

Learning

Discovery

Enterprise

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 University of  
BRISTOL  
**2009**  
CENTENARY  
GREAT PAST - GREATER FUTURE

**REVIEW OF THE YEAR**  
2008/09

# THE YEAR IN PICTURES

## August Milk: a potted history

A paper published in *Nature* by Professor Richard Evershed in the School of Chemistry describes how his analysis of early Neolithic pottery vessels from south-eastern Europe, Anatolia and the Levant suggests that humans were processing and using milk in the seventh millennium BC – over 2,000 years earlier than previously thought.

## September Bristol scientists in tiny collisions

The largest scientific experiment in the world – the Large Hadron Collider at CERN in Switzerland – was launched, with scientists from the Department of Physics playing key roles in its construction and the interpretation of the data resulting from the measurement of tiny particles as they collide. It is hoped that the findings will fill in some major gaps in our understanding of the laws of nature.

## October Dating in caves

A team from the Department of Archaeology and Anthropology returned from an expedition to the Cantabria and Asturias regions of Spain where they took samples from over 20 prehistoric painted caves. This three-year, Natural Environment Research Council-funded project uses a new method, based on the radioactive decay of uranium, to determine the age of the paintings.

## November Students rough it for charity

Around 20 Bristol undergraduates swapped their warm beds for sleeping bags, cardboard boxes and freezing temperatures for one night. The students spent the night in the Students' Union car park to raise money for the Bristol homeless charity, the Julian Trust.

## December Bristol makes *TIME's* Top 10

The stem-cell research carried out by Professors Anthony Hollander and Martin Birchall (see p9) appeared in *TIME* magazine's Top 10 medical breakthroughs and scientific discoveries of 2008. Three other research projects with Bristol involvement also made the list: the Large Hadron Collider (see September); NASA's Phoenix probe mission to Mars (Professor David Catling in the Department of Earth Sciences); and the discovery by Dr Alastair Pike and colleagues of the earliest evidence of a nuclear family (see p9).

## January 100 treasures unveiled online

The Cobden Book of Hours was among 100 treasures from the University Library's Special Collections to feature in an online exhibition of some of the rarest and most interesting items held at the University, organised as part of the celebrations of the centenary of the granting of the University's Royal Charter.

## February Bristol's brains go to work

Local pupils took part in a series of interactive workshops, hosted by Bristol University neuroscientists to help the children discover more about the science of the brain by creating brain-based works of art. The children's work was displayed at At-Bristol during Brain Awareness Week in March (see p22).

## March ChemLabS sets new record

Bristol ChemLabS, one of the University's two Centres for Excellence in Teaching and Learning (CETLs; the other is AIMS – Applied and Integrated Medical Sciences), had a record month for chemistry outreach activities, clocking up almost 1,000 face-to-face engagements as far apart as South Africa, France, Spain and Italy.

## April Naturalist/broadcaster visits Langford

Sir David Attenborough visited the Department of Clinical Veterinary Science at Langford to open the new, £3.9 million Animal Welfare and Behaviour Building (see p24).

## May Centenary garden unveiled

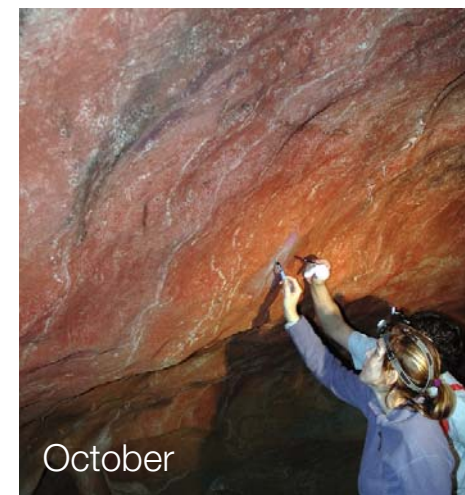
Historian Sir Roy Strong opened the University's new centenary garden, situated in the grounds of the Wills Memorial Building and designed by Bristol alumna Anne de Verteuil.

## June Nature on display

Biodiversity Jenga was one of the many attractions presented by University staff and students as part of the 2009 Festival of Nature, organised by the Bristol Natural History Consortium, on Bristol's Harbourside.

## July Debut for whiskered robot

Researchers from the Bristol Robotics Lab (a partnership between the University of Bristol and the University of the West of England) and the University of Sheffield unveiled the SCRATCHbot, a robot with sensory whiskers that marks a milestone in a pan-European project to develop biologically inspired artificial intelligence systems.



# INTRODUCTION

This review of 2008/09, which complements our formal Annual Report and Financial Statements for that year, helps to account for the University of Bristol's overwhelmingly positive reputation within and beyond the higher education sector. The achievements of the students and the range and quality of the work undertaken by academic and support staff are truly inspiring. Council, the governing body, is proud to play its part in ensuring that the University continues to be renowned for high standards and academic success, and to deliver invaluable benefits to individuals and to society at large.

Throughout 2009, the University has been celebrating the hundredth anniversary of the granting of its Royal Charter. What better year than the centenary to refresh the institution's overarching Vision and Strategy? Doing so has been a stimulating exercise; the outcome, which you can see in full at [www.bristol.ac.uk/university/vision/](http://www.bristol.ac.uk/university/vision/), is that the University is clearer about its future direction, its priorities and how best to pursue them.

It has been a year of challenge as well as celebration. The University's outstanding performance in the 2008 Research Assessment Exercise has had favourable financial consequences, but the severe pressures on the public sector, combined with the global economic downturn, have created uncertainties that are likely to prove persistent. Bristol is at least as well placed as other leading universities to come through these difficult times in good shape, but there is no disguising the fact that Council – and, indeed, the whole University – will have to navigate some inhospitable waters.

The objective is to maintain the University's academic trajectory and to keep investing in the estate, but to do so in a prudent and sustainable manner. That way, the University will not merely survive the current economic turbulence but continue to achieve national and international distinction as a leading centre for education, research and enterprise.



**Top:** Eric Thomas, Vice-Chancellor  
**Below:** Jim Foulds, Chairman, University Council

A handwritten signature in black ink, appearing to read 'Eric Thomas'.

Eric Thomas  
**Vice-Chancellor**

A handwritten signature in black ink, appearing to read 'J.S. Foulds'.

Jim Foulds  
**Chairman, University Council**

# MISSION, VISION & VALUES

Through its Royal Charter granted in 1909, the University of Bristol is committed to ‘the promotion of Arts, Sciences and Learning’. In its centenary year, the University restated its mission, together with its vision and values. These are set out below. They also appear at the start of the University’s new Vision and Strategy for 2009-16. This Review of the Year, together with the associated Annual Report and Financial Statements, charts progress in 2008/09 against the Vision and Strategy.

## MISSION

To pursue and share knowledge and understanding, both for their own sake and to help individuals and society fulfil their potential.

## VISION

The University of Bristol is an international powerhouse of **learning, discovery** and **enterprise**. Its vision is of a university whose excellence is acknowledged locally, nationally and globally and that is:

- dedicated to academic achievement across a broad range of disciplines, and to continuous innovation and improvement
- research-intensive, supporting both individual scholarship and interdisciplinary or thematic research of the highest quality
- a centre for intellectually demanding, research-informed education that nurtures independence of mind and helps students achieve their personal goals and serve society’s needs, both during and after their time here
- an inclusive and collaborative community of scholarship that attracts and retains people with outstanding talent and potential from all walks of life and all parts of the world
- a stimulating and supportive environment for all students and staff, distinguished by a commitment to high standards, respect for the individual and a strong sense of collegiality
- committed to operating in a sustainable manner
- engaged with society’s interests, concerns, priorities and aspirations
- a major contributor culturally, environmentally and economically to Bristol and the South West
- well led and responsibly run, with an emphasis on consultative decision-making and open communication as well as personal responsibility and accountability.

## VALUES

Our mission and vision are underpinned by these values:

- |   |  |   |
|---|--|---|
| <p><b>Truth</b><br/>We seek and are inspired by truth, which we pursue for its own sake</p> <p><b>Excellence</b><br/>We strive for the highest quality in all we do</p> <p><b>Innovation</b><br/>We welcome the challenge of the new and value the creative and entrepreneurial</p> <p><b>Ambition</b><br/>We have high aspirations for the University and all its staff, students and alumni</p> | <p><b>Responsibility</b><br/>We aim to make a positive difference to the wider world and the future</p> <p><b>Independence</b><br/>We encourage independent thinking and cherish academic and institutional autonomy</p> <p><b>Collaboration</b><br/>We are committed to teamwork and to partnership with others</p> | <p><b>Transparency</b><br/>We want to be accountable for our decisions and actions</p> <p><b>Diversity</b><br/>We view the diversity of our staff, students and alumni as a great asset</p> <p><b>Equity</b><br/>We believe in the equitable treatment of all</p> |
|---|--|---|

**Right:** The winning entry, by Timo Kunkel in the Department of Computer Science, in a competition to design a centenary banner for display on the wall of the Physics Building



## EDUCATION & THE STUDENT EXPERIENCE

The University recognises the academic potential of students as a resource precious to the individuals concerned, to their communities and to society at large. Its extensive investment in teaching and learning facilities, in training of staff, in widening participation and in technological innovation reflects the centrality to the University's mission of helping every student to fulfil his or her potential.

### The University's priorities in this area are to:

- attract and retain academically gifted and highly motivated students from a wide range of backgrounds, creating a diverse and international University community;
- provide an education of the highest quality that is researched and focused on the needs and expectations of our students;
- ensure students have a fulfilling, demanding and intellectually stimulating experience while at University, that prepares them for employment and worldwide opportunities when they leave;
- provide effective and enabling educational leadership and structures that support educational enhancement;
- ensure that learning takes place within a high-quality environment that enables both students and staff to achieve their full academic potential.

### Audit and survey: grounds for confidence

The results of an institutional audit of the University by the Quality Assurance Agency for Higher Education in April 2009 expressed 'confidence' in Bristol's academic standards and in the value of a Bristol degree.

It was also encouraging to note that some departments improved their National Student Survey scores over the past year. The Education Support Unit, along with other divisions of Support Services, is committed to working with academic departments and the Students' Union to ensure that the student experience at Bristol is as good as it can be within the resources available.

### Student residences

In 2008/09, the University continued to develop its residential strategy. This is aimed at ensuring that halls of residence and other University homes offer students a choice of high-quality, affordable places to live with good facilities for living and learning, better transport links and improved safety and security. The strategy is not only about prioritising further capital investments in the residential estate, necessary though these will be; it is also about how to achieve residential communities that work for students – communities that support students' education as well as their social and welfare needs. Over the past year there has been widespread consultation and debate about these and related issues. The emerging strategy will be far stronger as a result.

### Master's degree in Deafhood Studies – another first for Bristol

The University's Centre for Deaf Studies has launched the world's first Master's degree in Deafhood Studies, only five years after the

Centre's Dr Paddy Ladd and colleagues introduced the Deafhood concept (now adopted globally) to reflect the enormous changes in Deaf and hearing communities over the past 30 years. The course includes units on Deaf history, sign language literature and folklore, sign linguistics and Deaf culture.

### Bristol to offer 75 new Humanities studentships

The Arts and Humanities Research Council (AHRC) has awarded the University £2.6 million to support postgraduate studentships in Arts and in Social Sciences and Law. The funds, which will come to Bristol under the AHRC's new Block Grant Partnership scheme, will provide 75 studentships over the next five years.

### Fundraising professionals to train at Bristol

Bristol is one of 12 UK universities to offer a new, three-year graduate trainee programme aimed at increasing the number of fundraising professionals working in higher education. The programme is funded by CASE (Council for Advancement and Support of Education) Europe and the Higher Education Funding Council for England.

### Widening participation

The Widening Participation Office exists to encourage and support people who have the ability, motivation and potential to thrive at university, but who come from groups that are currently under-represented in higher education. These include people from certain minority ethnic groups, those with disabilities, 'mature' candidates (people over the age of 25) and those from families who have little or no history of going to university.

The Office works in partnership with schools, other higher education institutions, Connexions, the Learning and Skills Council, the government's Aimhigher programme, further education colleges and the voluntary and community sector to raise aspirations and attainment with a view to increasing the numbers of people from under-represented groups attending and succeeding at university. The Office's busy programme includes taster days and residential summer schools to give young people an insight into university life; school visits and mentoring of pupils by student volunteers; and specialist masterclasses to help raise pupils' attainment in specific subjects.

In 2008/09, widening participation events included:

- Aimhigher-funded activities involving 57 local schools and colleges, during which the University worked with around 5,000 young people and 1,500 parents;
- outreach work targeted at mature students, young people and their parents, teachers and careers advisers, totalling some 9,000 people via schemes such as Access to Bristol, the Sutton Trust and higher education summer schools, and events in schools and colleges throughout the region.

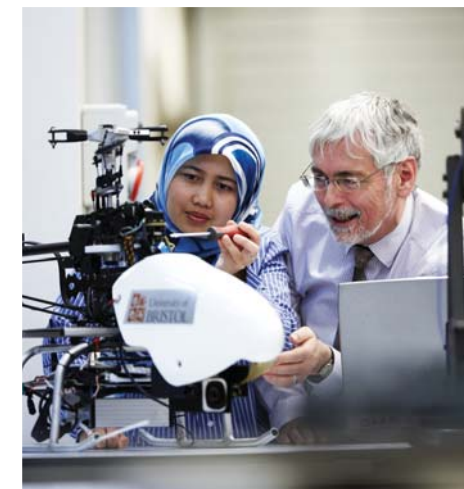
The profile of the student body has proved resistant to change, with the proportion of students from low-participation areas and from social classes 4 to 7 remaining stubbornly low at around 5.5 and 14.9 per cent respectively. The University cannot address this challenge alone, but it will continue to play a full part, both in the interests of fairness and in order to gain the benefits of having a student body that is uniformly strong in terms of academic ability and potential but more diverse in terms of background and experience.

### Pastoral care: Student Counselling Service and the Multifaith Chaplaincy

The moral, spiritual and personal welfare of students is a concern shared throughout the network of student support services, which includes the Student Counselling Service and the Multifaith Chaplaincy.

The Student Counselling Service is staffed by a team of professionally trained and widely experienced counsellors accustomed to helping people from many backgrounds and cultures. Counselling is available free to all students at the University, including on-site counselling at Langford. In response to an escalation in the number of students requesting counselling in 2008/09, the Service extended its evening opening hours and appointed a new receptionist. It also joined forces with the Staff Counselling Service and the Access Unit to provide workshops on managing students in distress and crisis, available to all sectors of the University.

The Multifaith Chaplaincy maintains an active role in the spiritual and social welfare of the University community. There are currently 17 University chaplains, all appointed by faith communities in Bristol, and the Multifaith Chaplaincy Centre offers a range of quiet rooms and social spaces. In 2008/09, events organised by the Multifaith Chaplaincy included a lecture by Mona Siddiqui, Professor of Islamic Studies and Public Understanding at Glasgow University, on Christian-Muslim relations (arranged as part of the University's centenary lecture series) and the annual thanksgiving service for those who bequeath their bodies to the Department of Anatomy.



**Top:** Undergraduates at Manor Hall, one of the University's halls of residence  
**Bottom:** Dr Mike Barton, Senior Lecturer in Microelectronics, with a postgraduate student in the Dynamics Laboratory, Faculty of Engineering

## EDUCATION & THE STUDENT EXPERIENCE CONTINUED

### Teaching prizes

In January, the University held its annual Learning and Teaching Exhibition and awarded prizes to members of academic and support staff across the University in recognition of their efforts in supporting the student learning experience. The event, organised by the Education Support Unit, included an exhibition of innovative learning and teaching practice from across the faculties, short talks on recent developments in learning and teaching, and a keynote presentation by Dr Nick Harris, a British Council-appointed UK Bologna Expert, on the implications of the Bologna Process for higher education.

During the evening, the 2008 awards were presented to the following people:

### Teaching and Learning Prizes

Awarded to members of staff who show the characteristics of an excellent teacher.

#### Tricha Passes

Department of History of Art

#### Dr Martin Lings

Department of Civil Engineering

#### Dr Lynda Moore

Department of Clinical Veterinary Science

#### Dr Angela Hague

Department of Oral and Dental Science

#### Dr Andrew Blythe

Community-based Medicine

#### Dr Sean Collins

Department of Mathematics

#### Dr Tony Hoare

School of Geographical Sciences

#### Elisabeth Lazarus

Graduate School of Education

### Rising Star Awards

For staff who have been teaching in higher education for less than five years and who show excellent potential through the quality of analysis and practice in teaching.

#### Dr Emma Hornby

Department of Music

#### Dr David Drury

Electrical and Electronic Engineering

#### Dr Emma Robinson

Department of Physiology and Pharmacology

#### Dr Andy Salmon

Clinical Science at North Bristol

#### Dr David Leslie

Department of Mathematics

#### Dr Jo Haynes

Department of Sociology

### Awards Recognising Support for Teaching and Learning

Recognising outstanding contributions to education by members of support staff.

#### Paula Coonerty

Arts Faculty Office

#### Dr Evan Jones

Department of Historical Studies

#### Anne Thorpe, Gina Stuart, Martin Baker and Phil Wade

Faculty of Engineering

#### Ruth Batterham

Department of Biochemistry

#### Deborah Hawkings

Department of Social Medicine

#### Melanie Stodell

Community-based Medicine

#### Dr Tim Obey and Dr Tom Podesta

Chemistry

#### Janet Woolway-Allen

Department of Experimental Psychology

#### Kes O'Donnell

Social Sciences and Law Faculty Office

### Engagement Awards

Recognising staff whose work in public engagement has been exceptional and/or innovative.

#### Lois Bibbings

(School of Law) and the Widening Participation Office Meriton Law Enrichment programme

#### Professor Jon Keating, Chrystal Cherniwchan and Azita Ghassemi

(Department of Mathematics) Mathematical Ethnographies project

#### Dr Caroline McKinnon

(Department of Biochemistry) Science Alive! initiative in Biochemistry

#### Dr Linda Sellou (School of Chemistry)

Bristol ChemLabS outreach programme

#### Tom Sperlinger (Department of English)

BA in English Literature and Community Engagement programme

### e-Learning Awards

Recognising innovative and effective use of e-learning in the delivery of programmes and the support of staff and students.

#### Dr Martin Homer

Department of Engineering Mathematics

#### Dr Dominic O'Sullivan

Department of Oral and Dental Science

#### Dr Colin Western

School of Chemistry

#### Gervas Huxley

Department of Economics

Right: Postgraduates on the staircase inside the Wills Memorial Building

## EDUCATION & THE STUDENT EXPERIENCE CONTINUED

### Statistics and commentary

#### Financial support to students

The University can provide financial support to students in the form of bursaries, scholarships and discretionary assistance from hardship funds. In 2008/09, the University disbursed the following amounts in these kinds of financial support:

	Bursaries £m	Scholarships £m	Hardship funds £m
Undergraduate	2.4	0.2	0.3
Postgraduate	0.1	2.0	0.1
<b>Total</b>	<b>2.5</b>	<b>2.2</b>	<b>0.4</b>

#### Total student numbers 2008/09

	Undergraduate	Postgraduate taught	Postgraduate research	Total
Arts	2,774 (83.81%)	248 (7.49%)	288 (8.70%)	3,310
Science	2,950 (81.16%)	87 (2.39%)	598 (16.45%)	3,635
Engineering	1,584 (67.84%)	424 (18.16%)	327 (14.0%)	2,335
Medical and Veterinary Sciences	1,414 (81.59%)	62 (3.58%)	257 (14.83%)	1,733
Medicine and Dentistry	1,658 (71.50%)	468 (20.18%)	193 (8.32%)	2,319
Social Sciences and Law	2,583 (53.68%)	1,501 (31.19%)	728 (15.13%)	4,812
<b>Year total</b>	<b>12,963 (71.45%)</b>	<b>2,790 (15.38%)</b>	<b>2,391 (13.18%)</b>	<b>18,144</b>

#### Total student numbers 2007/08

	Undergraduate	Postgraduate taught	Postgraduate research	Total
Arts	2,644 (84.28%)	271 (8.64%)	222 (7.08%)	3,137
Science	2,876 (80.95%)	78 (2.20%)	599 (16.86%)	3,553
Engineering	1,555 (69.61%)	384 (17.19%)	295 (13.21%)	2,234
Medical and Veterinary Sciences	1,473 (83.65%)	61 (3.46%)	227 (12.89%)	1,761
Medicine and Dentistry	1,613 (69.89%)	524 (22.70%)	171 (7.41%)	2,308
Social Sciences and Law	2,355 (50.46%)	1,729 (37.05%)	583 (12.49%)	4,667
<b>Year total</b>	<b>12,516 (70.87%)</b>	<b>3,047 (17.25%)</b>	<b>2,097 (11.87%)</b>	<b>17,660</b>

#### Number of degrees awarded

	2008/09	2007/08
Undergraduate	3,471	3,309
Postgraduate taught	1,810	1,749
Postgraduate research	409	408

#### Graduate destinations

Every year, new graduates are asked to complete a questionnaire concerning their employment or study status. The resulting figures enable the University to build a year-on-year picture of the destinations of its graduates.

As might be expected, the most significant labour market trend during 2008/09 was the economic downturn and its impact on students and graduates – and on the level of employer activity on campus. The number of vacancies registered with the University's Careers Service fell by an unprecedented 33 per cent compared with the previous year.

In response to these conditions, and to student concern, the Careers Service implemented a series of measures:

- running a programme of 'Job hunting in a recession' workshops for current students;
- staying open throughout the summer to meet the increased demand from recent graduates;
- enhancing provision for Bristol graduates, including more access to online vacancies;
- running short courses for unemployed graduates and professionals in the region through Jobcentre Plus;
- offering a telephone helpline for graduates.

At the same time, the University approved a new Employability Strategy, reorganising the Careers Service to offer broader support to academic departments, introducing a new Bristol Plus Award recognising extra-curricular achievement by students and establishing a new, accredited, commercial-awareness module.

#### Graduate destinations 2008

Full-time paid work	51.0%
Part-time paid work	5.3%
Voluntary/unpaid work	1.8%
Work and further study	7.5%
Further study	22.0%
Assumed to be unemployed	5.4%
Not available for employment	4.9%
Other	0.7%
Explicit refusal	1.4%

#### Graduate destinations 2007

Full-time paid work	53.4%
Part-time paid work	4.3%
Voluntary/unpaid work	1.3%
Work and further study	8.8%
Further study	20.8%
Assumed to be unemployed	4.0%
Not available for employment	4.4%
Other	1.0%
Explicit refusal	1.8%

## RESEARCH

Research at Bristol includes much that is of public benefit. The University's activity is engaged in the fullest sense: engaged with urgent issues such as disease, climate change, energy, social justice, natural resources and the welfare of the individual; engaged with the cultural life and history of nations and communities across the world; engaged with the future of technology and science and the development of innovations in medicine, nanotechnology, quantum cryptography, composite materials, stem-cell engineering and other emerging fields.

### The University's priorities in this area are to:

- be recognised globally for the quality of our research;
- create a positive research environment and infrastructure that will attract and retain the highest quality researchers and postgraduate students worldwide;
- develop our portfolio of flagship and high-impact research, working across and between disciplines to answer important societal questions and contribute to the social, political, environmental and economic well-being of the region, the UK and the wider world;
- seek, manage and provide professional support for strategic relationships and alliances with key national and international partners – business and industry, the public sector, user communities, sponsors of research and policy-makers;
- play a leading intellectual role in enterprise, knowledge exchange and economic and social impact agendas, and continue to be a beacon of good practice and leader of innovation in the city and region;
- develop a sustainable portfolio of research informed by evidence-based leadership, management and administration and supported by high standards of governance.

### Strong showing for Bristol in Research Assessment Exercise

The results of the 2008 Research Assessment Exercise (RAE), an independent assessment of the quality of research in UK universities, confirmed the University of Bristol as a world leader in research.

The RAE, a rigorous exercise carried out on behalf of the higher education funding bodies, helped the Higher Education Funding Council for England to determine how more than £1.5 billion in research funding would be allocated annually. Over 90 per cent of eligible staff at Bristol were included in the University's RAE submission – thought to be one of the highest percentages in the sector.

Over 61 per cent of the research work assessed in 48 research fields at Bristol was awarded either the top 4\* rating, defined as 'world leading', or the 3\* rating, classed as 'internationally excellent'. The quality of Bristol's research in geography emerged as first equal with Cambridge in the UK.

Epidemiology and public health, health services research, chemistry, mathematics, drama, mechanical engineering, economics, accounting and finance, aeronautical engineering and sports-related studies are among other research areas in which the University achieved particular distinction.

Bristol's faculties of Science and Engineering performed exceptionally well, but there were areas of outstanding research performance across all six faculties.

Taking into account the 2\* rating – defined as 'recognised internationally' – as well as the 3\* and 4\* ones, nearly 93 per cent of research at Bristol was deemed to be of international standard.

### Adult stem-cell breakthrough

Academics from Bristol played a key role in a breakthrough in stem-cell research that was announced in November 2008. Professor Anthony Hollander from the Department of Cellular and Molecular Medicine and Professor Martin Birchall from Clinical Science at South Bristol were part of a pan-European team that achieved a breakthrough in tissue engineering using adult stem cells, leading to a life-saving transplant operation. A young woman's diseased trachea was replaced by a length of cartilage grown from the patient's own stem cells in Professor Birchall's lab, and matured into cartilage cells using an adapted method originally devised by Professor Hollander for treating osteoarthritis. The operation was performed in June 2008 in Barcelona by Professor Paolo Macchiarini of the University of Barcelona.

The breakthrough gained global media coverage, and by April 2009 Professor Hollander had raised over £1.6 million to fund trials, including the first human study, of the pioneering 'cell bandage' technology, which aims to save thousands of patients from the type of knee surgery that currently leads to premature osteoarthritis. The trials will be conducted by the spin-out company he co-founded, Azellon Cell Therapeutics.

### Found: world's earliest nuclear family

An international team including Dr Alistair Pike, Head of Archaeology at Bristol, and PhD student Hylke de Jong, has uncovered the earliest evidence of a nuclear family, dating back to the Stone Age. A 4,600-year-old grave excavated at Eulau in Germany contained a female, a male and two children, buried facing each other – an unusual practice in Neolithic culture.

## RESEARCH CONTINUED

Using state-of-the-art genetics and isotope techniques, the researchers established that the group consisted of a mother, father and their two sons. This provides the oldest molecular genetic evidence in the world of a nuclear family and fills in an important gap in our knowledge of human social evolution.

### Quantum cryptography sets new standard in 'unbreakable' encryption

A Bristol team led by John Rarity, Professor of Optical Communication Systems in the Department of Electrical and Electronic Engineering, is one of the partners in a Europe-wide project to establish a secure communications network using quantum cryptography. The network was demonstrated for the first time in October 2008 in Vienna.

The encryption process uses quantum cryptography to generate and distribute 'keys' that encrypt confidential communications with the highest level of security ever achieved. Potential users of this network include government agencies, financial institutions or companies with distributed subsidiaries.

### Work transformed: new study earns plaudits

An acclaimed new book by Kevin Doogan, Jean Monnet Professor in the School for Policy Studies, examines the undercurrents of the new global economy and challenges conventional thinking about the causes of the current economic crisis. *New Capitalism? The Transformation of Work* looks at the modern economic landscape through the lens of the labour market, examining themes such as globalisation, technological change, and the pension and demographic time-bombs.

Professor Doogan takes issue with the prevailing view that the more precarious world of so-called 'new capitalism' is the result of rapid technological change, the mobility of multinational capital and the privatisation of the welfare state. His book includes a comprehensive analysis of developments in Europe and North America,

and concludes that the precariousness of employment is not a natural consequence of the new global economy but is manufactured, emanating from neoliberal policy that advocated greater exposure of the economy to market forces and encouraged extraordinary levels of financial speculation, consumer debt and over-production.

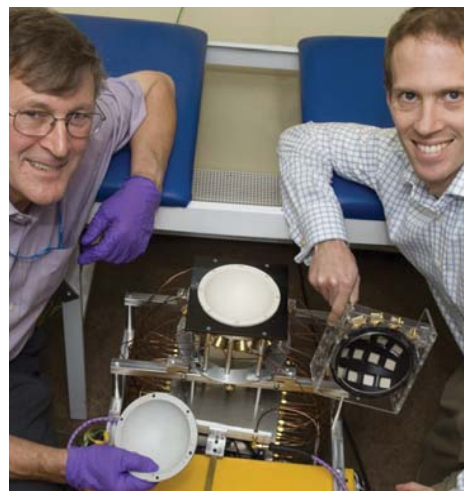
Professor Doogan explains that the book, which has received huge critical acclaim around the world, 'aims both to counter despair and to contribute to the restoration of rationality in the management of economic affairs'.

### Breast cancer screening transformed by radio waves

A revolutionary new technique for breast cancer screening, which has been in development at the University for several years, began trials at North Bristol NHS Trust in November 2008.

Alan Preece, Emeritus Professor in Medical Physics at Clinical Science at South Bristol, has been collaborating with Professor Ian Craddock from the Department of Electrical and Electronic Engineering to develop a breast-imaging machine that uses radar. Their prototype adapts the pioneering work of Bristol's Professor Ralph Benjamin on landmine detection. It produces a detailed, 3D image of the breast in less time – and with much greater comfort for the patient – than either a mammogram or an MRI scan.

It is hoped that the new technique, developed with funding from the Engineering and Physical Sciences Research Council and the trustees of University Hospitals Bristol, will prove successful enough to be commercialised via Micrima Ltd, a University spin-out company.



**Top:** A still from the Chamber of Demonstrations (see p11)  
**Bottom:** Professors Alan Preece (left) and Ian Craddock with their breast cancer screening prototype

### Bristol chemists make liquid protein

Chemists at Bristol have created the first known example of a liquid protein, opening up the possibility of a number of medical and industrial applications.

Professor Stephen Mann and Dr Adam Perriman, along with Helmut Cölfen of the Max Planck Institute for Colloid and Interface Research in Germany, made a liquid form of the iron-storage protein, ferritin, by modifying its surface. The resulting highly concentrated protein could pave the way for a new generation of protein-based pharmaceuticals, sensors, coolants and lubricants.

### DVD sheds new, detailed light on Jacobean theatre

Professor Martin White and colleagues in the Department of Drama: Theatre, Film, Television have made a major contribution to our understanding of theatre history, with a DVD reconstruction of a candlelit Jacobean playhouse. The Chamber of Demonstrations (an outcome of a project funded by the Arts and Humanities Research Council) features high-definition (HD), multi-angle footage of scenes from *The Duchess of Malfi*, *The Changeling* and other works, performed by classical actors in costumes from Shakespeare's Globe. The DVD, produced by Ignition Films, includes a wealth of supporting material on 17th-century English drama practice and is one of the first HD DVDs to be created specifically as an academic research and teaching tool.

### Virtual chemical labs bring safety to school science

Learning Science Ltd, a start-up company based in the University's SETSquared Business Acceleration Centre, has launched a groundbreaking chemistry e-learning tool developed at Bristol. The LabSkills Schools Dynamic Lab Manual ([www.labskills.co.uk](http://www.labskills.co.uk)), the result of a collaboration between Bristol ChemLabS and teachers from Southampton, Bristol, Leicester and Sheffield, allows trainee chemistry teachers and their pupils to watch or carry out 'virtual'

experiments, practise the techniques and make mistakes – all before they tackle the real thing.

### Interdisciplinary work

Interdisciplinarity, currently a buzzword in academia, has for some time been a major component of the University's research strategy, with many instances of collaboration across disciplines that have already yielded concrete, highly beneficial outcomes (see, for example, the work on breast cancer screening, p10). At the organisational level, the University has invested heavily in establishing a number of new centres and networks to make the walls between disciplines more permeable, and to create opportunities for imaginative collaboration between disparate researchers. Here are just a couple of examples.

### Institute for Advanced Studies

The University's Institute for Advanced Studies (IAS) promotes and encourages interdisciplinary research at Bristol, facilitates visits by distinguished international scholars and creates conditions for collaboration and the generation of ideas that otherwise might not see the light of day. Its programme of fellowships, Benjamin Meaker Visiting Professorships, workshops and other events forms the framework for a vigorous and lively culture of discussion and exchange between individuals, disciplines and institutions.

A notable instance of the work of the IAS is its hosting of the Water and Health Research Centre (WHRC), an interdisciplinary partnership between all six University faculties that provides a research focus for over 30 academic staff in 13 different departments. The largest WHRC project is AQUATEST, an international programme (funded by the Bill & Melinda Gates Foundation) to develop and distribute an easy-to-use, low-cost device for testing water quality in developing countries. In 2008/09, other WHRC projects making significant headway included a collaboration between Bronwen Morgan, Professor of

Socio-legal Studies in the School of Law, and FRANK Water, a locally based social-enterprise company, to study and improve the delivery of FRANK's support of community-run clean water projects in India and Africa.

### Bristol Neuroscience

Bristol Neuroscience (BN) is a focal point for the University's neuroscience community. It enables neuroscientists working at separate sites to make full use of the expertise and facilities within the University and its partner hospitals and to create opportunities for collaboration across disciplines. BN's co-ordinator, Dr Anne Cooke, also organises public lectures and other events.

BN is affiliated to the Institute for Advanced Studies, has close links with the local NHS Trusts and works in partnership with the Cardiff Neurosciences Centre via the Bristol-Cardiff Neuroscience Collaboration. This latter initiative has established Young Neuroscientists' Day, a highly successful networking event for early-career UK neuroscientists. Autumn 2008 saw the second of these annual events, hosted by Cardiff University and featuring workshops, mini-symposia and a plenary lecture by Dr Sarah-Jayne Blakemore from University College London.

Among many illustrations of the fertile environment fostered by BN is a recent discovery by three scientists from different departments that suggests a new approach to the treatment of multiple sclerosis (MS). Professor David Wynick in the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology, who works on the function of a neuropeptide called galanin in the relief of neuropathic pain, wanted to investigate whether galanin might play a role in the treatment of MS. A BN symposium provided the opportunity to discuss his ideas and propose a collaboration with David Wraith, Professor of Experimental Pathology in the Department of Cellular and Molecular Medicine, and Neil Scolding, Burden Professor of Clinical Neurosciences in Clinical Science at North





## RESEARCH CONTINUED

Bristol. Their tests showed that mice bred to produce high levels of galanin were completely resistant to an MS-like disease called experimental autoimmune encephalomyelitis. This and other results provide powerful insights into how MS might be treated in humans.

### AN EYE TO BRITAIN'S FUTURE

The University recognises its responsibility to help improve the future of the UK population – our health, our infrastructures, our preparedness for new challenges. In December 2008, as part of a £250-million initiative to create 44 training centres across the UK, the Engineering and Physical Sciences Research Council announced funding of over £24 million for four new centres at Bristol that will train the scientists and engineers needed for Britain's future:

**The Advanced Composites Centre for Innovation and Science**

(based in the Department of Aerospace Engineering)

**The Doctoral Training Centre in Functional Nanomaterials**

(based in the new Centre for Nanoscience and Quantum Information)

**The Holistic Doctoral Training Centre for Chemical Synthesis**

(based in the School of Chemistry)

**The Industrial Doctorate Centre in Systems**

(based in the Faculty of Engineering)

### Supporting research

Staff in Research and Enterprise Development (RED) work with University colleagues, students and external partners to support world-class research and enterprise, and to develop a sustainable portfolio of activities that strengthen and underpin the University's research base. The RED team provides training and advice on entrepreneurship, knowledge transfer and the exploitation of research and expertise. RED also holds the annual New Enterprise Competition, which is judged and sponsored by local government and national businesses.

### SETsquared

RED manages the University's SETsquared Business Acceleration Centre, part of the SETsquared Partnership, which also includes the universities of Bath, Southampton and Surrey and is now the UK's largest enterprise collective, with some 6,500 researchers. The Centre draws on in-house expertise and a wide network of seasoned entrepreneurs, investment advisers, professional services firms and academics to provide support for emerging technology companies, accelerate growth and pre-empt the common pitfalls of technology businesses. The Centre was named 'Established Business Incubator of the Year 2008' by the UKBI, the professional body for the business incubation industry.

It was reported late in 2008 that 12 of the companies in the University's SETsquared Business Incubator had between them raised over £23 million in the Centre's busiest year since its inception in 2002. The Centre's 37 early-stage, high-tech, high-growth businesses together increased turnover by 20 per cent to over £6 million and increased headcount by 66 per cent to 175 people.



Top: Professor David Wynick (see p11)  
Bottom: The first cohort of students in the Holistic Doctoral Training Centre for Chemical Synthesis

Left: Professor Bronwen Morgan (left) and PhD student Sarika Seshadri, who are helping FRANK Water to develop its support of clean water projects in India and Africa (see p11)

## RESEARCH CONTINUED

### New Enterprise Competition

The winner of the 2009 New Enterprise Competition was Jennifer Griffiths, a fourth-year student in the Department of Computer Science, for Snap-Fashion, a new website that uses a number of image processing techniques to provide a 'pictorial search engine' for fashion items. The prize included £15,000 plus six months' managed office space at the Bristol SETsquared Business Acceleration Centre and free legal advice from Bristol law firm Osborne Clarke.

The joint runners-up were:

- Srilakshmi Sharma, a member of staff in the Department of Ophthalmology, for Selo, a low-cost device that increases the efficiency of eye injections to treat macular degeneration, a major cause of blindness, potentially saving the NHS some £50 million per year;
- Engineering Mathematics undergraduate Edward Matos for Shamba Technologies, a social enterprise that will distribute biodigester technology among the rural poor of developing countries, introducing a fuel source derived from livestock excrement – a cleaner alternative to the firewood that causes disease and death for thousands every year through smoke inhalation.

The 2009 competition entries were judged by a panel of experts from the sponsoring organisations, including Bristol City Council, Business Link, Deloitte, EADS, Edwards, Ginko Investments, IP Group, North Bristol NHS Trust, Osborne Clarke, Santander and Wyvern Seed Fund.

## GRANTS

The University attracted a total of £102 million in grants during 2008/09. This included the following:

**£1.5 million** in Doctoral Training Grants from the Biotechnology and Biological Sciences Research Council to the Faculty of Medical and Veterinary Sciences for the training of postgraduates.

A European Research Council Advanced Grant of **€2.4 million** over five years to Professor Steve Sparks in the Department of Earth Sciences for a study of volcanoes and their environmental and social impact.

**£1.1 million** from the Medical Research Council for a study led by Chris Salisbury, Professor of Primary Health Care, to improve access to physiotherapy in the NHS.

Over **€2 million** in the form of a five-year European Research Council Advanced Grant to Jeremy Henley, Professor of Molecular Neuroscience in the Department of Anatomy, for a study of brain proteins entitled 'Mechanisms and consequences of synaptic SUMOylation in health and disease'.

**£1.2 million** over three years from the Biotechnology and Biological Sciences Research Council to David Murphy, Professor of Experimental Medicine in the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology, and Professor Julian Paton in the Department of Physiology and Pharmacology, for studies of gene expression and hypothalamic plasticity in response to dehydration.

An EC grant of nearly **€11 million** to an international consortium, including Paolo Madeddu, Professor of Experimental Cardiovascular Medicine at the Bristol Heart Institute, that seeks to understand the molecular mechanisms that impair wound-healing and organ repair in ageing

or ill patients. The ultimate aim is to find ways of enhancing the body's healing capacity and reducing chronic inflammation.

**€1 million** from the European Space Agency to a team including members of the Department of Aerospace Engineering working on the design of a reusable space plane, the SKYLON, that can take off from a conventional aircraft runway, carry over 12 tonnes into orbit and return to land on the same runway.

**£0.6 million** from the Economic and Social Research Council to Dr Maurizio Marinelli (Centre for East Asian Studies), Professor Robert Bickers (Department of Historical Studies) and Professor Nikki Cooper (a former Bristol academic now at Swansea University) for a three-year research project on colonial Chinese history, focusing on the northern Chinese port city of Tianjin.

**£1.7 million** from the Biotechnology and Biological Sciences Research Council to a team including Keith Edwards, Professor of Cereal Functional Genomics and Dr Gary Barker, Research Fellow in the School of Biological Sciences (along with researchers at the University of Liverpool and the John Innes Centre) to carry out an extensive genetic analysis of the wheat genome, with a view to increasing disease resistance, quality and yield.

Funding of **€1.0 million** from the energy company E.ON to Dr Neil Fox from the School of Chemistry and the Department of Physics for a project to exploit solar heat to produce electricity using devices called thermionic energy converters. Dr Fox is developing special electrodes for these converters using nanoparticles of industrial diamond powder, which is low-cost and readily available.

## STUDENTS

Education is at the heart of the student experience, but university life should also offer outstanding opportunities for social, vocational, intellectual and personal development. The University is proud of its students and works tirelessly to provide an environment, a set of support structures and a range of opportunities that will enable students to excel in every aspect of their lives at Bristol and to make their university career a genuinely transformative experience.

### The University's priorities in this area are to:

- ensure a fair and transparent system of student representation that provides students with the opportunity to shape their educational and extra-curricular experience;
- support a vibrant, active and democratic Students' Union;
- ensure the provision of learning and skills opportunities that enhance students' future employability;
- offer a rewarding extra-curricular experience that provides for students' health, well-being and personal development;
- provide advice and support for students' personal welfare and ensure effective integration into the University and local community.

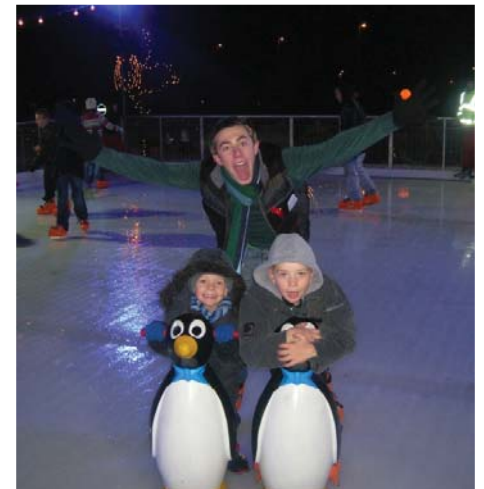
### Student Community Action and RAG

Student Community Action (SCA), a volunteering organisation in the Students' Union with over 1,000 members, provides opportunities and training for student volunteers working in support of community projects. A Volunteer Development Co-ordinator, initially funded by the Higher Education Funding Council for England through its Teaching Quality and Enhancement Fund, organises and oversees training and development programmes for the students involved.

SCA ran 33 projects between August 2008 and July 2009. Each project is run by one or two student volunteer co-ordinators; regular volunteer numbers vary but 2008/09 saw a total of 2,365 volunteers working on SCA projects. The 29 training programmes for volunteers were attended by some 1,080 people.

SCA projects include:

- Greenforce, a conservation group that has recently begun working with bodies such as the British Trust for Conservation Volunteers and the Avon Wildlife Trust (via its School Grounds Project), and was involved in a project to build a green space for the Totterdown community in Bristol;
- Door to Store, a free service offering transport to supermarkets for elderly people that has teamed up with the Bristol charity Dial-A-Ride to reduce costs and organisational load, also enabling volunteers to gain experience in Dial-A-Ride's offices;
- Panda Club, in which volunteers take five- to 11-year-olds from disadvantaged areas on outings and trips;



Above: A Panda Club outing to a local ice rink

- The Big Give, which organises collections of left-over food and objects from halls of residence and student houses at the end of the academic year and donates them to local homeless shelters and charities (see p26);
- Breast Cancer Awareness, which provides workshops and presentations for students and members of the local community about breast health.

RAG activities in 2008/09 encountered an uncertain economic climate but still raised a total of £94,000. Over 5,000 student volunteers were involved in RAG fundraising events and activities, including regular street collections, an art exhibition, a 'Massage-a-thon' (in which the Massage Society provided ten volunteers to give massages for donations), a Soccathon (involving 15 football teams), a 10km race, and the annual RAG Ball, which raised over £8,000.

## STUDENTS CONTINUED

### STUDENT AWARDS AND PRIZES

#### Bristol students win SET Awards

Two Bristol students were winners of the prestigious 2008 Science, Engineering and Technology (SET) Student of the Year Awards, organised by the World Leadership Forum. Philip Ewels from the Department of Biochemistry won the AstraZeneca Award for the Best Biology or Biotechnology Student, and Niall Oswald from the Department of Electronic Engineering won the e2v Award for the Best Electronic Engineering Student.

#### Medical student wins Penguin Prize

Sethina Adjarewa, a British-Ghanaian fourth-year student in the Faculty of Medicine and Dentistry, was one of the winners of the 2008 decibel Penguin Prize, awarded by Penguin and Arts Council England for accounts by writers with a mixed-heritage background of their experiences. Her piece is published by Penguin in *The Map of Me*, the third annual anthology of decibel winners.

#### Chemistry student shines

Liam Ball, a final-year MSci undergraduate in the School of Chemistry, was awarded a 2009 Graduate Prize – one of only five – by the Salters' Institute, which supports chemistry teaching, encourages young people to pursue careers in the UK chemical industries and promotes chemical education.

#### Bristol student wins 2009 GHS Essay Prize

Three postgraduate students in the Department of Archaeology and Anthropology took top honours in the 2009 Garden History Society (GHS) Essay Prize. Judith Preston won the prize for her essay 'Thomas Wright: A polymath in Arcadia', while Janet Davidson Carter and Helen Lawrence were highly commended for their essays on Birkenhead Park and Thomas Archer respectively.

#### Bristol engineers ride high as role models

Five engineering students were selected by the Royal Academy of Engineering as 'inspirational role models to the next generation of engineers'. Graham Hinchly (Mechanical Engineering), Peter Levi and Tom Mynors (Civil Engineering), Edward Thompson (Aeronautical Engineering) and Richard van Arkel (Engineering Mathematics) competed against 150 students from other UK universities to win the national Royal Academy of Engineering Leadership Advanced Awards. These awards allow engineering undergraduates with aspirations to leadership roles to undertake an accelerated personal development programme.

#### Fulbright Award for Chemistry postgrad

Mike Shaw, a PhD student in the School of Chemistry, gained a prestigious Fulbright Commission Distinguished Scholarship Award in June to pursue his work on the synthesis of anti-cancer agents at the Scripps Research Institute in California, the world's largest independent, non-profit biomedical research facility. It is hoped that his work, which attempts to synthesise a rare molecule found only in Japanese Sea Squirts, will lead to the development of powerful new clinical medicines to fight cancer.

#### Sport

##### Medics score victories in fencing and powerlifting

Three members of the University's High Performance Squad won events at national level in the latter part of 2008.

Francesco Egro from the School of Medicine and Naomi Taylor from the Dental School represented England in the 5 Nations fencing tournament. Egro won both foil and sabre events, and Taylor won the épée event.



Top: Georgie Twigg (left) and Philippa Newton with their AYOF gold medals

Bottom: Niall Oswald (left) receives his SET award from Keith Attwood, CEO of e2v



Josh Hill from the School of Medicine won in the British Junior (Under 23) Powerlifting championships – and also broke the British record (Under 100 kg category), lifting a total weight of 835 kg.

#### Future Olympians win gold

Undergraduates Georgie Twigg and Philippa Newton were part of the Great Britain Women's Hockey Team that won gold medals in the 2009 Australian Youth Olympic Festival (AYOF), while neuroscience student Emily Cousins won the Gold Medal for Equestrian Dressage.

#### Engineering entrepreneur takes flight

George Mills, a student in the Department of Mechanical Engineering, was one of only 11 students in the UK to be awarded a place on the prestigious Flying Start Global Entrepreneurs programme. The scheme, made possible by a collaboration between the UK's National Council for Graduate Entrepreneurship and the Ewing Marion Kauffman Foundation in the US, includes mentoring from some of America's leading entrepreneurs. Mills spent the first six months of his fellowship developing his technology-based business idea within Research and Enterprise Development (RED) at Bristol, followed by six months in the US as a Kauffman Global Scholar at leading universities such as Harvard, MIT and Stanford.

#### Bristol's genetic engineers beat the world's best

An interdisciplinary team of Bristol students triumphed over 83 other teams, including some from the best universities in the world, in a prestigious competition to genetically engineer a machine. The Bristol Centre for Complexity Sciences team comprised nine students from departments including Biology, Biochemistry and Engineering Mathematics, working together on their entry for the competition at MIT, in which teams were given a set of 'bio-bricks' (or DNA parts) with which to engineer biological systems and test them in living cells.

The Bristol team designed microscopic 'Bacto-builders' that could perform tasks such as removing toxins from drinking water, and investigated the possibility of combining large numbers of *E.coli* bacteria to push particles around – a feat considered virtually impossible until recent developments in complexity sciences. Having created a mathematical model and simulation software, they tested it on Blue Crystal, the University's new supercomputer. It was for this that they won the Best Model prize.

#### Rare publishing achievement for Earth Sciences undergraduate

A fourth-year student in the Department of Earth Sciences achieved the rare distinction of having his work accepted for publication in a major scientific journal while still an undergraduate. Felix Marx's paper, 'Marine mammals through time – when less is more in studying palaeodiversity', was published in *Proceedings of the Royal Society*. His paper offers new insights into the fossil record of whales, seals and sea cows.



Top: The Bristol Centre for Complexity Sciences team  
Bottom: Earth Sciences student Felix Marx

# STAFF

The University of Bristol is committed to ensuring that it has the right people in place to achieve its vision and mission in an increasingly competitive international market for the best academic talent. It also needs outstanding people across the broad range of support roles. Personnel activities in 2008/09 focused above all on the organisation's aim of providing a stimulating, supportive working environment where staff can achieve their full potential, while individuals' and departments' achievements over the course of the year are evidence of their contribution to the success of the University.

## The University's priorities in this area are to:

- recruit and retain first-class talent;
- foster a high-achieving workforce that is competent, committed, creative and capable of managing and responding positively to change;
- develop a culture and an environment that motivates and enables people to make an excellent contribution.

### Integrated recruitment policy

The University recognises that staff recruitment is a strategically important activity that needs to be undertaken professionally with the full engagement of all those involved. In 2008/09, it agreed a fresh approach to the recruitment of academic staff, which will be implemented in the coming year. The new policy aims to provide an effective platform to face the challenges of the modern recruitment landscape while upholding the University's commitment to ensuring equality, diversity and transparency throughout the organisation.

The emphasis is on robust selection criteria and effective decision-making as well as on proactively representing the University as an attractive destination for exceptionally talented people. Integral to the policy is a partnership approach in which Personnel Services works closely with the recruiting department or faculty to co-ordinate the recruitment and selection process and a smooth introduction for new staff.

### Managing change

Continuous improvement and strategic change are a central part of life at the University. In order to maintain staff effectiveness during such changes, Personnel Services established a Change Team in 2008/09 that aims to:

- support change within individual projects and programmes;
- build change-management awareness, understanding and capacity within the organisation;

- establish an overview of where change is happening and how much impact it is having in order to minimise bottle-necks and encourage collaborative working.

Perhaps the most significant change programme initiated in 2008/09 was Support Process Review. A new vision for the University's support services was adopted as the basis for an effort to transform the efficiency, consistency, resilience and cost-effectiveness of the structures and processes that underpin the academic endeavour. The cost pressures on the University (which have parallels across the higher education sector) have increased the urgency of this project, and of measures to boost income. An early retirement and voluntary severance scheme implemented in 2008/09 was helpful in controlling costs, as was a 'salary exchange' programme that should save about £1 million a year. However, further measures will be required in order to achieve financial sustainability and allow ongoing capital investment. The costs and risks associated with pension schemes are among the major factors that the University, in common with other organisations in every part of the economy, will have to address.

### Excellence in human resources

Bristol University won the Outstanding Human Resource Initiative Award at the Times Higher Education Leadership and Management Awards 2009 ceremony. The award recognises the single initiative or innovation that has had the most positive impact in the field of higher education human resources. Bristol won for its exceptional



Positive Working Environment (PWE) initiative, which aims to make working life productive, rewarding and enjoyable for all staff.

The PWE agenda, which encompasses staff counselling, career advice and healthy living opportunities, has led to a reduction in absenteeism and sick leave, increased institutional loyalty and improved staff well-being. Ann Mroz, editor of *Times Higher Education*, said: 'This holistic approach to human resources management has produced brilliant results. The fact that other institutions have enlisted the services of the University of Bristol's HR consultancy proves that this is an initiative that could have far-reaching effects.'

Bristol also won an award from City of Bristol College for its Modern Apprenticeship Scheme, provided by Personnel Services and Staff Development. In addition, two apprentices working at the University won Apprenticeship of the Year Awards: Charlotte Wyatt, working in the Department of Anatomy, was named Business Administration Apprentice of the Year and Steven Bush, an advanced fitter in Estates Services, won the Best Apprentice Engineer Award.

### Equality and diversity high on the agenda

The University's equality and diversity strategy supports the organisation's efforts to attract the best employees from all walks of life and all parts of the world, improve motivation and productivity and reduce staff turnover. Activities undertaken in 2008/09 by the Equality and Diversity team to help create a stimulating and supportive working environment that values difference included:

- establishing a Work and Family Buddy Scheme, where staff with caring responsibilities share their experiences with others;
- setting up a Russell Group Equality Network, where equality and diversity

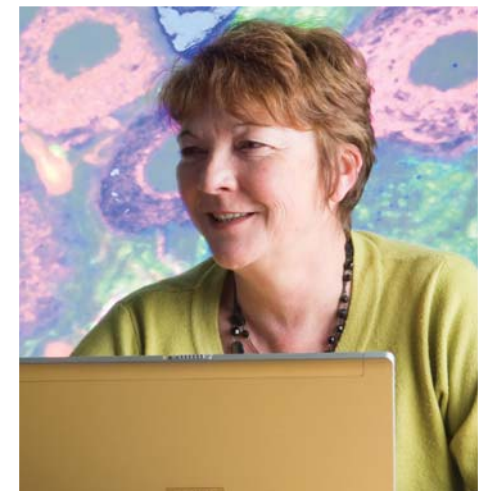
practitioners from leading UK research-intensive universities meet to discuss and influence strategic and policy development, share best practice and respond to national issues relating to equality and diversity;

- developing networks for disabled staff and black and minority ethnic staff;
- expanding the successful Mentoring Circles model for women in the faculties of Science, Engineering, Medical and Veterinary Sciences, and Medicine and Dentistry;

- launching a process of equality risk assessment across the whole organisation, whereby decision-makers are encouraged to consider the impact of any existing or proposed policy on people from diverse backgrounds and circumstances in an effort to ensure that such policies are inclusive. More than 30 policies and 14 capital projects have been subject to this process so far;

- working with academic colleagues to better support Deaf and disabled students. An annex on disability equality was also developed for inclusion in the University's Code of Practice for the Assessment of Students on Taught Programmes to encourage a consistent approach to this element of the student experience;

- supporting the University's commitment to the Athena SWAN Charter, an initiative that recognises excellence in employment in science, engineering and technology. In particular, the Department of Physiology and Pharmacology won a silver SWAN award in recognition of its success in recruiting and retaining women and developing an innovative staff review and development programme designed to encourage more women to advance their careers; the University's Equality and Diversity Manager was invited to sit on the national judging panel for the Athena SWAN Awards; and the University featured as an example of best practice in several sector-wide guides for its success in recruiting, supporting and retaining women in science.



**Top:** Professor Bridget Lumb, first female Head of Department in Physiology and Pharmacology

**Bottom:** Personnel Manager Christian Carter (left) receives the Times Higher Education Outstanding Human Resource Initiative Award from satirist Rory Bremner

## STAFF CONTINUED

### Movers and shakers

Many Bristol academics achieve the distinction of being appointed to sit on the boards and decision-making committees of external organisations, which in many cases enables them to contribute to shaping national policy. Some examples from the year are as follows:

- Professor Tariq Modood of the Department of Sociology was appointed to the National Equality Panel, an independent panel of experts that will provide the government with an authoritative analysis of inequality in Britain by the end of 2009. The panel will provide a factual analysis of how equality trends have changed over the past ten years and map out where gaps have narrowed and widened in society; investigate how people's life chances are affected by factors such as gender, race, disability and age; and show how these factors interrelate.
- Dr Jo-Anne Baird of the Graduate School of Education was appointed an independent adviser by the government's Department for Children, Schools and Families to give advice to an expert group on future assessment and accountability systems for primary and secondary schools. Part of the group's remit was to examine government proposals for the introduction of a new School Report Card, designed to give parents a new, simpler and more comprehensive way of understanding schools' performance and achievements.
- Professor David Gordon of the School for Policy Studies and Director of the Townsend Centre for International Poverty Research was appointed to the Supervisory Board of the Union Modernisation Fund (UMF) by the Ministry of Business, Enterprise and Regulatory Reform. The UMF is a government grant scheme that provides financial assistance to trade unions to help them improve the services available to their members. The Supervisory Board of the UMF advises government ministers on the projects that should receive financial support in each bidding round. The current funding round aims to help unions improve

the support they give to vulnerable workers, in partnership with voluntary and community organisations that have specific expertise in this area. This focus on vulnerable workers is particularly important at a time of rapidly rising unemployment and recession.

Many others, such as Joe McGeehan, Professor of Communications Engineering, Director of the University's Centre for Communications Research and Managing Director of Toshiba's Telecommunications Research Laboratory in Bristol, play an active role in industry, helping to stimulate the economy and enable businesses to compete globally. Professor McGeehan, who is credited with pioneering many of the major developments in mobile communications, was appointed a member of the South West Science and Industry Council (SWSIC). SWSIC promotes greater understanding of science and technology to business, and raises awareness of the opportunities presented by science for the overall economic advantage of individual businesses and of the region.

### Fellowships and professional appointments

Many members of staff represent the University through prestigious Fellowships and membership of professional organisations as leaders in their field. 2008/09 saw the following influential appointments, among others:

- Mike Ashfold, Professor of Physical Chemistry, and Jon Keating, Professor of Mathematical Physics, achieved the rare distinction of being elected Fellows of the Royal Society for scientific excellence. The Fellowship of the Royal Society is composed of the most distinguished scientists from the UK, other Commonwealth countries and the Republic of Ireland. It is the highest accolade a scientist can receive, short of a Nobel Prize. These latest awards bring to 31 the number of current Bristol academics whose work in the fields of science, engineering, technology and medicine has been honoured in this way – a remarkable total for a relatively small institution.



Top: Mike Ashfold, FRS, Professor of Physical Chemistry  
Bottom: Jon Keating, FRS, Professor of Mathematical Physics

- George Davey Smith, Scientific Director of the University's Children of the 90s study and Professor of Clinical Epidemiology in the Department of Social Medicine, was elected a Foreign Associate of the Institute of Medicine of the National Academies in the US. Professor Davey Smith is one of around 80 foreign associates elected by the Institute on the basis of professional achievement and of demonstrated interest, concern and involvement with problems and critical issues that affect the health of the public. The Institute of Medicine is a non-profit organisation that provides unbiased, science-based advice and authoritative information on biomedical science, medicine and health to policy-makers, professionals and the public. Professor Davey Smith has pioneered the use of genetic studies to inform us about disease prevention and is a recognised international leader on research in this area and in social inequities in health.
- Professor Jenny Donovan, Head of the Department of Social Medicine, was elected to the Fellowship of the Academy of Medical Sciences, which promotes advances in medical science and campaigns to ensure these are converted into healthcare benefits for society.
- Judith Squires, Professor of Political Theory and incoming Dean of the Faculty of Social Sciences and Law (from 1 August 2009), was elected an Academician of the Academy of Social Sciences. Academicians contribute evidence drawn from in-depth research that has a positive impact on public policy-making and practice through knowledge exchange and public engagement.
- Dr David Langley, Director of the University's Research and Enterprise Development division, was appointed a Distinguished Faculty Member of the Society of Research Administrators International. Members are called upon as expert consultants and speakers to present and review professional workshops, continuing education courses and professional development programmes, and as expert researchers to

conduct periodic external reviews of research administration capacity and process within organisations.

### Awards and prizes

Staff continue to distinguish themselves through the receipt of awards and prizes. Accolades from the year include:

- Four Royal Society-Wolfson Research Merit Awards, to Professor Nigel Smart in the Department of Computer Science, Professor Peter Cullen in the Department in Biochemistry, Professor Richard Evershed in the School in Chemistry and Professor Jens Marklof in the Department of Mathematics. The awards recognise researchers of outstanding achievement.
- Two Leverhulme Prizes, to Dr Harald Helfgott and Professor Andreas Winter, both in the Department of Mathematics.

Elsewhere, the University's Quantum Photonics group won a global award for innovation in the Institution of Engineering and Technology's annual Innovation Engineering Awards. The team, led by Professor Jeremy O'Brien, Professorial Research Fellow in Physics and Electrical Engineering, and including Alberto Politi, Dr Martin Cryan, Professor John Rarity and Dr Siyuan Yu, won the award for the development of silicon chips for optical quantum technologies.

Beth Tarleton, a research fellow at the Norah Fry Research Centre, received an Early Career Research Award from the International Association for the Scientific Study of Intellectual Disabilities for her work with parents with learning disabilities.

*Subtext*, the University's magazine, won two medals in the 2009 Circle of Excellence Awards, an international programme run by the US-based Council for Advancement and Support of Education. *Subtext*, which was conceived as a magazine for staff but has developed a much wider readership, was selected for a gold medal in the Print Internal Audience Magazines category and a silver medal in the Periodical Staff Writing for Internal Audiences category.



Top: Judith Squires, Professor of Political Theory, elected Academician of the Academy of Social Sciences  
Middle: Joe McGeehan, Professor of Communications Engineering, appointed a member of the South West Science and Industry Council  
Bottom: *Subtext*, the University's award-winning magazine

# THE ENGAGED UNIVERSITY

Public engagement at Bristol includes all the ways in which University staff and students interact with members of the public, encompassing talks, debates, festivals, performances, widening participation, research with, and driven by, communities, volunteering, lifelong learning, action research and engaged learning. The Centre for Public Engagement works alongside colleagues throughout the University to support, reward and celebrate engagement activity. Here we cover some of the vast array of such activity that took place in 2008/09, to the mutual benefit of the public and the University.

## The University's priorities in this area are to:

- support and promote dialogue between staff/students and the public;
- play a leading role in setting the national agenda on public engagement in higher education;
- respond positively to community needs;
- play a positive role in the affairs of the city, region and nation;
- nurture relationships with alumni and other friends of the University;
- behave responsibly as an institution.

## Involving the public

The University is committed to sharing its teaching expertise and research findings with members of the public. One of the ways it does this is through organising or promoting an extensive programme of free public events. In 2008/09, these included:

- a series of lectures to celebrate the University's centenary, featuring renowned speakers such as Jonathan Kestenbaum on innovation, Leonard Susskind on Darwin and the cosmic landscape and Will Hutton on the shifting global economy;
- a major exhibition of photographs of life in China at the Grant Bradley Gallery in Bedminster. The five-week Picturing China 1870-1950 exhibition was accompanied by a series of evening talks about China past, present and future, a schools outreach programme to primary and secondary schools involving more than 500 local children and a Chinese New Year celebration in conjunction with the City Museum;
- a series of 'citizen science' activities co-ordinated by researchers in the School of Biological Sciences (during National Science and Engineering Week and at the Festival of Nature) that involved hundreds of schoolchildren in the task of identifying and recording invasive moths and their pest-controlling parasites, bringing the issue of biodiversity alive for thousands of people;
- Brain Awareness Week, hosted by Bristol Neuroscience and supported by The Physiological Society and the Biotechnology and Biological Sciences Research Council.

This annual event, which involved more than 60 Bristol neuroscientists this year, gives the public the chance to meet experts in the field, try their hand at interactive neuroscience activities and learn about new research at Bristol;

- a series of informal 'Twilight Talks' held just after work where members of the public met academics to hear about and respond to their latest research.

## Leading role for CPE

The University's Centre for Public Engagement (CPE) went from strength to strength in 2008/09, co-ordinating efforts to ensure that engagement is embedded in the University's culture. As well as organising engagement events in partnership with others, it gave presentations to departments and faculties throughout the year, and to Court and Council, outlining the ways in which it can support academics in sharing their work with wider audiences. It also organised the University's first Engage 2009 conference, providing an opportunity for staff and postgraduates to hear from national figures in public engagement, share experiences and ideas, and find out about the range of public engagement activity at the University. Another new initiative, aimed at helping staff to capture and articulate the value of their public engagement activities, was the creation of a public engagement stories website ([www.bristol.ac.uk/publicengagementstories](http://www.bristol.ac.uk/publicengagementstories)).

## Engaged University Forums

The Engaged University Steering Group, which oversees this area of the University's work, has organised a series of forums to enable external organisations to play a part in setting the institution's engagement strategy. Three key areas in which the city of Bristol excels – sustainability, creativity and ideas, and connectivity and digital media – have been identified as potential areas for further engagement work. In May 2009, the Engaged University Forum on Sustainability brought together representatives from the University (research staff, support staff and students) and from external organisations, including Bristol City Council and the Green Capital Momentum Group, Sustrans, Arnolfini, Bristol Zoo, Wildscreen and the University of the West of England, to identify areas where the University might add value to current work in the sustainability arena. Outcomes included proposals to develop multi-partner research bids, training for undergraduate and postgraduate students in sustainability-related skills and shared visions of Bristol as an eco-city.

## Setting the national agenda

The University continues to play an active part in the activities of the National Co-ordinating Centre for Public Engagement (NCCPE). The Centre, which is funded by the Higher Education Funding Council for England, Research Councils UK and the Wellcome Trust, is working to embed public engagement across the higher education sector. Its steering group is chaired by the Vice-Chancellor. The University's own Centre for Public Engagement represents Bristol on the NCCPE project group, which provides valuable opportunities to share learning, propose joint work and co-ordinate with counterparts at the University of the West of England. Joint work during 2008/09 focused on training for public engagement and on the research impact agenda, which asks academics to articulate the economic and societal impacts of their work. This learning will be shared across UK higher education with a view to securing the culture change sought by funding bodies.

Kathy Sykes, Professor of Sciences and Society, was awarded an OBE in the Queen's Birthday Honours and has contributed to national strategies on science engagement by advising funders, government, learned institutions and others. She also co-authored a report on the use of dialogue and public consultation in shaping government policy.

## Responding to community needs

The University continues to encourage members of staff to take part in volunteering activities in Bristol communities by awarding an extra day's annual leave for the purpose. Students, too, have always made a huge investment in the well-being of the local area through volunteering and more details of their activities can be found on p15.

The Centre for Sport, Exercise and Health is involved in a wide variety of community projects. Among the year's highlights was the Festival of School Sports and Culture. The three-day event, held at the Coombe Dingle Sports Complex and involving 18 Bristol secondary schools, aimed to celebrate sport participation and achievement and provide pupils with a positive experience of sport.

The Avon Longitudinal Study of Parents and Children is engaging further with the local community by turning participants from its Children of the 90s study into young researchers themselves. It has set up a Teenage Advisory Panel, which provides a forum for the young people to contribute their views on the study and inform its future direction.

The University maintained its involvement in the Merchants' Academy in Withywood, South Bristol, which has completed its first year of operation. As co-sponsor with the Society of Merchant Venturers, the University played a significant role in the establishment of the Academy, including its education strategy. Three members of staff at the University continue to serve as governors.

Bristol ChemLabS, one of the University's two Centres for Excellence in Teaching and Learning, won a prestigious Big Tick award in Business in the Community's Awards for



Top: Participants in the Children of the 90s study  
Bottom: Brain Awareness Week

Excellence 2009. It was judged to be making a strikingly positive and sustained impact on the community through its strong schools outreach programme. This is the first Big Tick ever awarded to a university department for outreach activities and is also the first awarded to an educational programme in the chemical sciences.

## ESTATE DEVELOPMENT

Through its estates programme, the University aims to provide consistent, high-quality services that support day-to-day operations and help staff and students achieve their goals by providing a sustainable and positive physical working environment. In 2008/09, the Estates Office continued to develop, service and manage the University estate in keeping with the institution's high standards, with particular emphasis on the environmental performance of new and refurbished buildings.

### The University's priorities in this area are to:

- provide all parts of the University with flexible accommodation which is of a quality, size and functionality appropriate to the activities to be delivered and which supports the University's vision;
- ensure the most efficient use of existing space and the development of capacity within the central precinct area wherever appropriate;
- continue to work to reduce carbon emissions and improve the sustainability of the physical estate;
- provide residential accommodation which is attractive to students in form, service and location;
- deliver an ambitious capital programme in support of the renewal of accommodation and the creation of adaptive capacity;
- provide an attractive, safe, accessible and welcoming setting for University buildings that is sympathetic to the wider urban context;
- produce a new Estate Strategy to inform future strategic decisions about the size, nature and direction of the University's estate.

### Bumper year for new buildings

Several new buildings were completed in 2008/09, boosting research and learning opportunities in a continually changing academic environment:

- The £4.1 million extension to Canynge Hall, home of the Department of Social Medicine, opened in September 2008. The extension, which includes clinical examination rooms, teaching rooms, a lecture theatre and office space, greatly enhances research and teaching capacities.
- The new £3.9 million Dolberry Building, housing the Animal Welfare and Behaviour Group at the Vet School in Langford, opened in April 2009. Its facilities will help the University build on its position as a world leader in animal welfare research.
- The £12 million Centre for Nanoscience and Quantum Information was finished in May 2009. The building is a unique, interdisciplinary centre, designed to keep Bristol at the forefront of research in science, engineering and medicine. It houses state-of-the-art laboratories where temperature, air movement, vibration and acoustic noise levels are strictly controlled to produce conditions suitable for working at the nanoscale.
- A new, £2 million Multimedia Centre for the Faculty of Arts was completed in July 2009. The two-storey extension greatly enhances modern language teaching facilities and provides access to live European media. The building comprises a teaching space, areas for open access learning, a substantial media resource store, a small recording studio and a screening room.

### Improving existing spaces

Several refurbishment projects came to fruition, in keeping with the University's aim of making the most of its current assets:

- The refurbishment of the Medical Library was completed in January at a cost of £2.1 million (for more details, see p27).
- The £2 million refurbishment of the ground floor of the Arts and Social Sciences Library was completed in February (for more details, see p27).
- The refurbishment of the fifth floor of Senate House was completed in March, creating additional office space and allowing for flexible use of the remaining accommodation while refurbishment continues as part of a wider project to transform the entire building.
- Following the external restoration and cleaning of the Wills Tower, further improvements included the internal restoration of the building fabric, upgrading of ventilation and heating services and the provision of an internal lighting scheme for the key public spaces within the tower.
- Improvements totalling £4 million were made to the Social Sciences and Law Faculty complex in Priory Road. The new facility links a number of disparate buildings into a coherent whole and provides a prominent, main entranceway with a café and social space for students.
- Work began on a High Voltage Network project designed to deliver an improved electrical services infrastructure with the necessary capacity to support the new and improved facilities. This includes the construction of a shared power distribution sub-station with University

Right: Centre for Nanoscience and Quantum Information



## ESTATE DEVELOPMENT CONTINUED

Hospitals Bristol NHS Foundation Trust, a new switch room and two high-voltage ring mains in the precinct.

### Go-ahead for new Biological Sciences and Maths buildings

Planning permission was granted in April for the first phase of an exciting development of the old Children's Hospital site on the corner of St Michael's Hill and Tyndall Avenue. This paves the way for the creation of new education and research facilities for the School of Biological Sciences and Department of Mathematics, aimed at keeping the University at the top of its game in key areas of science. The plans include a new route into Royal Fort Gardens, which would also improve the public realm at the heart of the precinct. Implementation of the planning consent will, of course, be subject to the achievement of financial sustainability.

### Working towards a sustainable future

In planning new buildings and refurbishing existing ones, the Estates Office works closely with the Sustainability team to reduce the University's carbon footprint and environmental impact.

The new Dolberry Building (see above) has a BREEAM (Building Research Establishment Environmental Assessment Method) 'excellent' rating for sustainability in design, materials and energy usage. External insulation keeps the building cool in summer and retains heat in winter. The primary heating source uses waste heat from a nearby building and a green roof significantly enhances biodiversity. The new Social Sciences entranceway, which also has a green roof and low-energy heating system, achieved a 'very good' rating at the design stage.

Waste management has taken a significant step forward with a new plastic recycling scheme in all buildings that aims to divert nine per cent of the University's waste from landfill. In 2008/09, the University invested over £200,000 in energy-saving technologies within the precinct, saving an estimated £70,000 and 750 tonnes of carbon dioxide a year. Projects included an organic liquid

swimming pool cover that reduces the need for air and water heating and humidity control. A further combined heat and power unit was installed during 2008/09, this time at Langford, providing savings of £100,000 and 500 tonnes of carbon dioxide a year.

### Building environmental awareness

The University encouraged staff and students to improve the environmental performance of their own departments with the introduction of the Green Impact Awards, an accreditation scheme for environmental best practice. Over 2,000 staff and 4,225 students representing 46 departments took part in the scheme to see which could be the greenest. Their combined efforts resulted in over 1,000 sustainability actions being taken across the University. Many other activities reflect a growing concern with sustainability: for example, Student Community Action, working with the Sustainability team, collected nearly two tonnes of unwanted domestic items from students during this year's 'Big Give' project, passing them on to charities to sell or reuse.

### Travelling light

The University's commitment to promoting sustainable modes of transport was reflected in improvements to its travel plan in 2008/09, including new cycle-parking facilities at the School of Medical Sciences, Oakfield House, Barley House, 8-10 Berkeley Square, the Centre for Nanoscience and Quantum Information and Langford; cycle maintenance and cycle training sessions; an improved staff car-sharing scheme; and a car club for students.

### Bristol top of the class for security

The University's efforts to provide a safe environment in which staff and students can work, study and live were recognised when Bristol became one of only two universities in the UK to win a police-approved Secured Environments Award in January. Certification is awarded to organisations that have adopted six key principles of crime protection. The University demonstrated that it had invested in effective processes and management in order to reduce crime.



Top: Artist's impression of Biological Sciences building  
Bottom: Dolberry Building, home of the Animal Welfare and Behaviour Group

## INFORMATION TECHNOLOGY & LIBRARIES

The University's Information Services division provides information resources and library services, information and communications technology (ICT) and a robust ICT infrastructure to support University learning and teaching, research and enterprise. Some of the division's achievements and developments, undertaken during 2008/09, are outlined below.

### The University's priorities in this area are to:

- provide IT and library facilities to support education, learning and teaching and to enhance the student experience;
- provide IT and library facilities to support research activities and enhance research impact;
- support the University's business objectives by providing efficient and effective processes enabled by well-designed, integrated information systems;
- ensure that our IT Strategy is people-focused and that all members of the University are well supported, trained and equipped to fulfil their roles;
- provide excellent, responsive and resilient IT services for all members of the University;
- develop sustainable approaches to the provision of IT, in order to minimise the impact on the environment.

### New-look libraries

The University is committed to ensuring that all students and staff have access to high-quality library and IT facilities appropriate to a leading institution. To this end, 2008/09 saw major refurbishments of both the Medical and Arts and Social Sciences Libraries. These projects, partially funded by the Wolfson Foundation, provide modern learning environments comprising a wider, improved range of study spaces and facilities.

Improvements to the Medical Library include more social learning space, using an innovative, flexible design to enable individual study, group problem-solving activities, presentation work and resource sharing; a coffee bar; improved IT facilities; contemporary furnishings and decoration; and improved learning technology equipment and self-service facilities.

The refurbishment of the Arts and Social Sciences Library comprises a new glass wall and doors at the front of the building, increasing the natural light available. New refreshment facilities have been developed, and contemporary furnishings, newspapers and on-screen information systems introduced to create a space where visitors can relax after studying in quieter zones of the library. The issue, help and reception desks have been redesigned and relocated to maximise the use of space. The Short Loan Collection has been redesigned to create better accommodation and a new self-issue service improves the availability of loan items by allowing users to borrow books at any time while the library's doors are open.

The library resources budget has risen by ten per cent a year over the past four years. In addition, a pilot project was launched to develop electronic study packs aimed at improving student access to materials in high demand.

Helping students to find and use information effectively and ethically has also been a key target. This year, in addition to offering library induction and training courses to all new students, and refresher sessions to returners, Library Services used £9,000 awarded from the University's Annual Fund to develop an online resource bank. This new interactive tool consists of video tutorials and quizzes designed to help students improve their information literacy skills, including understanding and avoiding plagiarism.

### Using IT to support learning

A major achievement in 2008/09 was the development and approval of the University's new Information and Technology Strategy, following consultation with staff and students during the previous year. The strategy includes a Development Plan, which identifies significant projects and activities. Many of these are currently under way, such as the development of timetabling and room-booking systems and a programme of learning support developments, including a system for summative assessment, a clinical-experience recorder and an electronic portfolio tool to support reflective learning.

Student-focused initiatives include the introduction of a student laptop clinic, and an out-of-hours IT help desk covering evenings, weekends and University closure days. There has also been a great demand for wireless network access points around the University. Following improvements to the underlying infrastructure, the number of points increased to 300 during the year, covering all study desks in the Arts and Social Sciences Library and including new access points in the Hawthorns refectory.



## INFORMATION TECHNOLOGY & LIBRARIES CONTINUED

2008/09 also saw a dramatic increase in the usage of the University portal, My Bristol, with around 300 staff, 5,000 undergraduates and 2,000 postgraduates regularly using the facility since 1 October 2008. The portal is a gateway to web-based services within and beyond the University. By signing in, students and staff can access a range of tools and services in one place, such as email, course details, Blackboard, the Students' Union and the Sports Centre.

### Help for researchers in developing countries

The University's Institute for Learning and Research Technology has developed a new website for an international project aimed at helping researchers in developing countries to publish their work and advance their research careers. AuthorAID ([www.authoraid.info](http://www.authoraid.info)) is a free online community providing access to advice, mentoring, discussion forums and a range of material on best practice in writing and publication. It is based at the International Network for the Availability of Scientific Publications and supported by the Swedish International Development Corporation Agency, the Norwegian Agency for Development Co-operation and the UK Department for International Development.

### Boosting research

The University's new High Performance Computing system, Blue Crystal, became fully operational, and now has more than 250 active users. The system supports research in disciplines such as aerospace engineering, molecular modelling, climate change and social medicine, among others, with a combined project income to date of around £9.5 million. In November 2008, Blue Crystal was ranked as the 86th most powerful supercomputer in the world, helping to establish Bristol as a world-leading centre for research. The next stage of development will be the introduction of a large-scale (one petabyte) data-storage facility to complement Blue Crystal's computational power.

Other significant activities during the year include work with Research and Enterprise Development (RED) on the creation of a research applications and contracts database for better visibility and management of contracts and awards from application through to completion. Work also began on a project with RED and Communications and Marketing Services to develop a new website through which to showcase the University's research.

### Community collaborations

As well as providing tools to enable communication between members of the University, Information Services facilitates projects with external collaborators. During 2008/09, the division worked with the National Co-ordinating Centre for Public Engagement to develop web-based resources to support its local and national activities. The Bristol-based Centre is a partnership between the University of Bristol and the University of the West of England and aims to co-ordinate UK universities' best practice in public engagement and to deepen the social impact and relevance of their work.

Information Services also worked with the Department of Drama and Bristol's Watershed Media Centre on the Semantic Tools for Screen Arts Research (STARS) project. This provides an innovative way of mapping and annotating connections between artists, video performances and other research centres on the web, supporting new collaborations and new perspectives on screen arts research.

### Maintaining high-quality information systems

Underpinning all these developments, the division invested more than £1 million in core ICT infrastructure, such as the University's data network, IT systems hardware and software and PC provision in Information Services sites. Such investment ensures that critical IT services are robust and resilient and that business continuity plans are established, tested and kept up to date.



Top: Refurbished Medical Library  
Bottom: Refurbished entranceway to the Arts and Social Sciences Library

# ALUMNI DISTINCTIONS & HONORARY DEGREES

## ALUMNI DISTINCTIONS

Bristol alumni excel in many fields. The following are among those who were awarded particular distinctions by external organisations in 2008/09.

### Fellow of the British Academy

**Professor Paul Cloke** (DSc 1993), **Professor Glyn Humphreys** (BSc 1976, PhD 1980), **Professor Margaret Snowling, FRSA** (BSc 1976), **Professor Peter Taylor-Gooby** (BA 1969)

### CBE

**Professor Linda Colley, FBA** (BA 1972, Hon DLitt 2006) Author and Shelby MC Davis 1958 Professor of History, Princeton University, for services to historical studies

**Keith Elliott** (BSc 1968, Diploma in Social Sciences) Principal at the City of Bristol College, for services to further education

**Dr Patricia Hamilton** (BSc 1972, MBChB 1975) President, Royal College of Paediatrics and Child Health, for services to medicine

**Nicholas Campbell Paul** (BSc 1966) Chairman, Advantage West Midlands, for services to business

**David Tanner, OBE** (BA 1970) Performance Director, GB Rowing Team, for services to sport

**Professor Peter Neil Temple Wells, FRS** (MSc 1962, PhD 1966) Research Professor and Senior Scientific Director, Institute of Medical Engineering and Medical Physics, University of Cardiff, for services to healthcare science

**Professor Lynn Gladden** (BSc 1982) Shell Professor of Chemical Engineering, University of Cambridge, for services to science

**Professor Peter Toyne** (BA 1962) Lately Vice-Chancellor, Liverpool John Moores University, for services to the community

**Alwen Williams** (BA 1980) Chief Executive, Tower Hamlets Primary Care Trust, for services to healthcare

### DCMG

**Denise Holt, CMG** (BA 1970) Ambassador to the Kingdom of Spain

### Olympic medals

**Iain Percy, MBE, OBE** (BSc 1998) Olympic Gold Medal for Great Britain – Sailing

### Tony awards

**Peter Darling** (BA 1985) Best Choreography in a Musical (*Billy Elliot*)

**Matthew Warchus** (BA 1988) Best Direction of a Play (*God of Carnage*)

### BAFTA awards

**Esther May Campbell** (BA 1995) Best Short Film (*September*)

## HONORARY DEGREES

Every year, the University awards its own distinctions. Below we list all those who received honorary degrees from Bristol in 2008/09 in recognition of outstanding achievement.

**Dr Philip Ball** Science writer and a Bristol graduate, Doctor of Letters

**Dr Andrew Garrad** Managing Director of Garrad Hassan Group Ltd, Doctor of Engineering

**Professor Caroline Gipps** Vice-Chancellor of the University of Wolverhampton and a Bristol graduate, Doctor of Laws

**The Very Reverend Robert Grimley** Dean of Bristol (1997-2009), Doctor of Laws

**Professor Geoffrey Hill** Poet, literary scholar, theologian, Doctor of Letters

**Caroline James** Nurse and chair of Frenchay After Burns Children's Club, Master of Arts (see p30)

**Josh Lewsey** Rugby international and a Bristol graduate, Doctor of Laws

**Sue McMullen** Chair of the Vassall Centre Trust, Master of Arts (see p30)

**Batook Pandya** Campaigner for racial tolerance, Master of Arts (see p30)

**Iain Percy, OBE, MBE** Double Olympic gold medallist and a Bristol graduate, Doctor of Laws

**Professor Chris Rapley, CBE** Director, Science Museum, Doctor of Science

**Dr Una Ryan, OBE** Formerly President and CEO of AVANT Immunotherapeutics and a Bristol graduate, Doctor of Science

**Louis Sherwood** Former Chairman of Gateway Foodmarkets, HTV West and

Clerical Medical Investment Group, Doctor of Laws

**Alison Smale** Executive Editor, *International Herald Tribune* and a Bristol graduate, Doctor of Laws

**Trevor Smallwood, OBE** Chairman, Advanced Transport Systems Ltd, Doctor of Laws

**Dr Alison Taunton-Rigby, OBE** Founder, President and Chief Executive Officer of Ribonovix Inc and a Bristol graduate, Doctor of Science

**Dr Peter Taylor** Civil engineer and a Bristol graduate, Doctor of Engineering

**John Wilkins** Fundraiser, Master of Arts (see p30)

## ALUMNI DISTINCTIONS & HONORARY DEGREES CONTINUED

Four of the honorary degrees awarded in 2008/09 deserve special mention. As part of its centenary celebrations, the University conferred honorary Master of Arts degrees on four individuals who have made a significant contribution to the local community. The University teamed up with the *Bristol Evening Post* to find the four local heroes, with readers nominating 56 individuals in total. The recipients are featured below.



**Caroline James** A nurse at the Barbara Russell Children's Unit at Frenchay Hospital and chair of the Frenchay After Burns Children's Club, a charity set up by nurses and run by volunteers that rehabilitates children and young people with burns by encouraging them to try confidence-building activities, such as abseiling, archery, climbing and sailing.

**Sue McMullen** Founder and chair of the Vassall Centre Trust, which provides accessible accommodation to 15 charities and charitable organisations in Bristol that are run by and employ disabled people.

**Batook Pandya** A leading figure in race relations in Bristol who has been closely involved with Support Against Racist Incidents (SARI) since it was established in 1988. SARI's main aim is to combat racial intolerance and discrimination against any ethnic groups or individuals in Bristol.

**John Wilkins** A former paratrooper who has raised £100,000 for Wallace and Gromit's Grand Appeal though a variety of activities, including, at the age of 77, a 10,000-foot freefall parachute jump. His other fundraising stunts have included bungy-jumping, abseiling, white-water rafting and zip-sliding.

From left: John Wilkins, Caroline James, Sue McMullen and Batook Pandya

## PHILANTHROPY

Teaching and research at Bristol has always been enhanced by the generosity of alumni, friends, companies, charitable trusts, students and staff. In every aspect of life, from the creation of 3G mobile technology, to life-changing research that has saved thousands of babies from cot death, to finding the blueprint which enabled the accurate recreation of the Globe Theatre, the University makes an impact. Philanthropic support makes this great university – the extraordinary outcomes of its research and the successes of its graduates – even greater.

The Centenary Campaign, launched in anticipation of the University's centenary this year, has now raised over £45 million towards its target of £100 million.

Bristol's alumni and friends participated in greater numbers and with ever more generous donations in 2008/09:

- Campaigns and Alumni Relations, working with academic and other colleagues, raised £5.1 million.
- Regular annual gifts totalled over £750,000 for more than 100 projects across the University.
- The number of Bristol Pioneers (donors giving £1,000-plus in an academic year) reached 268, with members contributing over £1.2 million.
- 5,905 individuals, companies and trusts made gifts, 1,362 of whom made a donation to the University for the first time.
- Over 1,500 alumni returned to Bristol for the Centenary Alumni Weekend (3-5 July 2009).

### 2008/09 Bristol Pioneers £25,000+

Mr Andrew E J Burton (BA 1988)  
 Dr John M Davis  
 Emeritus Prof Geoffrey Eglington  
 Mrs Pamela Eglington  
 Dr Paul J England (BSc 1965, PhD 1968)  
 Mrs Kate Holmes  
 Mr Roger A Holmes (BSc 1981)  
 Mrs Janet Hulme – The Hadley Trust  
 Mr Philip W Hulme – The Hadley Trust  
 Mr Terence C Mordaunt LLD (Honorary LLD 2000) – First Corporate Shipping Ltd  
 Mr David C Ord – First Corporate Shipping Ltd  
 Mr John Rutley  
 Mr Trevor Smallwood  
 Professor Eric J Thomas (Honorary LLD 2004)  
 Mrs Narell Thomas

### £5,000+

Dr John M H Andrews (BSc 1969, PhD 1973)  
 Mrs Linda J Andrews (BA 1971)  
 Mrs Carol A Barnett  
 Mr Stuart W Barnett (BSc 1973)  
 Mrs Helen M Bennett (BSc 1973)  
 Mr Richard E T Bennett (LLB 1973)  
 Mrs Alison Bernays – J & M Britton Charitable Trust  
 Mr Robert E J Bernays – J & M Britton Charitable Trust  
 Mr Graham H Blyth (BSc 1969)  
 Dr Roger J R Cairns (MSc 1971, PhD 1977)  
 Mr Charles J Cazalet  
 Mrs Jenny Cazalet  
 The Rt Hon Lord Chilver FRS (BSc 1947, PhD 1951, DSc 1962)  
 Dr Genevieve R Davies (BA 1994)  
 Mr William G R Davies (BSc 1971)  
 Mrs Diana E S Dunn (BA 1977)  
 Mr Luke S Ellis (BSc 1985)  
 Mr A Stephen Fagg (BSc 1962)  
 Mr Gerard I Fox (BSc 1986)  
 Mr David T Frank (LLB 1976)  
 Mrs Elinor Goldsmith  
 Dr Stuart A Goldsmith (BA(Econ) 1966, Honorary LLD 2007)  
 Dr Ian J E Keil (BA 1955, PhD 1965)  
 Mrs Teresa Keil  
 Mrs Kyung Lloyd  
 Mr C Stephen Lloyd (BSc 1982)

Mr Charles D Z Martin (LLB 1982)  
 Mr Alastair J G Matchett (BSc 1991, MSc 1993)  
 Lady Merrison – J & M Britton Charitable Trust  
 Dr A David Milne OBE (MSc 1967, PhD 1969, Honorary DEng 2007)  
 Mr Iain C S Morpeth (LLB 1974)  
 Mrs Maria Morris  
 Professor Steve Morris  
 Mr Timothy A Page (LLB 1985)  
 Mrs Margaret R Peacock  
 Mr John K Pitts (BSc 1948)  
 Mr John D W Pocock (BSc 1982)  
 Mr Timothy Ritchie (BA 1978)  
 Mr William J Rucker  
 Mr Daniel J O Schaffer (LLB 1986)  
 Dr Peter L M Sherwood (Honorary LLD 2009)  
 Mr Andrew S Sibbald (BSc 1988)  
 Ms Lesley G Silvester (BA 1968)  
 Mr Philip G Symonds (BSc 1973)  
 Mr Robin Thring (BSc 1947)  
 Sir James Tidmarsh (Honorary LLD 2002)  
 Lady Virginia Tidmarsh  
 Mrs Julia M Wathen (BSc 1972)  
 Mr Simon W J Wathen (LLB 1972)  
 Dr Michael Wong Pakshong (BA 1957, Honorary LLD 1994)  
 Mr Nigel W Wray (BSc 1970, Honorary LLD 2005)  
 Mr Charles A Wynn-Evans (LLB 1988)

### £1,000k+

Mr Gati S Al-Jebouri (BEng 1990)  
 Dr Gerald Avison (BSc 1962, PhD 1967)  
 Dr Adebola O Bada (MB ChB 1969)  
 Dr Harry Beckhough (BA 1935)  
 Mr John S M Beckwith-Smith (BEng 1993)  
 Mr Simon D J Beddow (LLB 1986)  
 Mr Nick P Bell (BSc 1981)  
 Mr John E Benson (BSc 1976)  
 Mr Nicholas J Bishop (BSc 1998)  
 Professor Dame Carol M Black CBE DSc (BA 1962, MB ChB 1970, MD 1975, Honorary DSc 2003)  
 Mr Paul Blackham – The Bristol Commonwealth Society  
 Mr Steven A Blakey (LLB 1980)  
 Mr Donald Bourgeois  
 Mrs Judith Bray (BSc 1959 Certificate in Education 1960)  
 Miss Davinia Bulford-Cooper BSc (BSc 2004)  
 Mr Kevin J Burke (LLB 1973)

Mr Denis A S Burn (BSc 1975)  
 Mr James Burstall (BA 1987)  
 Ms Jane A Camblin (BA (Hons) 1973)  
 Mrs Linda Carr (BSc 1969)  
 Mr Russ Carr (BSc 1969)  
 Mr Nigel S Cawthorne (BSc 1970)  
 Dr Tim L Chambers  
 Mr Patrick D Cheng (BSc 1978)  
 Mr Ian B Chickin (LLB 1987)  
 Dr Andreas M Chrysaphinis (MB ChB 1961)  
 Professor David Clarke  
 Miss Kitty Clarke (BA 1971)  
 Professor Richard R Clements  
 Mr Nigel J Cobb (MB ChB 1952)  
 Mr Ian J Cockerill (BSc 1987)  
 Mr Andrew Collender QC (LLB 1968)  
 Mr Nigel W H Cooper (BSc 1978)  
 Dr Mary F Corbin (BSc 1937, PhD 1939)  
 Mr Richard H Cunningham (BEng 1982)  
 Mr Jeremy R Davidson (BSc 1970)  
 Mrs Alison C Davis (BSc 1984)  
 Mr Peter G Dawes (LLB 1969)  
 Professor Richard N Dixon, FRS  
 Dr Niels T Doble (BSc 1960, PhD 1968)  
 Mr Richard H Dodd (BSc 1983)  
 Mr Robert Dufton (LLB 1983)  
 Dr Barry J Dunne (BSc 1985, PhD 1990)  
 Mr Alastair M Ennals (LLB 1969)  
 Mr Peter K Estlin (BSc 1982)  
 Dr Roy F Followell (BSc 1954, PhD 1958)  
 Mr James S Foulds  
 Mrs Judith Fowler  
 Professor Robert L H Fowler  
 Mr Bill Fullagar (BA 1961)  
 Mrs Helen Gaastra (BSc 1979)  
 Mr Stephen Gaastra (BSc 1979)  
 Dr Brian A Genney (MB ChB 1964)  
 Professor Julia M Goodfellow CBE (BSc 1972, Honorary DSc 2002)  
 Dr Peter N Goodfellow (BSc 1972, Honorary DSc 2002)  
 Dr Stephen P Goodwin (BSc 1979, PhD 1985)  
 Mr Ben Gordon (BSc 1981)  
 Mrs Christine D Gorman (BA 1958)  
 Mr Michael J Gorman (BA 1960)  
 Mrs Anne P Gray (BA 1956)  
 Mr Colin H Green CBE (BSc 1971, Honorary DEng 1997)  
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