

# INSPIRING GENERATIONS





PRIFYSGOL  
**BANGOR**  
UNIVERSITY

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## GOVERNANCE

The Council, which is chaired by Lord Davies of Abersoch and is the governing body of the University, met on four occasions in 2011/12. The Council is assisted by a number of sub-committees, including the Resources Committee, chaired by the Treasurer, Mr David Williams, which met on five occasions. The Audit & Risk Committee, chaired by Mr Geraint Jones, met on four occasions. Other Council committees include the Strategy Committee, Ethics Committee, Bilingualism Committee and the Health & Safety Committee.

During the year, amendments to the University's Charter & Statutes were approved by the Privy Council enabling the University to change the title of the President and the Vice-President to 'Chancellor' and 'Pro-Chancellor'.

Further information regarding the University's governance is available on  
[www.bangor.ac.uk/about/management.php.en](http://www.bangor.ac.uk/about/management.php.en)



# AN INTRODUCTION FROM THE VICE-CHANCELLOR

I am delighted to present our Annual Report for 2011-12 which highlights a small selection of our many achievements during the last twelve months. It has been a demanding year in many respects, but Bangor's performance once again has been first class particularly when one takes into account the radical changes that are affecting the sector at this time.

I was particularly pleased with the outcome of the QAA institutional review which concluded that standards at Bangor are at the highest level.

I fully expect another challenging year for the sector as a whole. Universities face a number of uncertainties. The impact of the new fees regime, the difficult economic climate, cross-border policy differences and many other factors test our staff and students on a regular basis. Across Europe and beyond we are seeing tremendous economic pressures causing anxiety and difficulty for many, but Governments and others are rapidly recognising the key role that Universities play, not only in developing the workforce and entrepreneurs of the future, but also in supporting economic activity, delivering growth and inspiring innovation.

Construction work is starting on our long awaited £44m Arts and Innovation Centre, which in addition to being a wonderful facility for students, staff and the local community will make a significant contribution to the economy. It will be a centre of excellence for culture, but it will also be much more than that. It will bring our academics together with business, it will enable us to showcase our research and it will inspire innovation amongst students, staff, business and the community.

The knowledge and skills gained by our students, as well as the research carried out at the University play an important part in improving the economic and social wellbeing of Wales and the world, and we look forward to continuing with this essential work in the years to come.

During the year we have strengthened and deepened existing partnerships with Aberystwyth University and Grŵp Llandrillo Menai. We have also launched a number of new international partnerships, for example with the Research Institute of Tsinghua Shenzhen, and opened a Confucius Centre in Bangor which is the first in the world to have a focus on Law. I look forward to seeing these initiatives advance further and to introduce new ones, such as the partnership we are developing with the Central South University of Forestry and Technology in Changsha which will see Bangor become one of only a handful of Universities with a campus in China.

The next academic year will of course bring its own challenges, but Bangor is fortunate to have working here a team of people that are enthusiastic, dedicated and loyal to the University. Together, we will continue to deliver a great experience for our students, and make a valuable contribution to the economic and social wellbeing of Wales and the world.

**Professor John G Hughes**  
Vice-Chancellor



A handwritten signature in white ink that reads "John Hughes".



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# HIGHLIGHTS 11/12

The University celebrated the centenary of the **Main University Building** with a conference 'The need for education in Wales - the reaction of the north Wales Quarrymen' and a special concert by the University's Symphony Orchestra.

**Professor Gary Carvalho** of the **School of Biological Sciences** was appointed to the newly established UK National Committee for Biodiversity, which will advise on issues related to biodiversity and represent the UK in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems.

Aberystwyth and Bangor Universities announced a **new Strategic Alliance**, one that signalled a new phase in the partnership between the two institutions. The alliance will build on the successful HEFCW funded £10.9m Research and Enterprise Partnership which was established by the two universities in 2006.

**Neuadd John Morris-Jones** (Hall of Residence) was officially opened following its revamp.

**Dr Pauline Horne** and **Professor Fergus Lowe** won a Society for the Advancement of Behavioral Analysis award for their pioneering work on childhood obesity at a conference held in Seattle.

The **Finance Office's** Procurement Unit was awarded the Outstanding Procurement Team Award in the 2012 Times Higher Leadership and Management Awards.

Bangor became the first university in the UK to have its **occupational health service** accredited in a scheme managed by the Royal College of Physicians.

A Memorandum of Understanding was signed between the University and Hanban (Confucius Institute Headquarters) at the Foreign and Commonwealth Office in London to establish a **Confucius Institute** in collaboration with China University of Political Science & Law, Beijing. The Institute was formally launched by Carwyn Jones, First Minister of Wales.

The pioneering work of the Language Technologies Unit at **Canolfan Bedwyr** was highlighted as the Welsh Language Board launched an online version of *Geiriadur yr Academi*, the Welsh Academy English-Welsh Dictionary. Since its first publication in 1995, the Dictionary, a masterpiece by Bruce Griffiths and Dafydd Glyn Jones, both former lecturers at the University, has been a key resource for anyone using Welsh daily at their work-place.

**Professor Sian Hope**, Director of Innovation and Professor of Computer Science was awarded an OBE in the Queen's Birthday Honours list.

1. Professor April McMahon, Vice-Chancellor of Aberystwyth University and Professor John G Hughes, Vice-Chancellor of Bangor University who announced the new Strategic Alliance between both institutions.

2. L – R: Julian Clary (award presenter); Jennifer Wolstenholme, Director of Procurement and Phil Baty, Editor of the Times Higher Education Rankings at the Times Higher Leadership & Management Awards Ceremony.

3. L-R: Professor John G Hughes, Vice-Chancellor; Professor HUANG Jin, President of the China University of Political Science & Law and the Rt Hon Carwyn Jones, First Minister; unveiling the Confucius Institute plaque.



1. Students' Union representatives receiving the Green Impact Award at a ceremony in Manchester.

2. Delyth Prys, Head of Canolfan Bedwyr's Language Technologies Unit with the Education Minister, Leighton Andrews at the launch of the new *Y Termiadur Addysg*.

3. Professor Bob Woods being awarded the Reisberg Award in New York with John Zeisel (left) and Barry Reisberg (right).

The University was awarded the **European Commission HR Excellence in Research** award. This European award reflects the on-going work of Bangor University in support of our research staff.

**Professor Bob Woods**, Director of the Dementia Services Development Centre and Professor of Clinical Psychology of the Elderly was the first international recipient of the Reisberg Award. The award recognises people who have made distinguished contributions in the area of non-pharmacological treatment for Alzheimer's disease.

Leighton Andrews, Minister for Education and Skills, launched the new *Y Termiadur Addysg* (Education Terminology Dictionary) web-site in Cardiff. The web-site [www.termiaduraddysg.org](http://www.termiaduraddysg.org) includes a new enlarged version of the popular terminology text. This is the third version of *Y Termiadur* to be developed at **Canolfan Bedwyr's** Language Technologies Unit.

The University launched its **mobile website**, with Welsh, English and Chinese content aimed specifically at potential students.



**The Students' Union** was named Union of the Year (non-commercial) at the National Union of Students (NUS) Green Impact Awards in Manchester. The awards recognise the environmental work of students' unions around the country.

A team of three students from the **School of Psychology** impressed a panel of Wales' leading marketers with a winning business proposal at *The Pitch*, a challenge set by The Chartered Institute of Marketing and Big Ideas Wales. The team beat marketing students from across Wales in this Welsh Government-led campaign that aims to inspire young people to start their own businesses.

**Dr Nichola Callow, Dr James Hardy and Dr Calum Arthur** of the **School of Sport, Health & Exercise Sciences** have been awarded a prestigious Higher Education Academy (HEA) award to support the development of learning and teaching across UK higher education. They are to lead a programme researching "The effect of transformational supervision on student engagement, retention and success."

The R.S. Thomas Study Centre at the **School of English** and **School of Welsh** acquired a large collection of manuscripts and typescripts, including much unpublished material, from the estate of the late Peter Jolliffe, a prominent collector of modern literary books and manuscripts.

**Tony Bushell**, Professor of German at the **School of Modern Languages**, was awarded a prestigious visiting scholarship by St John's College, Oxford to complete a study devoted to the rhetorics of Austrian identity.

A project set up by **Joanna Wright**, lecturer at the **School of Creative Studies and Media**, in partnership with the Snowdonia National Park Authority and Ysgol Bro Heddwyn in Trawsfynydd, won an award at the Welsh Heritage Schools Initiative.

A new group of staff joined Bangor from Cardiff University. **The North Wales Centre for Primary Care (NWCPCR)** is a research/teaching group that is now part of the College of Health and Behavioural Sciences.



**Dr Charles Buckley** of the **Academic Development Unit** was awarded a Higher Education Academy National Teaching Fellowship, the most prestigious award for excellence in higher education teaching and support for learning. This is the first time it has been awarded to a member of staff from Bangor University. He gained recognition for his inclusive approach to teaching, research and scholarship into higher education, work with the Staff and Educational Development Association and collaborating with *Y Coleg Cymraeg Cenedlaethol* to support staff at Bangor and other higher education institutions across Wales to study in their preferred language.

The **Corporate Communications and Marketing Department** received an 'Honourable Mention' for the quality of the University prospectus in the Association of Commonwealth Universities annual PR, Marketing and Communications Awards for 2011.

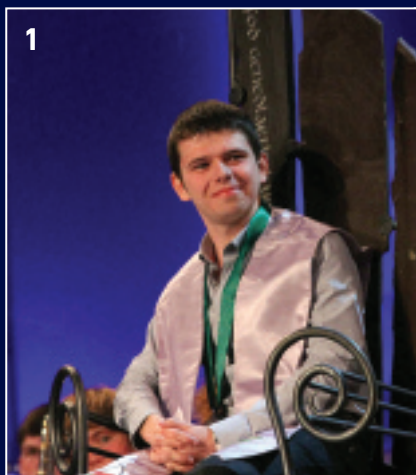
Dr Enrico Onali, a lecturer at the **Bangor Business School**, won an award for a paper presented at a major banking and finance conference in Italy. His paper called 'Moral Hazard, Dividends, and Risk in Banks' won the 'Best Young Economist' award.

The University received the **Athena Swan Bronze Award** in recognition of its success in recruiting, retaining and promoting women in Science, Engineering and Technology (SET). Bangor is now one of 38 Universities in the UK that have been awarded a bronze award under the Athena SWAN Charter for Women in Science.

**Evelyne Schmid**, a lecturer at the **School of Law**, was awarded a prestigious research prize by the Academic Platform Switzerland UN, which is a network that aims to foster innovation and excellence in research on issues pertaining to international relations and the United Nations.

The **School of Ocean Sciences** was invited to exhibit at the House of Commons. The exhibition at the Palace of Westminster highlighted a selection of the cutting edge science undertaken at the School, focusing on ways in which the marine environment can be sustainably harnessed for years to come.

**Bangor Business School** launched the innovative project, Elevate Cymru. This is a pioneering work-based learning programme providing both employers and employees access to fully funded training



1. Llŷr Titus Hughes receiving the Drama Medal at the Urdd National Eisteddfod 2012.

2. The Athena Swan Bronze Award was collected on behalf of the University at an event in Birmingham by Dr Rosanna Robinson, College Teaching and Learning Co-ordinator, College of Natural Sciences (left) and Lyn Meadows, Director of Human Resources.

3. L-R Heather Fry (HEFCE), Prof Caroline Gipps (Chair of the NTFS Advisory Panel), Dr Charles Buckley from Bangor University and Prof Sir Robert Burgess, Chair of the HEA Board at the National Teaching Fellowship Awards.

on work related courses encouraging future growth and sustainability.

Dr Christine Cahalan, Head of the **School of Environment, Natural Resources and Geography**, has been awarded the 2012 Peter Savill Award. The prize, which is awarded each year by Woodland Heritage is to recognise the contribution of an individual who has significantly contributed towards British Forestry, in this case, to Forestry Education.

The University was awarded an '**Inspire Wales Award**' sponsored by the Institute of Welsh Affairs and the Western Mail, following its success in the 'Bilingual Workplace' category.

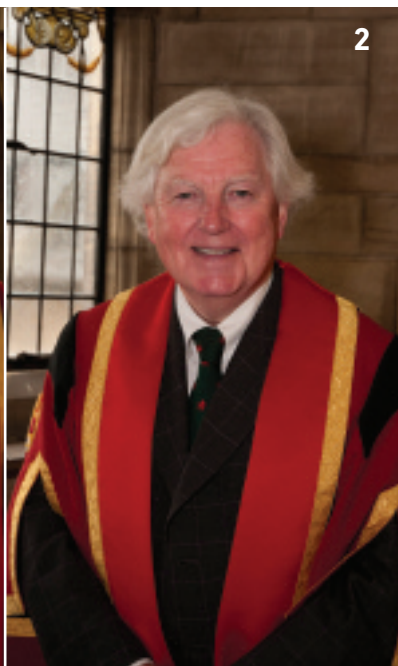
A £1M industrial facility, operated by the **BioComposites Centre**, was opened on Anglesey and has been helping local companies test new eco-friendly alternatives to existing products. The Technology Transfer Centre is part of the pan-Wales BEACON project, a partnership between Bangor, Aberystwyth and Swansea Universities, which assists local Welsh companies to find new uses for plants and plant co-products.

**Llŷr Titus Hughes**, a student at the **School of Welsh**, won the Drama Medal at the Urdd National Eisteddfod 2012.

## HIGHLIGHTS 11-12



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Internationally renowned opera star **Bryn Terfel CBE (9)** was awarded an Honorary Doctorate for his contribution to music. In May, he performed at a special concert at the Prichard-Jones Hall to mark its centenary.

Several individuals attended the University Degree ceremonies to receive Honorary Fellowships. They were: **Professor Steve Jones (1)**, Professor of Genetics at University College London (UCL); **Professor Tony Jones CBE (2)**, who has been President of the School of Art,

Institute of Chicago; **Professor Malcolm Evans OBE (3)**, one of the UK's most distinguished international lawyers; **Professor Catherine McKenna (4)**, a Professor of Celtic Languages and Literatures at Harvard University; Wales' National Poet from 2005-06, **Dr Gwyneth Lewis (5)**, the first writer to be given the Welsh laureateship, and who also won the Crown at the National Eisteddfod of Wales, 2012; **The Rt Hon Lord Barry Jones (6)**, a former MP for Alyn & Deeside, Coleg Normal graduate and government minister; **John Gibb Marshall (7)**, also known as John Sessions, actor and writer, and Bangor graduate, who has enjoyed a distinguished acting career – starring most recently as Edward Heath in the film *The Iron Lady*; and **Bleddyn Wynn-Jones (8)**, plant collector and cultivator at Crûg Farm Nurseries.



# TEACHING AND LEARNING



Dr Faye Short, Teacher of the Year.

## STUDENT LED TEACHING AWARDS

Over two hundred students, course representatives and University staff celebrated Bangor's first Student Led Teaching Awards in May. Bangor Students' Union successfully bid for funding to take part in a pilot scheme supported by the National Union of Students (NUS) and the Higher Education Academy (HEA). One of 21 successful project bids nationwide, the awards were match-funded by Bangor University.

Over 300 different nominations were submitted by students on behalf of 180 different members of staff representing all of the University's Academic Schools. The nomination process was completed online through the Students' Union's website. Fifteen categories ranged from Best

Teacher to Dissertation / Thesis Supervisor of the Year

All short-listed members of staff were invited to the awards dinner and were presented with a certificate and a mug recognising their achievement. Additionally, the winner of each category received an engraved glass trophy, presented by Professor Colin Baker, Pro Vice-Chancellor for Teaching and Learning.

"Rarely has there been such strong applause, warmth of appreciation, and so much enjoyment of a student-staff event in the PJ Hall. For everybody, this was an event to be remembered forever," said Professor Colin Baker.

## IMPROVING THE STUDENT EXPERIENCE

This year has seen the development of two major strategic initiatives aimed at improving the student experience in Bangor. The University launched its Student Experience Enhancement Strategy which brings together colleagues working in student-facing areas across the institution with the core aim of ensuring that all aspects of the student experience in Bangor are as good as they can be. As part of the University's Fee Plan for 2012/13, a number of new initiatives have also been introduced to further enhance the student experience.

These include the establishment of a dedicated Study Skills Centre which will be based in the Main Arts Library. Also, the Bangor Employability Award, which has been successfully piloted in a number of Schools, will now be rolled out across the institution. There is an on-going programme aimed at ensuring that the vast majority of teaching spaces are of an excellent standard and the University is working to further enhance the quality of its student accommodation, including the

complete refurbishment of Neuadd Garth.

One of the major commitments of the Fee Plan is that, from September 2012, membership of all student clubs and societies will be free. This, coupled with the

release of Wednesday afternoons for extra-curricular activity and the appointment of a new Director of Sport, means that students will have increased opportunities to take part in sport and other activities.



Maes:Space, social learning area at the Main Arts Library.





## QUALITY MATTERS

The Quality Assurance Agency for Higher Education is an independent body and its job is to safeguard standards and quality in higher education. The inspection process has evolved over the years: the current 'institutional review' (which takes place roughly every 5 years) focusses on an audit-type examination of the policies and procedures the University itself has in place to assure quality and standards – and whether they actually work.

In 2011/12, it was Bangor's turn to undergo a QAA institutional review – the fifth such review since the inspection of universities began in the early 1990s. The review process included:

- the submission of a 100-page self-evaluation document by the University,
- an independent written submission from students,
- interviews with over 75 members of staff and students, and
- the scrutiny of over 1,000 University policy and other documents

It culminated in a week-long visit in May 2012 by a team of 5 external reviewers – senior university staff from other

universities plus one student reviewer.

The outcome was a judgement by the QAA reviewers of '**Confidence**' in the soundness of the University's "current and likely future management of the quality of student learning opportunities and of academic standards". This is the highest of the three ratings which can be attained, and is a substantial boost to the University's academic standing and profile.

As well as examining the University's general policy and procedures for assuring quality and standards, the QAA team paid particularly close attention to provision delivered in partnership with other institutions (such as Aberystwyth University or Coleg Llandrillo - where around 400 students currently study for Bangor University qualifications).

The full report, which was published in October and is available on the QAA website, also highlighted the following "features of good practice" in Bangor:

- The work of the *Miles Dyslexia Centre* where research enhanced the support given to students

- The *Peer Guide* scheme which introduces students to university life
- The work of *Canolfan Bedwyr* in enhancing Welsh language provision

There is no doubt that the result is a major vote of confidence in the University's management of academic quality and standards. The Vice-Chancellor, Professor John G Hughes, said: "This outcome is a tribute to the commitment of all staff to high quality and standards in all our activities – quality is very much our watchword, whether it is in teaching and learning, pastoral care, academic support, research supervision, or in supporting the wider student experience. I warmly congratulate all colleagues on achieving this judgement."

The Registrar, Dr David Roberts, who chaired the Institutional Review Task Group which prepared for the review, commented: "This was unquestionably the most searching external review of academic activities that we have experienced – and it's a very gratifying result for everyone associated with the University."



# WELSH MEDIUM

## EXCELLENT STANDARDS FOR LEARNING WELSH

The North Wales Welsh for Adults Centre, which is part of the College of Education and Lifelong Learning, received the highest praise possible from Education and Training Inspectorate, Estyn, for the quality of their provision.

The North Wales Welsh for Adults Centre is responsible for co-ordinating the Welsh for Adults provision across north Wales, working with eight independent providers to deliver the highest standards of learning. The Centre also acts as a one-stop-shop for Welsh learners in the region

and offers information, advice and resources to put them on the right track and help ensure the best possible learning experience.

The Inspectors' main findings are that the Centre's current performance is "excellent" and that the prospects for improvement are "excellent" - the highest judgement possible. Estyn refers to many excellent characteristics in their report on the Centre's work, and in particular to the high standard of teaching, the training provided to the tutors, and learners achieving better

outcomes than in any other area in Wales. The report also refers to the variety of courses available for Welsh learners along with all the support offered to them outside the classroom in the form of social activities.

The Centre was praised for its strong management and leadership. It has a very clear vision for the future and is determined to build on its strong foundations and maintain excellence in every aspect of its provision.



## PORTRAYING TRADITION

Since its establishment in 2011, Coleg Cymraeg Cenedlaethol has offered sponsorship and financial support for strategically important research projects and for the creation of resources to help students studying through the medium of Welsh. Nine grants (ranging from £8,000 to £45,000) have already been awarded to Bangor University for key projects in psychology, language technology, environmental management, marketing, Welsh history, sociology, music, bilingualism and creative studies.

With support from this fund and under the direction of Dr Pwyll ap Siôn (a senior lecturer in the School of Music) there is a project underway to publish *'Cydymaith i Gerddoriaeth yng Nghymru'* (the companion to music in Wales) which will describe various aspects of the tradition and offer critical comments from a team of experts on the influence of music in Wales on the multi-faceted cultural life of our nation.

A conference has already been held at the National Library of Wales in Aberystwyth to launch this exciting scheme, and it became apparent then that there is a huge demand for this type of publication and that the challenge to make it a reality is even greater. Those interested in the richness of the tradition and those already involved in the tradition hope to see a publication that will cover folk singing and classical music, early music and contemporary music – from the time of Robert ap Huw to that of Karl Jenkins and his peers, from the crwth and the hornpipe to the most recent pop music performances.

Despite the wide range of expertise at Bangor University, the project will include many scholars from outside the institution. Indeed, one of the main aims of the project is to strengthen links and interest in this area among individuals and higher education institutions both in Wales and over the border.

## THE COLEG CYMRAEG CENEDLAETHOL AND ONLINE LEARNING SCHEMES

Following a grant of £25,000 awarded to Bangor University during the summer by the Coleg Cymraeg Cenedlaethol, a brand-new video-conferencing room has been established at Canolfan Bedwyr (Neuadd Dyfrdwy), in order to achieve further co-operation between universities in Wales. This new facility will make it possible for members of staff, researchers and students from Bangor to hold lectures, seminars, one-day conferences and committees of relevance to Welsh-medium learning interests and areas of scholarship, in co-operation with friends working in education throughout Wales. This valuable resource will enable individual academic departments to reach out to schools and 6<sup>th</sup> form colleges which have Welsh-medium provision, and to spread the message to the students of the future.

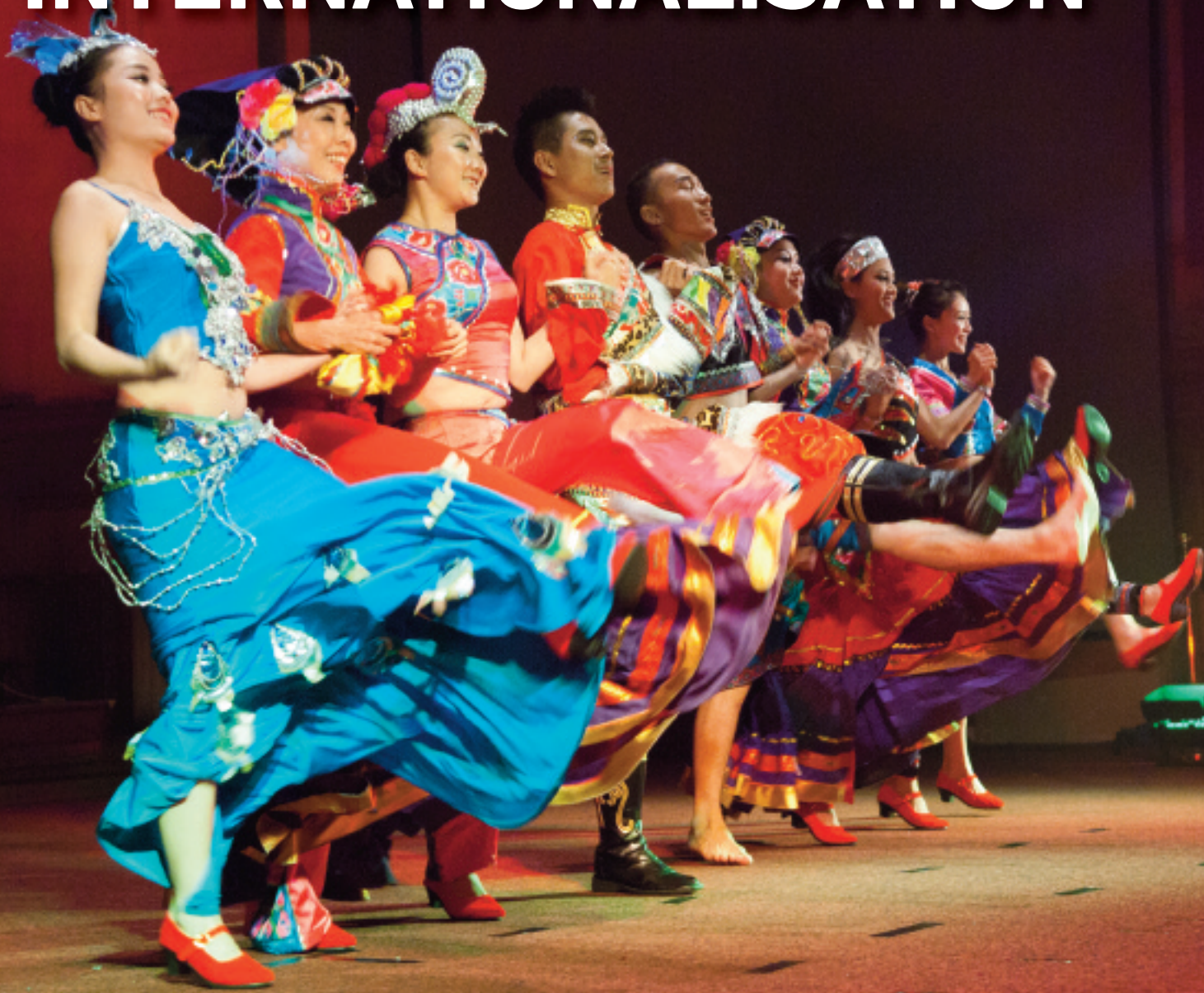
For 18 months, lectures through 'distance learning' have become a natural part of the daily experiences of the students and staff of this University – in order to share

expertise in areas which are strong here at Bangor, as well as to expand opportunities to study less familiar topics which are available at other institutions. For example, the School of Music at Bangor has pioneered in this area for some time, through its 'Music on-line' lecture series, where students from Carmarthen and Cardiff can receive presentations in areas such as *'Cyfansoddi a Ffilm'* (Composing and Film), *'Cerddoriaeth Boblogaidd'* (Popular Music), *'Cerddoriaeth mewn Iechyd a Lles'* (Music in Health and Welfare), as well as an entire course on *'Cerddoriaeth Cymru Heddiw'* (Music in Today's Wales), led by young Welsh-medium lecturers at the School who receive sponsorship and support from the Coleg Cymraeg Cenedlaethol. Despite the extraordinary capability of the equipment, this provision is unlikely to surpass face-to-face lectures and meetings entirely. However, it is a particularly useful way of avoiding the need for frequent travel between north and south by both staff and students.



Dr Tristian Evans delivering a *'Cerddoriaeth Cymru Heddiw'* (Music in Today's Wales) lecture at Bangor.

# INTERNATIONALISATION



## BANGOR BUILDS A CULTURAL BRIDGE

Bangor University launched the first Confucius Institute anywhere in the world to have a focus on Law. The Confucius Institute was launched by First Minister Carwyn Jones, in the presence of Mr Shen Yang, Minister-Counsellor of the Chinese Embassy.

A delegation from Bangor University's partner institution, the China University of Political Science & Law, led by its President, Professor Huang Jin visited Bangor especially for the opening ceremony.

The First Minister said: "China will be increasingly important to the future of

Wales and this new Confucius Institute, the first to focus on law anywhere in the world, is a major boost in creating further links between our two countries.

Bangor University Vice-Chancellor, Professor John G Hughes, said: "This is a major development for Bangor University. Confucius Institutes spread understanding about Chinese language and culture. They have become a platform for cultural exchanges between China and the world. The Institute at Bangor will play a key role sharing Chinese culture and learning with schools and cultural organisations in north Wales and north west England, as it

develops a program of cultural activities."

The President of China University of Political Science & Law, Professor Huang Jin said: "Bangor University is renowned for its cultural tradition and high quality education, while China University of Political Science & Law is a leading University in Chinese legal education. I believe that the establishment of the Confucius Institute with a focus on Law will deepen the cooperation and communication between the two institutions as well as the two countries."



## AN INTERNATIONAL UNIVERSITY

The University has made initial progress in fulfilling its ambition to become an International University for the region. Colleges have now launched their own international development plans focusing on curriculum development, international student support, and staff and student outward mobility.

The University is working towards clearly demonstrating a strong physical global footprint: a sizable body of international students (16% of Bangor students are from outside the EU in 2011-12) and faculty (25% of Bangor academics are from outside the UK); a strong internationalised course content and delivery mechanism; and a suitable number of opportunities for various types of overseas study. High profile visits to China, Brazil and the US from the University gave the Bangor brand maximum exposure on the



international higher education stage.

The international collaborative provision was a part of the QAA institutional review, which took place in May 2012. The positive outcome of the review provided the University with the confidence to develop a comprehensive international partnership development strategy with a focus on Transnational Education (TNE). In a significant milestone, the University successfully validated an MBA programme

in China in collaboration with one of the most prestigious Chinese universities, Research Institute of Tsinghua University.

The much anticipated £2.5 million Rathbone wing renovation project, completed in June 2012, provides the International Education Centre (IEC) with a high quality purpose-built office building to deliver a one-stop shop service to all the University's international students and partners.

## INTERNATIONAL SUMMER SCHOOLS

Over a hundred students from around the world attended various International Summer School programmes at Bangor University between July and August.

In collaboration with Cardiff and Aberystwyth Universities, Bangor welcomed the return of the Fulbright Summer Institute in July. Eight Fulbright Scholars, who are among America's brightest undergraduate students, spent two weeks at Bangor University, studying Wales' industrial heritage. The students were competitively selected from universities spanning the USA, from Seattle to South Florida, for the top-flight summer study institute by the leading US scholarship programme. While at Bangor, the students studied the events, places and people that have shaped Wales, and the crucial influence industry has had on all of them. They explored the impact of such industries as tourism, slate mining and highland agriculture, and how a small nation can maintain its identity in a global era.

The Bilingualism Summer School had a great debut in July. It attracted researchers

and students from many countries. Leading researchers in the field of Bilingualism, Linguistics, Psychology and Social Sciences from Bangor University, University of Maryland, Aix-Marseille University, City University of New York, McGill University, University of Düsseldorf, University of Reading, University of Tübingen, University of Hawaii and Radboud University, Nijmegen and the University of Cambridge presented stimulating talks.

The Visceral Mind Summer School, now in its third year, proved popular with 40

ambitious young researchers keen to share in the School of Psychology's world leading expertise in the field of cognitive neuroscience. The primary aim of the summer school was to redress an inadequacy of neuroanatomical knowledge in young neuroscientists, caused at least partially by the limited availability of human brain tissue to provide this training to students. Over the past 3 years this course has attracted 120 students from 20 countries across the world including Argentina, Cuba, Italy, Lithuania, South Africa and Singapore.



American Fulbright group.

## BANGOR BOOSTS BROADBAND SPEED

Researchers at the School of Electronic Engineering are working on a project that could make broadband access up to 2,000 times faster.

The revolutionary technology, which would use existing optical internet cabling, would mean that it is possible for customers to download 20 feature length films in one second.

The technology will also save money on the network installation and maintenance cost for service providers and equipment vendors. It is also a more environmentally friendly solution as it uses less electricity.

The team, led by Professor Jianming Tang from the School of Electronic Engineering, is now working on making the new technology commercially viable. He said: "Compared to today's commercially available broadband connections, the technology is expected to provide end-users with both downloading and uploading speeds up to 2,000 times faster than current speeds and with a guaranteed quality of service at a price that subscribers are currently paying for their current 20Mb/s services, regardless of subscribers' home location. Obviously, this will revolutionise communication technology."

The technology, Optical Orthogonal Frequency Division Multiplexing (OOFDM), offers greater system flexibility and excellent performance robustness.

The current problem with fibre-optic networks is that errors become more frequent as the length of the cable increases.

Partners working with Bangor University in developing the project include world leading technology companies and leading research institutes: Fujitsu Semiconductors GmbH, Fujitsu Labs, Finisar Israel, Fraunhofer Heinrich Hertz Institute, VPIsystems GmbH, and University of Essex. Valued at over three million Euros, the project is funded by the European Union.

# RESEARCH

## HELPING PARENTS LEARN WELSH

A PhD student at the School of Education has been working with S4C to provide an innovative new service that will encourage non-Welsh speaking parents to learn Welsh whilst enjoying television programmes with their children.

Nia Williams' research focuses on using different methods to bring Welsh into the home and exploring the effect of the development of Welsh language television programmes on children of English speaking backgrounds.

She has been working on programmes that are part of *Cyw*, a Welsh language children's television segment on S4C, primarily aimed at the 3 to 6 age group. *Ti, Fi a Cyw* is a new digital resource which will provide key words, translations and suggestions to accompany some of *Cyw*'s most popular

programmes. During the *Cyw* slot, a live Twitter feed, @tifiacyw will coincide with the programme which will enable parents to enjoy a light, informal Welsh lesson by following the live Twitter feed on their PC, tablet or mobile phone whilst watching.

Sioned Wyn Roberts, Children's Commissioner for S4C said: "The new @tifiacyw service will encourage non-Welsh speaking parents and learners to join in the fun of watching *Cyw* with their children, and at the same time, will offer an opportunity to learn the language. We hope to give parents the confidence to go on and learn Welsh formally if they wish to do so."

Nia's research scholarship is funded under the Knowledge Economy Skills Scholarships (KESS) ESF Programme.







## RESEARCHING PUBLIC ATTITUDES

With funding from the Welsh Government, Dr Robin Mann of the School of Social Sciences and Wales Institute of Social & Economic Research (WISERD) has been researching public attitudes in Wales toward immigration. Based on an analysis of data from the European Social Survey, he has found that people in Wales and the English regions report higher support for reducing immigration than people in London, Scotland and Northern Ireland. The research shows that while people as a whole strongly support the reduction in the number of immigrants to the UK, there are also notable regional differences in what people think about immigration. While a small and exploratory study, this does give us, for the first time, a general picture of what people in Wales think about immigration from outside the UK.

Of particular interest to Dr Mann is why Scotland reports less support for reducing immigration than Wales. As he explains, "The difference between Scotland and Wales is interesting because as devolved

nations you might expect them to be similar in attitudes on a range of public policy issues. But it appears that Wales is closer to the majority in England than it is to Scotland when it comes to views on immigration policy".

This research was reported by BBC Wales and was also raised in the Plenary Session of the Senedd in Cardiff Bay. Dr Mann plans to pursue this further through ethnographic fieldwork – speaking to and spending time with people - to see whether these attitudes affect community relations.







## PROJECT ELISEG REVEALS ITS SECRETS

Archaeologists from the School of History, Welsh History & Archaeology completed a third season of excavations at the Pillar of Eliseg, a fragmentary ninth-century AD stone cross, which stands on a mound near Valle Crucis Abbey, Llangollen, in north-east Wales.

The Pillar once bore a long Latin inscription saying that the cross had been raised by Concenn, ruler of the kingdom of Powys, who died in AD 854, in memory of his great-grandfather, Eliseg, who had driven Anglo-Saxon invaders out of the area. By the seventeenth century the Pillar was no longer standing, but the damaged inscription was recorded by the famous Welsh antiquary Edward Lhuyd in 1696. The mound was dug into in 1773 by the local land-owner who re-erected the Pillar.

Excavations have revealed a multi-phase Early Bronze Age kerb cairn with the eighteenth-century antiquarian trench dug into it. Stone burial cists were excavated, one of which contained a great quantity of cremated bone, a flint knife and fragments of bone pin.

The project is part of works by Cadw to conserve the mound and better explain the monument to the public. The project was funded by Cadw, The Society of Antiquaries of London, the Prehistoric Society, the Cambrian Archaeological Association, the Institute for Medieval and Early Modern Studies (Bangor and Aberystwyth Universities), Bangor University, the University of Chester and the University of Wales.

## RESEARCH

Excavating a Bronze Age cairn by the Pillar of Eliseg.





## BENEFITTING FUTURE ELITE ATHLETES

From Wales winning the Grand Slam to Bradley Wiggins winning the Tour de France to Team GB's record haul of Olympic and Paralympic medals, 2012 saw a sensational year of sport.

Such high profile sporting events create considerable pressure: some athletes will thrive under this pressure; others will 'choke'. Researchers at the Institute for the Psychology of Elite Performance (IPEP) in

the School of Sport, Health and Exercise Sciences have been examining how personality might predict how well athletes perform under pressure. They found that athletes with a narcissistic personality tend to perform well under the pressure of competition whereas non-narcissistic individuals may tend to 'choke'.

The 'Ironic Error' is something that elite athletes could find themselves trying to

avoid under pressure. IPEP researchers found that athletes under pressure commit specifically the error that they are trying to avoid e.g. if a runner at the starting block tells himself, "whatever you do, don't leave the starting block early" he will ironically prime his body to leave the blocks early. Researchers have found that practice skills that reduce anxiety, and using positive statements are both effective ways of reducing the likelihood of committing such an ironic error.

By considering these differences in personalities and practicing these psychological skills, elite athletes' performance could benefit immensely.

These two pieces of research were highlighted in the Universities UK report, *Supporting a UK success story: The impact of university research and sport development* which was launched at the House of Commons in May during Universities Week.



## WORLD FISH STOCKS SAFEGUARDED

In the future, consumers will be able to purchase fish confident in the knowledge that they are buying or eating the product described on the label or the menu and that their purchases are from sustainable fish stocks.

With almost a quarter of the world's fish catches being caught illegally, at an estimated cost to Europe alone of up to €10 billion by 2020, the EU was eager to address illegal fishing. One major initiative was to fund a three year, €4m pan-European project called "FishPopTrace" led by the School of Biological Sciences.

The project has now delivered proven, powerful and versatile new genetic tools that will assist in safeguarding both European fish stocks and European consumers.

Professor Gary Carvalho explains: "It has not been possible to prove the exact origin of any particular fish, and in some circumstances, particularly with processed or cooked fish, it can be quite difficult even to identify the species, let alone its source of origin.

"We have developed a method that can be used throughout the food supply chain and across the fish industry. The tools can be used to identify or compare a set of pre-identified genetic markers within fish samples at any point in the consumer chain from net to plate, and to trace the fish back to their region of origin or breeding group."

This is the first system proven to identify populations of fish species to a forensic level of validation, and was reported in *Nature Communications* in May.



The extraordinary Luminarium, a giant structure of tunnels and cavernous domes filled with radiant light and colour.



## PONTIO'S PROGRAMME PACKED

With a packed programme of events each season, Pontio delivered cabaret nights, Welsh and English language dramas for all ages, dance, pantomimes, world music, film showings, community fun days, storytelling days, experimental theatre and much more.

Among the highlights, the unique *Luminarium* attracted over 4,000 visitors, and the innovative production, *Cerebellum*, saw students from the School of Psychology join theatre professionals to design an unique theatre of the mind. The Devoted and Disgruntled Theatre conference gave an opportunity to air ideas as to the future of theatre in north Wales, and for the first

time ever, Pontio enabled Shakespeare's Globe theatre company to visit Bangor and bring *As You Like It* to Penrhyn Castle.

Pontio has run inspiring community projects to take the arts out to new audiences. 20 local schools benefitted from introductory 'Music and Poetry workshops'. The *Pelydrau* project gave local children with special educational needs the opportunity to experiment with sound and composition as well as a high quality performance of their work. Pontio's first artist residency also took music to every corner of the Plas Hedd residential home in Maesgeirchen, Bangor.

All 11 schools in Bangor were also invited to submit and plant their ideas for the new arts and innovation centre on the building site as part of the HaDAsyniaDA/ IdeaSeeds project, and poet Karen Owen worked with local school pupils to compose a poem about the new centre.

*"Down where Theatr Gwynedd used to be  
is a big black hole  
where we plant our ideas,  
sow all our inspiration  
and promise to water the seeds..."*



# COMMUNITY

## HIGH PERFORMANCE COMPUTING

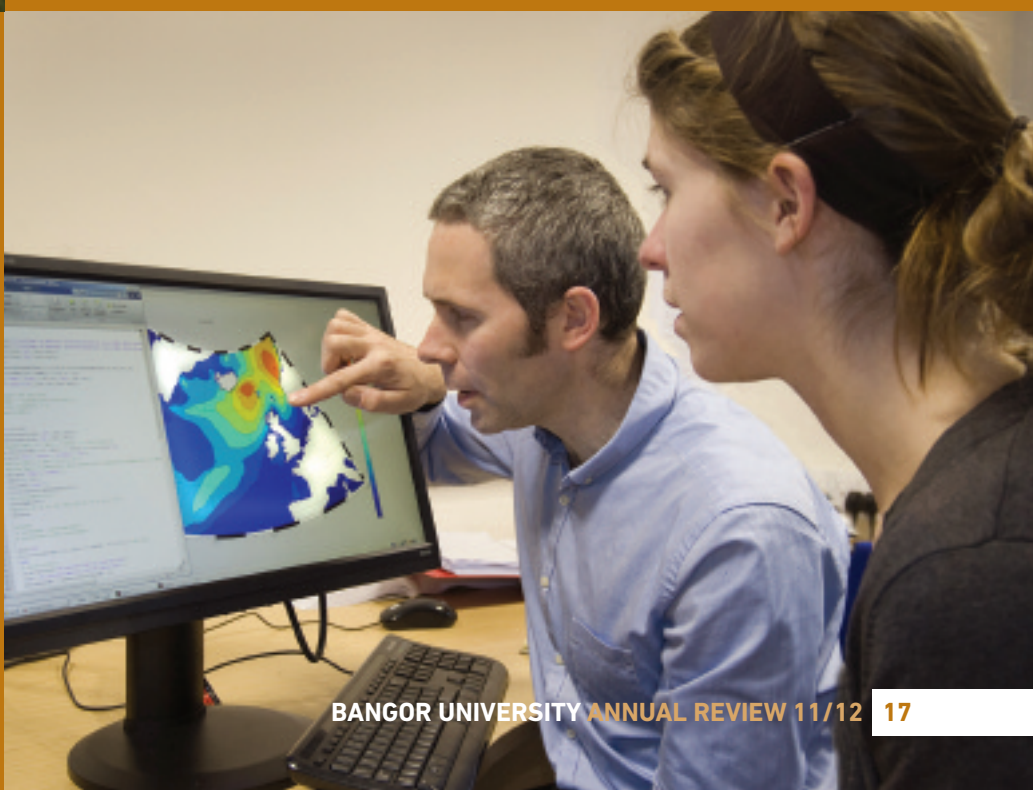
High Performance Computing Wales (HPC Wales) is a pan-Wales project in partnership with all Welsh universities. The project is driving economic development and academic research in Wales through the provision of world-class computing hardware, and a wide range of support services. Fujitsu were the successful bidder contracted to supply HPC Wales, and as part of their commitment to the project, they are funding 20 PhD studentships across Wales.

Bangor won four of these PhD studentships that are fully-funded by Fujitsu. They will work with academics on a range of projects. Professor James Scourse and Dr Mattias Green from the School of Ocean Sciences are modelling how climate change can impact the damping effect that ice sheets have on global tides. Dr Simon Neill, also from the

School of Ocean Sciences, is modelling the long-term impact that tidal power generation installations such as those planned for the Anglesey coast will have on sea-bed sediment deposition. Dr Reza Hashemi, SEACAMS, is looking at how climate change will drive changes in estuaries by considering the whole system from the mountainous catchment areas where rain falls to the sea. Dr Si Creer from the School of Biological Science is using DNA analysis of microbial communities in peatlands to develop an understanding of how climate change can influence the release of carbon from the peat.

HPC Wales is part-funded by the Welsh Government's ERDF and ESF Convergence programmes for West Wales and the Valleys, the UK Department of Business, Innovation and Skills and the partner Universities.

Dr Simon Neill and PhD student, Alice Goward Brown, who are modelling the long-term impact of tidal power generation schemes.



## TRANSFORMING OUR FUTURE LEADERS

A PhD student at the School of Sport, Health and Exercise Sciences is working with local company, Outlook Expeditions to make sure that young people get the most out of expeditions.

Samantha McElligott, is working with Outlook Expeditions under the three year KESS programme at Bangor University to measure the benefits of overseas expeditions as a positive developmental experience for young people.

During the first year of the research project over 800 young people aged 15-19 were involved. The results have so far been very positive, demonstrating that Outlook's expeditions have a positive and significant impact on the participants' self-esteem, leadership skills, levels of responsibility, teamwork and communication skills.

Samantha, who worked as an outdoor instructor in the past, said: "It has been proven that Outlook's leaders are currently showing high levels of transformational leading behaviours. This is a behavioural approach which has been shown to inspire and improve learning outcomes. This approach has been used in areas such as business and the military before but this is the first time that it has been researched within the field of outdoor expeditions."

"It is very important to maximise learning for young people on expeditions, which can be life-changing in themselves. The next stage will examine more closely the leadership behaviours and how we can train leaders to maximise the learning outcomes."

"My project really shows how research can impact the real world and I would jump at the opportunity to develop it further when my three years are up!"

Samantha's research scholarship is funded under the Knowledge Economy Skills Scholarships (KESS) ESF Programme.



## BY ROYAL APPOINTMENT

Student Volunteering Bangor (SVB) have been awarded the Queen's Award for Volunteering. The prestigious national honour is the MBE for volunteer groups who work in their local community for the benefit of others. It sets the national benchmark for excellence in volunteering, with the work of those awarded judged to be of the highest standard. SVB, which forms part of the Students' Union, were one of only three groups in Wales to receive the award last year.

Over one thousand of the University's students take part in SVB activities, 250 of whom volunteer on one or more of 17 community based projects. Volunteers currently contribute a total of 450 hours each week, promoting a close relationship between the University and the local community, enabled by the organisational support at SVB.

Vice-Chancellor, Professor John G Hughes said: "Our students make an active contribution to the community in which they live and study, promoting a close relationship between the University and the local community. The volunteering opportunities provided by SVB enrich the students' experience as well as that of surrounding communities. I know that our volunteering projects respond to local needs as well as reflecting student interests and concerns."

Helen Munro, Student Volunteering Manager at SVB said: "The volunteers are incredibly proud to have received this accolade which endorses the time they give and the sacrifices they sometimes must make in order to enrich the lives of other, more vulnerable, people."



With Helen Munro and Trefor Alun (SVB) are the Lord Lieutenant; Mayor of Bangor, Cllr Bryn Hughes; Professor Carol Tully, PVC (Students); Dr Dewi Roberts of the University Council; and SVB volunteers.

## COMMUNITY

### BANGOR CELEBRATES THE OLYMPICS

Staff, students and graduates from Bangor University were among those honoured to be Torch Bearers as the Olympic Torch made its way through north Wales on May 28th. To mark the occasion the University hosted a variety of events around Bangor.

The School of Sport, Health and Exercise Sciences (SHES) hosted a 'Test your health and fitness' event in the Deiniol Shopping Centre. Members of the public were able to participate in activities such as balance testing on a simulated surfboard and reaction time tests, as well as learning about current research.

Dr Jeanette Thom, a Senior Lecturer at SHES, said: "With the Olympic flame coming to Bangor it was the perfect opportunity to get everyone enthusiastic

about the Olympics - we really enjoyed showcasing our research and expertise in this area."

Students from India and China, wearing their country's national dress, performed a selection of traditional dances and songs in front of the cathedral and near Deiniol Road to welcome the flame as it passed through the city.

Bangor alumnus Danny Boyle was the Artistic Director behind the 2012 Olympic Games opening ceremony on 27 July. Boyle, who graduated with an English and Drama degree in 1978, is best known for directing films such as *Trainspotting*, *127 Hours* and for winning the Academy Award for Best Director in 2008 for his film *Slumdog Millionaire*.

Dr Matthew Davies, a Research Assistant at the School of Chemistry, was one of a number of staff, students and Bangor University graduates chosen to run with the Olympic flame.







# COMMUNITY

## TOPPING THE GREEN LEAGUE

Bangor University is the 'greenest' university in Wales according to *People and Planet*, the largest student network in Britain campaigning to end world poverty, defend human rights and protect the environment. Bangor topped the list of Welsh Universities and moved from 28th to 19th in the UK wide table. And, at the same time as the League was announced, the University was being awarded the top 'Level 5' of the Green Dragon Environmental Standard for its commitment to achieving continual environmental improvement.

Vice-Chancellor, Professor John G Hughes said: "I'm delighted with the progress that we are making in managing our

environmental impacts at Bangor. These awards came only weeks after our Students' Union was named Environmental Union of the Year at the National Union of Students (NUS) Green Impact Awards. These accomplishments clearly demonstrate that we are taking our environmental responsibilities very seriously indeed at Bangor."

Ricky Carter, Environmental Manager added, "These are truly remarkable achievements. The Student's Union has made astounding progress in the past few years, and for the University to have remained in the top flight of the Green League for three successive years is a

tribute to the teamwork and commitment of all of our staff and students in caring for our local environment. Our Environmental Management System has now reached the highest achievable Green Dragon Environmental Standard, which, amongst other things, required intensive training of a dedicated group of staff and students in carrying out internal audits of our environmental impacts."

Further information on Bangor's commitment to all aspects of sustainability can be found on the University's website: [www.bangor.ac.uk/sustainability](http://www.bangor.ac.uk/sustainability)