



# Welcome from the Vice-Chancellor



Compiling an annual report for a complex university is always a tricky task. It is easy to forget the many opportunities, challenges and successes of the previous year when you are forging ahead with new projects and priorities, particularly at a time when so many significant changes are happening in UK Higher Education. Yet representing this year is even more complicated; we are reflecting on the University of Bath's golden anniversary year, a year in which we celebrated all that has been achieved since the granting of our Royal Charter in 1966.

Marked by events ranging from the celebration in Bath Abbey in October 2016 to the University of Bath Festival in May 2017, the anniversary year enabled the University to engage with great numbers of people locally, nationally and internationally, and raise £61 million towards our fundraising target of £66 million – truly an achievement. With 32 academic conferences held on campus, keynote speakers visiting from 18 countries and many of the 50 new honorary doctorates created during the year, it certainly was 12 months to remember.

Against this backdrop of celebration, the University continued its pursuit of excellence in education and research, achieving a Gold award in the Teaching Excellence Framework, and continuing to be highly ranked in league tables – fifth in the 2018 *Guardian University Guide*, Sports University of the Year in *The Times* and best university in the region in *The Times* and *The Sunday Times Good University Guide*.

Significant progress was also made in implementing the key planks of our 2016–21 strategy. Launched in October 2016, the strategy focuses on strengthening our research base, stabilising undergraduate numbers whilst growing postgraduate provision and improving the student experience, investing in infrastructure, and enhancing our international reputation and profile. This is an ambitious, all-encompassing strategy and I have been impressed by the way our talented community has risen to the challenge and already delivered outstanding results.

Highlights of the progress made include the creation of the Doctoral College and our new Centre for Learning and Teaching, increased postgraduate recruitment and a streamlined student induction process. Delivering more for our students remains a priority as we invest in facilities such as our new Bath city centre hub - the Virgil Building - as well as a £3.5 million gym development and nearly 300 new student rooms on campus for 2018.

The Virgil Building is named after the author of the University's motto. Taken from *The Georgics*, our motto - *generatim discite cultus* - points us to achieve an understanding of our world and strive to use our knowledge to ensure a sustainable future.

We are aware that our University is a significant contributor to the City of Bath and the wider region, both financially and socially, but we are ever mindful of our responsibilities to the local community. Over the past year my colleagues in the senior management team have worked closely with local stakeholders to ensure that our plans for the future are realistic and sustainable.

This theme of sustainability also underpins much of the University's research. Our research is achieving societal and technical impact by addressing issues of global importance. Whether concerned with the first-ever combined detection of both light and gravitational waves, developing future generations of ultra-low emission vehicles through the £60 million Institute for Advanced Automotive Propulsion Systems (IAAPS), establishing the Milner Centre for Evolution to make fundamental discoveries in evolution science and promote their dissemination, or responding to the refugee crisis in the Middle East through educational and practical programmes of support, our research effort and impact is growing.

This annual report will be my last as I step down from the role of Vice-Chancellor at the end of August 2018. I look forward to seeing the University progress, continue to support exceptional graduates, produce innovative research that solves world problems and have major impact locally, nationally and internationally for years to come.



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





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Cover image © University of Bath.  
The lake and fountain at our Claverton campus.

# Key facts and rankings

The University was established by Royal Charter in 1966. Our charitable objects are to “advance learning and knowledge by teaching and research, particularly in science and technology, and in close association with industry and commerce”.

## Our community

We have 17,308 students, with over thirty per cent from outside the UK, representing over 130 nationalities. We have over 100,000 alumni living and working in 169 countries around the world. We currently employ around 3,300 people and are the second largest employer in the local authority area.

## Research

Our current research grant and contract portfolio is worth around £140 million, with almost £40 million of new funding awarded during 2016-17. The value of our research grant and contract portfolio has increased by over fifty per cent in the last five years.

In 2016, thirty two per cent of our publications were in the top ten per cent of journals.

In the last Research Excellence Framework (REF), eighty seven per cent of our research was defined as world-leading or internationally excellent.

## Placements and employment

Eighty six per cent of our employed UK full-time first-degree graduates are in the top three occupational groups, compared to seventy one per cent of employed graduates nationally.

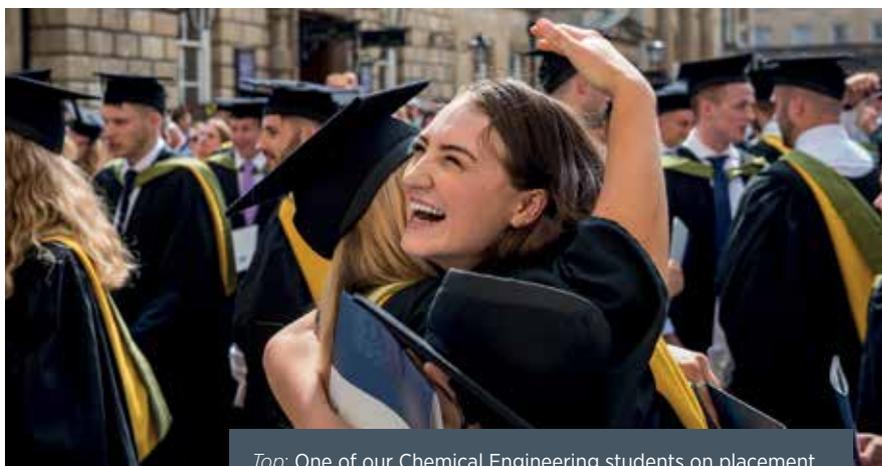
Our graduates have a mean starting salary of £26,000, which is £4,500 more than the equivalent for all higher education providers in the UK.

We were one of the 10 universities most often targeted by Britain's top graduate employers in 2016-17.

## Gifts and scholarships

Over 450 students currently hold a scholarship as a result of gifts to the University.

Our largest donation came from our alumnus Dr Jonathan Milner, who donated £5 million to fund the Milner Centre for Evolution.



Top: One of our Chemical Engineering students on placement

Middle: Our Claverton Down campus

Bottom: Some of our students celebrating success



## Rankings

- **Awarded Gold** status in the Government's Teaching Excellence Framework (TEF)
- **Ranked 7th for job prospects** by the Whatuni Student Choice Awards 2017
- **Ranked 7th for graduate prospects** by *The Times and The Sunday Times Good University Guide 2018* and 9th by the *Complete University Guide 2018*
- *The Times and The Sunday Times Good University Guide 2018* named us **Sports University of the Year 2018**
- Our students continue to be among the **most satisfied in the UK**, according to the 2017 National Student Survey (NSS). Our **overall student satisfaction rate is 88.15%** - three points above the national average.

Guide	Year	Ranking	Institutions ranked	Location
The Times & The Sunday Times Good University Guide	2018	12	128	National
The Guardian University Guide	2018	5	121	National
The Complete University Guide	2018	11	129	National
Whatuni Student Choice Awards	2017	21	125	National
QS World University Rankings	2018	160	959	International
Times Higher Education World University Rankings	2016-17	251-300	980	International
Leiden Ranking	2017	167	842	International





**Polden:**  
A £34.5m investment in high quality student accommodation on campus

# Capacity and capability

We continue to invest heavily in our infrastructure, providing the highest quality spaces and facilities for research, learning and teaching as well as sports, arts and leisure activities.

## New campus developments

During 2017, we launched the Virgil Building, a resource for students in the centre of Bath, including a new Learning Commons for private study, group work, skills development and social engagement. Student services, including the Careers Services, Counselling and Skills Development, are also accessed here following a £4.4 million refurbishment.

We are currently constructing three new buildings on campus. Firstly, the Milner Centre for Evolution, an £8.5 million research development, supported by a £5 million donation from our alumnus Dr Jonathan Milner. October saw the celebratory ‘topping out’ event to mark the mid-point of the project and completion of the building’s highest aspect. Due to open in the early summer of 2018, the Centre will be the first for evolution in the UK.

Polden, meanwhile, is our £34.5 million residential development to provide high-quality accommodation for nearly 300 students in two buildings arranged around a landscaped courtyard. Due to open in September 2018, Polden will also include a café and communal study spaces at its site on campus.

Plans have also been approved for a £3.5 million expansion of the Sports Training Village gym, which will more than double the current capacity of 105 exercise stations as well as offering dedicated group exercise space, zones for functional training and state-of-the-art equipment. It is scheduled to open in autumn 2018.

## New facilities in London

In London, our Pall Mall offices were officially launched in February 2017 by Jules Pipe, Deputy Mayor of London for Planning, Regeneration and Skills, and Baroness Royall of Blaisdon. Pall Mall is playing an important role in implementing our strategy, creating a platform for engagement with Whitehall and Westminster on major public policy challenges. It also supports interaction with senior stakeholders in commerce and industry, enables us to offer our successful Executive Education programmes in the capital and allows people across the University to better engage with individuals and organisations in London.



*Top:* Students studying in the Virgil Building

*Bottom:* The University has opened a hub in London at 83 Pall Mall

# Learning and teaching

We are rightly proud of our longstanding reputation for high-quality learning and teaching, informed by world-leading research. Our students are supported to actively engage with their education, develop sought-after skills and encouraged to make positive and worthwhile contributions locally, nationally and internationally.

## TEF Gold recognises excellent teaching

The University received a Gold award in recognition for excellence in our teaching, as part of the UK Government's new assessment of teaching quality in universities. The Teaching Excellence Framework (TEF) evaluates universities on criteria including teaching quality, learning environment and student outcomes, taking into account student satisfaction, retention rates and employment. The Gold rating means that the teaching here is of the highest quality found in the UK. The TEF panel praised the University for its strong employment orientation that ensures students develop the knowledge and skills most highly valued by employers, with extensive professional accreditation across the curriculum and support via alumni mentoring through the Bath Connection.

## Centre for Learning & Teaching

We launched the Centre for Learning & Teaching (CLT) to support excellence in learning and teaching, promote professional development of our teaching staff, and strengthen our culture of student engagement to help us to deliver an inspirational student learning experience. As a result, an additional 80 members of staff successfully attained further teaching qualifications, our 'Talk Teaching' seminar series was established to share the latest in teaching practice and plans are underway to expand technology enhanced learning. We are also developing Moodle, our virtual learning environment, and trialling digital exams and e-portfolios.

## Support for students who are refugees or asylum seekers

Last year saw us announce our latest response to the ongoing refugee crisis when we agreed to provide a sector-leading programme of dedicated funding, accommodation and support for refugee students.

All undergraduates and postgraduates holding UK asylum seeker status will be classified as home students for fee purposes. All undergraduate students with refugee or humanitarian protections will be offered the same means-tested support we offer undergraduates from other financially vulnerable groups. This includes a guaranteed place in University accommodation for the duration of their course and access to a wide range of personal, academic and financial support, including Gold Scholarships. In addition, two postgraduate taught students holding UK asylum seeker status will have their fees waived and be given a £10,000 bursary, provided by the alumni fund.

## Gold scholarships open education to all

A unique new scholarship is giving students from the most disadvantaged backgrounds the chance to build social and cultural capital as well as offering increased financial support during their studies. The Gold Scholarship Programme (GSP) features a full personal development programme including support with placements and internships, alumni mentoring and a commitment to undertake 50 hours of volunteering per year, as well as a £5,000 grant per year of study.

This year we have funded over 50 GSPs which will equip scholars with the funding, skills, knowledge and social capital needed to maximise their Bath experience and succeed in the graduate job market or postgraduate study.



Above: Students capture a memory of their day of graduation

Right: Intake weekend at the University of Bath

***“The last 10 years have seen unprecedented numbers of people displaced from their homes in the Middle East and elsewhere due to persecution, conflict and violence. The challenge for organisations such as ours is to do something meaningful and sustainable that will have a tangible impact.”***

Professor Peter Lambert, Pro-Vice-Chancellor (Learning and Teaching)

We've been awarded gold  
in the Teaching Excellence Framework



# Cross-disciplinary research

Our campus was designed to enable researchers from different disciplines to collaborate and exchange ideas. That ethos continues today, with our innovative and talented academics producing world-leading research that is often not confined to one Department, or even Faculty. The University’s research Institutes act as focal points where researchers can come together and combine their expertise to help solve real world problems.

## The IPR’s response to Brexit

During the last year, the University’s Institute for Policy Research (IPR) has made a significant contribution to conversations around Brexit, discussing the impacts of this crucial process across a variety of policy areas. In particular, the IPR has hosted or contributed to six public events on Brexit – including two symposia, two research seminars, a public lecture and a panel debate. The IPR has also released two major publications and published 23 blogs offering expert commentary on Britain’s progress towards exiting the European Union.

In January 2017, Lord Kerr of Kinlochard, former Ambassador to the European Union and author of Article 50, delivered a public lecture at the University for the IPR, discussing the issues Britain faces as it negotiates its withdrawal from the EU. In a sold-out event, Lord Kerr’s lecture entitled ‘Brexit: Will Divorce be Damaging, and Could it be Amicable?’ addressed how and whether Brexit would be damaging to Britain, highlighted his problems with Theresa May’s negotiating position on Brexit, and outlined five possible scenarios for Britain’s future before opening the floor to receive questions from the audience.



## Institute for Mathematical Innovation (IMI)

IMI continued to expand rapidly through its second full year of operation, with a complete programme of events and collaborations across the whole range of the University’s activities.

Highlights from its 28 events during the year included welcoming a visiting delegation (arranged through the British Council and the Smith Institute) from universities in Malaysia, and hosting a visit from the Government Office for Science.

IMI ran two Thematic Semesters of seminars and discussions, one centred around Markov Chain Monte Carlo numerical methods, and the second on the Mathematics of Imaging. Professor Mike Tipping gave a thought-provoking overview of machine learning in his Public Lecture; one of seven held over the year.

IMI’s portfolio of external research partnerships included work in collaboration with Airbus, Atlas Genetics, BT, Mayden, N12 Technologies, the Police Foundation, Tokio Millennium Re, and UNICEF.

The Institute’s Internal Secondment scheme attracted significant interest: eight academic staff were selected for the scheme, drawn from Architecture & Civil Engineering, Biology & Biochemistry, Health, Mechanical Engineering, Physics, and Psychology.

IMI’s EU COST Action MI-NET (Mathematics for Industry Network) supported 46 events, including the first ever Study Group in Cyprus, the first modelling week in Israel, and the first industry workshop in Macedonia.



Top: Lord Kerr delivers a lecture on the implications of Brexit

Bottom: Faculty across the University collaborate within the Institute for Mathematical Innovation

## Green light for automotive research institute

In July, the University received significant government investment to develop the Institute for Advanced Automotive Propulsion Systems (IAAPS). IAAPS was awarded £28.9 million of capital funding from the Higher Education Funding Council for England's (HEFCE) UK Research Partnership Investment Fund and received £10 million from the West of England combined Authority and Local Enterprise Partnership. This funding will enable construction of the £60 million facility to start in the summer of 2018, with IAAPS scheduled to open in early 2020.

Located at the Bristol & Bath Science Park, IAAPS will lead the development of future generations of ultra-low emission vehicles and attract sector-related businesses to the region, generating economic growth. It will stimulate over £67 million in additional automotive research investment by 2025, creating an additional turnover of £800 million for the UK automotive sector and supporting nearly 1,900 new highly productive jobs. Global companies, including McLaren, Ford, Jaguar Land Rover, Hofer Powertrain and HORIBA Group, as well as local businesses such as HIETA Technologies, have been key to the success of the IAAPS concept. The support and advocacy of the Automotive Council and the Advanced Propulsion Centre, alongside the support of the University's industrial partners, will continue to play a key role as the vision becomes reality.

*"I am delighted that IAAPS has received the support and backing of the Government. The University of Bath has over 40 years of automotive research excellence in collaboration with some of the world's leading companies and is ideally placed to turn this opportunity into a reality."*

President and Vice-Chancellor of the University of Bath,  
Professor Dame Glynis Breakwell



Above: IAAPS will be industry led and compete on a global scale to support the UK in delivering transformational research in the years to come

# Engineering and Design

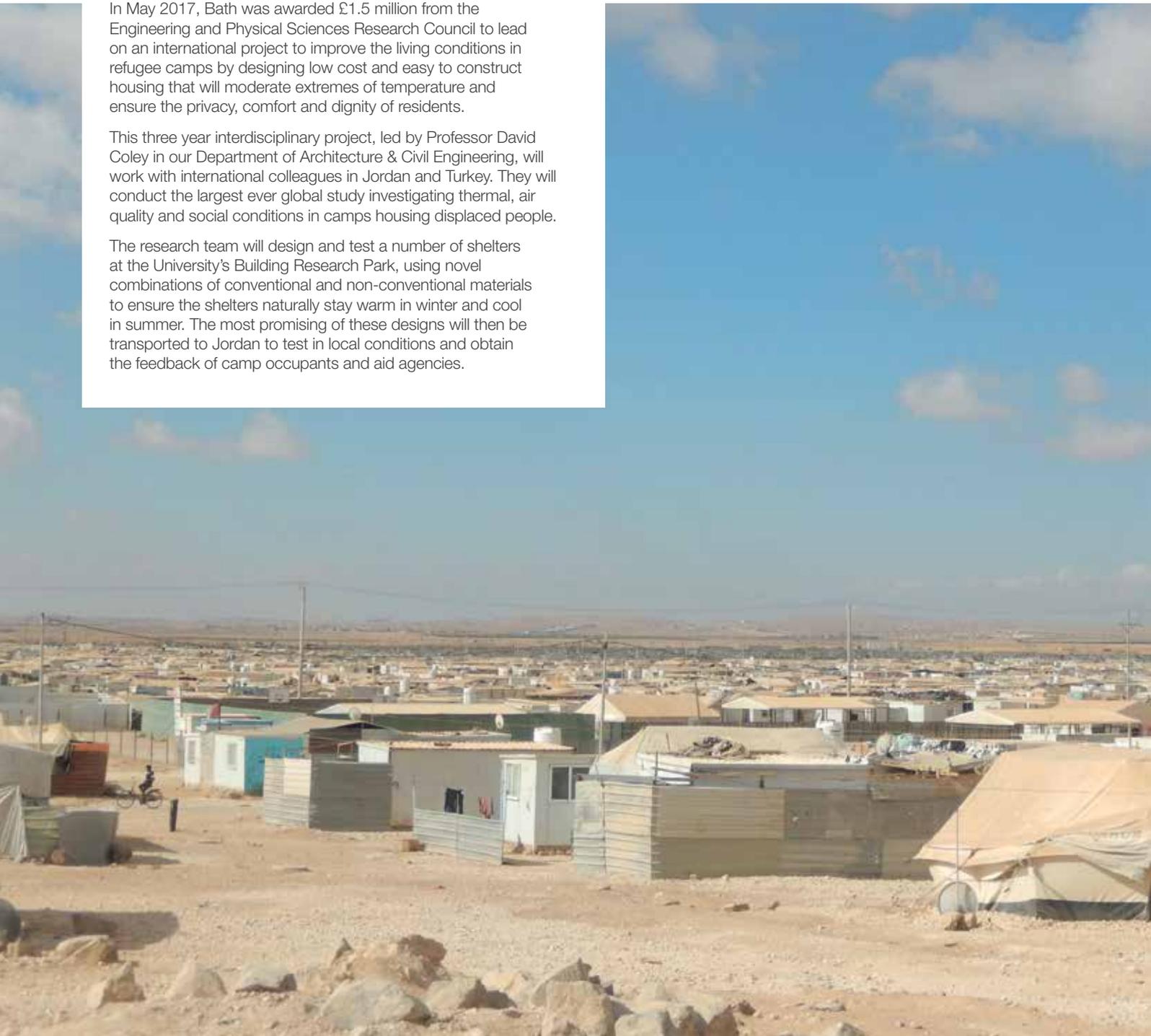
Our Faculty witnessed another highly successful year, combining impressive subject rankings with major cutting-edge facility developments, awards and innovative, impactful, world-leading research in collaboration with industry.

## Healthy housing for refugees

In May 2017, Bath was awarded £1.5 million from the Engineering and Physical Sciences Research Council to lead on an international project to improve the living conditions in refugee camps by designing low cost and easy to construct housing that will moderate extremes of temperature and ensure the privacy, comfort and dignity of residents.

This three year interdisciplinary project, led by Professor David Coley in our Department of Architecture & Civil Engineering, will work with international colleagues in Jordan and Turkey. They will conduct the largest ever global study investigating thermal, air quality and social conditions in camps housing displaced people.

The research team will design and test a number of shelters at the University's Building Research Park, using novel combinations of conventional and non-conventional materials to ensure the shelters naturally stay warm in winter and cool in summer. The most promising of these designs will then be transported to Jordan to test in local conditions and obtain the feedback of camp occupants and aid agencies.





*Left:* Shelter design can create specific problems for refugees living in extreme climates

*Right:* Team Bath Drones enjoyed an award-winning year

## Bath students bid to send their experiment to the moon

Three of our Aerospace Engineering students were finalists in an international student engineering competition, with the winners sending their experiment to the moon.

LunaDome was the only team representing the UK and one of 25 finalists from over 3,000 entries in the Lab2Moon Challenge, an international competition run by Indian space technology company Team Indus.

## Bath Chemical Engineer wins prestigious national tech award

Semali Perera, Professor of Chemical Engineering, was named the winner of the Academic Award in the UK's biggest programme championing women in technology, the 2017 FDM Everywoman in Technology Awards.

The Awards celebrate the contributions of women who are changing the face of technology in the UK, and their role in inspiring and supporting the next generation. A leading chemical engineer, Professor Perera's research specialises in developing novel sustained drug delivery methods for cancer sufferers.

## Student success across the Faculty

A number of our students were highly successful in a range of national and international team competitions.

Team Bath Drones - a multidisciplinary group of students from the Aerospace, and Integrated Mechanical & Electrical Engineering degree programmes - were named winners of the Institution of Mechanical Engineers' Unmanned Aircraft Systems (UAS) Challenge 2017. The UAS Challenge is the leading international student competition in the aerospace sector.

Team Bath Racing Electric (TBRe17) - which is made up of undergraduate student engineers from our Department of Electronic & Electrical Engineering - was crowned the number one UK electric team following a successful outing at the Formula Student competition at Silverstone.

The University's TT Zero motorcycle team also had a very successful season, completing the Isle of Man TT Zero race. Bath Zero is made up of a team of Mechanical and Electrical Engineering students who design, test and build an electric superbike to compete at the MotoE electric motorcycle race series, and Isle of Man TT Zero race, one of the most prestigious road races in the world.



# Science

From the development of biodegradable microbeads to making a crucial link between sugar and Alzheimer's Disease, our researchers continue to push the boundaries to make a difference to people's lives and the world around us.

## Bath scientists develop sustainable, biodegradable microbeads

Bath scientists developed biodegradable cellulose microbeads from a sustainable source that could potentially replace harmful plastic ones that contribute to ocean pollution. Microbeads are little spheres of plastic that are added to personal care and cleaning products to give them a smooth texture. However they are too small to be removed by sewage filtration systems and so end up in rivers and oceans.

Now a research team from the University's Centre for Sustainable Chemical Technologies (CSCT) has developed a way of producing a biodegradable, renewable alternative in a scalable, continuous manufacturing process. The beads are made from cellulose, the material that forms the tough fibres found in wood and plants and are robust enough to remain stable in a bodywash, but can be broken down by organisms in a short time.

## Molecular link made between sugar and Alzheimer's Disease

For the first time, a molecular link between the blood sugar glucose and Alzheimer's Disease has been established, showing that excess glucose damages a vital enzyme involved with inflammation response to the early stages of Alzheimer's. Scientists already knew that glucose and its break-down products can damage proteins in cells but the specific molecular link between glucose and Alzheimer's was not understood. But now scientists from the Departments of Biology & Biochemistry, Chemistry and Pharmacy & Pharmacology, working with colleagues at the Wolfson Centre for Age Related Diseases, King's College London, have unravelled that link.

The team discovered that in the early stages of Alzheimer's, glycation damages an enzyme called MIF (macrophage migration inhibitory factor), which plays a role in immune response and insulin regulation. MIF is involved in the response to the build-up of abnormal proteins in the brain during Alzheimer's disease, and the researchers believe that inhibition and reduction of MIF activity caused by glycation could be the 'tipping point' in disease progression.



*Top:* The biodegradable beads are made from cellulose and can be broken down by organisms in a short time



*Bottom:* A molecular link between the blood sugar glucose and Alzheimer's Disease has been established

## Gamma ray bursts captured in incredible detail

An international team of scientists have captured the most complete picture yet of the most powerful type of explosion in the universe – Gamma Ray Bursts – unravelling the long-standing mystery of what powers them. Short-lived gamma ray bursts (GRBs) are intense flashes of high-energy light detected by space-based telescopes orbiting above the Earth's atmosphere. By an incredible one-in-10,000 chance the international team from the University of Bath, NASA, University of Maryland and others around the world, detected light from one of these extremely rare bursts beginning as a dying star collapsed into a black hole.

Using novel, autonomous robotic telescopes, the team were able to measure how the light was produced during the explosion and a special property of the light that probes magnetic fields – its polarisation. The group's measurements provide the first answers to some longstanding questions about how GRBs evolve during a star's collapse. Their data suggest strong magnetic fields form close to the new black hole and drive energy and material outwards in a tightly focused beam.

*Picture: Artist's impression of a Gamma Ray Burst © CC ESO A Roquettevendi*

## Study reveals Artificial Intelligence can learn human prejudice

A study by Bath researchers has demonstrated how machines can be reflections of us and acquire human-like biases. Common machine learning programs, when trained with ordinary human language available online, can acquire cultural biases embedded in the patterns of wording, the researchers found. These biases range from the morally neutral, such as a preference for flowers over insects, to objectionable views of race and gender. Identifying and addressing possible bias in machine learning will be critically important as we increasingly turn to computers for processing the natural language humans use, for instance in doing online text searches, image categorisation and automated translations.

# Humanities and Social Sciences

Whether celebrating film success, developing national policy on the diversity of the UK's student population or preventing injury on the rugby pitch, our Faculty of Humanities & Social Sciences places an innovative focus on the varied realities of our 21st century lives.

## British Film Institute Award success

A University film documenting the realities of life for female farmers in Ghana scooped a top national award at the British Universities Film and Video Council (BUFVC): Learning on Screen Awards 2017. The 17-minute film, *Gender and Fairtrade*, was shot in Ghana in 2015 and edited back at the University. Directed by Dr Roy Maconachie, from the Department of Social & Policy Sciences, it is a collaboration with Simon Wharf from Computing Services Audio Visual Unit and Dr Elizabeth Fortin at the University of Bristol.

Telling the story of life for female cocoa farmers in Ghana, the film uses participatory video to chart aspects of the female farmers' lives, to highlight how access to land, capital and markets often remains the preserve of men. Despite their efforts, this shows how women's ability to reap the financial rewards of their efforts is often limited. It has already generated important global impacts, having been screened to policy-makers including Fairtrade in the UK, US and Africa alongside related research from Dr Maconachie.

## New study to investigate links between cybercrime and autistic traits

A new study will assess the links between autistic-like traits and cybercrime. The project is between the University's Centre for Applied Autism Research and the charity Research Autism and the cybercrime unit of the National Crime Agency (NCA).

While autism and higher autistic-like traits appear to be more prevalent among cyber criminals than for other types of crime, this link remains unproven. This project aims to cover all aspects of cybercrime. Specifically, the team want to understand more about the motivating factors that influence people to conduct cybercrime. The research is being carried out by Katy-Louise Payne, Dr Ailsa Russell, Dr Katie Maras and Professor Mark Brosnan from the Centre for Applied Autism Research at the University.



Above: Participatory film-making with female cocoa farmers in Ghana

Right: Rugby players go through their pre-match warm up preparations



### New injury prevention exercise programme will dramatically reduce injuries in rugby

A new 20-minute exercise programme, performed by rugby players before training and matches, could dramatically reduce injuries in the sport according to a benchmark study.

The collaborative project between health researchers at the University and England Rugby shows that the introduction of a simple injury prevention exercise programme has significant impacts in reducing rates both for concussion and lower limb injuries.

By following the progress of 81 men's adult community rugby club teams and nearly 2,000 players over one season, its findings shows significant reductions in concussion and lower-limb injuries. Results showed concussion injuries reduced by up to sixty per cent with lower-limb injuries reduced by up to forty per cent.

The Activate warm up regime, which is now being rolled out by England Rugby, focuses on balance, strength and agility in order to better prepare players for the physical challenges they face in matches and to mitigate potential injury risks.

*“This new programme is markedly different from the kind of warm up players might typically take part in during training or pre-match with a much greater focus on movement control. We are particularly excited by the potential for this work in making a long-term impact on the game.”*

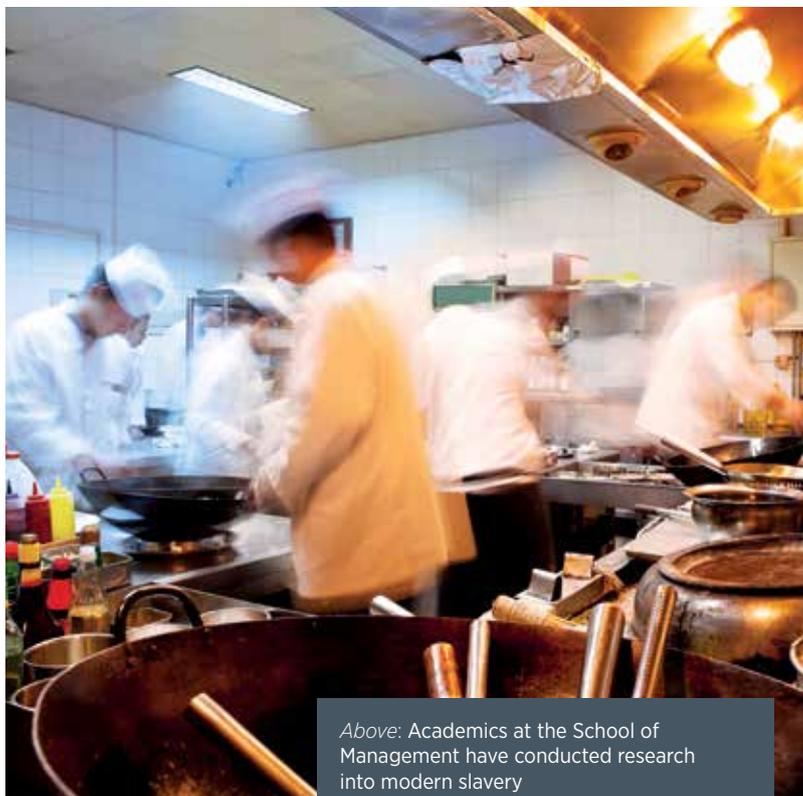
Dr Simon Roberts, Department for Health

# School of Management

As one of the UK's leading business schools, we engage closely with business and society to influence the present and shape the future.

## Research suggests employee outsourcing hides slaves in the workforce

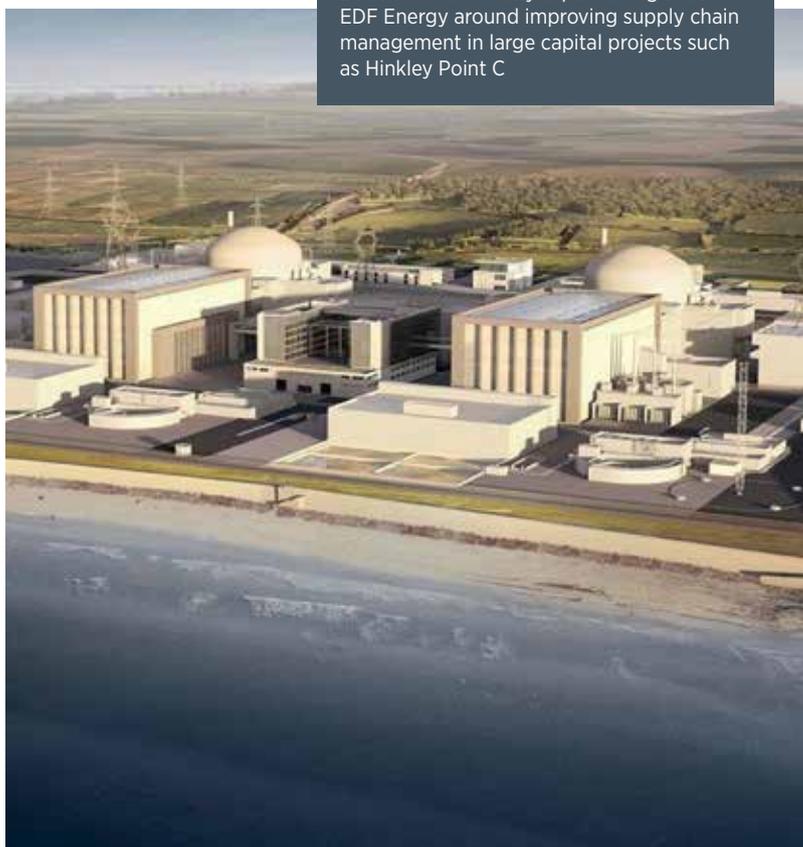
Failure to monitor outsourced recruitment is resulting in companies inadvertently employing victims of modern slavery, according to research led by our School of Management. Interviews with experts in business, NGOs, trade unions, law firms and the police showed that while companies can increasingly trace where their products come from, many are in the dark about the backgrounds of their staff. The research suggests that layers of outsourcing, subcontracting and informal hiring of temporary staff are to blame. This enables victims of slave labour to be hidden within the workforce of companies and organisations. Statistics recently released showed that the number of people reported as potential victims of slavery and human trafficking in the UK has more than doubled in the past three years, with 3,805 people referred for help in 2016. The researchers concluded that the key issue in tackling modern slavery is understanding the labour supply chain, and states the government needs to instigate better coordination between labour market enforcement and immigration law.



Above: Academics at the School of Management have conducted research into modern slavery

## Pioneering partnership with EDF Energy launched

The University is embarking on an innovative research partnership with EDF Energy, the company behind Hinkley Point C. The partnership will establish the Hinkley Point C Supply Chain Innovation Lab in our School of Management, creating a community of academics, managers and policy-makers to improve the management of supply chains within complex capital projects. EDF Energy is committed to devising innovative ways of working at Hinkley Point and has developed a consortia approach for its suppliers, enabling local companies to join forces to bid for contracts that would otherwise remain out of reach.



Below: The University is partnering with EDF Energy around improving supply chain management in large capital projects such as Hinkley Point C

## Conference spotlights HE's role in global social transformation

University leaders and researchers gathered at the University of Stellenbosch, South Africa, to discuss how business schools and higher education can contribute to the wellbeing of everyone. The Contribution of Business Schools and Higher Education to Inclusive Development event marked the 50th anniversary of the University. Exploring the issues of enabling inclusion and triggering societal transformation, as well as ensuring diversity and equality in higher education, a delegation from Bath and over 70 international researchers joined keynote speakers Baroness Janet Royall of Blaisdon, Professor Derrick Swartz and Professor Rajani Naidoo, Director of Bath's International Centre for Higher Education Management.

The School has around 2,500 students and continues to enjoy rankings successes

## Excellence confirmed with ranking successes

### School of Management still number one for Marketing

*The Complete University Guide 2018* again ranked us first for Marketing in the UK. We also kept our second place spot for Business and Management studies. Bath remains 11th in the university league table, the third year in a row we've held the position. The rankings are calculated from a combination of student satisfaction, research assessment, entry standards and graduate prospects.

### Top three in UK for Masters in Management

*The Economist* placed us third in the UK in their 2017 Masters in Management rankings. Judged against rival courses across the world, our MSc in Management placed 18th. As well as placing in the top three in the UK, our course ranked third globally for potential to network and fourth for open career opportunities. A range of data was used, including graduates' salaries, faculty quality and students' ratings of courses.



# Internationalisation

Our truly international outlook has been embedded across the University's activities for a number of years and has significant impact on our research collaborations and our learning and teaching. Both our international reach and reputation are growing as a result of a number of important initiatives, while links are being strengthened with key partners in China, South Africa and South America.

## Successful USA visit closes 50th anniversary celebrations

Affirming the University's international influence through worldwide partnerships and extending our research power are two key strands of our 2016–21 strategy. As part of this commitment, a University delegation headed by Professor Breakwell visited New York in 2017 to celebrate the close of our 50th anniversary with supporters and alumni who play a crucial role in supporting scholarships and funding our research.

Professor Breakwell met with influential academics, including Professor Michael Purugganan, Silver Professor of Biology and Dean of Science at New York University, who spent time as a Global Chair at the University of Bath's Milner Centre for Evolution.

At the heart of the visit to the United States was Professor David Coley's important research into developing better shelters for refugees. The University delegation met senior figures in the UN during which the practical applications of Professor Coley's work helping to improve the living conditions of people living in extreme climates in the Middle East were discussed.

The Foundation Board, the University's US charity, also made important decisions about supporting sports scholarships for US students, further supporting the Global Chairs visiting professorship scheme and creating a joint grant with Marshall Scholarships to attract the brightest minds to Bath.

## Pro-Vice-Chancellor (Learning & Teaching) leads University delegation to Jordan

A university delegation, led by Professor Peter Lambert, spent four days in Amman as part of a long-term commitment to help build capacity and resilience in Jordan in terms of people and systems.

Jordan has received more refugees per capita than any other country in the world, and it faces problems of water scarcity, poverty, housing shortages and food insecurity across its population.

The six-person delegation from Bath represented a variety of collaborative research and teaching projects, with a focus on capacity building through education, housing, water and energy.

Over the four days, the delegation met with representatives from Jordan's four leading research universities, the British Council and British Institute, as well as key United Nations agencies, including the UN High Commissioner for Refugees (UNHCR), the UN Children's Fund (UNICEF) and the UN Relief and Works Agency (UNRWA). Listening to Jordanian colleagues and regional experts in these meetings was crucial in helping fine-tune and further develop projects in order to make the greatest impact.



The University is deepening formal partnerships with international universities and policy makers, strengthening our global networks



# Our alumni community

The University's supportive community of alumni and friends enables scholarships that give students opportunities they never would have imagined and provides funding that sparks the research innovations of the future.

## Fundraising activities provide opportunities to succeed

Last year the Alumni Fund panel made grants worth a quarter of a million pounds to projects which benefit students and staff directly. Donations enabled the University to welcome our first 50 Gold Scholars to campus. The Gold Scholarship Programme is a lasting legacy of the University's 50th anniversary and gives those students most in need a golden opportunity to succeed, year after year. Our Look Further campaign, meanwhile, has a target of £66 million to support our students and researchers, of which £61 million had been raised by 2016/17 – a fantastic achievement!

## University hosts biggest ever reunion

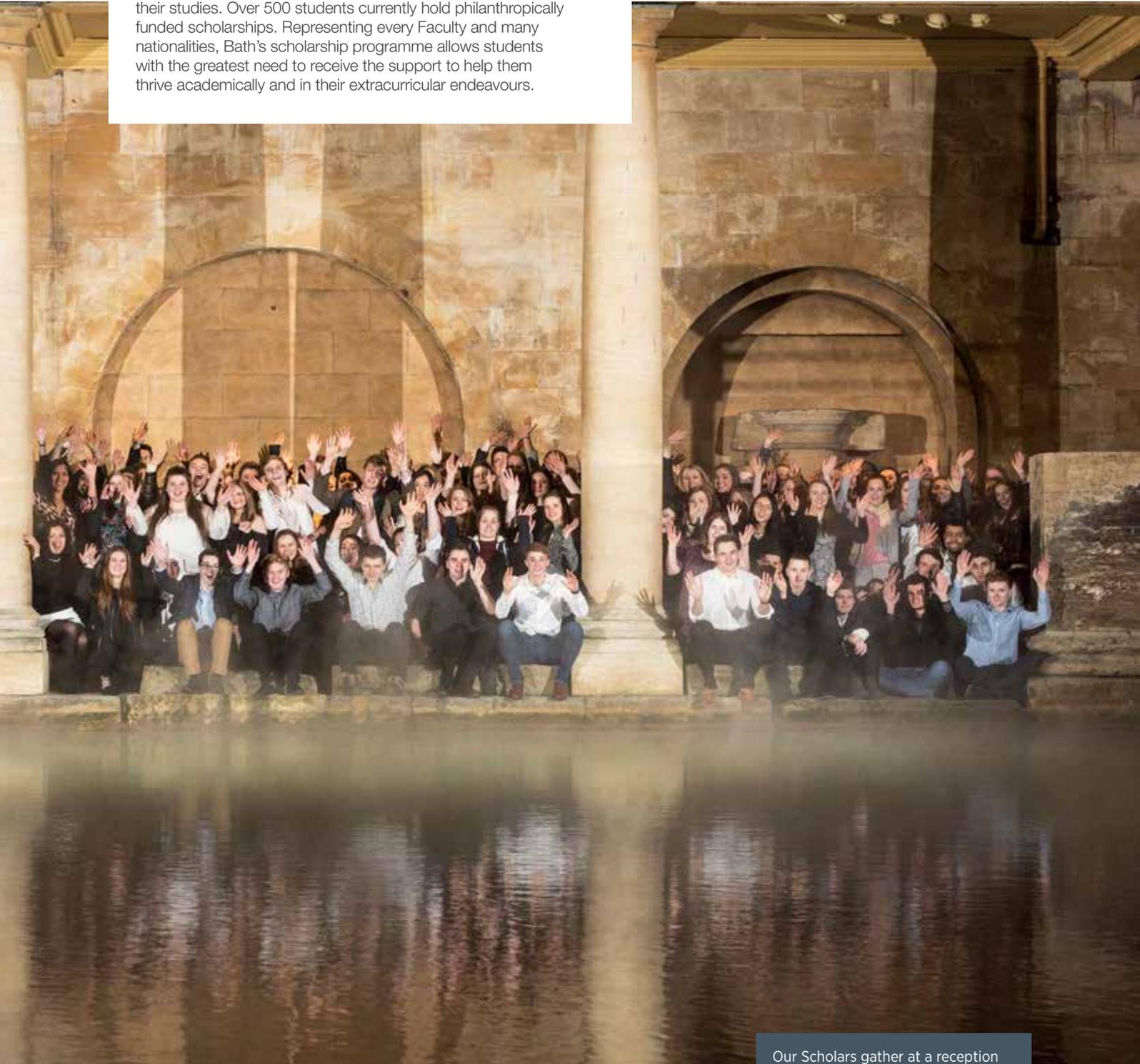
More than 3,000 alumni and friends attended University events in 2016/17 including more than 30 international alumni events.

The largest alumni reunion in the University's history was held at our community festival on Saturday 6 May. Thousands of friends and neighbours came up to campus for a day of fun and discovery. The day also saw more than 800 graduates and their guests return to the University to enjoy performances from reunited student bands, cheer on alumni teams in rugby, hockey and netball contests versus current students and dance the night away in the Students' Union building.



## Scholars celebrate success

Over 100 first year scholars gathered at the Roman Baths to celebrate our growing scholarship programme, and the people who make it all possible. In the classical setting, scholars enjoyed the opportunity to meet one another and speak to the staff, alumni and friends of the University who will support them through their studies. Over 500 students currently hold philanthropically funded scholarships. Representing every Faculty and many nationalities, Bath's scholarship programme allows students with the greatest need to receive the support to help them thrive academically and in their extracurricular endeavours.



Our Scholars gather at a reception at the Roman Baths



Around 10,000 people of all generations attended a free festival on campus and engaged with our research

# Public engagement

Public engagement is central to the University's mission and we aim to embed this culture throughout the research lifecycle. During the year, researchers involved the public with their research through a myriad of projects.

## University of Bath Festival

Approximately 10,000 people celebrated the University's 50th year with a free community festival in May. Crowds experienced some of the research at the University by meeting robots, building crystals and making their own spectrosopes. Visitors also went on behind the scenes tours, experienced a virtual reality art exhibition and tried out the sports facilities.

The Images of Research exhibition was on display showcasing the strength and diversity of research taking place across the University. Fifty-six entries were submitted, the highest ever received.



## Local research partnerships

Community Matters saw University researchers teaming up with local organisations to undertake research and help affect positive social change in and around Bath. The project was run by the Public Engagement Unit and South West Foundation and looked at areas as diverse as traffic, mental health and play services.



## Pint of Science

May's Pint of Science Festival gave Bath residents the chance to hear about the latest research over a drink in their local pub. Last year's event involved 32 researchers from 12 Departments, with over 400 people attending festival events, raising money for four RAG charities.

***"Images of Research challenges researchers to explain why their work matters in a visually compelling way."***

Professor Jonathan Knight,  
Pro-Vice-Chancellor (Research)



Researchers developed networks and heard new perspectives through a variety of engagement activities



More than 9,000 visitors attended The Brutalist Playground exhibition at The Edge

# Arts

Edge Arts is a creative hub informed by the context and research of the University of Bath.

## The Brutalist Playground

The Brutalist Playground at The Edge shone a light on the abstract concrete playgrounds designed as part of post-war housing estates in the mid-twentieth century. Artist Simon Terrill and 2015 Turner Prize winners Assemble worked with RIBA curators to recreate these play structures in foam, creating an interactive playground where the viewer becomes participant.



## Bath students represent UK in international singing championship

A group of students from the University jetted to New York in April to represent the UK at the finals of an international singing competition after coming first in the UK round of the International Championship of Collegiate A cappella (ICCA). Out of 387 entries across the UK and US, Aquapella made it to the final 10, after winning the UK semi-finals. Mathematics student Georgia Blessitt also won a special award for Outstanding Soloist for her solo performance of Prince classic Purple Rain.



## James Capper exhibition and collaboration

One of the UK's most exciting young sculptors James Capper works with hydraulic engineering and elements of mechanical movement borrowed from the industrial world, bringing together art and engineering. Capper's exhibition Sculpture & Hydraulics at The Edge in spring 2017 presented a wide range of sculptures, drawings and films.



Edge Arts puts on a year-round programme of exhibitions, performing arts presentations, talks, arts classes, family and community events

# Sports

Last year saw an amazing medal haul at the Rio Olympics, another visit from the Royal Family and further major investment in our excellent facilities. The Sports Training Village (STV) continues to benefit elite athletes, students, staff and the wider Bath community alike, hosting 43 community sports clubs with an average of 4,262 club members active every week.

## Sporting excellence

The University continues to benefit from excellent sporting facilities, including our Olympic Legacy swimming pool. The Sports Training Village is the base for a number of national governing bodies, including Pentathlon GB and the British Bobsleigh & Skeleton Association. Around 250 international athletes train on campus, with University of Bath-based athletes winning six Olympic medals and four Paralympic medals at Rio 2016. Many of the international athletes combine sport and study, supported by scholarships provided by alumni and the University's Dual Career programme.



## Success in netball and rugby

The University of Bath was one of eight higher-education institutions to compete as founder members of the national BUCS Super Rugby league in 2016-17, designed to raise the standards of student rugby and establish a pathway to elite and professional rugby. The highlight of the debut season was victory over Leeds Beckett in front of a 5,000-strong crowd at The Rec.

For netball, over the course of this year, nearly 10,000 spectators came to the Team Bath Arena for our 2017 Vitality Superleague matches where Team Bath once again reached the semi-finals of the competition.



## Invictus Games and disability sport

In April 2017, the University hosted the UK Team Trials for the 2017 Invictus Games, building on our reputation for supporting para sport established through hosting the ParalympicsGB training camps ahead of London 2012. All use sport as part of their recovery from injury or illness. The GB trials saw Prince Harry return to the Sports Training Village to support serving and veteran members of the Armed Forces as they competed. Prince Harry also met with the Rugby Football Union Injured Players Foundation (IPF) and discovered how IPF-funded research at Bath is helping to improve player welfare and reduce players' injury risk.

Over 3,000 athletes visited Bath for the UK Team Trials of the 2017 Invictus Games, which took place in September in Toronto. Over the weekend, competitors contested events in athletics, archery, wheelchair basketball, road cycling, power-lifting, indoor rowing, wheelchair rugby, swimming, sitting volleyball and wheelchair tennis.

Researchers from the University's Department for Health are also involved in projects relating to disability sport as well as rehabilitation for military personnel, including a new collaboration with Headley Court – the Defence Rehabilitation Centre for our Armed Forces. This involves work through our new £5 million EPSRC-funded research Centre for the Analysis of Motion, Entertainment Research and Applications (CAMERA), with researchers from the Department of Computer Science. The University is using motion capture technologies to develop assistive technologies including new prosthetics for amputees. This project builds on work through the University's unique DisAbility Sport and Health initiative.





## Gym expansion

The University is investing £3.5 million in developing the gym facilities at the Sports Training Village. The new Team Bath Gym & Fitness Centre will be a significant boost to all customers and more than double the current capacity of 105 exercise stations, as well as offer dedicated group exercise space, zones for functional training and state-of-the-art equipment. The new facilities will open in September 2018.

Our popular gym with cutting-edge fitness equipment is receiving further investment to expand its capacity

# Our Honorary Graduates

This year saw a number of eminent figures from arenas as diverse as science, engineering, business and sport being awarded honorary degrees in recognition of their achievements and contribution to their specialist fields.



## Honorary Doctor of Engineering (DEng)

Professor Kevin Edge	September 2016
Professor Michele Aresta	October 2016
Mr David Constantine MBE	November 2016
Jenson Button MBE	December 2016
Dr Michael Cook	April 2017
Mr Aslam Farukullah	May 2017
Dr Martyn Thomas CBE	July 2017
Mr Roy Wyatt	July 2017
Professor Steve Tennison	July 2017

## Honorary Doctor of Business Administration (DBA)

Mr Jan Bártů	May 2017
Mr Peter A Cheese	July 2017
Mr Luke Johnson	July 2017

## Professional Doctorate in Policy Research and Practice (DPRP)

Mr Jon Barrick	July 2017
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## Honorary Doctor of Education (EdD)

Professor Simon Peyton Jones	July 2017
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## Honorary Doctor of Health (DHealth)

Professor Kevin Fenton	July 2017
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## Honorary Doctor of Law (LLD)

Professor Scott Barrett	October 2016
Professor Kaushik Basu	November 2016
Professor David Nutt	December 2016
Baroness Catherine Ashton	December 2016
Mr Paulus Polman	December 2016
Mr Keith Bradley	January 2017
Professor Daron Acemoglu	March 2017
Professor Koen Steemers	March 2017
Mr Sascha Kindred CBE	May 2017
Professor Dame Athene Donald DBE FRS	May 2017
Mr Jason Gardener MBE	June 2017
Ms Amy Williams MBE	June 2017
The Rt Hon the Lord Willetts	July 2017
Sir Francis Richards KCMG CVO DL	July 2017
The Rt Revd Libby Lane	July 2017

## Honorary Doctor of Letters (DLitt)

Sir Anthony Seldon	September 2016
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## Honorary Doctor of Science (DSc)

Professor Philip Power FRS	September 2016
Professor Robert Crabtree	September 2016
Dame Jilian Matheson DCB FACSS	December 2016
Professor Bernard W. Silverman FRS FACSS	May 2017
Professor Doreen Cantrell	July 2017
Ms Louise Kingham OBE FEI	July 2017



Many distinguished figures received honorary degrees as part of a range of events and lectures celebrating our 50th anniversary

# Accounts

Consolidated income and expenditure account for year ended 31 July 2017

	2017 Operating £m	2017 Valuation £m	2017 Total £m	2016 Total £m
<b>Income</b>				
Tuition fees and education contracts	148.8	-	<b>148.8</b>	139.4
Funding body grants	28.0	3.9	<b>31.9</b>	35.2
Research grants and contracts	35.1	-	<b>35.1</b>	35.7
Other income	47.1	0.1	<b>47.2</b>	49.8
Investment income	0.9	0.1	<b>1.0</b>	0.5
<b>Total income before endowments and donations</b>	<b>259.9</b>	<b>4.1</b>	<b>264.0</b>	<b>260.6</b>
Donations & endowments	2.8	-	<b>2.8</b>	2.6
<b>Total income</b>	<b>262.7</b>	<b>4.1</b>	<b>266.8</b>	<b>263.2</b>
<b>Expenditure</b>				
Staff costs	143.0	0.6	<b>143.6</b>	131.6
Other operating expenses	89.9	5.5	<b>95.4</b>	86.0
Depreciation	16.6	7.5	<b>24.1</b>	22.1
Interest and other finance costs	4.6	0.4	<b>5.0</b>	9.4
<b>Total expenditure</b>	<b>254.1</b>	<b>14.0</b>	<b>268.1</b>	<b>249.1</b>
<b>Operating Surplus/(deficit)</b>	<b>8.6</b>	<b>(9.9)</b>	<b>(1.3)</b>	<b>14.1</b>
Increase/(decrease) in market value of non current asset investment	-	0.3	<b>0.3</b>	(0.4)
Increase in market value of current asset investments	-	5.8	<b>5.8</b>	8.5
<b>Surplus/(deficit) for the year</b>	<b>8.6</b>	<b>(3.8)</b>	<b>4.8</b>	<b>22.2</b>
Actuarial gain/(loss) in respect of pension scheme	-	5.0	<b>5.0</b>	(20.8)
Change in the fair value of tangible fixed assets	-	52.8	<b>52.8</b>	-
Gain/(loss) in the fair value of derivatives	-	2.7	<b>2.7</b>	(7.0)
<b>Total Income/(expense) in the year</b>	<b>8.6</b>	<b>56.7</b>	<b>65.3</b>	<b>(5.6)</b>
<b>Represented by</b>				
Endowment comprehensive income			<b>0.8</b>	0.1
Restricted comprehensive income			<b>(0.1)</b>	0.1
Unrestricted comprehensive income			<b>11.8</b>	(5.8)
Revaluation reserve comprehensive income			<b>52.8</b>	-

The University's key financial metric is Historic Cost operating surplus being £8.6 million and 3.3 per cent of income. This excludes a number of accounting entries and balances introduced by FRS102 where a fair value measure is used, and therefore this measure more accurately reflects the University's on-going financial performance.

## Consolidated and University balance sheet as at 31 July 2017

	Consolidated	Consolidated	University	University
	2017 £m	2016 £m	2017 £m	2016 £m
<b>Non-current assets</b>				
Fixed assets	677.0	625.9	678.1	627.5
Investments	1.7	1.4	1.7	1.4
<b>Total non-current assets</b>	<b>678.7</b>	<b>627.3</b>	<b>679.8</b>	<b>628.9</b>
<b>Current Assets</b>				
Stock	0.3	0.7	0.5	0.8
Trade and other receivables	16.5	16.1	16.5	16.1
Investments	115.5	110.4	115.5	110.4
Cash and cash equivalents	6.7	10.7	6.5	10.7
<b>Creditors : Amounts falling due within one year</b>	<b>(60.8)</b>	<b>(54.7)</b>	<b>(60.8)</b>	<b>(54.7)</b>
<b>Total net current assets</b>	<b>78.2</b>	<b>83.2</b>	<b>78.3</b>	<b>83.3</b>
<b>Total assets less current liabilities</b>	<b>756.9</b>	<b>710.5</b>	<b>758.1</b>	<b>712.2</b>
<b>Creditors : Amounts falling due after more than one year'</b>	<b>(165.3)</b>	<b>(180.0)</b>	<b>(165.3)</b>	<b>(180.0)</b>
<b>Provisions</b>				
Pension provision	(80.1)	(84.3)	(80.1)	(84.3)
<b>Total net assets</b>	<b>511.5</b>	<b>446.2</b>	<b>512.7</b>	<b>447.9</b>
<b>Restricted reserves</b>				
Income & Expenditure reserve - Endowment reserve	6.0	5.2	6.0	5.2
Income & Expenditure reserve - Restricted reserve	1.9	2.0	1.9	2.0
<b>Unrestricted reserves</b>				
Income & Expenditure reserve - Unrestricted reserve	200.6	181.3	201.8	183.0
Revaluation reserve	303.0	257.7	303.0	257.7
<b>Total reserves</b>	<b>511.5</b>	<b>446.2</b>	<b>512.7</b>	<b>447.9</b>



[www.bath.ac.uk](http://www.bath.ac.uk)



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