in helping to keep Elks strongman, Ian O'Boyle, a UCD graduate, to just 6 points in the game.

Even with Elks American duo of Matt Betley and Clint Nagel scoring 26 and 15 points respectively, their offensive threat was curtailed by foul trouble by the start of the fourth quarter. Again even with veteran Gareth Maguire knocking down three three-pointers in the second half, the home side held firm and took the points on an impressive score line of 98-74.

UCD MARIAN 98 - 74 ULSTER ELKS

# **stoday**

#### **UCD Special Guests**

#### L&H honour Sir George Martin and Salman Rushdie

In recognition of his lifetime achievements in the world of music as a producer and arranger, the man known as the Fifth Beatle, Sir George Henry Martin received the James Joyce award from the L&H in early October.

"I am very honoured to be asked to do this. This is a great university you have got here and this is a great thing I've been asked to do. I'm really very, very pleased," said Sir George Martin, before receiving the award.

"Sir George Martin was instrumental in providing the world with some of the finest music of our time," said Ian Hastings, Auditor of the UCD L&H Society. "His work with The Beatles and a host of other artists represents a truly invaluable contribution to music history, and as such is most deserving of the James Joyce Award".

Record producer, music arranger and composer, Sir George Henry Martin CBE, is often referred to as "the Fifth Beatle" due to his role as producer or co-producer of The Beatles' records. He is considered one of the greatest record producers of all time. In recognition of his services to the music industry and popular culture, he was made a Knight Bachelor in 1996.

Sir Ahmed Salman Rushdie was also presented with the James Joyce Award in October. Before accepting the award, the Indian-British author gave a reading from his latest novel, The Enchantress of Florence (2008), and took part in a questions and answers session with the audience of students and academics.

Rushdie first came to fame after winning the 1994 Booker Prize for his second novel Midnight's Children (1981). But it was the publication of his controversial fourth novel, The Satanic Verses (1988) that catapulted the author into worldwide recognition. Following its publication, protests were staged by Muslims in several countries across the globe, the author received countless death threats, and the Ayatollah Ruhollah Khomeini, the then Supreme Leader of Iran, issued a fatwa against the author. As a result, Rushdie spent nearly a decade largely underground, very seldom appearing in public. In June 2007, he was appointed a Knight Bachelor for services to literature. In July 2008 his novel Midnight's Children (1981) won a public vote to be named the Best of the Booker - the best novel to win the Booker Prize in the 40-year history of the award.

"Salman Rushdie receives the James Joyce Award for his truly invaluable contribution to contemporary literature and for his stalwart defence of an individual's right to freedom of expression" said Ian Hastings, Auditor, UCD Literary & Historical Society.

Previous recipients of the Award include: Hollywood comedian, Will Ferrell; Harry Potter author, JK Rowling; and former UN Weapons Inspector, Hans Blix.



### President Mary McAleese addresses Irish Diaspora Forum

### Jeremy Irons at UCD

In recognition of his work on screen and stage, Jeremy Irons has received honorary lifetime membership of the UCD Law Society. Before accepting the award, Irons took part in a live interview about his life and career with RTE Presenter, Ryan Tubridy, in front of several hundred students in a packed lecture theatre at Belfield.

Irons truly made his mark on the map through his portrayal of Charles Ryder, the archetypal Englishman, in Brideshead Revisited in 1981. He made his Broadway debut in 1984, in The Real Thing by Tom Stoppard playing alongside Glenn Close. He won an Oscar for best actor and a Golden Globe for his role in Reversal of Fortune (1990); a New York Film Critics Circle Award for his role in Dead Ringers (1987); a Tony for his role in The Real Thing on Broadway (1984) and a Best Supporting Actor Emmy and a Golden Globe for his role in Elizabeth I where he played alongside Helen Mirren (2006). Throughout his film career, Irons has continued to perform classical roles with the Royal Shakespeare Company.

"The lifetime membership is the highest honour that the UCD Law Society can bestow," said Niall Ó hUiginn, Auditor of the UCD Law Society. "It is awarded to individuals who have truly excelled in their chosen vocation or walk of life." Previous recipients of the award include: Former US President, Bill Clinton; Author, Jung Chang; and 'Lord of the Dance', Michael Flatley. Finding our place in the new world order was a common theme across economic, political, culture and philanthropy discussions at the Irish Diaspora Forum held at the Global Irish Institute at UCD in November.

An estimated 70 million people worldwide claim Irish ancestry and over one million people born on the island of Ireland live abroad. Over the past decade, the legacy of forced emigration has been replaced by the return of emigrants: some 107,000 have returned to Ireland since 2003.

Addressing the Forum, President of Ireland, Mary McAleese paid tribute to the achievements of the Irish Diaspora around the world. She went on to reflect on the rich diversity of that Diaspora and on their continued hunger for a "meaningful connectedness to one another and to Ireland."

Referring to Barack Obama's success, President McAleese said his election was "transformational in its power and scope and served as a beacon of hope not just for America but for the whole world."

The changing relationship between the US and Ireland was a key focus at the Irish Diaspora Forum.

Calling for a strengthening of U.S.-Ireland ties, UCD President Dr Hugh Brady said, "The economic changes and political peace that have taken place over the past decade have brought a new confidence to Ireland. Ever since the formation of the State, we have, through organisations such as the United Nations, played our part in the world arena. At the same time, the Irish Diaspora has shared our culture and our heritage with their new communities, particularly in the United States."

The Irish Diaspora Forum is hosted through hosted through the UCD John Hume Institute for Global Irish Studies and its partners Irish America Magazine and The American Ireland Fund. Among the speakers are Colin McCrea of Atlantic Philanthropies, the organisation set up by billionaire Chuck Feeney, Kingsley Aikins, President and CEO of the Ireland Funds worldwide, Bruce Morrison, former member of the US House of Representatives, Grant Lally, National Co-chair Irish

American Republicans, Hugo MacNeill, Goldman Sachs and John Gilmore, Chief operations officer, Sling Media.

24