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# HIGHER EDUCATION INSTITUTION OF THE YEAR

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“The passion students have for studying in UK higher education institutions never fails to delight and motivate me. From a business perspective, these students are one of the most demanding audiences around, and they become more demanding every year. This has created an exciting, dynamic market to work in, pushing all concerned to strive for excellence in every field, from initial recruitment to the quality of the academic delivery. We at Hobsons continue to dedicate our expertise to improving the global student experience of UK higher education and meeting student expectations through our portfolio of services – we are delighted to be involved in raising the profile of higher education in the UK with these awards.”

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**JUDGES:** Helena Kennedy QC; John O’Leary, editor of *The Times Higher*; Bernadette Porter, former vice-chancellor of Roehampton University

**NOMINEES**



**ABERDEEN UNIVERSITY**

Aberdeen University wants to recapture the idea of higher education as a scholarly community. Looking to the past might seem odd in a modern knowledge economy, but for C. Duncan Rice, Aberdeen’s principal, the timing is right.

“When we debate higher education, we tend to talk about issues such as student employability and how institutions contribute to the economy,” he says. “But there is not so much talk about universities’ role in traditional liberal learning and about the role the humanities and social sciences play in society.”

At the heart of Aberdeen’s scholarly community will be a £55 million landmark library, which is due to open in 2011. Rice says the building, part of a £230 million capital-building programme, will do for Aberdeen what the Guggenheim Museum did for Bilbao. “We want the library to be a beacon. It will be an explicit statement of our ambitions.”

Aberdeen hopes that its

commitment to scholarship will prove attractive. Its Sixth Century Chairs campaign has already resulted in 27 professorial-level appointments. This is the exciting future that Rice quit Manhattan for.

**KENT UNIVERSITY**

Kent University’s home page reads a little like a property portfolio – Canterbury, Medway, Tonbridge, Brussels and Transmanche. But territorial reach is less important for Kent than the fact that each name represents a distinct type of provision.

David Melville, Kent’s vice-chancellor, claims to have coined the word “multiversity” to encapsulate the strategy.

Robin Baker, pro vice-chancellor, explains that Kent wants to show that research and teaching need not polarise higher education. “We could have aspired to become a Russell Group university or an access institution. But we have strengths that can take us in all directions



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if developed properly.”

One of its most exciting sites is Transmanche, which is billed as the only Anglo-French higher education institution. Its first students, who studied at Kent and at French partner universities, graduated this summer.

Kent has also blazed a trail in widening participation with its Medway campus, near Chatham, which it shares with Greenwich and Canterbury Christ Church universities as well as Mid-Kent College.

These projects are the culmination of a decade’s work, but, as Baker says: “We feel that 2006 is our year. All the strands have come together.”

**LEEDS METROPOLITAN UNIVERSITY**

Leeds Metropolitan University has a touch of Tesco about it: both provide a huge number of quality products and services at discount prices.

Leeds Met advertised its decision to charge £2,000, instead of £3,000, a year for all its degree courses with the slogan “low-charging, high-impact”. It boasts 52,000 students, a figure that is likely to grow as a result of its decision on fees. The number of applications rose 12.6 per cent this year, bucking trends.

Steve Denton, pro vice-chancellor, says: “It is a market with many complicated messages about fees and bursaries. It must be a nightmare for 17-year-olds to navi-



gate. Our message is simple. It’s an eye-catcher.”

But Leeds Met is about more than low fees. It plans to become a regional super-power along the model of the big US state university systems. “Whether you compare it with American state universities or a Commonwealth system, the aim is to create a system that is mutually beneficial for us, partner institutions and students,” Denton says.

**LEICESTER UNIVERSITY**

Leicester is not the biggest, richest or most famous university in the UK. But by any measure, it is one of the best.

Students gave it top marks in four out of the seven categories in last year’s National Student Satisfaction Survey, and the university is confident that this year’s results will be just as good, if not better.

Leicester is ranked the 14th best institution nationally for meeting benchmarks on widening participation among disadvantaged students.

This would be achievement

**We compete in a sector of research elites and teaching-intensive universities, but we want to do both**  
 Richard Taylor,  
 Leicester University

**What brings staff in here at the weekend is self-esteem. They are hugely committed**  
 Sir Colin Campbell,  
 Nottingham University



enough, but Leicester is also rising in the research ranks. Earlier this year, it accepted an invitation to join the 94 Group of universities, which represents small research-intensive institutions.

Richard Taylor, Leicester’s director of marketing, believes the institution’s all-round excellence comes from valuing teaching as well as research and administrative skills. “We see teaching, research and administration as synergistic, not antagonistic. We believe this builds a stronger institution. Although we compete in a sector of research elites and teaching-intensive universities, at Leicester we want to do both.”

**NOTTINGHAM UNIVERSITY**

There can be only two reasons why a university car park would be half full on a Saturday – either the managers are tyrants or the staff are incredibly driven. Nottingham University is going places – notably to East Asia – and its staff want to share in its success.

Sir Colin Campbell, the vice-chancellor, is quick to praise those who have contributed to Nottingham’s considerable achievements. “What brings staff in here at the weekend is self-esteem. They are hugely committed.”

Nottingham was the last foreign university to open a campus in China last year before the country’s Government banned further overseas institutions. A week after that, it became the first overseas university to open a campus in Malaysia. The campuses allow Nottingham to expand and to satisfy its staff and students with exchanges abroad.

Sir Colin says: “We have had about 15 or 20 applications a year to open campuses abroad, but we have turned them down. We do not want to overstretch.”

There is plenty to focus on back home too, with plans to redevelop a brownfield site behind the university’s main campus for, among other things, a research and innovation park.



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# OUTSTANDING CONTRIBUTION TO THE LOCAL COMMUNITY

**JUDGES:** Sir David Watson, professor of higher education management at the Institute of Education and former vice-chancellor of Brighton University; Sir Peter Lampl, chairman of the Sutton Trust; Liz Thomas, senior adviser for widening participation at the Higher Education Academy

## NOMINEES

### LEEDS METROPOLITAN UNIVERSITY

#### Partnership with Bradford City Football Club

Just two years ago, Bradford City Football Club was facing complete collapse. The club was in administration, having been crippled by debts and demotion from the Premiership. And, while sitting in the heart of a deprived community riven by racial and social tensions, it was facing strong local criticism for failing to play its part in the "community cohesion agenda" called for by Lord Ouseley in his landmark report into the Bradford race riot.

But at this nadir in the club's history, Leeds Metropolitan University stepped in. Its experts helped lift the club out of financial ruin, and its students (about a thousand of whom have a Bradford post-

code) have helped facilitate a radical reform of the club's image and restored it to its place as a positive, cohesive force at the heart of the community.

"The club had a very, very bad reputation," says Peter Rogers, director of business partnerships at the university, who, with business development manager David Ward, a fellow MBA, provided consultancy services to help the club out of its financial mess.

The university seconded Ward, a principal lecturer, to the club. Once the club was financially back on its feet, students on placements helped provide facilities and services for the community. An events management student helped to establish a facility for weddings at the club, while others helped market its new football museum.

Among its other achievements, the university helped create a classroom at the club, which can handle sessions for more than 5,000 pupils, and it acquired £100,000 in capital and £100,000 annual revenue to create a "playing for success" study centre. (Pictured is Steve Denton, pro vice-chancellor of Leeds Met.)

### ABERDEEN UNIVERSITY

#### The Word Festival

The figures behind Aberdeen University's Word Festival speak volumes. The annual literary event injects £1.2 million a year into the local economy, attracts 10,000 participants and includes events for more than 2,000 pupils from 20 local schools.

But it is the festival's less measurable contribution to the cultural life of the city

that Aberdeen is so proud of.

"Aberdeen believes that one of the roles of universities is to contribute to the cultural life of the cities in which they sit, to not only make their own intellectual community more vibrant but to enrich the wider community," says Lori Manders (pictured), director of the university's external affairs department, who helps organise the event.

The five-day programme includes readings, workshops, music, art exhibitions, children's activities and film screenings. The event is free, in keeping with the university's remit to ensure the initiative remains inclusive.

Last May's festival featured actor and director Richard E. Grant, who gave a talk after a screening of his latest film, *The Wah Wah Diaries*, and Liz Smith, actor in the BBC television comedy *The Royle Family*, alongside established authors such as Alistair MacLeod. Children's authors Katie Grant and Debi Gliori gave readings and led games as part of the schools programme.

The event is only six years old, but it has enjoyed huge growth. Audiences have increased by 1,000 per cent since the first festival, and the number of events has risen 150 per cent since 2003.





## HERTFORDSHIRE UNIVERSITY

### Uno (formerly University Bus)

Hertfordshire University's Uno community bus service is the only one of its kind in the UK, and its fleet of 54 vehicles eclipses similar operations run by US universities.

As well as ferrying Hertfordshire's students to and from campus — as part of the university's access agenda — the service plays a key role in the wider community.

In Hatfield, home to the university's main campus, Uno carries more than 2.3 million passengers a year and provides more than 50 per cent of all public transport. It is used by 29 per cent of local residents and the public now account for two thirds of journeys. The service provides essential cross-country connections, and it fills a gap for east-west connections in a region that has good north-south links to London and back. Fares are kept low.

"As well as being financially viable, Uno plays a vital role in the social, economic and cultural life of the area it serves," says Philip Waters, the registrar at the university (pictured with Terry Neville and Michael Finn).

With "express routes" linking central Hertfordshire to the Hatfield Business Park,

where major employers such as T-Mobile, Computacentre and Ocado are housed, the service helps to prop up the local economy. It also, Waters points out, has strong green credentials through supporting park-and-ride schemes and reducing car use.

"Uno shows that a university-owned company can be successful in its own right while making a vital contribution to the local community," Waters says.

## EXETER UNIVERSITY Community Action

Student volunteers at Exeter University gave 86,000 hours of service to the community this year — the equivalent of 50 full-time workers. With the support and organisation of the Community Action service, more than 600 volunteers gave up their time to work with 350 children and elderly people, and students were placed with more than 70 voluntary organisations.

The scale of the operation is significant. But what also impressed the judges was the way the university has embedded a culture of student volunteering into the "Exeter experience". This has led to record numbers of students giving up their time this year.

A university spokesman says: "Volunteering has been going on in the university for years. But in the past two or three, we've seen a massive rise in interest and involve-



ment. It is largely down to the energy and organisation of the student guild. They have promoted it extremely well, but the organisation shines through. It is seen to have a really pronounced effect on people's lives, and our students can make a lasting contribution to the community."

The key "in-house" projects supported by Community Action are focused on helping disadvantaged young children — providing outings, swimming, sports and summer camps — and on helping isolated elderly people.

Among the 70 local agencies students work with are the Exeter Drugs Project, Exeter Prison, the Samaritans and Sexual Abuse Line.

The service — a partnership between the university, the student guild and the local volunteer centre — has been adopted as a model of best practice by the Higher Education Active Community Fund. (Pictured are community action officers Guy Meagher, Tess Nixon and Steve Moyses.)

## LIVERPOOL HOPE UNIVERSITY Urban Hope

Liverpool Hope University set up Urban Hope, a dedicated subsidiary company, to foster urban regeneration, support the development of sustainable community enterprise and to widen access to higher education. Judges were impressed by the range of initiatives that the company has conceived, project managed and delivered.

Among its many successful projects, the Life Bank building stands out. This is a massive permanent resource in

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Exeter spokesman

**As well as ferrying students to and from campus, Hertfordshire's bus service plays a key role in the wider community**



the deprived Kensington area of Liverpool that accommodates a 62-place nursery, the local Sure Start project and the local primary care trust. It also houses courses for the local community college.

Urban Hope managed the project in its entirety, from raising £3.6 million in funding from several sources, including the New Deal for Communities initiative, and commissioning the building, which has won an award.

"It is a massive resource for the community," says Martin Carey (pictured), chief executive of Urban Hope. "The project drew not only on the expertise of the university in dealing with education, social and community issues, but also on professional expertise of contract management."

The Life Bank, which opened in 2005, had more than 5,000 visitors in its first six months, provided 20 jobs to local people and is sustained by renting out other facilities in the building.

Urban Hope, which generates revenue for the university, is working on a new "community campus" development on the site of a disused reservoir near the Life Bank. A £1.6 million community-owned sports centre has been built on the site, and it is already self-sufficient.



# YOUNG ACADEMIC AUTHOR OF THE YEAR

**JUDGES:** Jon Turney, former commissioning editor (science) at Penguin Press and convener of the MSc in creative non-fiction course at Imperial College London; June Purvis, professor of women's and gender history, Portsmouth University; Alex Danchev, professor of politics and international relations at Nottingham University

## NOMINEES

**DAVE REAY**  
*Climate Change Begins at Home – Life on the Two-Way Street of Global Warming*

When Dave Reay's daughter was born, he felt depressed and helpless at the thought of the catastrophic changes to the climate that her generation would inherit. He told himself that it was down to Tony Blair and President George W. Bush to avert climate disaster; academics such as him were helpless bystanders. Now he admits that he was very wrong.

Shortly after becoming a father, Reay – a fellow of the Natural Environment Research Council at the Institute of Atmospheric and Environmental Science in Edinburgh University – began writing a book called *Climate Change Begins at Home*. "Writing it changed my behaviour mas-



sively. It was quite shocking. I had been a climate change scientist for more than ten years, but when I started looking at my own greenhouse gas emissions I was ashamed," he says. "I was not considering the internal flights I was taking. I was almost blind to the climate impact. Now I take the train."

Reay insists that his book is not about trying to send people off to live in huts for the sake of the environment. "There are so many really easy changes people can make, like switching off the television properly or driving a smaller car," he explains. "Much of the greenhouse gas emissions in the developed world come from private houses and transport."

Although he will not turn his back on his research, Reay is eager to do more popular science writing. "I'm locking myself away at weekends again to write a book for children on climate change," he says. "I am regressing to being nine again – which is not hard."

**RUTH SCURR**  
*Fatal Purity: Robespierre and the French Revolution*

While researching her PhD on the French Revolution, Ruth Scurr encountered many peo-



ple who violently disliked the thinking of Robespierre – the architect of the revolution's bloody Reign of Terror.

"That is what attracted me," says Scurr, a fellow and director of studies in social and political sciences at Gonville and Caius College, Cambridge. "He was the mysterious enemy, and it is fascinating to go across to the other side."

*Fatal Purity* is an original interpretation of Robespierre's life and his role in the French Revolution, written to appeal to a general readership. Scurr argues that Robespierre has attracted excessively partisan historiography. She strived to break away from this, "giving him the benefit of any rational doubt while never denying or attempting to excuse the consequences of his actions".

She explains: "He kept

moving through that gory river because he believed it necessary for saving the revolution. He can be accused of insanity and inhumanity, but certainly not of insincerity."

Scurr spent months poring over Robespierre's speeches and letters in an effort to understand him. But unlike many biographies, her exploration of Robespierre's life is more public than private. "He is not someone with a vivid personal life. His life is the revolution," she says. "But writing the book changed my historical sense of the revolution. Working on him and his life made me realise how intense and short that period was."

Scurr had to do more juggling than usual when writing her book because she had a baby when she was only one chapter in. "It was difficult, but I was very fortunate in that the British Academy allowed me to stretch out a three-year fellowship over five years. I was incredibly grateful for that. I could not have managed it in three years," she says.

**NICK LANE**  
*Power, Sex, Suicide: Mitochondria and the Meaning of Life*

Nick Lane prides himself on being good at telling stories. His book *Power, Sex, Suicide:*

*Mitochondria and the Meaning of Life* deals with complicated science, but his mission was always to make it accessible enough to capture the imagination of a lay audience.

"I am good at piecing disparate subjects together," he says. "I have managed to develop the belief that I can grasp a subject that I do not necessarily know a lot about at the beginning and work it into the bigger picture.

"I am trying to write for as wide a public as I can. There are not many books that really try to carry the professional scientists and the wider public as well, but that is what I am trying to do."

If his reviews are anything to go by, Lane has succeeded. *Power, Sex and Suicide* was shortlisted for this year's Aventis prize for accessible science books. And *Prospect* magazine claimed that it "explains life's workings, fabric and inner logic with a previously unapproachable coherence".

As an honorary senior research fellow at University College London, Lane has the freedom to work full time at producing books. All of his writing is research-driven, but he feels that having some distance from the lab bench helps to provide a broader



perspective. "If you are in the lab all the time, you are inevitably absorbed in the detail," he says. "Science papers are not a good vehicle for putting across complex, broad ideas. In a few thousand words, you simply cannot do it."

#### DAN TODMAN

##### ***The Great War: Myth and Memory***

Dan Todman hated Sebastian Faulkes's popular First World War novel *Birdsong*. "I not only hated it, but I had problems with it in terms of its depiction of memory," he says passionately. "But because it was about the First World War and it was presented in a very emotional context, people felt it was truth. It felt right."

In his first book, *The Great War: Myth and Memory*, Todman aims to give people more information about the texts they have already come across describing this period so as to encourage them to question and analyse their initial reactions.

The book explores how Britons have thought about the First World War over the 90 years since it began. Todman says that we are accustomed to seeing the war as horrific, ill-fought and futile, while those who experienced it were either helpless victims or doomed poets. He argues that this bears only partial resemblance to how it was understood in 1918, when it was also viewed as a miraculous victory, a worthy sacrifice and a triumph of British heroism. He looks at how we got from there to here.

Todman, lecturer in modern British history at Queen



Mary, University of London, wrote the book straight after completing his PhD and as he was getting his teaching and research career off the ground. "In career terms, probably for the next book I should retreat to something scholarly to gain status that way. But instead, the next one is a big general history of the Second World War," he says. "I never wanted to be an academic who existed in an ivory tower and wrote books that only academics read."

#### JERRY BROTTON

##### ***The Sale of the Late King's Goods: Charles I and his Art Collection***

Speaking at this year's Hay literary festival, Jerry Brotton expressed frustration about the way the Royal Collection is guarded today, with many works inaccessible to the public or available for viewing only at a steep price.

His latest book, *The Sale of the Late King's Goods*, lifts the lid on a murky world in which diplomats doubled as art dealers and where Puritans bought paintings by Titian from the public sale of Charles's collection after his execution.

Using archives from Britain and across the rest of Europe, Brotton paints a picture of the

**I had been a climate change scientist for more than ten years, but when I looked at my own greenhouse gas emissions I was ashamed**

Dave Reay

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Dan Todman

king and his court against the background of political turmoil and civil war, as well as offering a history of the evolution of art collecting in England.

The book was shortlisted for this year's £30,000 Samuel Johnson Prize for Non-Fiction, and it received considerable praise from a number of broadsheet reviewers. *The Times Literary Supplement* said: "Brotton writes with transparency, verve and panache: undaunted by a vast quantity of research material, he steers a rapid course under full sail through an ocean of facts." *The Times* described the book as "provocative" and "fascinatingly detailed".

Despite his youth, Brotton already has a strong public profile. As well as having published a string of books about the Renaissance, he writes for several magazines and makes regular appearances on *Newsnight Review*. He has also contributed to the BBC documentary *Leonardo* and Channel 4's *The Medici*.

The senior lecturer in Renaissance studies at Queen Mary, University of London, is currently on a sabbatical funded by the Arts and Humanities Research Council while he works on a book on Shakespeare and Islam.







# YOUNG RESEARCHER OF THE YEAR

**JUDGES:** Dame Nancy Rothwell, MRC research professor and vice-president of research at Manchester University; Philip Esler, chief executive of the Arts and Humanities Research Council; Peter Atkins, SmithKline Beecham fellow and tutor in physical chemistry, Lincoln College, Oxford

## NOMINEES

### PAUL CAMPBELL Dundee University

Paul Campbell pounds the streets of Dundee each week in preparation for the Marathon des Sables, a six-day, 240km race across the Sahara Desert in Morocco. The physics lecturer is running in the legendarily gruelling event to promote physics. "I want to raise awareness of what physicists do in the real world and how useful physics is," he says.

No mean feat. But it's no match for his discovery of a less costly "sniper" treatment for cancer that could, subject to clinical trials, be available within five years.

Campbell's team discovered that tumours can be targeted and destroyed by a single blast of ultrasound. The targeting is done by gas bubbles that, when injected intravenously, naturally cluster around cancerous cells. The bubbles can then be stimulated by a burst of high-intensity ultrasound energy that causes them to puncture and kill the cells.

Campbell used ultra-fast imaging technology employed by the Army to capture the millionth-of-a-second event on film. "The camera's speed is 200 million frames per second, but it takes only



eight frames — so it had to be right on the money," he says. "We proved what was happening at this microscopic level for the first time."

He now has £2 million to extend his research and hold on to the expert team he has built. "It's very versatile science and could be used for DNA vaccination or bespoke stem-cell therapy, depending on the level of ultrasound," Campbell says.

"When physicists work with biologists and surgeons, you get workable results really quickly. I've thrived on Dundee's push to work towards big goals in medicine in an interdisciplinary way."

### SAMUEL CHAMBERLAIN Cambridge University

Few people can boast of publishing a research paper in *Science* before having completed a PhD. Samuel

Chamberlain can; moreover, the 25-year-old Cambridge University medical student, whose pioneering work explores the neurological basis of self-control, has had more than 15 articles accepted for publication.

Chamberlain found that increasing brain levels of noradrenaline — a naturally occurring chemical that prepares the body for physical activity such as fighting or fleeing — in healthy volunteers allowed them to better control their behaviour.

"People with several psychiatric conditions have problems suppressing inappropriate behaviour," he explains. "My findings shed light on how certain drugs work in treating impulsive behaviour."

In a separate study of obsessive compulsive disorder and trichotillomania



(repetitive hair-pulling), Chamberlain first scanned the unaffected relatives of patients with either condition to work out how different parts of the brain responded to the drugs. His findings suggest possible new ways to treat the disorders. After he finishes his medical studies next year, Chamberlain hopes to combine clinical practice with research. "I'm interested in finding out how the human brain works when it's healthy and when it's diseased," he says.

"Psychiatry is such a young science and not very evidence-based compared with other areas of medicine."

He feels that there is a lot of scope for applying findings from neuroscience research to clinical practice. "Any study you do is a leap forward because we understand so little about the human brain," Chamberlain says. "It's only recently that we've had brain scanning that allows you to get to the base of all these conditions."

### PHILIP COWLEY Nottingham University

Philip Cowley is one of those rare academics who is as well respected within academe as he is sought-after outside it.

The Nottingham University



reader of politics is regularly quoted by broadsheet and broadcast journalists for his analysis of parliamentary voting behaviour. "As I have got older, I have become more of a zealot about the importance of disseminating research," he says. "It frustrates me how few academics do that."

Cowley has several big books to his credit, but it is his most recent — *The Rebels: How Blair Misled his Majority* — that made him a public name. In that work, Cowley examined the relationship between the Government and its backbenchers, predicting outcomes that were realised when the Government lost its first vote in the House of Commons in eight years.

But Cowley is more proud of the website he created — [www.revols.co.uk](http://www.revols.co.uk). It allows a wider audience access to his research, and it gets hundreds of hits every day. And although his academic work is still focused on backbench behaviour, his mainstream profile will grow when he replaces David Butler as co-writer of *The British General Election of...* books, which he will write with Dennis Kavanagh of Liverpool University.

Cowley's future research plans include a study of how

politicians view politics. "They often have an inner logic that they all understand and other people [beyond their circle] do not, so I want to explain that to people outside," he says.

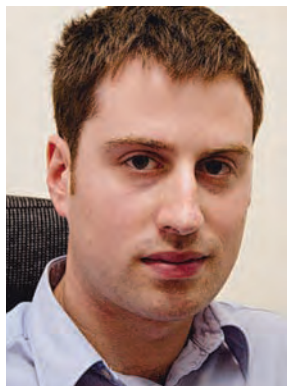
This determination to share his expertise drives Cowley, and he hopes that his being shortlisted will encourage others to do the same. "It's gratifying to know that my efforts are recognised. And how beautiful it is to be officially still young at 37."

#### **JAMES RUBIN** **King's College London**

James Rubin has unravelled the mystery behind why some people report painful symptoms when they use mobile phones.

The lecturer at the Mobile Phones Research Unit at King's College devised a simple experiment to show that electrosensitivity — in which people in contact with weak electromagnetic fields report discomfort — is not a physiological problem but rather a psychological one. "I love that moment when the results flash up and suddenly you know something that no one else does," he says.

Rubin exposed people who reported sensitivity to mobile phone signals to a device with a pulsing mobile phone



signal, a non-pulsing signal or no signal. Volunteers reported severe symptoms in all three cases, lending weight to a psychological explanation for the phenomenon.

"If you're anxious about something, that anxiety can cause symptoms. You monitor yourself quite closely. That can act as a self-fulfilling prophecy and work in a vicious circle to create symptoms," Rubin explains.

This study and others he has done have pushed Rubin to the forefront of research in the field. Now he has funding to replicate and extend his work and test whether a simple explanation of his results has beneficial effects for his original volunteers.

"Regardless of what the issue is, these people need some kind of treatment for symptoms they really do feel," he says. "Cognitive behaviour therapy to explore what else might be causing them to be ill could be useful. I'd like to follow that up."

#### **DANIELLE TURNER** **Cambridge University**

Brain power is a key factor in determining whether people with schizophrenia will recover and be able to live independently.

Danielle Turner, a Cambridge University psychopharmacologist, found evidence that stimulant drugs such as modafinil and methylphenidate (aka Ritalin) can enhance mental performance with minimal side-effects.

"Showing that it is possible to improve short-term memory in patients with schizophrenia has been a highlight," she says. "My research showed for the first time that it



**I'm interested in finding out how the brain works. Psychiatry is a young science and not very evidence-based compared with other areas of medicine**

Samuel Chamberlain

**Politicians often have an inner logic that they understand but others beyond their circle do not; I want to explain that to people outside**

Philip Cowley



is possible to improve cognitive performance in patients with chronic schizophrenia, which not only gives us more insight into understanding schizophrenia but also offers hope to the thousands of patients with the illness."

While working on her PhD, Turner published nine papers of original research on cognitive enhancement, which attracted widespread media interest. This sparked a great deal of academic interest, too. Her 2003 publication on the cognition-enhancing effects of modafinil was the most highly cited research paper that year in the journal *Psychopharmacology*.

Since graduating, Turner has embraced the ethics of neuroscience and has been examining the wider moral and social implications of her research. Her work has been instrumental in describing the current state of science and setting guidelines for overcoming some of the dilemmas faced by neuroscientists.

Turner's research has won plaudits both in the UK — from the Royal Society and the Royal Institution — and abroad; she recently won the first fellowship in cognitive enhancement from the Californian Centre for Cognitive Liberty and Ethics.



# BUSINESS INITIATIVE OF THE YEAR

**SPONSOR:** MICROSOFT

**JUDGES:** Sir Richard Branson, founder of the Virgin Group; Arthur Francis, dean of the School of Management, Bradford University

## NOMINEES



**EXILICA  
Coventry University**

Daniel Lynch (pictured) is looking forward to the day when he can approach a total stranger, point at his or her shirt, say, "That smells nice, doesn't it?" and then explain that his technology made it possible.

The Coventry University academic has invented a range of polymer micro-beads and silica nano-shells that store chemicals for release later. The slow-release mechanism can dispense a fragrance for weeks, so shirts smell fresher for longer. But its uses will not be confined to hygiene and fashion.

Exilica, which Lynch set up last year, is exploring applications that range from improving the efficiency of fuel production to controlling drug delivery. "Companies are approaching us with ideas of how our technologies could help them in ways we had not dreamt of," Lynch says.

This is Lynch's first company. He is keen to learn the business, but he insists that he will never wear the general

manager badge. "I am a scientist. I am the inventor. I want to give Exilica the best opportunity possible to work, and that includes me not getting involved in areas where I might mess up."

**DIAGNOSTIC  
MONITORING SYSTEMS  
Strathclyde University**

The academic pedigree of Diagnostic Monitoring Systems – which evolved out of Strathclyde University – since it was established in 1995 can help to attract customers. But the spin-off, which is the world leader in detecting insulating defects in power substations, cannot afford to be viewed as an ivory-tower operation. "You have to be seen to be independent and commercially run," says John Pearson, managing director and co-founder.

DMS has left the campus to emphasise its independence, and it is thriving: in the past three years, turnover has risen more than 270 per cent, from £1.4 million to £5.1 million.

Pearson says that the decade he has spent developing the business has been exciting. Yet he admits to a



# Sponsored by

certain nostalgia for academe, where he previously worked as an engineer. "Mostly I miss the research. I miss pottering in the lab."

The company retains some academic links — the founders commission research from Strathclyde. (Pictured is DMS president Brian Hampton accepting a prize from Glasgow's Deputy Lieutenant Rajan Madhok.)

**SMART SURGICAL APPLIANCES**

**Imperial College London**

Surgeons have for years made do with some instruments that do the job but are far from perfect. To open a blocked oesophagus, for example, they can insert a balloon. But without being able to gauge accurately the pressure being applied, the balloon could overinflate and rupture the oesophagus.

To address this, business-minded surgeons at Imperial College London have developed the "smart bougie". This device, which can dilate a narrow area such as a blood vessel, has sensors that display the pressure being placed on the structure. "The risk of tearing the oesophagus is reduced if you know what is going on," says Omar Aziz, a surgical trainee who helped set up the company with his PhD supervisor, Ara Darzi (pictured), a professor of surgery.



Darzi admits that the business exists to make money. He says the smart bougie will provide an annual income of £15.9 million by 2010. But he is also determined to improve surgical safety and results. The company plans to use its links with medical manufacturers to drive deals to develop other appliances.

Both men insist that they must stay in surgery when the business takes off. "I have to balance business and surgery," Darzi says. "The surgery is where the creativity comes from. The company will just channel these ideas."

**SYRINIX University of East Anglia**

Paul Linford, the founder of University of East Anglia spin-off Syrinix (pictured with Vic Lee, Andrew Jessop, Hal Belmonte, Chris Harrison and Alex Palmer), describes the venture as a "university dream ticket". His company has developed signal-processing techniques and equipment to detect tiny leaks that could wreck trunk water mains.

**I have to balance business and surgery. The surgery is where the creativity comes from. The company will just channel these ideas**  
Ara Darzi



Linford, who began his academic career in speech-recognition research, was set on the commercial road with a blue-skies research contract on water engineering. His success in the area piqued the interest of Thames Water, which offered his team a consultancy project. By the end of that, Linford had the makings of a lucrative business.

He won a £10,000 business scholarship to help him get started. "It wasn't a great deal of money, but it kept me afloat while I was making pitches." Syrinix recently moved from the campus to a workshop. "We've taken the plunge. We are properly spun out now," Linford says.

**SYNTOPIX Leeds University**

It takes many years and many millions of pounds to test new drugs. But Syntopix, a Leeds University spin-off, has found a way to fast-track drug development.

Jon Cove and Anne Eady, a husband-and-wife team of microbiologists (pictured), created the company to find

new treatments for inflammatory skin conditions such as acne and eczema. But instead of studying new compounds, they are investigating the antibacterial properties of familiar compounds, such as food preservatives, already proven to be safe for humans.

The treatment of skin problems is big business. Acne is not just a teenage complaint; the incidence is rising among adults. The global prescription market for acne is forecast to top £3 billion this year. In March, three years after its launch, Syntopix floated on the London Stock Exchange and raised £4 million.

Rod Adams, the chief executive, says: "There are lots of products on the market for acne. But 90 per cent of them do not work. Ours will do what it says on the label."



**Microsoft®**



# RESEARCH PROJECT OF THE YEAR

**JUDGES:** Dame Nancy Rothwell, MRC research professor and vice-president of research at Manchester University; Philip Esler, chief executive of the Arts and Humanities Research Council; Peter Atkins, SmithKline Beecham fellow and tutor in physical chemistry, Lincoln College, Oxford

## NOMINEES

### ROBOTIC FISH

#### Essex University

The robotic fish that Huo-sheng Hu (pictured) and Essex University's Human Centred Robotics Group created were so lifelike that they fooled onlookers on their first public outing at the London Aquarium last October.

"Some tourists who were there thought the fish were real," Hu says. Even some experts with years of experience said they had never seen anything like it, Hu adds.

The fish, the most advanced robots of their kind in the world, have been three years in the making. Those robots that took the plunge in the London Aquarium under the gaze of the world's media are the ninth generation developed since the project began in January 2003.

Each robot contains four computers, five motors and



more than ten sensors, which allow them to swim safely, avoid objects and react to their environment much like real fish. They have the speed of tuna, the acceleration of pike and the navigational skills of eels.

The main aim of the project was to bring the public into contact with robots and increase people's understanding of science and technology, although the technology could also be applied to exploring the sea-bed, detecting leaky oil pipes or even spying.

The project was a great way to inspire children to take up science, Hu says. "We see the decline in applications for science and technology courses, and we are trying to attract young people to this area. This is a really good platform for that. We wanted to make the public understand what robotics can do for us. The 21st century will be the robotic century."

### INVISIBLE CLOAK

#### Imperial College London

Within 24 hours of publishing their paper in *Science Express* earlier this year, Sir John Pendry (pictured) and his two American collaborators had caught the world's imagination.



The team demonstrated the theoretical possibility of cloaking an object with a material to render it invisible.

"I suppose it was all down to J. K. Rowling [and her Harry Potter books], not my physics," Pendry says of his invisibility theory.

The theory is based on the light-bending properties of "metamaterials", man-made composite substances that contain minute metallic substructures. If these are designed to have an anisotropic refractive index — a measure of the ability to warp light in certain directions — they could change the path of electromagnetic radiation in a way that renders an object covered by the cloak invisible.

"If you want to hide something, you have to stop light hitting it or it will bounce off and you will see it. But it must not cast a shadow, and that is

much more difficult," Pendry says. "When you have steered the light around the hidden object, it has to emerge on the far side travelling in the same direction as before."

David Smith, Pendry's collaborator at Duke University in the US, has made the theory a reality. He has fabricated a version of the "invisible cloak" that works for radar waves.

"The first applications will, unfortunately, be military, as with all these things," Pendry says. "Conventional stealth makes an object absorb radar waves so you cannot see it in reflection, but that is a much simpler technology than the one we are aiming for."

### GENEALOGY

#### University College London

Paul Longley and University College London's spatial literacy team have changed the way people think about where they come from and the social structure of modern Britain.

The team devised a quantitative analysis of surnames from two snapshot years — 1881 and 1998 — to uncover the effects of migration and changes in the workforce on Britain's social structure.

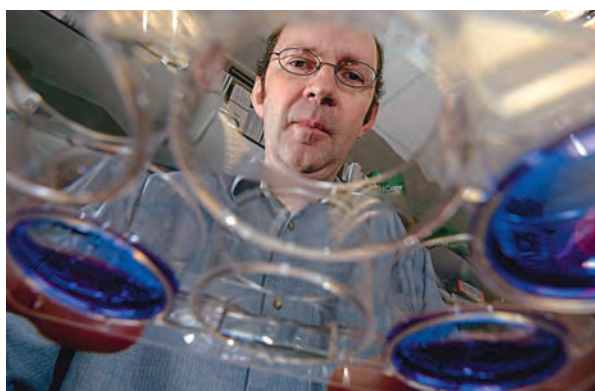
The research revealed the home areas of individuals from a given bloodline and

showed how that may have affected their social standing and life chances today.

Most surnames in Britain are concentrated geographically. Mapping where they end up gave a unique picture of migration patterns across the UK and Ireland, while present-day data for each of the 25,000-plus surnames allowed the team to measure socioeconomic status and lifestyle.

The researchers created a website through which people can trace the geographic origins and status of their names and see where others with the same name have ended up. The website was responsible for the project's taking off, says Longley (pictured with Alex Singleton and Daryl Lloyd). "When it appeared on the BBC website, we had 200,000 hits in a day. A name is a statement in lots of different ways. You can get a good idea of who has moved where and in what sorts of numbers."

The project's first stage was backed by just £45,000. Now that links have been forged with geneticists and with the public, the team is being financed by a US computer firm to give the website a global reach. Soon, people the world over will be able to



trace their origins and the emigration patterns of their kin.

#### **ECZEMA GENE** **Dundee University**

Tenacity led Irwin McLean's team to find the principal gene that lies behind eczema and asthma, which is sometimes associated with it. McLean (pictured) says the filaggrin gene they isolated was particularly difficult to analyse. "It is much worse than others because it has an unusually plain and repetitive DNA sequence," he says. "It is very difficult to know when you have isolated part of the gene and what part you have isolated. We ended up cracking the gene where other labs had given up on it. I'm glad we persevered."

The gene produces a protein called filaggrin, which is normally found in large quantities in the outermost layers of the skin. This protein is essential for the skin's barrier function, helping to form a protective surface layer that keeps water in and foreign organisms out. The team found that reduction or absence of filaggrin in the skin is likely to be a major cause of skin complaints.

At present, eczema is treated with creams and ointments to prevent the skin

drying or with drugs to reduce inflammation. The team's discovery opens the way to develop new and more effective ways to tackle the root cause of the condition, rather than just treating the symptoms.

"We realised what we had, and we were scared of someone else being on the trail," McLean says. "It was beyond paranoia. Every week we were looking at the big journals to see if anyone else had found it." Their success has had an electrifying effect on the scientists. "Morale in the department is incredibly high," he says.

#### **CASSINI** **Queen Mary,** **University of London**

Discovering a new moon of Saturn would be achievement enough for many scientists, but not for Carl Murray (pictured with Kevin Beurle, Mike Evans and Nick Cooper). He and his team from the astronomy unit at Queen Mary also detected the possible presence of water — and therefore the potential for life — on another of Saturn's moons, Enceladus.

Murray and his group are the only British academics working on the Imaging Science Subsystem team of the

**I suppose the invisibility theory was all down to J. K. Rowling and her Harry Potter books, not my physics**  
Sir John Pendry

**When the project appeared on the BBC website we had 200,000 hits in a day**  
Paul Longley

\$3 billion multinational *Cassini* mission to Saturn, which arrived in orbit around the ringed planet in July 2004.

The images his team have planned, taken and sent back to Earth for analysis have helped with the navigation of the spacecraft as well as furthered our understanding of space science. They have also been instrumental in boosting interest in space exploration.

Polydeuces, the moon the team discovered, emerged from images taken in October 2004. "In February 2005, Cassini came within 6,000km of it, and that's far too close for comfort," Murray says. "The images tell us something about the physical properties of Saturn's rings so we can deduce something about the size of particles."

Images from the mission are released almost daily. In one, the Sun was almost behind Enceladus, which appears as a crescent. "At the South Pole, you could see enormous plumes coming out," Murray explains. "When we did the physics calculations for those jets, the temperature was close to 0°C so we were talking about the possibility of liquid water, which is phenomenal. That's the origin of life."





# OUTSTANDING CONTRIBUTION TO LEADERSHIP DEVELOPMENT

**JUDGES:** Linda Holbeche, director of the Campaign for Leadership, Work Foundation; Baroness Rennie Fritchie, consultant on strategy and leadership; Sir David Watson, professor of higher education management at the Institute of Education, University of London

## NOMINEES

### LEEDS UNIVERSITY

The leadership skills of a wide range of staff at Leeds University are being developed through a five-year strategy called Tomorrow's Leaders, which is designed to encourage more women and ethnic-minority staff to rise through the ranks.

Matthew Knight, director of human resources, says: "There is no magic wand. One in eight of our professors is female, and we are aware that women are desperately underrepresented in leadership positions. We are keen to correct this imbalance."

All faculties and services in the university must identify future leaders early and put them forward for the initiative. Leeds uses a two-stage selection process, with faculty and service panels nominating people who are considered by a steering group.

"We have been running this course for four years. It has a good reputation, so

people are keen to come on it," Knight says. "We have more applications than places, but people can always reapply if they are not successful."

Selected candidates join an 11-month programme. They develop a personal leadership plan with the help of an online "360 degree" feedback process in which colleagues comment on their strengths and weaknesses anonymously. Candidates draft self-development programmes, attend workshops and work with mentors.

"The vice-chancellor and other senior staff run some of the sessions, so it is a great opportunity for these people to meet the senior team," Knight says. "This gives the programme great credibility."

In 2005-06, all nine faculties and services participated in the programme. Of the 42 staff who took part, 79 per cent were academic and the rest academic-related. Most

participants have been male.

By 2010, the university hopes to have well-trained leaders in all key academic and service roles and more women in leadership. (Pictured are team members Paul Heaton, Penny Hatton and Joanne Ashby.)

### NEWCASTLE UNIVERSITY

Newcastle University's submission to the Award for Leadership Development was rather blunt: "Historically, academic leadership appointments were made 'papally', using soundings and nominations, and any leadership development took place subsequently. This was patently not sufficient in an environment where more is expected of leaders than ever before."

Over the past few years, Newcastle has reversed the situation. In 2005, it won a leadership foundation fellowship. Tony Stevenson, pro vice-chancellor for planning and resources (pictured), says: "The use of rotating headships in old universities can create problems. The wrong choice can destroy a department quickly as people vote with their feet."

Newcastle has introduced a framework that outlines the key leadership qualities as identified by staff. Prospective leaders attend a two-day



programme where they are measured against the framework. After feedback sessions, the participants produce personalised leadership development plans spanning one to two years. The university now wants to extend this approach to administrative areas.

On the scheme's benefits, the submission was again blunt: "This work has given the university more confidence that, in a culture where leadership roles were accepted reluctantly, leaders at Newcastle are more likely to develop the appropriate skills to lead in higher education over the next five to ten years. Hopefully, they will also do it more willingly!"

### OXFORD BROOKES UNIVERSITY

The management programme at Oxford Brookes University is aligned with UK-wide qualifications, which



allows participants to gain national accreditation for their achievements. The university has also introduced an element of drama to training.

With the help of a £330 million injection in 2000 from the Government to improve human resources management, Oxford Brookes set about developing its core management and leadership programme. The programme is informed by and aligned to new national occupational standards for leadership and management that were introduced by the Management Standards Centre in 2005.

The programme, which is aimed at academic and non-academic staff, allows established and emerging leaders to work towards nationally recognised qualifications such as chartered manager status — a more practice-based qualification than the MBA.

Oxford Brookes has worked with local further education providers to provide external mentor support. It has run a programme of one-day workshops throughout the year.

"We also employed actors, who use forum theatre techniques to play out higher education and Oxford Brookes-oriented management scenarios so that participants can apply their knowledge to direct a particu-

lar situation to a useful conclusion," says David Langston, staff developer at the university's Centre for Staff and Learning Development. (Pictured are team members Anna Meachin, Dave Langston and Kay Tillyer.)

#### **ROBERT GORDON UNIVERSITY**

In 2002, Robert Gordon University set out to improve the leadership skills of senior managers. Two thirds of its 60-strong senior management team have so far been through the programme.

"We introduced a '360 degree' feedback process," says Neville Brown, human resources manager (pictured with principal Mike Pittilo and director of human resources David Briggs). "This is widely used in the private sector, and it represented a culture change here."

In this process, an individual is assessed by his or her boss, peers and subordinates for qualities and behaviours deemed vital to the university's mission. "We use an external consultancy to carry out this process," Brown says. "The agency looks at all the comments and then helps individuals assess their skills and development needs. Comments cannot be traced back to individuals, so people can be very honest."

Robert Gordon is also developing a framework for good management practice — in effect a management and leadership standard. The framework is critical to the university's leadership development plans; it also forms a starting point for all future management and leadership development activity.



The scheme is voluntary, but it has nevertheless attracted most senior managers, academic as well as academic-related. "It can be difficult to get academics on to management training," Brown says, "so we are pleased that we have managed that here."

#### **SOUTHAMPTON UNIVERSITY**

At Southampton University, the Future Leaders programme is designed around the needs of participants. The scheme, run by Ashridge Consulting in collaboration with Tony Cooper, head of staff development at the university, changes each year as the cohort changes.

"We do not subscribe to the traditional 'this is how you manage' approach," says Vanessa Helps, an associate at Ashridge Consulting (pictured with Tony Cooper and Robert Dickson). "We spend a lot of time talking to the university and the participants before they arrive, making sure that we will meet people's needs."

About 30 people have been through the programme this year. "They are very much the people whom Southampton sees as its future leaders," Helps says. "Participants get the opportunity to meet other exciting people from across



**There is no magic wand. We are aware that women are desperately under-represented in leadership positions**

Matthew Knight,  
Leeds University

**This has given the university confidence that leaders at Newcastle are more likely to develop the skills to lead in higher education. Hopefully, they will also do it more willingly!**

Newcastle University



the university. We organise people into trios during the programme so that they can visit each other's departments, even shadow each other."

This year's programme was broken into three modules. The first was a welcome dinner, which offered delegates an opportunity to establish informal networks.

The second module ran over two days and allowed participants to discuss key management issues and focus on difficult situations. "Participants generally want these sessions to be confidential," Helps says. "The idea is that they can be frank about the problems they face. We do not use case studies — we take real-life examples."

Actors are also brought in to rehearse difficult conversations and scenarios.

The third module began with a conversational dinner between the participants and the university executive group. Three participants took responsibility for leading the conversation. The next day was spent "making sense" of the conversations.

Helps says: "The fact that senior management participate in the programme is crucial. We have found Southampton to be a very professional university with a great reputation for producing leaders in higher education."







# OUTSTANDING SUPPORT FOR EARLY CAREERS RESEARCHERS

**SPONSOR:** RESEARCH COUNCILS UK

Iain Cameron, head of the RCUK Research Careers and Diversity Unit, says: "The research councils are committed to enhancing the quality and output of the UK research base. Our sponsorship of this award signals our commitment to helping research organisations improve the quality of research training, the employability of researchers and the attractiveness of research careers."

Janet Metcalfe, director of RCUK's UK GRAD Programme, says: "The UK GRAD Programme is committed to supporting individual researchers to reach their full potential, both in their research and their future careers. Enhancing the provision of skills development is key to achieving this, and *The Times Higher Awards* provide a great opportunity to highlight some of the really excellent developments that are taking place in this area."

**JUDGES:** Gareth Roberts, FEng, FRS, and president of Wolfson College, Oxford; Julia Goodfellow, chief executive of the Biotechnology and Biological Sciences Research Council; Bob Burgess, vice-chancellor of Leicester University

## NOMINEES



**OXFORD UNIVERSITY**

In 2005, Oxford University committed itself to improving the management and career development of staff. A vital part of the plan was setting up an "integrated, multi-level strategy" for contract staff. Last autumn, Oxford's first pro vice-chancellor for research convened the contract research staff working group.

By April, the university had a broad-ranging protocol for managing researchers. Induction events for new staff have been set up, as has a webpage for research staff. Oxford has run two large conferences on transferable skills for research staff

and a series of smaller events.

Jonathan Wyatt, professional development adviser at the Oxford Learning Institute (pictured with Christina Redfield and Ewan McKendrick), says: "As the central university structure has become more active and efficient, so have groups organised by contract researchers."

A recent unsolicited e-mail from a contract researcher reveals the impact being made: "I wanted to say how much I appreciated events such as the contract research staff induction session... and the independent researcher seminar. I've never worked where so much directed and relevant support and information is given to research staff."

**EDINBURGH UNIVERSITY**

The initiatives that Edinburgh University has devised to improve the skills of everyone from PhD students and young postgraduates to more experienced contract research staff have been so successful that some are being adopted nationwide.



The Research Councils are committed to enhancing the quality and output of the UK research base through training the next generation of world-class researchers. Our sponsorship of the award for support for early career researchers signals our collective commitment to assist research organisations to improve the quality of their research training, the employability of researchers and the attractiveness of research careers by promoting improved career development and planning.

Among them was a two-day course on how to be an effective researcher, which arms students with vital skills early in their PhD. Edinburgh has been collaborating with other Scottish universities and UK GRAD, a body set up to develop postgraduates' skills, to improve the course and offer it to universities nationally.

Mary Bownes, vice-principal for postgraduate issues (pictured with Jon Turner), says: "Our initiatives are designed to take PhD students and postdocs right through from their early research days to research careers." The university has piloted interactive induction sessions that allow first, second and third-year students and supervisors to share experiences and identify training needs. Staff are offered an introduction to professional development and career planning.

**IMPERIAL COLLEGE LONDON**

Imperial College wants to build a solid research base to inform its training policy. It has offered bursaries to those who want to pursue research into transferable skills and has assigned two academics to the subject.

Bernie Morley, director of the Graduate School for Life Sciences and Medicine (pictured with Esat Alpay and Dame Julia Higgins), says: "The senior lecturers have worked to ensure that



courses meet the needs of our PhD students."

They have also devised means to measure skills. "It can be difficult to gauge whether a student has really learnt new communication skills, for example," Morley says. "We now have considerable data from our evaluation forms, and one of the two students will evaluate it."

One of Imperial's most successful courses is a three-day residential research skills course designed to make first-year students effective researchers. Imperial will launch similar courses for second and third-years.

Morley says: "These efforts have led to fundamental changes in the culture, whereby skills development is no longer viewed as something that is bought in or tagged on, but something that staff across the college work together to produce."

**PLYMOUTH UNIVERSITY**

Plymouth University wants its researchers to develop transferable skills so they can hit the ground running.

It's a personal goal for Chris Wood, the student liaison officer in the university's gradu-

**Our initiatives are designed to take PhD students and postdocs right through from their early research days to research careers**

Mary Bownes, Edinburgh University

**We see contract researchers as employees rather than students**

Christian Carter, Bristol University



ate school, which uses professional staff to deliver courses to PhD students and to young researchers. It also works closely with personnel, the educational development and learning technology group, the IT training group and the School of Mathematics and Computing.

Plymouth has developed a staff/graduate portal that offers researchers up-to-date information and allows the university to track researchers. "If a new PhD student books on to a block of courses, this shows up centrally," Wood says. "We usually ring them then to make sure that they are booked on appropriate courses."

More than 80 per cent of attendees have said that they would recommend the training courses to colleagues. (Pictured is Mick Fuller, head of Graduate School.)

**BRISTOL UNIVERSITY**

Bristol University's treatment of its 1,100 contract research staff has earned it an enviable

international reputation. It was the only UK university named among the top ten best places to work in a 2005 poll of academics in the US magazine *The Scientist*.

The annual survey of research staff that Bristol developed is now run in 43 higher education institutions across the UK. Using data stretching back to 1999, Bristol can see continuous improvements in induction schemes, staff review processes, training workshops and careers advice.

Christian Carter, the university's personnel manager for staff development (pictured with Natalie Smith and Sarah Musson), says training programmes and workshops for contract research staff are separate from those for PhD students. "We see contract researchers as employees rather than students."

Bristol's annual staff conference is a big draw. "We use it to enhance communication and debate between researchers, university managers and policymakers from inside the university and elsewhere," Carter says.

The university has also developed a network of research staff departmental representatives.



The RCUK Research Careers and Diversity Unit funds a number of schemes to support early career researchers, including RCUK Academic Fellowships, the UK GRAD Programme and the Dorothy Hodgkin Postgraduate Awards.

For more information about the work of the Unit, Contact its Head, **Dr Iain Cameron, on 01793 444038, iain.cameron@rcuk.ac.uk, or visit www.rcuk.ac.uk**



Together in Research



# BEST STUDENT EXPERIENCE

Last year, *The Times Higher* commissioned Opinionpanel, owner of The Student Panel, to run the survey for its first Student Experience Award. After polling more than 10,000 students, Swansea University came out top based on responses to a five-part questionnaire.

This year, the survey has been developed and refined. We began by asking a representative sample of 1,000 current students to tell us, in their own words, what they would say for and against the student experience at their university. Replies were condensed into a three-minute online survey that covered 21 aspects of the university experience.

We also added a new question: "Would you recommend your university to a friend?" Many business experts see this question as the best predictor of future organisational growth and success, and it is widely used as a proxy for

## TOP TEN INSTITUTIONS (In alphabetical order)

- Cambridge University
- Leeds University
- Liverpool University
- Loughborough University
- Oxford University
- St Andrews University
- Sheffield University
- Stirling University
- Swansea University
- Warwick University

customer satisfaction. We could have asked just this one question, but we needed more detail to ensure that the full range of student experience was being measured and that recommendations were not being driven by non-experiential factors such as a university's reputation.

The new questionnaire was administered online to more than 6,931 full-time undergraduate students at 140 different institutions. We calculated average institutional scores for each of the 21

attributes and applied a weighting system to ensure that attributes most closely correlated to recommendation had the biggest impact on overall scores. Attributes with high correlations were weighted by two; those with low correlations were weighted by one; and other items were weighted by 1.5.

Results for institutions with fewer than 50 responses were suppressed, leaving 94 universities in the final analysis. Fieldwork took place between April and September 2006, and the sample comprised 26 per cent first-year students, 36 per cent second-years and 38 per cent third-years or higher. It was nationally representative in terms of gender.

The top ten universities are listed above. The winner will be announced at the awards ceremony on November 15.

**Ben Marks is managing director of Opinionpanel.**



## THE QUESTIONNAIRES

The **2005 questionnaire** was based on Agree/Disagree responses on a ten-point scale to the following questions:

- "My course is very stimulating"
- "Overall, I find the library and IT facilities at my university to be first rate"
- "I really enjoy my social life at my university"
- "The time I spend at my university will stand me in good stead for the future"

■ "Overall, my student experience at my university has exceeded my expectations"

The **2006 questionnaire** was based on Agree/Disagree responses on a seven-point scale to the following question: "Based on your experience, how strongly do you agree that your university offers the following? (post fieldwork scoring weights in brackets after each attribute)

- High-quality staff/lectures (2)
- Helpful interested staff (2)
- Well-structured courses (2)
- Good social life (2)
- Good community atmosphere (2)
- Good environment on campus (2)
- Good extracurricular activities (2)
- High-quality facilities (2)
- Personal requirements catered for (2)

- Good student union (1.5)
- Good support/welfare (1.5)
- Good relationship with teaching staff (1.5)
- Centralised facilities (1.5)
- Industry connections (1.5)
- Cheap shop/bar (1)
- Tuition in small groups (1)
- Good accommodation (1)
- Fair workload (1)
- Security (1)
- Sports facilities (1)
- Library (1)



# OUTSTANDING STUDENT FINANCIAL SUPPORT PACKAGE

**JUDGES:** Sir Martin Harris, director, Office for Fair Access; Geoff Layer, pro vice-chancellor (learning and teaching), professor of lifelong learning and dean of school, Bradford University; Anthony McClaren, chief executive of the Universities and Colleges Admissions Service

## NOMINEES



### LEEDS UNIVERSITY CITY AND REGIONAL TEAM

The Skipton Building Society Scholarship Programme was set up three years ago by Leeds University's City and Regional Team and funded by the building society to support students in rural North Yorkshire. This year, it will benefit 54 students at institutions across the country.

Students from targeted rural areas are offered scholarships worth £2,000 a year if they study at Leeds or York university, and £1,000 a year if they study elsewhere.

Those who go to Leeds also benefit from a "scholar peer-befriending" scheme.

### KEELE UNIVERSITY

Keele University believes that winning a bursary should be as much an academic achievement as it is a financial lifeline. It awards its bursaries, worth up to £1,000 a year, on a competitive basis.

The university awarded 80 bursaries last year in five categories. From September, it will also offer vice-chancellor's scholarships worth £4,000 a year and dean's scholarships worth £2,000 a year to high achievers regardless of background.

### DURHAM UNIVERSITY

Students who receive a Durham University grant — worth up to £3,000 a year — also learn how to spend wisely. They are told how to use their funds to make the most of university, to finance extracurricular activities and to cover day-to-day costs.

Information is available online and in information sessions and workshops.

Elizabeth Lovett, head of student financial support at Durham, explains: "Our bursaries are generous, but that is no use if we do not encourage students to be financially responsible."

### BUCKINGHAMSHIRE CHILTERN'S UNIVERSITY COLLEGE

When staff at Buckinghamshire Chilterns University College visited local schools, they found that the array of financial support offered by institutions was so confusing that it put off some prospective students. So they designed their scholarships and bursaries scheme to be as simple as possible. They offer a "universal bursary" of £1,000 a year to every student who signs up for a full-time course.

The institution offers only two other types of support,

each worth £300 a year: a faculty scholarship for students on a foundation degree or higher national diploma course and a "compact" scholarship for students from schools with low rates of progression to higher education.

### EDGE HILL UNIVERSITY

Edge Hill University wants its scholarships and bursaries to do as much to retain students as to attract them in the first place.

So, as well as offering students from low-income families bursaries worth up to £1,000 a year, the university has crafted support schemes that are worth more for their value in maintaining a student's commitment than for their monetary value.

An example is the "progression bursary", which offers only £100. But students can claim it easily by completing a questionnaire that helps them evaluate their academic progress. Those considered at risk of dropping out get extra support.

(Pictured from top are Darren Ackroyd and John Goodfellow, Leeds; Sarah Hatfield, Keele; Durham; Ruth Farwell, Bucks Chilterns; and Marnie Jackson, Christine Coleman and Adam Bell, Edge Hill.)



# OUTSTANDING SUPPORT FOR OVERSEAS STUDENTS

**SPONSOR:** HIGHER EDUCATION ACADEMY. Glynis Cousins, senior adviser, says: "Our work on the internationalisation of the curriculum and support for international students is clearly linked to the award for supporting overseas students. Their participation adds value to all students. We hope that they take home a positive message about higher education in the UK."

**JUDGES:** Dominic Scott, chief executive of Ukcosa; Pat Killingley, director of educational services at the British Council; Issahaku Kotomah, international officer at the National Union of Students

NOMINEES



## UNIVERSITY OF CENTRAL LANCASHIRE

The University of Central Lancashire runs a language programme to help overseas students gain university-level competence in English before they arrive at the institution.

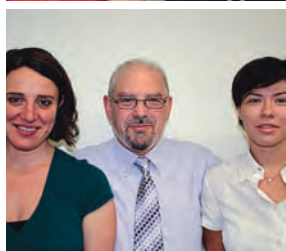
Angela Murphy, pro vice-chancellor, says that although students may have passed basic competence tests, "their listening and speaking skills may still not be very good". Through partner institutions in China, Uclan helps students develop language skills relevant to their area of study and learn about English culture. Completion counts towards a student's award.



## WARWICK UNIVERSITY

Warwick University claims to have one of the most comprehensive support programmes for overseas students — and it has a 97 per cent satisfaction rating from its international cohort to back up its claim.

Its support includes course and immigration advice and guidance in a student's home country, an orientation programme on arrival, English-language training, networking opportunities and careers guidance. A spokesman says: "Other institutions provide elements of our provision, but



we believe we are unique in providing the full range of such a large population of international students."

A key element is a network of 20 overseas representative offices.

## OXFORD BROOKES UNIVERSITY

Oxford Brookes University is producing CD-Roms to help overseas students find work when they return home. The disk offers fee information and advice about graduate job-hunting in China.

Although the university tries to secure work experience for students in the UK, such opportunities are limited. Many students leave with little knowledge of job hunting.

The careers office is offering copies of the CD-Rom to careers offices in all UK institutions free of charge.

## CITY UNIVERSITY

City University's Olive Tree scheme seeks to promote understanding among Israelis and Palestinians. It offers scholarships to 16 Israelis and Palestinians, who live and study together.

The values of the scheme were tested this summer when the uncle of one student was injured in a bomb

blast on a Gaza beach, and Palestinian and Israeli fellow scholars offered support. Stephen Miller, City's deputy vice-chancellor, says: "At the moment of an acute event, some might be propelled back into thinking that the whole thing is a waste of time. It is then that the friendships kick in and bring people back to a sense of sanity."

## USTINOV COLLEGE, DURHAM UNIVERSITY

For postgraduate students from abroad, support for their family can be as important as support provided for them. When Ustinov College opened new halls of residence for postgraduate students last September, it expanded its support as well.

It offers overseas postgrads and their families classes in English, family learning and "keeping up with the kids' homework". It also runs an international women's group.

(Pictured from top are Isabel Donnelly, Uclan; Caroline Pack, Laura Goodall and Esther Meininger, Warwick; Dan Ferret, Mark Turnball and Lorna Froud, Oxford Brookes; Aimee Shalan, Steve Miller and Diana McIlroy, City; and Christine Smithson, Durham.)



# OUTSTANDING SUPPORT FOR STUDENTS WITH DISABILITIES

**SPONSOR:** HIGHER EDUCATION ACADEMY. "The HEA supports institutions in their desire to provide an excellent learning experience for a diverse student body, and we support staff in responding to an increasingly diverse student body. So we are delighted to help recognise and reward people who have made outstanding contributions in these areas."

**JUDGES:** Sue Daniels, chief executive of the National Deaf Children's Society; Alex Kemp, NUS officer for students with disabilities; Kevin Connell, assistant director of post-compulsory training at the Royal National Institute of the Blind

## NOMINEES



### **NORTHUMBRIA UNIVERSITY**

The Disabilities Service at Northumbria University ensures that every computer can be used by any student, no matter what their needs.

Computers cater for the partially sighted and the blind with magnifiers and Braille software. Other programs help students with learning difficulties. Karen Newton, head of the Disabilities Service, says: "We want disabled students to use IT alongside their non-disabled peers."



### **WOLVERHAMPTON UNIVERSITY**

As a sign language interpreter at Wolverhampton University, Louise Rhodes works to improve the university experience for more than 50 deaf and partially hearing students.

At Wolverhampton, notetakers and sign language interpreters are available for field trips and film studies lectures. The service is vital because a deaf person may seem to follow what people say but may in fact be struggling to understand.

The university regards deaf and partially hearing students as a linguistic minority. Rhodes says: "Our role is to provide the students with



the means to complete their degrees and progress to a career."

### **UNIVERSITY OF CENTRAL ENGLAND**

Several years ago, the Disabilities Services Unit at the University of Central England helped a student with spina bifida gain a doctorate. Since then, the unit has grown, as has the number of disabled students. UCE has developed a "personalised package" to help teach its 2,000 disabled students how to use its bespoke software. One told the unit: "I hardly ever ask for help with written work anymore after learning how to use some of these programs."

### **MANCHESTER UNIVERSITY**

The Disability Toolkits created by Manchester University's Career and Employability Division helps dispel the fears that make disabled students and employers wary of work experience placements. Its website offers information and advice on placements.

Rowena Forbes, a disabilities support consultant at Manchester, says the aim had always been to be creative in addressing the needs of disabled individuals. "We see

our role as not just helping students with disabilities while they are at universities, but assisting them beyond that."

### **DERBY UNIVERSITY**

Derby University runs an early induction week for disabled students to settle them in to campus. They can also discuss support needs with staff and speak to existing students about university life.

Heather Marshall, assistant team leader of the Support and Advisory Service, says the scheme, Get Ahead, has been a tremendous success. "We have made the transition for disabled students that bit more comfortable. They can get on with admin tasks and get used to the setting. We are committed to creating an experience [for disabled students] that is on the same level as that of able-bodied students."

(Pictured from top are Shelagh Groves and Karen Newton, Northumbria; Sally Burrows, Jacqueline Turner and Louise Rhodes, Wolverhampton; Eric Neil, Marcia Graham and Paul Kent, UCE; Patrick Johnson, Fiona Christie and Chris Hughes, Manchester; Susie Denton, Chéron Stevenson and Hannah Futter, Derby.)



# OUTSTANDING CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

**JUDGES:** Sara Parkin, co-founder, Forum for the Future; Dominic Houlihan, professor of zoology and vice-principal, Aberdeen University; Elaine Thomas, rector, University College for the Creative Arts

## NOMINEES

### LONDON SCHOOL OF ECONOMICS

The London School of Economics has proved that one student's waste is another person's treasure. A weightlifting set and designer sunglasses are among items that departing undergraduates might once have thrown out, but a new initiative helps to find them new homes.

The recycling project in the LSE's halls of residence includes an end-of-term scheme to donate unwanted items such as kitchen equipment, clothes, furniture and electrical goods. Students typically have 10kg-20kg of items to dispose of at the end of the academic year. In 2005, the project prevented 2 tonnes of goods from going into landfill.

On the first day of term, some goods, including textbooks, are sold to new students at low prices. Other items go to charities supporting low-income households.

Last year, staff volunteered more than 60 hours to sort, wash and redistribute items. Hall managers laundered 100 unwanted duvets and 60 pillows for homeless charities. Unwashed bedding went to the Battersea Dogs' Home — dogs are comforted by the scent of humans, says Victoria Hands, the LSE's environmental and sustainability co-ordinator (pictured with Ian



Spencer and Joel Kenrick).

Hands, whose fellow nominees are Ian Spencer, Jamie Quinn and Rosa Gil, says that sustainability campaigns often make people feel bad — for, say, driving or flying. This scheme, she says, is different. "There is nothing wrong if anybody wants to get rid of something. And it is a good thing if it can be reused."

"I'm so pleased that *The Times Higher* has a Sustainable Development Award because, whether this wins or not, there are a lot of really great projects going on, and the higher profile they get, the more mainstream they will become," she says.

### UNIVERSITY OF EAST ANGLIA

In 1994, the University of East Anglia erected its award-winning Elizabeth Fry Building, dubbed "The Best Building Ever" in terms of energy efficiency and comfort.

It has now trumped that with the Zuckerman Institute for Connective Environmental Research (Zicer). The building houses 140 research staff and postgraduates in social and natural science alongside virtual-reality laboratories that can bring together scientists, policymakers and other users to investigate particular environmental problems.

Zicer encompasses five research centres in UAE's double-5\*-rated School of Environmental Sciences whose head, Chris Vincent (pictured with Martyn Newton and Trevor Davies), has been nominated for the award. The centres examine climate change, investigate sustainable solutions, conduct interdisciplinary research to inform environmental policy and give practical guidance on environmental risk.

The building includes a range of energy-saving technologies, including flat



screens and power-saving for computers, controlled lighting and improved insulation. Grants from the European Union and Department of Trade and Industry allowed the university to put photovoltaic cells in the roof to harness solar power. Zicer's key low-energy feature is the TermoDeck heating, cooling and ventilation system, which uses floor slabs to distribute warm or cold fresh air as necessary.

Greg White, head of liaison for research and business services, says: "The Elizabeth Fry Building set a precedent in environmental friendliness and sustainability, and Zicer is a testament to UEA's leadership in this field. On particular days, the building actually contributes [energy] back into the National Grid."

### ST ANDREWS UNIVERSITY

Last year, students at St Andrews University abandoned the fashion for electing celebrities or politicians as rector and chose instead Simon Pepper, the leading Scottish environmentalist.

The university's green credentials are well established. It is charting the progress of the first student cohort taking a four-year interdisciplinary honours degree in sustainable development.

St Andrews believes that



no single discipline can span the field effectively. Teaching staff are drawn from three faculties, ranging from management and accountancy to history and social anthropology. Its environmental manager also contributes to bring together theory and practice.

St Andrews' nominees, all of whom serve on the degree's management committee, are Jan Bebbington, professor of accounting and sustainable development (pictured), Pat Willmer, professor of biology, and Charles Warren, senior lecturer in geography and geosciences.

"The university is also putting its own house in order," Bebbington says. This includes gaining Fairtrade Mark status for the university and student association, developing a sustainability strategy and drawing up a carbon budget for the science campus.

"Being shortlisted is absolutely delightful: it's like a badge that we are doing something special and should keep evolving and pushing," Bebbington says.

"I was delighted when I saw the award coming up because it offers a really good impetus to universities to start talking more publicly about what they're doing and to share that knowledge."

### **BOURNEMOUTH UNIVERSITY**

Students behaving madly goes down well in the Bournemouth area. The students' union is successfully encouraging students to get involved in the local community through Mad ("Make a Difference") days, in which they volunteer to help charities and community groups.

For almost a decade, Bournemouth University has been committed to developing its students as global citizens. And it is reviewing its curriculum to ensure that by 2010 all of its students understand sustainable development and are primed to challenge injustice and champion change.

In the past academic year it has embedded sustainable development across all its

work, from management and teaching and learning to external activities such as volunteering. Other initiatives include a Global Cinema season, a diversity week highlighting issues of justice and equity, and campus support for national campaigns such as Energy-Saving Week and Fairtrade Fortnight.

Christine Shiel, head of learning and teaching in the Institute of Business and Law, says: "A holistic approach to change is critical." Shiel, who has championed Bournemouth's global perspective from its inception, is nominated alongside environmental officer Amanda Williams and purchasing manager David Lifford (pictured).

"I think this award is an excellent addition to *The Times Higher's* portfolio because the higher education sector has backed off from engaging in a serious way with sustainable development," she says. "Some institutions have done good work, but, historically, trying to get people to get to grips with it involves lots of talk about why it's important but not a lot of change."

### **GLOUCESTERSHIRE UNIVERSITY**

Three-letter acronyms are common in higher education, but Gloucestershire is leading the way with ISO 14001, the cornerstone of the International Standards Organisation's environmental management standard.

This year, Gloucestershire became the first English university to gain this accreditation from the British Standards Institution. Keeping its accredited status demands



**The recycling project in the LSE's halls of residence includes an end-of-term scheme to donate unwanted items such as kitchen equipment and clothes**

continuous improvement.

For more than a decade the university has had a sustainable development committee that unites academic and administrative staff, managers and the student union to implement sustainable development strategies covering the curriculum, procurement, transport, waste and energy.

Sustainability is now part of course validation and review, and Alex Steele, who runs the University Green Business Club for local employers, will audit every course for the staff development programme.

Kristine Mason O'Connor, dean of teaching and learning development (pictured with Martin Foster and Andrew Simpson), says: "The university takes a holistic approach to sustainability. Bearing in mind that the student experience extends well beyond the classroom, we have now secured Fairtrade Mark status for our food, and we discourage car use by providing a free bus service between campuses and throughout the county for all students and staff.

"The university is delighted to be shortlisted and very pleased that *The Times Higher* has recognised that sustainability is now a mainstream activity," Mason O'Connor says.







# WIDENING PARTICIPATION INITIATIVE OF THE YEAR

**JUDGES:** Sir David Watson, professor of higher education management at the Institute of Education and former vice-chancellor of Brighton University; Sir Peter Lampl, chairman of the Sutton Trust; Liz Thomas, senior adviser for widening participation, Higher Education Academy

## NOMINEES



### THE CERTIFICATE IN HEALTH SCIENCE Nottingham and Lincoln Universities

The number of students from poor backgrounds studying medicine at Nottingham University will increase dramatically this academic year thanks to a one-year course offered by Lincoln University.

The collaboration between the two institutions helps students who would otherwise stand no chance of gaining a place in oversubscribed subjects such as medicine.

To gain a place on the certificate in health science, pupils must have academic potential that has not been fulfilled because of circumstances beyond their control. They must also satisfy at least two of the following criteria: be the first in their family to go to university; be in care; have received government financial aid; or come from a school with a poor academic record.

"It is a tough nut to crack," says Penelope Griffin, head of widening participation at Nottingham (pictured with John

Clayton and Mark Barren). "Medicine has extremely demanding entry requirements and attracts very small numbers of students from the lowest socioeconomic backgrounds."

As part of the one-year certificate, students take anatomy and physiology and chemistry, as well as transferable core skills. Among the first intake, the ten students who attained a mean grade of at least 60 per cent will enrol as first-year medical students at Nottingham. This will boost the numbers of students from neighbourhoods with low participation in higher education by some 50 per cent at the medical school. Five students will start other health-related degrees at Nottingham. Students attaining less than 60 per cent can progress to the second year of the health studies degree at Lincoln.

The number of students taking the certificate will rise from 25 to about 40 this year, with future participants able to qualify for veterinary medicine at Nottingham.

### LIFELAB Manchester University

Manchester University has declared that it will become "the most accessible research-intensive institution in the UK" by 2015.



The Manchester Museum's Lifelab project is one of the flagship schemes that may help the university to meet its goal. It is all the more impressive in that it focuses on science — an area that faces declining numbers of A-level and degree students.

At the museum, PhD researchers show school pupils how science works in the laboratory. "There is this great two-way benefit for both PhD students and pupils," says Louise Sutherland, curator of learning (secondary) at the

museum (pictured with Julian Skyrme, head of widening participation at Manchester University and Nick Merriman, museum director). "Who better to deliver one of the trickiest parts of the syllabus and communicate the excitement of science than active researchers themselves?"

The PhD students gain training and supervised experience in innovative teaching methodologies, and also earn a teaching fee.

For the pupils, practical science is demystified and made

exciting, encouraging them to consider careers in the field. Many schools do not have the expertise or resources to teach the latest scientific techniques.

More than 1,300 youngsters — many from poor backgrounds — have benefited from the programme in the past academic year.

### **THINK AGAIN Napier University**

In July 2005, Student A received an honours degree in environmental protection from the Scottish Agricultural College. He also won its student of the year award and, in October, was named Napier University's community student of the year. He now works in "the job of his dreams" — organising volunteers to clean up a river in Scotland.

Student A, an ex-offender, is one of the first beneficiaries of Think Again — a ten-week course designed to address the barriers facing ex-offenders who want to study at college or university. One in three Scottish males has some form of criminal record, and research shows that education can prevent people lapsing back into criminal habits.

Napier delivers the course in partnership with Apex Scotland, a charity that works to



rehabilitate ex-offenders. It aims to develop personal and learning skills, increase self-confidence and motivation and raise aspirations.

Each student leaves the course with a portfolio of work, references for potential employers and trainers, and career guidance. Several have gone on to gain degrees.

Jan Tunnock, community projects manager at Napier's widening access unit (pictured with Allan Shedlock and Anne Chirside), says: "The course is open to individuals who want to change their lives and not re-offend. Our overall aim is to open up educational opportunities for disadvantaged groups in society, and this group is particularly disadvantaged."

### **'UNDERSTANDING SCHOOL' MODULE Bradford University**

Bradford University's Understanding School module could have consequences for widening access initiatives far beyond the confines of higher education.

The course aims to have an impact on perhaps the single most important influence on someone's prospects — his or her parents.

It offers guidance to parents at local primary schools who want to help their children but do not know how to. The course provides information about the national curriculum and the responsibilities of parents of school-aged children. It is taught in primary schools in Bradford in disadvantaged areas and engages with parents, primarily from an Asian background, who have not considered university study.

Kath Bridger, director of



access and widening participation at Bradford (pictured), says: "We get two benefits — we engage with a group of people who would not normally enter education let alone higher education. But it is also about getting parents to help children at a critical stage of their education."

Despite anecdotal evidence that the most important influences on children's future educational prospects occur during their first ten years, little research has been done in this area. Bridger says the project will also include some "robust research" that will track the outcomes on children's progression — perhaps offering wider lessons for widening participation schemes elsewhere.

Some 16 parent students completed the module in 2006 and now hope to move on to part-time degree programmes.

### **THE MATHS SUPPORT CENTRE AND CENTRE FOR ACADEMIC WRITING Coventry University**

Attracting students to university is just the start of widening participation — equally important is ensuring they stay the course. This is the ethos that underpins Coventry University's two support centres that help students to improve on

**It is a tough nut to crack. Medicine has extremely demanding entry requirements**

Penelope Griffin

**Who better to communicate the excitement of science than researchers?**

Louise Sutherland

**The course is open to individuals who want to change their lives and not re-offend**

Jan Tunnock

the basic maths and writing skills needed for degree work.

Ian Marshall, pro vice-chancellor for research at Coventry, says: "What we found was that students started on our courses and suddenly realised that they had something missing from their maths background."

Students coming on to engineering courses from vocational education backgrounds and mature students coming on to a range of degree programmes from access courses often did not have the same level of basic mathematical skills as those with traditional A levels. This had nothing to do with ability — it related to the kind of education the students had previously experienced.

The university responded by creating a Maths Support Centre (named Sigma) that provides help to students when it is needed — and often on a one-to-one basis.

The Centre for Academic Writing, is, according to the university, the first of its kind in the higher education sector. It teaches the basics of writing through one-to-one and small-group tutorials, advising on the particular demands in different academic disciplines. (Pictured is Duncan Lawson, director of the BP Mathematics Centre.)





# OUTSTANDING CONTRIBUTION TO INNOVATION & TECHNOLOGY

**SPONSOR: TOSHIBA**

“Toshiba Information Systems is proud sponsor of this award; we believe higher education should be accessible to all those who can benefit from it. Toshiba is focused on providing PC technology that provides mobile, flexible information technology solutions that enable improved learning at all levels. A world leader in research and development in the sphere of mobile technology, Toshiba is able to bring innovation from the laboratory right through to practical and affordable devices – for example, improved battery life, greater reliability or higher levels of robustness and security featured in Toshiba laptops. We wish all nominees the best of luck.”

**JUDGES:** David J. Way, director of Innovation Platforms at the Department of Trade and Industry; Stephen Brooke, director of business development at IP2IPO; Andrew Ramsay, executive director of the Engineering Council UK

## NOMINEES



**TRIBOSONICS  
Sheffield University**

Technology developed by Sheffield University’s Rob Dwyer-Joyce (pictured) has already helped to improve car engine efficiency, prevent breakdowns at a hydroelectric power station and develop new prosthetic hip joints.

His research team, based in the department of mechanical engineering, used sound waves to measure the thickness of gossamer-thin films of oil *in situ* on moving surfaces of machinery. Drawing on acoustics and tribology, the team found a way to fire ultrasonic pulses at oil films and measure the reflected signal.

After Dinorwig Hydroelectric power station in Wales suffered two costly breakdowns, it used the Sheffield technology to help develop a different way of operating machinery.

The technology has also been used to measure oil-film formation on car engine pistons and is being used to help develop a new type of metal-on-metal prosthetic hip.

It will be commercialised by a spin-off, Tribosonics.

**PATHFINDER CELLS  
Glasgow University**

Cell technology developed at Glasgow University could deliver a new therapy for the treatment of diabetes and other conditions such as liver and kidney failure and neurodegenerative disease.

Paul Shiels, of the division of molecular pathology (pictured), and Wayne Davies, of the Institute of Biomedical and Life Sciences, identified adult pathfinder cells that can repair damaged tissue when injected into the bloodstream. They have been shown to



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"cure" type 1 diabetes in an animal model. One injection of rat pathfinder cells into the blood of diabetic mice kept the animals alive, while untreated diabetic mice died. The cells repaired the damaged pancreas of the diabetic mice to restore production of the hormones insulin and glucagon.

If the pathfinder therapy works, insulin injections, which have many attendant medical complications, would no longer be necessary; instead, patients would have as few as one or two cell injections in a lifetime.

**SURREY SATELLITE TECHNOLOGY**

**Surrey University**

Satellite technology developed by Surrey University has provided support for relief missions after disasters such as the Indian Ocean tsunami and Hurricane Katrina.

Surrey Satellite Technology Limited (SSTL), a spin-off from the department of electronic engineering, built devices that were used by the Disaster Monitoring Constellation (DMC), an international collaboration made up of five imaging satellites. The DMC was accepted in late 2005 as an integral part of the International Charter on Space and Major Disasters. SSTL has just formed DMC International Imaging to help manage the satellites for the charter.

But disaster management



is just a small part of the activities of SSTL. The company, which has a turnover of £18 million, specialises in low-cost access to space and in the construction of low-cost satellites and services using off-the-shelf technology. In October 2005, it launched TopSat, an imaging satellite built for the Government, and, in December, it created GIOVE-A, the first demonstrator for the planned European Galileo positioning system. (Pictured is SSTL chairman Sir Martin Sweeting.)

**INFORSENSE KDE  
Imperial College London**

Imperial College's "knowledge discovery environment" has a staggering range of applications. The product, in essence a single software platform that allows complex, high-volume data analysis in a user-friendly environment, has aided the making of clinical decisions and the design of new drug molecules and also helped a financial services company to target customers.

**If the pathfinder therapy works, insulin injections would no longer be needed**  
Glasgow University

**We need to stop Alzheimer's in its track**  
Damian Crowther

**SSTL specialises in low-cost access to space**  
Surrey University

The "integrative analytics platform" called InforSense KDE is marketed by Imperial spin-off InforSense. The technology originated from research conducted within Yike Guo's Data Mining Group at Imperial in the late 1990s and incorporates research outputs from Discovery Net, a multi-disciplinary e-science project funded by the Engineering and Physical Sciences Research Council (2002-05).

The platform drives a web-based portal that allows medical staff to merge and analyse reams of patient information from different sources to inform decisions on patient treatments. It also allows pharmaceutical chemists to explore virtual molecules. "KDE enables scientists to 'doodle' in molecular space to find the best molecules to make without needing extensive IT knowledge," says Moustafa Ghanem of Imperial's computing department.

He says the platform allows scientists and decision-makers in any discipline to build analytic workflows and customised portals that combine disparate data sources, analytic software and visualisation tools without having to worry about the underlying IT infrastructure.

**ALZHEIMER'S RESEARCH  
Cambridge Institute for Medical Research**

An innovation by scientists at the Cambridge Institute for

Medical Research that may help find ways to make the human brain resistant to Alzheimer's disease is paying dividends by cutting the use of laboratory mice in research into the condition.

The scientists are among the first to use fruit flies to develop a model that reproduces key aspects of Alzheimer's disease pathology.

They have inserted the human gene that triggers Alzheimer's into the insects to try to identify other genes that impede progression to full dementia. They have already discovered 20 genes in the fly that help to make it resistant to Alzheimer's, and one has an almost identical human equivalent. The genes could be used in the design of new drugs for human use.

Damian Crowther, senior research associate at Cambridge (pictured), says Alzheimer's is the most common cause of dementia. "We really need proper, strong therapies to stop the disease in its track."



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# COMMONWEALTH UNIVERSITY OF THE YEAR

**JUDGES:** Richard Bourne, former head of the Commonwealth Policy Studies Unit at the University of London's Institute of Commonwealth Studies; Brenda Gourley, vice-chancellor of the Open University; John Rowett, secretary-general of the Association of Commonwealth Universities; Tim Shaw, former director of the Institute of Commonwealth Studies, School of Advanced Study, University of London

NOMINEES



## NATIONAL UNIVERSITY OF SINGAPORE

With 100 years of history behind it, the National University of Singapore was privatised in April 2006.

The institution has raised its international profile through its Global E-C-O approach — global experience, global community and global outreach.

Singapore hosted the first meeting of the ten-member International Alliance of Research Universities and is the home of the secretariat of the 36-member Association of Pacific Rim Universities.

It has 13 faculties and schools, several centres and four overseas colleges. It is also home to 13 national and 11 university research centres, and 70 research institutes such as the Raffles Museum of Biodiversity Research.



## UNIVERSITY OF BENIN

After ten years of disruption, the University of Benin has managed to complete two academic years (2003-04 and 2004-05) and is on course to complete a third (2005-06).

The university, which was established in 1970, has 40,000 students and 4,000 staff across 12 faculties. The National Universities Commit-



tee described it as the most improved university in intellectual development and has accredited 95 per cent of its programmes.

Its researchers have worked on the use of plants as therapeutic agents in the clinical management of sickle-cell anaemia, glaucoma and bacterial infections, and the use of potential antioxidants from plant sources to reverse cataractogenesis.

## UNIVERSITY OF WOLLONGONG

In 2005, the 50-year-old university embarked on two projects critical to the health of the local communities. It set up a medical school to train doctors to serve regional, rural and remote communities and started a A\$300 million (£120 million) research and development precinct — the Innovation Campus — that will be developed over 15 years and will eventually employ 5,000 people in knowledge economy jobs.

## FATIMA JINNAH WOMEN UNIVERSITY

Fatima Jinnah Women University (FJWU) is the first university in Pakistan where women are trained in higher education management using the training and modules devel-

oped by the Association of Commonwealth Universities.

The university aims to rejuvenate research in social and human sciences. It recently held a conference examining the human, social and gender issues arising from the earthquake that hit the region in October 2005.

## UGANDA MARTYRS UNIVERSITY

Uganda Martyrs University, a private (Roman Catholic) institution west of Kampala, opened with 84 students and two academic departments in October 1993. It obtained its university charter in 2005.

It now has a student population of about 2,300 (of whom 1,500 are on distance-learning programmes) and 120 academic staff.

In 2005, a Department of Good Governance and Peace Studies was set up to offer students and local government officials an opportunity to get acquainted with what it calls "true professionalism based on ethical values".

The university is committed to serving the community through outreach and community-oriented programmes.

(Pictured from top are Singapore, Benin, Wollongong, Fatima Jinnah and Uganda Martyrs.)



# MOST IMAGINATIVE USE OF DISTANCE LEARNING

**JUDGES:** Grainne Conole, professor and head of the Post-compulsory Education and Training Research Centre, Southampton University; Sir John Daniel, president of the Commonwealth of Learning; Erica McAteer, senior lecturer at the Applied Educational Research Centre, Strathclyde University

## NOMINEES



### NATIONAL ARCHIVES AT KEW

Palaeography, the study of old handwriting, is a vital skill for anyone wanting to understand historical documents. And so the National Archives at Kew has drawn on its own collection to create a step-by-step package for distance learners.

The course, developed in partnership with the School of Library, Archive and Information Studies at University College London, is free.

Michelle Hockley, project manager for lifelong learning online in the National Archives' research knowledge and academic services, says: "I am delighted that we have been shortlisted. *The Times Higher* brings projects to the foreground that people would not normally have known about."

### BRADFORD UNIVERSITY

William Ashraf, senior lecturer in microbiology at Bradford University, now teaches his students 24/7. All his lectures are available as podcasts, distributed via Apple's iTunes or direct from his website and automatically downloaded for students to access whenever they choose.

The student reaction has been enthusiastic. "The pod-

casting approach can more easily reach and engage with students on the internet and via their MP3 players, laptops and mobile phones," he says.

### DERBY UNIVERSITY

Derby is one of five founding higher education institutions for Learndirect's Learning through Work (LTW), a framework that allows people to plan and structure their learning around their job and have it certified.

Learners can study either in groups or individually, designing a programme with a university tutor. All learners have access to resources including an electronic library and a dedicated support team. Programmes can lead to awards that range from certificates of achievement to masters degrees.

Chris Newman, one of Derby's nominated LTW team, says: "The scheme gives people who are already committed to work opportunities that they would not otherwise have."

### DE MONTFORT UNIVERSITY

For a number of years, "Moos" (multi-user domains, object-orientated) have flourished as interactive adventure or role-playing

games, but Andrew Hugill, director of De Montfort University's Centre for Creative Technologies, has developed one for teaching music technology.

Staff and students built the Moo, which is made up of virtual classrooms, libraries, cafés and many spaces devised from scratch by the students themselves. Online musical instruments allow multiple users to play together.

### CARDIFF UNIVERSITY

The department of dermatology at Cardiff University, University of Wales College of Medicine, is running an online diploma in practical dermatology that is helping 300 GPs a year to boost their knowledge.

"Students are encouraged to discuss their cases with their peers and staff through online forums," says Alan Salmoni, a researcher who nominated his department. (Pictured from top are Michelle Hockley, Mercedes Clark-Smith and Adrian Ailes, National Archives; William Ashraf, Bradford; Chris Newman and team, Derby; Andrew Hugill, De Montfort; and Maria Gonzalez, Sian Coxall and Helen Pugsley, Cardiff.)



# LIFETIME ACHIEVEMENT AWARD

**JUDGES:** Helena Kennedy QC; John O'Leary, editor of *The Times Higher*; Bernadette Porter, former vice-chancellor of Roehampton University

## NOMINEES

**PHILIP COHEN,  
Dundee University**

Philip Cohen still laughs about his first grant application, which he made as a junior faculty member at Dundee University nearly 40 years ago.

"It was for about £2 million in today's money. And, needless to say, it was turned down. People still remember that application," he says.

It was a salutary lesson for the young biologist who joined Dundee from the University of Washington, in Seattle, in 1969, and discovered that his new institution had no equipment and no money for his research.

"When you've been through that experience, you realise that unless you become self-sufficient from the university you're finished," he says.

Four decades and £35 mil-



lion-worth of fundraising later, Sir Philip, who is director of research at the School of Life Sciences, has helped to turn Dundee into a biotechnology powerhouse.

"Dundee is an extraordinary place. For example, we'll get the local cabbies doing a whip-round when we fund-raise," he says.

His own research has included a major contribution to the understanding of how insulin works, which is vital in the treatment of diabetes. Sir Philip is now investigating problems related to rheumatoid arthritis, but he is modest enough to admit "you're only as good as your last experiment".

Colleagues joke fondly that despite his seniority and research activities — he has published more than 470 peer-reviewed papers — Sir Philip still makes time to interview people for the least senior positions in the school.

He is unapologetic: "A receptionist is a very important person, they set the tone for the whole place."

**LISA JARDINE  
Queen Mary,  
University of London**

"It's the Jane Fonda award, isn't it?" Lisa Jardine asks when informed that she has been shortlisted for *The*



*Times Higher's* Lifetime Achievement Award.

When asked to elaborate, Jardine explains: "Oh you know, the one they give to someone who's still around but is too old to get starring roles any more."

The quip is typical of Jardine and nothing could be further from the truth, for the polymathic professor of Renaissance studies at Queen Mary, University of London, remains one of the brightest stars in academe.

Jardine has 14 books and more than 50 peer-reviewed publications to her name. She is an arch communicator and radio is her favourite medium.

As a regular contributor to Radio 4's *Start the Week*, *In Our Time* and *A Point of View*, it would be easy to stereotype Jardine as just another "media don". But this would

be a gross misrepresentation of what makes her tick.

"If I stand for anything, it is for bringing higher education to the broader public," she says.

Since being diagnosed with breast cancer in 2004, Jardine has had to slow down a bit. But she continues to teach graduate students at the Centre for Editing Lives and Letters, which she established at Queen Mary in 2002.

"Queen Mary has supported me way beyond the call of duty," she says.

Jardine was awarded a CBE in 2005 for services to education, and her relentless promotion of learning qualifies her as a true champion of higher education.

**PETER KNIGHT  
University of Central  
England**

Peter Knight was at Wolver-



hampton Business Airport when he was told he had made the Lifetime Achievement shortlist.

Fighting against the noise and wind from a helicopter landing nearby, he says: "Bear with me. I'm just changing the wheel on my plane."

Flying is perhaps an apt hobby for a man who, in addition to defying gravity, has never been afraid to defy convention. "If someone is talking bollocks, then I think they should be told they are talking bollocks, even if it happens to be august bollocks," he says.

Knight, who became principal of Birmingham Polytechnic in 1985 and vice-chancellor when it became the University of Central England in 1992, gets away with a lot.

To the wonderment of his peers, he managed to take his university out of national pay bargaining with barely a squeak of protest from the academic unions.

"And if I ever find out how I got away with that, I'll bottle it and sell it," he says.

There is, of course, a serious side to this former physics lecturer. In 1998, he risked imprisonment when he refused to destroy a library book by photographer Robert Mapplethorpe deemed by police to contain obscene images.

This courageous defence of academic freedom won Knight the Maverick of the Year award from the Maverick Club of Great Britain.

Colleagues say he will be sorely missed when he steps down as vice-chancellor next year.

As for the future. "I'm going

to build another aircraft and will continue to sit on the Armed Forces Pay Review Body. After that it is destiny and karma."

#### **KEN POUNDS** **Leicester University**

In demonstrating for the first time the existence of a black hole in our galaxy, Ken Pounds came close to provoking global panic.

Pounds and his team at Leicester University had been looking at objects emitting X-rays in the early 1970s when they noticed an increasingly powerful signal, which they concluded was coming from a black hole devouring material from a neighbouring star.

Unfortunately, the media got hold of the story and misinterpreted the growing strength of the signal as a sign that an object was racing towards Earth on a collision course. "They thought it was the end of the world," he recalls.

The anecdote demonstrates how far astrophysics, and no doubt public understanding of space science, has come since Pounds began his career in the distinctly quaint-sounding Rocket Research Group, at University College London, in the late 1950s.

Pounds, a pioneer of X-ray astronomy, describes his success as a classic case of being in the right place at the right time.

The right time was the advent of space exploration in the 1960s and 1970s, which allowed instruments to be stationed above the Earth's dense atmosphere, giving scientists their first clear view of what lay beyond our planet.



"It was all about timing, just like hitting a four in cricket," he says.

And, for a man now investigating exotica such as supermassive black holes, Pounds remains remarkably down to earth.

"I suppose one of my achievements is that I have graduated from a single stellar black hole to those that affect millions of stars," he says. "That and winning a few five-a-side medals."

#### **CHARLES REES** **Imperial College** **London**

From wartime lab boy at a Royal Air Force base to distinguished chemist, industrial consultant and inspirational teacher, Charles Rees is on quite a journey.

It has taken the emeritus professor of organic chemistry from laboratories full of test tubes and Bunsen burners to those dominated by mass spectrometers and X-ray crystallography.

"It could take years in the past to determine what a par-

**You realise that unless you become self-sufficient, you're finished**

Philip Cohen

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Lisa Jardine

**I'm going to build another aircraft. After that it is destiny and karma**

Peter Knight

ticular chemical structure was. Now it can be done in an afternoon," he says.

Along the way he has, among many other things, established a new area of chemistry and helped to develop an anti-ulcer drug.

Yet despite the pressures of his research and consultancy career, Rees retains a love of teaching.

"Research may be what turns us on as academics but teaching fresh young minds makes you have to think really hard about your subject," he says.

Rees was nominated for the award by a former student, and the respect and loyalty he commands is further underlined by the fact that he can still experiment even though he no longer has a laboratory at Imperial.

"I'm an old codger now and rightly they give the lab space to faculty. But some of my former students still collaborate," he says. "I come up with the ideas and they do the practical work for me. It works quite well."

Not bad for a man who retired 13 years ago. But then work has never been a chore for Rees.

"I am lucky. It's been more like play than work," he says.

