## ANNUALREVIEW 2015-16





### Welcome from the Vice-Chancellor



Our landmark golden anniversary was always going to be a special year for the University community. We are celebrating our 50th anniversary with a full programme of conferences, public lectures and special events, including the conferment of over 50 honorary degrees which you can read more about in this review.

The last year has seen us put in place the building blocks for another successful 50 years. We have secured funding for cutting-edge research that solves problems that matter to the world. New research projects include collaborating on a £4.4 million grant to produce the first ever yeast-derived alternative to palm oil on an industrial scale and a £6.8 million collaborative project to develop next-generation lithium batteries that meet the challenges of energy storage for electric cars, and from renewable sources such as wind and solar. The establishment of the new Milner Centre for Evolution will help increase our research power. In addition, our 50th Anniversary Prize Fellows scheme has helped attract more excellent young researchers to join our community.

Delivering world-class teaching and an outstanding student experience remain central to our success. Our students remain amongst the most satisfied in the UK with a 90% overall satisfaction rating in the 2016 National Student Survey and we are continuously improving our capacity and capabilities. The last year has seen real progress in this field; we have opened a London hub at Pall Mall for research and executive education which will be the face of the University in the capital. We have also opened a new £30 million building on campus, 10 West, providing space for the expansion of the Department of Psychology, a new home for the Institute for Policy Research and a dedicated postgraduate learning commons.

As a vibrant, global community, strong international partnerships are vital. In early 2016 we signed an agreement between our Department of Education and the Amman Baccalaureate School in Jordan, as part of our wider partnership with the region, to help drive both international research and postgraduate recruitment.

Looking to the future, there is much to do to live up to our motto: *Generatim discite cultus*. At its core, I believe our motto instructs us to achieve an understanding of our world and strive to use our knowledge to ensure our futures will not be lost.

I am very proud of our University community as we celebrate all we have achieved so far. Now we must put in place the foundations for our next 50 years of success so we can look further, and go further, than ever before.

Charles M. Brechwoell

Professor Dame Glynis Breakwell DBE DL FAcSS President and Vice-Chancellor

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Front cover - As part of the University's 50th anniversary celebrations over 300 staff and students took part in an aerial photo call.

Credit – Bath Chronicle / Artur Lesniak

### University overview

As our University enters its 50th anniversary year, we have been celebrating our remarkable achievements since being founded by Royal Charter in 1966. We also look further to build upon our success as a vibrant, international community focussed on excellence in teaching and research.

#### 50 golden years

Over the last 50 years, the University has grown in size and stature from our base on Claverton Down to become a global partner with an excellent reputation for conducting world-class research and delivering exceptional education.

We are able to celebrate our anniversary because of the foresight of the then City of Bath Council in supporting our foundation. We are fortunate to be based in one of the most beautiful cities in the world, a UNESCO World Heritage Site, and are grateful for the continued support of the local community.

Throughout our history, we have expanded and enriched our university community by recognising hundreds of remarkable men and women with an honorary degree. In our anniversary year, we are conferring the highest possible recognition we can provide to over 50 eminent academics and individuals who have made an outstanding contribution to their field.

We are marking our anniversary with a series of academic conferences, public lectures and special events as well as a full day of celebration on 25 October 2016. These diverse events have included partnering with Bristol's Festival of Nature, hosting BBC Gardeners' Question Time, symposia on topics such as biomechanics, regenerative medicine and tomography, conferences on American foreign policy, and supporting an exhibition on silver in Bath's Holburne Museum among many others.



#### Excellence in teaching and research

Delivering excellent education and world-class research remain the bedrock of our University strategy.

It has been an important year for cross-disciplinary research as our Institute for Policy Research (IPR) and Bath Institute for Mathematical Innovation (IMI) have grown their programmes and partnerships. In addition, we are making progress with our ambition to launch a £50 million global automotive research facility in the region, building upon our existing expertise and industry partnerships. The Milner Centre for Evolution has made progress on research papers and collaborations which help us ask the big evolutionary questions, develop tools to tackle real-life challenges as well as taking evolutionary research into the community. In 2016, we also opened a new Centre for Research on Entrepreneurship and Innovation which hosts a group of world-renowned researchers and rising scholars within our School of Management.

As our University turns 50, we celebrated our long history with Knowledge Transfer Partnerships (KTP): an Innovate UK-funded, world-leading programme, connecting businesses with academia. The University's first KTP was in 1978 and we have been awarded 168 KTP programmes since then across a range of companies and industry sectors.

Our focus on continuously improving education and our student experience has reaped rewards. Our students remain some of the most satisfied in the UK with a 90% overall satisfaction rate according to the 2016 National Student Survey. The University is committed to finding ways to further improve student experience. We have increased the amount of study space available through a series of learning commons, with a dedicated graduate learning commons in 10 West and new spaces for undergraduates both on campus and in Manvers Street in Bath city centre, due to open in early 2017.

Our Chancellor, HRH The Prince Edward The Earl of Wessex addresses staff, students and invited guests at our celebratory event in Bath Abbey.

### A new strategy: looking further

Our dynamic community is always looking to the future. This year we launched a new strategy which sets out our vision, building on our first 50 years.

Our strategic priorities are focussed on five main areas:

- Growing the volume of research and increasing our research power by recruiting more researchers and creating a vibrant environment to encourage discovery and impact;
- Attracting more graduate students by providing them with innovative programmes and first-rate training;
- Stabilising our undergraduate student numbers in order to focus on enhancing the quality of the student experience;
- Continuing to improve the infrastructure both on and off campus, allowing us to provide the facilities our communities require;
- Strengthening our international profile and establishing innovative joint teaching and research programmes with universities outside the UK.

We face a shifting external environment; our challenge is to be agile and to seize opportunities whilst remaining an outward-facing, inclusive and global institution.



### Rankings and reputation

Bath's standing on the national and world stage continues to grow, and this year we have seen significant accolades reinforcing our standing among the world's most elite universities.

At the start of 2016, the University was named one of the 'most international' universities, according to the latest rankings from *The Times Higher Education (THE)*.

Placed 82nd out of 800, this ranking comes after a string of international success stories for the University which over the past few years has significantly increased both our international reach and reputation. Furthermore, Bath has gone up again in the **2016 Leiden Ranking** which measures the scientific performance of 842 universities worldwide.

We were ranked 7th nationally for graduate prospects and 5th for student retention in *The Times* and *The Sunday Times* Good University Guide 2017. This impressive ranking reflects that 85.4% of our students secure employment, or pursue further study, within six months of graduating. They also earn some of the highest average starting salaries - more than £26,000. In *The Guardian* University Guide 2017, Bath was ranked 10th overall out of 119 institutions whilst also being ranked 5th for graduate employment after six months.

Our students continue to be amongst the most satisfied students in the UK. According to the **2016 National Student Survey (NSS)** our students have an overall satisfaction rate of 90% - four points above the national average for higher education institutions. On a subject level, Bath has continued to perform exceptionally well. Eleven of our courses scored 100% whilst three departments scored 95% or higher.



Upon graduating BEng (Hons) Civil Engineering student Rachel Broad, pictured above (middle), was offered employment at Mace, where she worked during her industry placement.

Guide	Year	Ranking	Institutions ranked	Location
The Times & The Sunday Times Good University Guide	2017	12	127	National
The Guardian University Guide	2017	10	119	National
The Complete University Guide	2017	11	127	National
QS World University Rankings	2016- 2017	159	800	International
Times Higher Education '200 Most International'*	2016	82	800	International
Times Higher Education World University Rankings	2016- 2017	251-300	980	International
Leiden Ranking	2016	154	842	International

\* Based on *Times Higher Education* World University Rankings.



"Rankings may not be everything, but to be consistently ranked in the top dozen universities in the UK over the last decade probably does say something about the character of our university."

Professor Dame Glynis Breakwell DBE DL FAcSS President and Vice-Chancellor

New study space for students in 4 East South.

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### Capacity and capability

The University has continued to invest in its infrastructure, providing additional space for research, learning and teaching as well as networking with key audiences. On site accommodation provision is also set to increase with planning consent received for the construction of new student flats.

On our Claverton campus, the University's two newest developments, 10 West and 4 East South, are now both in use. In July, **10 West**, which is the new home of the expanding Department of Psychology, Centre for Applied Autism Research (CAAR), and Institute for Policy Research (IPR), was officially opened by eminent psychologist Professor Dame Vicki Bruce. Another leading psychologist, Professor Dame Uta Frith, also attended, receiving an honorary degree and opening CAAR.

CAAR was established in 2016 and is aiming to increase our understanding of autism through conducting world-class research and translating theory into practical applications.

Also in July, staff from the Departments of Architecture & Civil Engineering and Computing Services moved into 4 East South. The £23 million building provides additional research and teaching space as well as housing a cutting-edge computing data centre. The building opened to students at the beginning of the academic year and is now in full use.

Elsewhere on the Claverton campus, the University received planning consent for the construction of new high-quality accommodation for postgraduate and undergraduate students. The £34.5 million **Polden** development, located to the west of the campus, will offer 293 ensuite bedrooms in 37 flats across two buildings, arranged around a landscaped courtyard. Construction starts early 2017 with the aim of opening in autumn 2018.

The University is also expanding its presence with new facilities in Bath city centre and for the first time, in London.



The University has opened a hub in London at 83 Pall Mall.



10 West opened in July 2016.

The £4.5 million transformation of **18 Manvers Street** in Bath city centre has continued to make good progress and will open to students in February 2017. This new, flexible learning zone will provide students with opportunities for independent study, group work and skills training in a convenient city-centre location.

Our new centre in the capital, **83 Pall Mall**, opened in September and is the face of the University of Bath in London. These new premises will enable the University to better engage with people and organisations in London to enhance our position as one of the UK's leading universities in terms of research, teaching and learning. The Pall Mall centre will also provide a new platform for our IPR to engage with Whitehall and Westminster on major public policy challenges.

### Learning and Teaching

At Bath, we are proud of our longstanding reputation for high quality learning and teaching. Informed by world-leading research, our staff support our students to actively engage with their education, enabling them to make positive contributions locally, nationally and internationally.

As the University implements its new strategy to establish itself as an international leader in graduate education, taught postgraduate and doctoral students will be supported by investment in new staff and study space such as the Graduate Learning Commons in 10 West.

#### Team Bath Racing student success

For a number of years now, many of the students in the Faculty of Engineering & Design have taken part in Team Bath Racing as part of their individual or group design projects. Students are challenged to put into practice what they have learnt in the classroom and then design, build and race a new single-seat racing car during their final year of study. The team compete annually at the Formula Student competition which is Europe's most established educational motorsport contest, run by the Institution of Mechanical Engineers.

Overseen by Dr Kevin Robinson, Associate Professor in the Department of Mechanical Engineering, our students are able to learn from staff who have been at the forefront of automotive research for over four decades. Furthermore, the Team Bath Racing project is multi-disciplinary in nature; it is open to students from a range of engineering courses meaning students are able to learn from each other and gain an understanding and appreciation of how other disciplines can contribute to the success of the project.

This collaborative approach has seen Team Bath Racing go from strength to strength with last year's team achieving a record-breaking year. Their victory in the Formula Student Czech Republic competition in August 2016 meant that they were the first British team ever to win a Formula Student event.

These results mean Team Bath Racing is now placed 6th in the world in the latest Formula Student rankings, topping the previous year's success which had been the highest achieving season to date. Furthermore, this ranking secured their position as the UK's top team for a third consecutive year which is a testament to the dedication and enthusiasm of both the staff and students involved with Team Bath Racing.



### A Passion for Professional Development

Over the past 12 months, the School of Management has unveiled a number of changes to its courses, in particular its world-ranked MBA. Detailed market research has inspired a more experiential learning approach for the 50 students who embark each year on the Bath MBA.

The changes have created a new strand of learning labelled 'the Bath Spine', an exciting package of practical business skills-focused learning, which runs alongside a core curriculum of classic business training and a host of optional units. The new structure gives students the opportunity to apply their theoretical learning in projects centred on leadership, personal and professional development.

The MBA students can choose to round off their qualification with a three-to-six month paid internship – providing a further opportunity to boost their career prospects.

#### Royal recognition

In October 2015, Professor Chris Budd visited Windsor Castle to collect an OBE for services to science and maths education. Professor Budd is one of the founders of the annual Bath Taps into Science festival, a major hands-on event which has won several national prizes in the 14 years it has been running. The week of events aims to show students and their families how the science and maths they learn at school can be applied to the wider world.

An influential figure in mathematics education, Professor Budd is an active researcher having published over 100 research papers, raised over £5 million in research funding and founded (and still leads) the University's MSc in Modern Applied Mathematics.

Professor Budd was awarded a National Teaching Fellowship in 2001 and used the associated funding to develop a new undergraduate unit 'Communicating Maths' and, as the Royal Institution Professor of Maths since 2000, has spoken at maths masterclasses around the country.

In June 2016, Professor Budd was awarded another accolade when he was appointed to the oldest mathematical Chair in Britain, the Professorship of Geometry and Other Mathematical Sciences at Gresham College, London. In this role, Chris continues the 420 year-old tradition of delivering free lectures aimed at the public within the City of London and beyond.

### National Teaching Fellowship Scheme success

Last year was the first time Bath had two members of staff awarded the highly prestigious National Teaching Fellow status by the Higher Education Academy (HEA) in the same year. This award celebrates excellent practice and outstanding achievement in learning and teaching in higher education.

The National Teaching Fellowship Scheme has been running since 2000 with up to 55 fellowships awarded each year. Award winners receive £5,000 to assist in further career development and retain the prestigious Fellowship for their entire teaching careers.

Drs Momna Hejmadi and Christine Edmead were presented their awards by the Chair of the HEA Board, Professor Rama Thirunamachandran, at a celebratory ceremony in the Liverpool Anglican Cathedral on 15 October 2015 and join a national community of nearly 700 National Teaching Fellows representing more than 40 discipline areas.

These latest two awards takes the total number of University of Bath staff holding National Teaching Fellowships to seven.



Dr Hejmadi, Senior Teaching Fellow in the Department of Biology & Biochemistry and Dr Edmead, Senior Teaching Fellow in the Department of Pharmacy & Pharmacology both achieved this award, pictured above with Heads of the Pharmacy & Pharmacology and Biology & Biochemistry Departments, Professor Steve Ward and Professor Rod Scott.

### Cross-disciplinary research

World-leading research at Bath arises from an innovative and close-knit academic community. Collaborations with other disciplines both inside and outside the University are actively encouraged and research projects are often not confined to one Department, or even Faculty.

The University's research Institutes act as particular focal points where researchers can come together and combine their expertise to help solve the world's problems.

### Institute for Policy Research (IPR)



It has been an important year of development for the IPR.

In December 2015 the IPR welcomed its new Director Professor Nick Pearce, former Head of 10 Downing Street's Policy Unit. In addition to expanding the IPR event programmes, creating an IPR Blog and producing new media outputs, the IPR has developed research activities and collaborations, recruited research staff and Visiting Fellows, and signed new international partnership agreements under Professor Pearce. Current research projects focus on the feasibility of basic income; the use of public data and its application to policy; and the changing nature of work, family and welfare. The IPR has collaborated with Bath academics from the IMI, science, engineering and management on a range of interdisciplinary projects.

In the lead up to the EU referendum the IPR published *A guide to the EU referendum debate*, with contributions from across the University's Faculty of Humanities & Social Sciences. Many of the chapters included in this publication were also made available on the IPR Blog, which – along with a new policy podcast series and a growing social media presence – has played a significant role in bringing the IPR's work to new audiences.

The IPR collaborated with the School of Management to deliver a seminar concerning the impact of Brexit on business in the South West. This was one of the 22 events held by the IPR with speakers including former Head of the Civil Service Lord Kerslake, former Shadow Foreign Secretary Douglas Alexander and drug policy expert Professor David Nutt.

The IPR's Professional Doctorate Programme attracted a second cohort of 12 students, expanding the number of doctoral candidates to 23. The IPR Policy Fellowship Programme extended its reach by offering 16 leading figures from the public sector and charities the opportunity to discuss key issues with Bath academics. The University's new facility in Pall Mall, opened at the end of September 2016, will give the Institute a new home in the capital and offer the opportunity to forge closer ties with decision-makers in Whitehall and Westminster.

### Bath Institute for Mathematical Innovation (IMI)

Launched in October 2015 and directed by Professor Jonathan Dawes, the Institute for Mathematical Innovation (IMI) enhances the quality, range and international visibility of mathematical sciences activity at Bath. IMI supports interdisciplinary research activities including programmes of cross-campus internal secondments and undergraduate research internships, and also hosts a well-attended series of public lectures.

During 2015-16 IMI supported six academic workshops in mathematics and statistics and welcomed nine academic visitors including Professor Jim Zidek (University of British Columbia) as a Global Chair.

IMI's 2016 undergraduate research internship programme, organised in collaboration with the Department of Mathematical Sciences' Centre for Doctoral Training in Statistical Applied Mathematics (SAMBa), supported 19 undergraduates, encouraging them to learn more about a research career and to consider continuing their studies further.

Since its launch, IMI has established and grown a programme of successful commercial partnerships with organisations from a wide range of sectors and industries including aviation, energy, health, insurance and retail.

These partnerships have resulted in new consultancy projects, commercially-funded research, PhD and MSc projects, and undergraduate placements.

IMI offers a distinctive capability through its team of Commercial Research Associates who, drawing on specialist expertise from across campus, provide rapid and bespoke mathematics and statistics solutions for external partners in the private and public sectors.

IMI also hosts the major pan-European initiative MI-NET (Mathematics for Industry Network), chaired by Dr Joanna Jordan, which promotes and funds joint activities between mathematics and industry. MI-NET comprises members from 31 countries, and will run until 2019 as a Horizon 2020 COST programme.

### Institute for Advanced Automotive Propulsion Systems (IAAPS)

In July 2015, the University announced its ambition to build a unique £50 million global automotive research facility, based at the Bristol & Bath Science Park.

Drawing on our research expertise and industry links, the new Institute for Advanced Automotive Propulsion Systems (IAAPS) will help to deliver future generations of clean and efficient vehicles. Industry-led and competing on a global scale, it will help to enhance the UK automotive industry and provide a significant boost to the regional and national economy.

Projections suggest that the new facility will stimulate £67 million in research and development between 2020 and 2025, driving an additional turnover of £800 million for the automotive sector. In addition, IAAPS will support nearly 1,900 new jobs and safeguard thousands more. Acting as a centre for world-class training and skills development, IAAPS will greatly benefit our students and staff too.

It will support new undergraduate, PhD, Masters and Apprenticeship courses, helping to address a significant skills gap for the sector, nationally and in the region.

The IAAPS project board led by Steve Egan, Vice-President (Implementation); Professor Gary Hawley, Dean and Medlock Chair of Engineering in the Faculty of Engineering & Design; and Dr Jon Hunt, Director of Research & Innovation Services, has been in frequent discussions with government officials, funding bodies and industry partners as plans develop.

Find out more about IAAPS at iaaps.co.uk



Nearly 1,900 new jobs created and thousands more safeguarded.



IAAPS will stimulate £67 million in R&D between 2020-25.



IAAPS will be a catalyst for sustainable, future economic growth.

### Engineering & Design

Our Faculty of Engineering & Design has enjoyed another highly successful year, both in terms of its impressive subject rankings and conducting impactful world-leading research in collaboration with industry.

All departments have seen major investment in student laboratories and project activity centres, and student competition teams have enjoyed national and international success. The new Architecture & Civil Engineering building, 4 East South, opened in September 2016 with its stunning design studios welcoming new and existing students.

### Architecture consistently top of the rankings

Our BSc (Hons) Architecture course continues to be top of the subject rankings, ranked number one in both the 2017 Complete University Guide and *The Times* Good University Guide 2017. The programme recently received a 97% satisfaction rating in the 2016 National Student Survey. Our unique approach, underpinned by collaborative projects between architecture and engineering students, has made this one of the most sought after programmes in the UK.

### Placements at all time high

A significant number of the Faculty's undergraduate courses benefit from extensive industry involvement, many of which involve placement years. Our close relationship with industry partners means students are able to learn from and work closely with industry professionals through guest lectures, sponsored projects, prizes and scholarships, and if desired, a placement. Industry placements are at an all-time high; last year 355 students were placed across 226 companies with 50 new companies joining as placement partners.

Placements enable students to apply theoretical understandings in the field whilst gaining real world experience ensuring students graduate with a sound knowledge base and practical understanding of their chosen field.



BEng (Hons) Chemical Engineering student Alexandra Strovall-Harf pictured above on placement at Exxon Mobil.

### New 3-D camera technology to uncover hidden landmines

Professor Manuchehr Soleimani in the Department of Electronic & Electrical Engineering is developing an innovative camera system capable of detecting landmines underground. The project is being funded by the charity Find A Better Way founded by footballing legend Sir Bobby Charlton who was awarded an honorary degree by the University in June 2016, in recognition of his significant sporting success and charitable work.

It is estimated there are 110 million landmines buried across the world, with the potential to kill and maim innocent men, women and children for decades to come. Modern day landmines are usually plastic instead of metal which makes detection extremely difficult with current technology. The project is exploring new ways of differentiating between images of plastic and metallic elements within a single device.

#### Investing in student spaces

Many of the faculty's students annually compete at a variety of national and international events with great success. Competing at such events has become a fundamental part of a large number of the faculty's courses, with major investment in its student laboratories and project activity spaces to support students continuing this success.

Last year Bath entered two cars for the first time at the annual Formula Student competition courtesy of Team Bath Racing and Team Bath Racing Electric, with the former recording its most successful season to date by winning the Czech Republic event; the first British team ever to win a Formula Student event. Other thriving student teams include Team Bath Drones which competes in the IMechE Unmanned Aircraft Systems Challenge, the Bath University Racing Submarine Team (BURST) which compete at the International Submarine Race (ISR) competition as well as the Bath Zero Emissions Motorcycles team (BOEM) which design and build a zero emissions motorcycle to race in the Isle of Man Tourist Trophy Zero Race.



#### A sustainable alternative to palm oil

In December 2015, a multi-disciplinary team of engineers and scientists from the University of Bath and the University of York were awarded a £4.4 million grant to produce the first ever yeast-derived alternative to palm oil, using sustainably-sourced waste feedstocks.

Led by Dr Chris Chuck in the Department of Chemical Engineering, the project team is working with a number of industry partners to develop a substitute for palm oil on an industrial scale.

Palm oil is an important source of biofuels and is used in the food and cosmetic industries. However, its high demand has caused the rapid expansion of palm plantations in South East Asia which has been linked to widespread deforestation, and water and air pollution across the region.

Previous work at Bath found that the yeast *Metschnikowia pulcherrima* was capable of producing a near identical oil to palm oil and this project is looking to build upon these earlier findings and produce an alternative on an industrial scale.

Dr Chris Chuck holding a jar of straw, one of a number of agricultural and food wastes which the yeast can be grown under non-sterile conditions to produce a thick oil with near identical qualities to palm oil.

### Humanities & Social Sciences

Whether conducting research on how to use competition to encourage children to eat more healthily, running a primary school psychology club, investigating how men and women feel pain in different ways, or debating the morality of drone warfare, staff and students in our Faculty of Humanities & Social Sciences focus innovatively on the reality of 21st century lives.

#### Global impact and experience

Our students are making their presence felt, and reaping the benefits from 600 placements, the largest number of any faculty. They go far afield to Australia and New Zealand, and Latin America, as well as Britain and Europe, working with employers as varied as Vauxhall and Walt Disney, the Bank of England and *The Big Issue*.

Two students from the Departments of Economics, and Politics, Languages and International Studies (PoLIS) attended the One Young World Summit of future leaders in Bangkok in November 2015, and we celebrated the achievements of 50 years of interpreting and translating at Bath with a conference in September 2016. Currently 25% of the English language staff in the European Parliament are graduates of our MA course. Postgraduate students will now have the option of a new course in business interpreting in Chinese, with other additions in economics, and physical activity and health. Recruitment for postgraduate courses in education and globalisation, and teaching English to speakers of other languages exceeded targets, in line with the University's postgraduate growth strategy.

The 2015-16 academic year saw Professor David J. Galbreath become the new Dean of the Faculty of Humanities & Social Sciences. In addition, the new 10 West building was officially opened, housing the Department of Psychology and the newly-launched Centre for Applied Autism Research.

### Providing expertise

We provided evidence to a parliamentary inquiry into devolution, and specialist advice for a Work and Pensions Select Committee investigation into support for the bereaved. BBC1's *Question Time* was broadcast from The Edge in December 2015. The University hosted a global conference on social policy and welfare and participated in Global Climate Change Week. An 'Ignite Your Mind' event gave PhD students the opportunity to explain their projects in just five minutes to a very different audience - drinkers at a Bath pub.

Our departments continued to shine in the 2017 *Complete University Guide* rankings with top ten placings in economics, Iberian languages, psychology, social work, sociology and sports science. The University is now top-rated for job prospects for economics graduates, and recorded a 95% student satisfaction mark for psychology.

Students from PoLIS and the Department of Social & Policy Sciences had the chance to try their hand as panellists and audience members.



### Backing new people and projects

Staff from our psychology and education departments were recognised as Future Research Leaders by the Economic & Social Research Council with funding for three-year projects, while two PoLIS researchers secured 'Horizon 2020' grants from the European Union. Our Department for Health secured major grants to study the effect of physical activity on older people, and, working collaboratively with the Department of Computer Science to establish the Centre for the Analysis of Motion, Entertainment Research and Applications (CAMERA). The new centre will use visual entertainment industry technology to improve the design of prosthetic limbs for amputees and the training of elite athletes.

The vote in June to leave the EU led to significant demand for interviews and comment by experts from the Faculty, reflecting both sides of the argument. HSS academics contributed extensively to the Institute for Policy Research's guide to the referendum. The consequences of the vote are sure to be debated at the annual conference of the University Association of Contemporary European Studies in 2018, which we successfully bid to host.

> Last year, a research project allowed Dr Roy Maconachie from the Department of Social & Policy Sciences to spend time in Ghana and employ participatory video to understand the gendered impacts of Fairtrade on female cocoa farmers.

Our work is prospering at home and abroad – as we co-operate with partners from public, private and third sectors to develop the University's international strategy, especially this year close ties with the University of Stellenbosch in South Africa. These partnerships are building on our reputation for teaching and research excellence, with examples including the successful launch of the University's part-time postgraduate education course in Jordan, which will be extended to support refugees, and research on natural resources and sustainable livelihoods in Africa.

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### Science

From using evolution to fight antibiotic resistance, to understanding the very first stages of life, our researchers are pushing the boundaries of science to make a difference to people's lives. This year, the Faculty of Science has forged new and strengthened existing collaborations with institutions, organisations and industry across the world, ensuring our research achieves real global impact. Professor Nick Brook this year joined the University, leading the Faculty of Science as its new Dean.

#### Fertilising embryos instead of eggs

Scientists have shown for the first time that offspring can be made from non-egg cells, a discovery that challenges two centuries of received wisdom.

Eggs can be 'tricked' into developing into an embryo without fertilisation, but the resulting embryos, called parthenogenotes, die after a few days. However, a team led by Dr Tony Perry in the Department of Biology & Biochemistry has developed a method of injecting these embryos with sperm that can result in healthy baby mice.

It had been thought that only an egg cell was capable of reprogramming sperm to allow embryonic development to take place. The findings help us understand more about the key mechanisms in the very early stages of life.

### Altruism is favoured by chance

Mathematicians may have found an answer to the longstanding puzzle as to why we have evolved to cooperate. An international team of researchers, including Royal Society University Research Fellow Dr Tim Rogers, has found that altruism is favoured by random fluctuations in nature, offering an explanation to the mystery as to why this seemingly disadvantageous trait has evolved.

The team developed a mathematical model to predict the path of evolution when altruistic "co-operators" live alongside "cheats" who use up resources but do not themselves contribute.

They found that the total size of population that can be supported depends on the proportion of co-operators: more co-operation means more food for all and a larger population. If, due to chance, there is a random increase in the number of cheats then there is not enough food to go around and total population size will decrease. Conversely, a random decrease in the number of cheats will allow the population to grow to a larger size, disproportionally benefitting the co-operators. In this way, the co-operators are favoured by chance, and are more likely to win in the long term.

> Semiconductors based on carbon instead of silicon can be printed onto flexible film to create devices that are low cost, wearable and lightweight.

### Milner Centre for Evolution given green light

A contractor has been appointed for the Milner Centre for Evolution, our cross-disciplinary centre that will combine fundamental, applied and education research on evolution. The building, on the south side of the lake on campus, will comprise of offices, laboratories and a seminar room, as well as an area for outreach activities. Construction is due to commence in early 2017.

Professor Ed Feil from the Centre was part of an international team of scientists that developed 'DNA photofits' to quickly identify drug-resistant superbug infections and track their spread across Europe. In the future, this approach may help doctors decide on the best treatments more quickly and help stop drug-resistant outbreaks.

### Flexible, 'organic' electronics

Light-up clothing, medical sensors and electronic wallpaper are just a few of the possible future applications that may be enabled by flexible and printable electronics using carbonbased materials.

Professor Alison Walker in the Department of Physics is leading a €5 million pan-European collaborative research project that will help develop new organic semiconductor materials and additives that can be printed onto flexible film to create devices that are low cost, flexible, wearable and lightweight.

The EXTMOS (EXTended Model of Organic Semiconductors) project, which also includes Dr Enrico Da Como in the Department of Physics, aims to reduce the time and effort involved in manufacturing and testing new materials and hence lower the production costs. http://extmos.eu/



### Next generation of lithium batteries

Scientists from our Department of Chemistry and Centre for Sustainable Chemical Technologies are part of a £6.8 million EPSRC collaborative project to develop next-generation lithium batteries that meet the challenges of energy storage for electric cars, and from renewable sources such as wind and solar.

Professor Saiful Islam will be using powerful computer modelling techniques to help understand battery materials on the atomic scale that can be tested in experimental labs.

Professor Islam was selected to present the annual Royal Institution's 2016 Christmas Lectures, which were broadcast on BBC Four. The popular science series, in its 80th anniversary year, focused on the topic of energy.

### Developing sunscreens that protect against UVA

A new compound developed by a research team led by Dr Charareh Pourzand in the Department of Pharmacy & Pharmacology offers unprecedented protection against the harmful effects of UVA radiation in sunlight, which include photo-ageing, cell damage and cancer.

Most sunscreens on the market offer good protection against solar UVB radiation but have limited effectiveness against UVA-induced damage, relying on the reflective properties of creams to defend against dangerous UVA rays.

However this new compound, called the 'mitoiron claw', offers strong protection within our cells precisely where the greatest damage from UVA occurs, without interfering with the rest of the cell.

Christmas Lecturer Professor Saiful Islam is leading the way on developing next-generation lithium batteries Credit – Paul Wilkinson

### School of Management

We are one of the UK's leading business schools. We equally value research, teaching and citizenship and engage business and society to influence the present and shape the future.

#### Making a difference to patient care

Our Centre for Healthcare Innovation & Improvement (CHI<sup>2</sup>) is focused on solving the practical challenges of health and social care systems, directed by Professor Christos Vasilakis. Using systems modelling and computer simulation, researchers are working with clinical teams and healthcare managers on the complex problems that are detrimental to patient care.

The complexity of our health and social care systems often deters individuals from feeling they can make improvements. CHI<sup>2</sup> has launched a free online course to give people at any level and in any sector the skills and confidence to improve the quality of care, run in partnership with the West of England Academic Health Science Network through the FutureLearn platform - the UK's leading organisation for the provision of Massive Open Online Courses (MOOCs).

Improving the supply management of donor blood

Every second, three people around the world receive a life-changing blood transfusion. It's a powerful illustration of why a regular supply of blood of all groups and types is so essential for hospitals.

Despite this very human need, the number of new people giving blood is dropping. Add in that blood deteriorates over time, with a short user shelf life, and it's easy to understand why managing blood supply is so problematic for health services across the globe.

Dr Dimitris Paraskevopoulos is leading a new CHI<sup>2</sup> project that aims to improve blood inventory management processes at blood banks and hospitals through the use of operational research methods.

### Enhancing the entrepreneurial journey

Dr Christos Kolympiris is leading world-renowned academics in our new Centre for Research on Entrepreneurship and Innovation. CREI@Bath is advancing knowledge of entrepreneurship and innovation including open innovation, the financing of entrepreneurial firms and the transfer of technology from academia to industry.

Our research informs policy on commercialising academic findings, promoting innovative entrepreneurship and boosting economic growth.

Through our research expertise we are able to answer commercially important questions asked by entrepreneurs and innovators at start-ups, through to established international corporations.

### In the business of building a better society

Our Centre for Business, Organisations & Society (CBOS) is exploring how business is responding to a changing social and environmental agenda. There's a growing demand for businesses to operate more sustainably and CBOS is working with companies to develop new business practice.

Directed by Professor Andrew Crane, our world-leading research is focussed on building sustainable supply chains; setting up better governance mechanisms; enhancing corporate responsibility and performance; and implementing sustainability in multinational corporations.

Partnering with the private sector, government and the third sector, research from CBOS is impacting on business, strategy and policy.

#### Bridging the boardroom gender gap

Addressing the global debate on executive diversity, Dr Johanne Ward-Grosvold has investigated the impact of a country's institutions on the number of women holding seats on corporate boards. Boardrooms the world over are still male dominated, despite evidence showing female board directors can improve firm performance.

The study of 23 countries was the first to analyse how family, education, economy, government and religion influence women's career choices and their representation on corporate boards.

It showed that government investment in initiatives that enable women to better balance their professional and home life, including flexible working, job-sharing and subsidised childcare, is important in creating a working environment that allows women to reach the very top of their field.

The insight has implications for practice at both the country and firm level and highlights the positive role the state can play in corporate governance.

> Tom Dewhurst got a taste for enterprise as a Business Administration student and now runs a successful digital business used by a growing number of restaurants and cafes.

Our students combine classroom learning with first-hand business experience gained on placement, and through enterprise competitions on campus. Many graduates go on to set up their own successful businesses. Dr Chris Archer-Brown, from our Information, Decisions and Operations Division, is one of a number of academics keeping in close contact to give strategic business advice, building a network of exciting start-ups that provides opportunities to entrepreneurs and students alike.

#### Strategic support for start-ups in Africa

A love of Africa and a passion to use enterprise to drive social change inspired Business Administration graduates Toby Hanington and Tom Fairburn to set up The Baobab Network. They recruit high-calibre professionals from around the world to run intensive two-week accelerator programmes for start-ups in Sub-Saharan Africa.

They select young companies that enrich their communities, matching them with professionals from leading firms including UBS, PWC and Credit Suisse. The most promising start-ups are introduced to investors. Thanks to £150,000 of equity crowdfunding the programme will expand from Nairobi into Ghana, Zambia and Rwanda in 2017.

#### New queue-busting business

Queueing for a lunchtime sandwich gave Business Administration graduate Tom Dewhurst his lightbulb moment to create an app for customers to order ahead at cafes and bars. Using the Ordoo app customers bypass queues and earn loyalty rewards, while companies increase sales and enhance customer service.

The University's "Dragon's Den" of alumni investors gave Tom the funding he needed to join our awardwinning Innovation Centre. Ordoo is now a thriving business based in London, with investment, a growing number of participating outlets and an impressive 10,000 customers and counting.

### Internationalisation

An international outlook is now firmly embedded across the University's activities and is having a significant impact on our research collaborations, and our staff and student mobility.

As an endorsement of the progress we have made in this area over recent years, in January Bath was included in an elite list of the world's 'most international universities' compiled by *The Times Higher Education*. Both our international reach and reputation are growing as a result of a number of important initiatives.



- We developed new mobility partnerships in Chile, Hong Kong, Singapore, South Africa, Mexico and Uzbekistan thanks to two successful bids for ERASMUS + International Credit Mobility funding.
- We welcomed over 1,250 new international students, including over 850 postgraduate taught students (a 22.5% increase on the previous year) from more than 100 countries around the world.

### Commitment to partnerships

This year saw the formation of a new, strategically important 'Universities of Four continents' (U4C) network. U4C comprises our three highest performing strategic partners -Unicamp (Brazil), Zheijiang (China) and Stellenbosch (South Africa) – and will be increasingly important in the years to come. The network, which is led by Bath, was officially launched by our Vice-Chancellor in Cape Town in June 2016.

Over the year we have strengthened our commitments in Jordan whose population is now made up of an estimated 40% refugees. Our multi-layered approach includes various research initiatives in collaboration with academic colleagues, principally at the Princess Sumaya University for Technology and the Royal Scientific Society of Jordan. We have also extended our established MA Education programme to Jordan with the Amman Baccalaureate School and are currently developing a parallel programme which will provide scholarships for local state school teachers who are involved in providing education for refugees.

In the last year, the School of Management welcomed the first cohort of South African higher education managers to the Professional Doctorate in Business Administration in Higher Education Management. This partnership is the first of its kind between a UK university and the South African Government and demonstrates Bath's commitment to developing higher education leaders of the future. In January 2016, leading academics from the School flew to South Africa to deliver the first intensive residential component of the course at the Nelson Mandela Metropolitan University (NMMU) in Port Elizabeth.

For International Darwin Day in February 2016, we announced another important strategic international partnership between our Milner Centre for Evolution and the University of Oslo's Centre for Ecological and Evolutionary Synthesis (CEES). CEES has been at the forefront of evolutionary science research for a number of years and joining forces in this way will enable us to increase our research and impact in this area.

### Increasing staff and student mobility

A key strand to our internationalisation strategy is to foster new collaborations and engagement through increased mobility for our staff and students. Year-on-year the number of University-led delegations to all corners of the globe increases as do the number of visits to campus from our international partners.

This year, researchers from our Centre for Doctoral Training in Statistical Applied Mathematics (SAMBa) travelled to Brazil to further their collaboration with the University of São Paulo, focussing on the investigation of mathematical solutions to industry problems.

Back on campus in July, we were joined by colleagues from Unicamp for three weeks to participate in an academic writing and teacher training programme developed and delivered by our Skills Centre.

At the end of 2016, our Vice-Chancellor and Chancellor were in San Francisco to commence our 50th Anniversary celebrations, connecting with influential alumni and discussing future collaborations.

### International collaboration for societal impacts

Researchers in our Department of Psychology are leading a collaborative project with our international partners at Stellenbosch University aimed at improving responses to child trauma in Khayelitsha – a township near Cape Town.

To date, our research in this area has focussed solely on the UK. International collaboration offers an opportunity to develop this research in a different context where traumatic events are more prevalent.

For Victoria Williamson, PhD candidate in Psychology (pictured below), this has afforded her a deeper and wider understanding of how parents in a non-Western context care for their children following a trauma.

#### The University has

strengthened its commitments in Jordan through a number of research initiatives, including establishing our MA Education programme with the Amman Baccalaureate School.

"Being able to travel to Stellenbosch has helped me as a young researcher and led to additional collaborations."

Victoria Williamson



Bharatanatyam dance piece performed in Bath Abbey by Jasmin Reeve, BSc Architecture, as part of the 50th anniversary celebrations.



A DESCRIPTION OF

### Lifelong connections

On 25 October 2016 we celebrated becoming a university 50 years ago.

It was a special day, made more so by the alumni and friends who came along to celebrate with us. Our guests enjoyed performances, music and dance in Bath Abbey and cheered the University's men's 1st XV rugby union team to victory at Bath Rugby's ground, The Rec, in the new BUCS Super Rugby league.

It was a day which captured the very best of the University of Bath, and was an opportunity to look back and celebrate all that we have achieved together. And for every member of our community who joined us in person for our birthday, thousands more joined in all around the world.

From Santiago to Shanghai, and more than 150 countries in between, our community not only share fond memories of their time at Bath, they also share a desire to see the next generation of graduates succeed. It's thanks to them that, as well as marking a golden anniversary, we are also celebrating an incredible £50 million in donations to our Look Further campaign. Year after year, the generosity of our alumni and friends has meant that the most talented, dedicated and ambitious students and researchers, whatever their background, have had a chance to realise their potential here at Bath. Thanks to them, in this year alone we welcomed more than 150 new scholars to Bath, taking our total number of scholars supported by donations to more than 1,000.

It is a pleasure to look back at all that we have accomplished together during our first 50 years, in particular the support we have received from our alumni and friends. With continued support we can look even further in the years to come.

You can find out more about our alumni community and get in touch at:

Web: www.bath.ac.uk/alumni Email: alumni@bath.ac.uk Twitter: @UniofBathAlumni Facebook: www.facebook.com/bath-alumni-community





Akram Khan's Dance Company performing at The Edge.

### Arts provision and participation at The Edge, the University's hub for creativity and creative thinking

Opening in 2015, The Edge has swiftly gained a reputation on campus and with city residents as a destination to engage with creativity and creative thinking. The dividends from the University's £10 million investment in the arts are evident, with a new Director of Arts at the helm and new branding.

#### A wide variety of activities

Students, staff and the public alike have enjoyed arts at The Edge in a variety of guises during 2015-16. Over 9,000 participated in activities offered by Edge Arts (formerly ICIA), our department with a remit to provide high quality arts presentations and creative learning opportunities for all. In particular many students have taken advantage of the variety of dance, fine art and music classes offered throughout the year. Presentations from professional performing arts and dance practitioners including two sold out nights by Akram Khan's Dance Company, alongside significant exhibitions in the galleries provided moments for Bath to engage with world class creative experiences. In addition, The Edge is home to student-led arts presentations and activities from a number of societies and groups.

#### **Creative Excellence**

Our inaugural arts gala at The Edge in April 2016 showcased the talents of students who demonstrate an exemplary commitment to their arts participation. We're grateful to a select group of patrons who support our 'Arts Scholars' through bursaries with which they can receive professional tuition and mentorship. Also in 2015-16 Edge Arts contributed to the development of commissions and new works from international artists including a new film by Ravi Deepres to celebrate the 2015 Rugby World Cup presented in The Edge galleries. Other notable commissions included Grace Schwindt and Zarina Bhimji, the latter will be exhibited at Tate Britain in 2018.

#### Community and campus engagement

Bath's research community found multiple moments to showcase their work at Edge Arts events including Science Showoff, our cabaret format where researchers bring their work to new audiences in unusual and entertaining ways, alongside Wellcome Trust Engagement Fellow Steve Cross. In addition, our film programme brought in academics to discuss subjects as varied as the mathematics within Lord of the Rings, architecture, operating as a deaf-blind person and the representation of death in film. In addition, a scheme partnering local artists with Bath researchers was launched with the University's Public Engagement Unit and Fringe Arts Bath.

The Edge also welcomed an increase in under16 visitors via its arts programmes together with activities instigated by other venue users such as the University's Widening Participation team. Edge Arts' monthly Saturday CREATE Club provided young people in particular with multiple opportunities to fire their creative imaginations across craft, movement, story-telling and instrument playing. Away from The Edge the presentation of two works by choreographer Rosemary Lee saw 34 older participants perform in the city of Bath's Royal Avenue, forming long-lasting friendships between participants. Edge Arts and Bath Festivals presented a coinciding exhibition to partner these performances at St Michael's Church in May.

### Community engagement

### Public Engagement with Research

The Public Engagement Unit works with the academic community to bring research to, and involve the public in, the high quality research undertaken in Bath. The Unit provides support, guidance, opportunities and small funds to enable researchers to engage with a broader range of publics, such as the local community, charitable bodies, public sector organisations, industrialists, policymakers, professional groups and young people.

This year, researchers have been given the opportunity to engage others with their work through the Pint of Science Festival in Bath pubs, the Bath Festival of Nature, and the annual Images of Research competition.

Entries for the Images of Research competition can be seen at: **go.bath.ac.uk/images-of-research** 

Led by Professor William Wadsworth, members of the Centre for Photonics and Photonic Materials exhibited their research on optical fibres to over 10,000 members of the public and 2,500 school children at the prestigious Royal Society Summer Science Exhibition, London, in July.

As part of the 50th Anniversary celebrations the Public Engagement Unit has run two new initiatives: *Community Matters* and *Expressions of Research*. In partnership with the South West Foundation, *Community Matters* is a programme which brings together our research expertise alongside grassroots insight to explore and understand issues that are affecting local communities. Through a collaborative project with Fringe Arts Bath and Edge Arts (*Expressions of Research*), five of our research centres are working with artists to develop a suite of exhibits and performances which provide intriguing interpretations of their research.

One of our engagement projects, *Fostering Hope*, was shortlisted for the national Engage competition, a prominent competition which recognises excellent public engagement with research. Dr Justin Rogers and Caroline Hickman from our Department of Social & Policy Sciences, and Dr Sam Carr from our Department of Education, worked with the fostering agency TACT on a participatory research project which sought to shift foster carers' and public perceptions of unaccompanied asylumseeking young people.

The 2016 Vice-Chancellor's Award for Public Engagement with Research was awarded to Dr Kit Yates (Department of Mathematical Sciences) for his rich history of engaging the public with mathematics. The 2016 Vice-Chancellor's Postgraduate Prize for Public Engagement with Research went to Jemma Rowlandson (Department of Chemical Engineering) for engaging both young and adult publics with her research and for her initiative in developing new opportunities for public engagement.

### Widening Participation

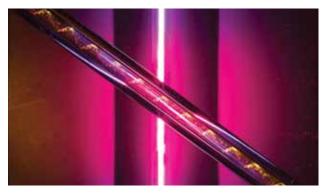
The University continues to host school visits, summer schools, open lectures, sporting activities and subject taster workshops to encourage participation in higher education and introduce people of all ages and backgrounds to university life.

Our Summer School Programme continues to expand, offering high-achieving Year 12 students the opportunity to attend either a STEM (Science, Technology, Engineering and Mathematics) or Social Science Summer residential. This year, students took part in group research projects to enhance their A Level curriculum and develop key skills needed to make a successful transition to university.

The 2016 Bath Taps into Science Fair attracted 1,200 primary school children to campus and offered them a chance to get 'hands-on' with science through a wide range of demonstrations. The Family Fair saw record numbers this year, with 5,000 people attending the activities in the city centre.

We delivered several events to provide more information and enable students to explore their options. The 2016 Futures Days allowed Year 9 pupils to discover the different learning and career pathways open to them and consider the routes that reflect their interests and strengths. We also delivered five Taster Days, each giving Year 10 pupils the chance to discover what it is like to study courses on offer at the University through interactive workshops run by our academic staff.

We were also successful in leading a bid to HEFCE (Higher Education Funding Council for England) as part of the National Collaborative Outreach Programme (NCOP), forming the Wessex Inspiration Network (WIN), a consortium of local higher education providers in Bath, Weston & Wiltshire. Designed to increase participation in higher education in wards with lower than expected progression rates, the WIN will offer a programme of high-intensity activities for students from Year 9 to Year 13 with a focus on motivational enrichment activities as well as Comprehensive Objective Information, Advice and Guidance (COIAG) and personalised support.



This image of the DNA of an optical fibre by Jamie Francis-Jones and Thomas Wright in the Department of Physics, won best image in our 2016 Images of Research competition.

### Sport

This year has seen the outstanding success of Bath-based athletes at Rio 2016 as well as visits from the Royal Family and sporting royalty.

#### **Royals and Roses**

An inspirational start to the University's 50th anniversary year saw HRH Prince Harry visit the Sports Training Village (STV) as it hosted trials for the 2016 Invictus Games. He met wounded, injured and sick servicemen and women, using sport as part of their recovery, who were trialling for the UK team in athletics, archery, wheelchair basketball, road cycling, powerlifting, indoor rowing, wheelchair rugby, swimming, sitting volleyball and wheelchair tennis.

Other notable visitors to the STV's world-class facilities during 2016 were the England Rugby Union squad (Vice Chancellor Professor Dame Glynis Breakwell pictured right with Head Coach Eddie Jones), who trained here during their successful Six Nations campaign; Davis Cup-winning captain Leon Smith; England Netball U21s; the Malaysian Paralympic powerlifting team; and Team England's rhythmic gymnastics squad working towards the 2018 Commonwealth Games.

### A summer to savour

The University of Bath's international reputation for sporting excellence was further enhanced as 20 athletes based at the £30 million STV competed at the Rio 2016 Olympic and Paralympic Games, winning a terrific ten medals between them.

Paul Blake was crowned as Paralympic Champion in the T36 400m and also won silver in the 800m, just a few weeks after fellow athletes Emily Diamond and Eilidh Doyle had formed half of the Team GB women's 4x400m relay quartet that claimed Olympic bronze.

It was an outstanding Olympics for members of the British Swimming National Centre who train in the STV's London 2012 Legacy Pool as Jazz Carlin, Siobhan-Marie O'Connor and Chris Walker-Hebborn all won silver medals. Teammate Andrew Willis, a Chemical Engineering graduate, was just eight-hundredths of a second shy of joining them on the podium.

Piers Gilliver won Britain's first wheelchair fencing medal at a Paralympic Games for 24 years, silver in the epee, whilst visually-impaired Melissa Reid won PT5 bronze in the Games' debut para-triathlon competition, having been guided by Sports & Exercise Science graduate Nicole Walters.

Among the other alumni to enjoy medal success was rower Heather Stanning, who made history by successfully defending her Olympic women's pairs title with Helen Glover. Both learnt to row at the University. Natural Sciences graduate Alexandra Rickham also won two-person SKUD18 sailing bronze with Niki Birrell for a second successive Paralympic Games.

### Proud to host

The University's indoor and outdoor tennis courts have been refurbished in the past 12 months. Used by hundreds of people each week, the courts have hosted international tournaments featuring the world's top wheelchair tennis players and aspiring stars of the future during 2016.

They are also one of the many facilities that will be used when the University welcomes thousands of students from across the country for BUCS Big Wednesday in March 2017 – the action-packed finale to the British Universities & Colleges season, featuring 40 finals across 15 sports.





Medal winners included members of the British Swimming National Centre who train at Bath.

#### Having a ball

The oval ball took centre stage in 2016 as the University became one of eight founder members of the BUCS Super Rugby league, designed to raise the profile of university rugby, progress the level of performance to National League standard and establish a pathway to elite and professional rugby.

The Blue and Gold's positive start to the inaugural season included an unforgettable match at The Rec, the iconic city centre home of Bath Rugby, as more than 5,000 spectators cheered them to victory over Leeds Beckett on the day the University celebrated its 50th anniversary.

It wasn't the first time the students had triumphed in front of a big crowd at The Rec – they also won the international Red Bull 7s title for a third successive year in September 2016.

### World-class facilities

The University's ongoing commitment to ensuring its sporting facilities are of the highest standard continued as athletics legend Colin Jackson returned to his former training base to open the extensively-refurbished Team Bath Gym.

The gym (pictured below) includes cutting-edge equipment that cannot be found elsewhere in Europe. As with other facilities in the STV, it is open to staff, students, elite athletes and members of the public alike – all can be found training alongside each other in an inspirational environment.



### Consolidated Statement of Comprehensive Income for the year ended 31 July 2016

		Consolidated		
		2016	2015	
Income		£m	£m	
income	Tuition fees and education contracts Funding body grants Research grants and contracts Other income Investment income	139.4 35.2 35.7 49.8 0.5	119.2 36.6 37.7 46.3 2.6	
	Total income before endowments and donations	260.6	242.4	
	Donations & endowments	2.6	1.6	
	Total income	263.2	244.0	
Expenditure	Staff costs Other operating expenses Depreciation Interest and other finance costs <b>Total expenditure</b>	131.6 86.0 22.1 19.4 <b>249.1</b>	139.3 75.9 19.9 7.7 <b>242.8</b>	
Surplus before gains and losses		14.1	1.2	
Surplus on disposal of fixed assets		-	0.1	
(Decrease)/increase in market value of non current asset investments		(0.4)	0.3	
Increase in m Surplus befor	arket value of current asset investments re tax	8.5 22.2	3.7 5.4	
	Taxation	-	(0.7)	
Surplus for the year		22.2	4.7	
Actuarial (loss) in respect of pension schemes Change in the fair value of hedging instruments		(20.7) (7.0)	(4.6) (2.2)	
Total Comprehensive Income in the year		(5.5)	(2.1)	
Represented	by			
Endowment comprehensive income for the year Restricted comprehensive income for the year Unrestricted comprehensive income for the year		0.1 0.1 (5.7)	0.3 0.1 (2.5)	
Total Compre	ehensive Income in the year	(5.5)	(2.1)	

# Statement of Financial Affairs at 31 July 2016

		Conso	Consolidated		University	
		2016	2015	2016	2015	
Non-Current	+ Accoto	£m	£m	£m	£m	
Non-Current	Assets					
	d Assets Itments	626.5 1.4	598.5 1.6	627.5 1.4	600.0 1.6	
		627.9	600.2	628.9	601.6	
Current Asse	ets					
Stock	4	0.7	0.8	0.7	0.8	
	e and other Receivables	16.1	18.5	16.1	18.5	
	tments	110.4	122.6	110.4	122.6	
Cash	and cash equivalents	10.7	4.2	10.8	4.1	
		137.9	146.1	138.0	146.0	
Creditors :	Amounts Falling Due					
	Within One Year	(54.7)	(54.4)	(54.7)	(54.4)	
Net Current Assets		83.2	91.7	83.3	91.6	
Total Assets	Less Current Liabilities	711.0	691.8	712.2	693.2	
Creditors :	Amounts Falling Due After More Than One Year	(180.0)	(178.4)	(180.0)	(178.4)	
Provisions						
Pension prov	visions	(84.2)	(61.0)	(84.2)	(61.0)	
Total Net As	sets	446.9	452.4	448.0	453.8	
Restricted R	eserves					
Incor	me & expenditure reserve -					
	wment reserve	5.2	5.1	5.2	5.1	
	me & expenditure reserve -					
restri	cted reserve	2.0	1.9	2.0	1.9	
Unrestricted						
	ne & expenditure reserve -	107.0	477.5	100.0	47.4.0	
	stricted reserve	167.8	173.5	168.9	174.9	
Reva	luation Reserve	271.9	271.9	271.9	271.9	
Total Reserv	es	446.9	452.4	448.0	453.8	



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