CREATE WONDER
Annual Review 2016
University of the Year 2016
And University of the Year
for Student Experience 2016

Winner of the TIMES HIGHER EDUCATION DATAPORTS MERIT AWARD FOR TEACHING STRENGTH AND REACHING STUDENTS FROM WIDENING PARTICIPATION BACKGROUNDS

4th

IN THE GUARDIAN UNIVERSITY GUIDE 2017

TOP 15

UNIVERSITY IN ALL MAJOR NATIONAL UNIVERSITY LEAGUE TABLE RANKINGS

90%

OVERALL SATISFACTION SCORE NATIONAL STUDENT SURVEY 2016
The Vice-Chancellor’s view

Time flies! It has been nearly a year since I took office as President and Vice-Chancellor. For me, this has been a very busy but rewarding time. Thanks to the University community, my installation and settling in has been very smooth, and my work has been enjoyable as well as productive.

In September 2016, we began the celebrations to mark our 50th Anniversary since formally establishing the University of Surrey in Guildford. A highlight was to process along Guildford High Street with our Chancellor, HRH The Duke of Kent, civic and community supporters and partners, students, staff and alumni.

The Thanksgiving Ceremony was a fitting tribute to the valuable relationship with our home town, where the University has thrived and now sits firmly as one of the top universities in the UK. I would like to thank all staff, students and alumni and the local and global communities for their great contribution and support. This Annual Review Report highlights the fantastic achievements of the University in the past year, and gives a flavour of the many wonderful things that have happened during the last 50 years.

We are keen to consolidate and build on this strong position by enhancing our global reputation and impact. Key priorities for Surrey will be to sustain excellence in teaching, maintain our strong track record in providing an exceptional student experience and to increase the scale and quality of research that addresses society’s greatest needs.

I recognise that such a global ambition calls for strong local action, and that this will not be without its challenges, especially against a backdrop of uncertainties for the sector triggered by Brexit. The University of Surrey welcomed the government’s commitment to providing access to funding for new EU students for the next couple of years and we continue to work with the sector to ensure that UK universities remain competitive internationally for resources, quality students and talented staff.

Fundamentally, it is our staff, students and supporters who will help Surrey to achieve its goals. Since April last year, I have also worked closely with my colleagues to reshape the structure of the Executive Board and successfully recruited several new senior leaders. I look forward to working with all our staff, students, alumni and supporters, to take this University to new heights.

Professor G Q Max Lu
President and Vice-Chancellor
Sustainable success

We collaborate with industry to develop solutions based on academic and industry evidence that will have enduring value for organisations and wider industry sectors.

**Practitioner Doctorate programmes**
2016 saw the unveiling of the Centre for Environment and Sustainability’s Practitioner Doctorate programme, paving the way for collaborative industry-focused research projects.

Building on our 25 years’ experience of undertaking cutting-edge applied research with leading industry, this programme continues to deliver impact and outstanding academic output in sustainability research. Current collaborations include Carillion, Thames Water and Rolls-Royce plc.

**People Planet Prosperity - P3**
We launched a new initiative called the P3Connect Talks that invites industry experts to share their experiences and insights in sustainability. This is a forum for academia and industry to interact and discuss the challenges and opportunities they are facing in their organisation and the wider industry. These seminars pave the way for future collaborative impactful research.

We were delighted to welcome speakers from HP and Mars Inc. and 2017 promises to be just as impressive with confirmed speakers from the Natural Capital Coalition and Unilever.

**Edie.Live event**
We plan to showcase our Practitioner Doctorate in Sustainability and our Centre for Environment and Sustainability at several events this year with the first event being a two day Edie.Live conference in Birmingham. Edie.Live is the energy, sustainability and resource efficiency destination for professionals. Sustainability topics covered range from energy-management technology to waste and resource efficiency solutions, and from water retail to re-use, recovery and recycling.

The annual CES/PDS conference showcasing the Roland Clift lecture in July is another platform to bring early career and postgraduate researchers together with leading academics and industry experts in the field to facilitate transfer of ideas and opportunities between all involved.

**Marie Curie ITN bid**
We are collaborating with a university in Italy to submit a Marie Curie ITN bid in September 2017. This will see two universities and nine industries across Europe working together to research how small and medium-sized enterprises (SMEs) can effectively support, engage and encourage the growth of a circular economy within the limits of planetary boundaries.

We are also seeking to utilise further third party funding opportunities to develop the impact of the programme over the next five years.
Surrey on the global stage

Surrey International Institute at Dongbei University of Finance and Economics, China (SII-DUFE)

Established in 2007, SII-DUFE is the third-largest scale British higher education programme in China.

In the past year SII-DUFE has been accredited by the China Education Association for International Exchange (CEAIE). This is the first university-level accreditation awarded by the CEAIE.

In June 2016, Chairman Du of DUFE and Vice-Chancellor Max Lu discussed a number of proposed changes to enhance cooperation and advance impact. These include expanding programme offerings by type and level, as well as encouraging mobility between China and the UK.

University Global Partnership Network (UGPN)

The UGPN is a university network committed to developing sustainable world-class research, education and knowledge transfer for the benefit of global society. The Network was founded by the University of Surrey, the University of São Paulo and North Carolina State University. It forms a distinctive and important element of Surrey's international strategy, expanding our reach and providing a unique platform for collaboration.

November 2015

The UGPN agreement expanded to include the University of Wollongong. With this addition, the Research Collaboration Fund is now able to support high-quality research projects with collaborators based across four continents.

June 2016

Eight projects were selected to receive UGPN funding, including two quadrilateral collaborations. Topics included environmental sensors, inflammation, age and nutrition, advanced nanoscale electronics and understanding youth crime in Brazil.

Global opportunities for students and staff

Surrey is committed to being a truly global university and continues to support and search for mobility opportunities for staff and students. In the 2015–16 academic year:

20 Erasmus Teaching and Training Grants Awarded

124 Incoming Students

50 From Europe

74 From International Partners

153 Students Travelled to International Destinations

Global citizens

We offer free language courses to all students via our Global Graduate Award in Languages, enabling students to start a new language, refresh a forgotten language or continue with one they have already studied.

Demand for the free programme continues to rise with over 3,000 applications for GGA modules running in 2015-16. Our Global Graduate Award in Sustainability is also proving popular, with 128 students enrolled in this – its third year of operation.

Strengthening our links with China

In November 2016, the University welcomed Chinese Vice Premier Ma Kai for a visit to our world-leading 5G Innovation Centre and spin-out company Surrey Satellite Technology Limited.

The visit formed part of the Chinese Vice Premier’s UK tour, during which he explored closer strategic and economic partnerships with the UK.

We are delighted that Vice Premier Ma and his colleagues were able to visit the University of Surrey today. UK-China relationships are now more important than ever and the future of higher education depends heavily on collaboration and the sharing of expertise.

Professor G Q Max Lu
President and Vice-Chancellor
University of Surrey
Giving back

The University’s economic and social contribution to wider society and the community around us is substantial. We achieve this through our scholarship and community outreach. Our recent report *Driving Positive Change* demonstrates our strong social values and role in contributing to social wellbeing and cohesion, economic growth and in solving some of the world’s most challenging problems.

At the University of Surrey we’re particularly proud of our strong connection to the local community. Our students, staff and partners engage with Guildford and the surrounding boroughs in a number of ways.

We invite you to discover a handful of highlights from the past year that demonstrate the many ways in which Surrey gives back.

[surrey.ac.uk/socialimpact2016](surrey.ac.uk/socialimpact2016)

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RAG and other student societies

Students’ Union clubs and societies raised over £13,500 for charity last year. Charity-aligned societies include our Raising and Giving society (RAG), Enactus, STAR (Student Action for Refugees), Coppafeel, Surrey Marrow, UNICEF and more.

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Community relations

Community relations are handled by our Public Engagement Manager and our Traded Services team. Initiatives include our new lettings agency, liaison over complaints and our Your University newspaper, which keeps the local community up-to-date with University news, research and upcoming events.

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Community Zone

The Students’ Union also get involved with community relations via their Community Reps Scheme, volunteering and their Community Zone.

The Community Zone is led by our VP Community, Saskia Cochrane, who works to bring the student community together, integrate the University into the local community, and ensure that volunteering opportunities are available to students.

£13.5k+
RAISED BY STUDENTS’ UNION CLUBS AND SOCIETIES 2015/16

3,721
ITEMS OF FOOD DONATED THROUGH THE STUDENTS’ UNION #GETGIVINGFOOD CAMPAIGN 2016
Staff volunteering

Since 2011, staff from the University have been swapping a day in the office for time spent in the community.

Various departments took part this year, volunteering for a number of local charities including Surrey Wildlife Trust, Phyllis Tuckwell and Woking & Sam Beare hospices.

Guildford Makerspace

Supported by the University of Surrey, its staff and students, Guildford Makerspace is an initiative by which people of all ages gather to make, create and collaborate, sharing supplies, skills and ideas. Based at Guildford Library, the activities have sprung from a culture of craftsmanship with a focus on community partnership.

Friends International

For 30 years, the University has been working with the Guildford branch of Friends International to help international students integrate into local life. The charity organises guided tours, has a network of host families and holds social events such as the popular International Café.

Breaking down barriers

Our Widening Participation and Outreach Department delivers a programme of activities to state school students from a range of backgrounds that are currently under-represented in higher education. These include subject taster days, residential summer schools, and information, advice and guidance days. During 2015/16 our In2Surrey Scheme saw a five-fold increase in student applications with 58 per cent enrolling at the University in 2016.
50 years of Surrey

The University of Surrey’s Royal Charter was signed on 9 September 1966, establishing us in Guildford from our roots in Battersea, London.

In September 2016, Surrey kicked-off a special programme of events to mark our 50th Anniversary year, celebrating half a century since we set up home on Stag Hill, Guildford.

Celebrate 50!

An evening of fireworks, music and entertainment for staff and students took place on Wednesday 19 October to kick-start our exciting schedule of 50th Anniversary events.

50th Procession

On Saturday 22 October 2016 - exactly 50 years to the day since the inauguration of the University’s first Chancellor - a 50th Anniversary Procession of robed students, staff, alumni and special guests took place along Guildford High Street to Holy Trinity Church.

It is fantastic to commemorate this milestone with our local community and bring our 50th Anniversary celebrations right into the heart of Guildford.

Professor G Q Max Lu
President and Vice-Chancellor

The celebrations will continue next year with the University of Surrey Wonder Festival on Saturday 13 May 2017, to which local community and alumni are warmly invited. There will be a whole host of activities on offer, including science demonstrations, music and dance performances, sports activities and hands-on workshops.

surrey.ac.uk/50
Discover 125 years of heritage

1891
The forerunner of the University, the Battersea Polytechnic Institute, is founded.

1934
The Students’ Union is established.

1966
The Queen grants a Royal Charter establishing the University of Surrey. Construction begins on the University’s new campus in Guildford.

1968
Students arrive on the new University campus for the first time.

1971
Daphne Jackson becomes the UK’s first female Professor of Physics. The Daphne Jackson Trust offers fellowships to scientists, technicians, engineers and mathematicians wishing to return to their research careers after taking a break for family reasons.

1981
NASA launches UoSAT-1, the University’s first small satellite.

1982
The iconic Geodesic triodetic aluminium Dome, a key landmark, is presented to the University.

1985
Surrey Research Park’s first tenants take up residence. Today it is one of the most successful science and technology parks in Europe.

1986
Professor Alf Adams invents the strained quantum-well laser, powering the internet, CDs, DVDs and supermarket checkouts and essentially making the digital world we live in possible.

1988
Performing Art and Technology Studios open, home to our elite Tonmeister degree course, which has produced multiple Oscar, BAFTA and Emmy award winners.

1995
European Institute of Health and Medical Sciences is established, now called the School of Health Sciences.

1998
HM The Queen visits campus to open the Surrey Space Centre.

2006
Surrey launches a joint academic institution in partnership with Dongbei University of Finance and Economics (DUFM) in Dalian, China.

2008
Guildford School of Acting (GSA), the world’s foremost conservatoire for musical-theatre training, merges with Surrey.

2009
The University announces the sale of Surrey Satellite Technology Ltd to EADS Astrium (now Airbus Defence and Space) in the largest ever cash spin-out deal from a British university.

2010
£36m Surrey Sports Park opens and became the training ground for 17 Olympic and Paralympic teams in 2012.

2011
Surrey is awarded a third Queen’s Anniversary Prize, for our research into the provision of safe water and sanitation for billions of people across the world.

2011
Ivy Arts Centre opened by HRH The Duke of Kent.

2015
HRH The Duke of Kent visits campus to open the 5G Innovation Centre (5GIC).

2015
Surrey is ranked in the top ten by all the major league tables and awarded The Times and Sunday Times University of the Year 2016.

2016
Celebrations for our 50th Anniversary year begin.

surrey.ac.uk/50th
The student experience

Here at the University of Surrey the student experience is at the heart of everything we do.

We are committed to personal and professional development and continue to deliver a student experience-focused approach to learning and teaching.

Thanks to this, in 2016 we experienced success in numerous areas of student life and celebrated a range of excellent achievements.

Student Satisfaction

The University achieved an overall satisfaction score of 90 per cent in the 2016 National Student Survey (NSS).

Ten of our subject areas ranked in the top ten of their category, whilst three of these received 100 per cent overall satisfaction scores:

- English Studies
- Electronic and Electrical Engineering
- Iberian Studies

£180,000+

DONATED BY OUR SUPPORTERS IN 2016 THROUGH THE ANNUAL FUND TO BENEFIT STUDENTS ACROSS CAMPUS AND OUR HARDSHIP FUND

2,084 hours+

DONATED BY OUR ALUMNI VOLUNTEERS IN MENTORING AND DELIVERING TALKS AND LECTURES

Philanthropy

Our alumni and supporters enhance student life at Surrey in a number of ways.

£180,000+

DONATED BY OUR SUPPORTERS IN 2016 THROUGH THE ANNUAL FUND TO BENEFIT STUDENTS ACROSS CAMPUS AND OUR HARDSHIP FUND

Employability

Figures from the Higher Education Statistics Agency (HESA) reveal that 95.6 per cent of Surrey’s 2015 graduates were in work (or further study) six months after they graduated.

On average, our graduate employment rate over the past five years is 95 per cent.

We pioneered our Professional Training placements 60 years ago and we continue to be a world leader in them today. As of 2016 we work with 2,300 placement partners and 1,075 of our students embarked on a Professional Training placement in the academic year 2015-16.
2016 has been an exciting year of growth and mobilisation for the Students’ Union, writes the University of Surrey Students’ Union President, Alex Mackenzie Smith.

“In 2016, the Students’ Union continued its work as an independent Union, campaigning and working for the benefit of our students. Our aim this year was to motivate and mobilise the student body to be more active members of their Union.”

**Course Reps**
“We trained just under 300 Course Reps this year. They can now confidently engage with University departments and come together quarterly with members of senior management, including the Vice-Chancellor, to make their course better.”

**Societies and Team Surrey**
“Our brilliant sports clubs continued their astonishing success in the British Universities and Colleges Sport (BUCS) league as part of Team Surrey, and we remain unbeaten at Varsity. Societies also continued to expand as we recorded over 4,000 members of our 150+ societies.”

**Campaigns**
“We tackled exam misconduct as our Support Zone raised awareness of how to look after yourself, study well and abide by the rules. We also continued to promote student wellbeing with our first ever campus WellFayre – an event all about health and wellbeing.”

**Community**
“The local community got to know us a bit better this year. Our new Community Zone took shape and began to raise our profile within Guildford. For the first time ever, we had the Council Leader visit to discuss student issues with the Union Trustees. Real progress was made in key areas such as refuse collection, police profiling and transport services.”

**The future**
“The Universities that succeed in the 21st century are those that listen and work with their students. Our focus as a Union is now totally on the engagement and representation of our members - the students of the University of Surrey.

“The National Student Survey now concentrates a great deal on student engagement and voice, which is why the work we undertake is so vital to the success of the University.

“We are also extremely excited for the planned upgrade of Union House, scheduled for 2018. This refurbishment will make a huge difference to the campus environment.”

[ussu.co.uk](http://ussu.co.uk)
Exceptional students

At the University of Surrey, we recognise success at every level.

Join us as we celebrate a handful of individual student success stories that prove wonderful things do happen here.

Undergraduate

Courtney Bowman  
BA Musical Theatre

Guildford School of Acting (GSA) student Courtney Bowman claimed first prize in The Stephen Sondheim Society Student Performer of the Year 2016 competition, held at the Novello Theatre.

Courtney was one of 80 entrants to this annual competition and faced strong competition from twelve finalists who performed to a jury, headed up by Edward Seckerson. Courtney’s Sondheim song of choice was Me and My Town.

“It feels unreal - I am absolutely thrilled and bursting with pride. I am so happy to be flying the GSA flag and to be the first GSA girl to win the award!”

James Lynn  
MEng Electronic Engineering with Space Systems

James Lynn’s project ‘Canaria’ won the Best Use of Hardware award in NASA’s SpaceApps Challenge 2016.

James was part of a team that created a 3-D printed ergonomic earpiece designed as a lifeline for the wearer, simultaneously monitoring heart rate, blood oxygen and atmospheric carbon dioxide levels.

“I’m thrilled that our work has been rewarded by NASA. I’m really excited about the opportunity to take the project forward and work to make Canaria a reality.”

Poppy Tilt  
MEng Civil Engineering

This year, the highly competitive Women in Property (WiP) National Student Awards named Poppy Tilt as South East regional winner.

Nominated by her lecturer Mr Tony Thorne, Poppy impressed the awards judging panel with her presentation on the design for an immersed tube tunnel in Hong Kong which she worked on during her Professional Training placement at Capita.

“I was thrilled to win the South East competition and achieve such a prestigious award.”
Exceptional students

Postgraduate

Rehan Khodabuccus
EngD Sustainability

Rehan helped design a ground-breaking ‘Zero Bills Home’ while working with ZEDfactory, who sponsored him while he was completing his thesis at Surrey.

The house is built on a super-insulated concrete foundation which prevents heat from escaping during the winter months. It has super-insulated cladding, triple glazing and the roof features a solar power system that provides electricity.

“Surrey has enabled me to take my academic experience and combine it with real-world application.”

Clare Holt
MFA Creative Writing

Clare, the first student on our new Master of Fine Arts Creative Writing programme, published a book of short stories, Mad, at the 2016 Guildford New Writers Festival.

The stories within Mad were based on Clare’s research into the treatment of women’s mental health in the nineteenth century.

“The English Department staff at Surrey are all published novelists, poets and academics, and their critical evaluation on work is both ruthless and invaluable.”

Craig Pitcher
PhD Surrey Space Centre (SSC)

Craig won the ‘Outstanding Paper Award for Young Scientists’ given by Committee on Space Research, one of the most respected international organisations in space research. The award was presented at the 41st COSPAR Scientific Assembly on 2 August in Istanbul, Turkey.

His research paper focused on the development of a prototype Dual-Reciprocated Drill (DRD) designed for planetary exploration.

“I am very honoured that my work has received this international recognition. Working in the SSC has been a fantastic opportunity to participate in world-leading research.”
Innovative educators

At the University of Surrey, learning and teaching is an integral partnership between our students and academic staff.

Through this partnership our students are provided with the opportunity to develop themselves intellectually, professionally and personally, and graduate as professional, employable and effective members of society.

**Inspiring academics**

Surrey's annual Vice-Chancellor’s Awards took place this year on Monday 21 November.

Here, we celebrate our Teaching Excellence Award finalists. The recipients have been recognised for their sustained excellence in teaching, innovative approaches to curriculum development and commitment to enhancing the student experience.

**The teaching excellence award finalists exemplify the innovation and drive that underpins delivering education to the highest possible standards, to the benefit of students at all levels.**

Professor Michael Kearney
Provost and Executive Vice-President

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**Dr Kate Plant**
Senior Teaching Fellow in Eukaryotic Genetics and Toxicogenomics

Kate is the Programme Director for Biological Sciences. In four months, she developed a programme that was validated with four commendations. After its first cohort graduated this year, doubled applications and tripled conversions were a testament to its success.

As an Engineering for Health lead, Kate has helped design the new £12.5M building and develop cutting-edge cross-disciplinary curricula linking Biosciences and Engineering to tackle real-world health problems.

All of these experiences and successes put Kate at the heart of teaching innovation.

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**Mr Luke Mason**
Director of Learning and Teaching at the School of Law and Lecture in Law and Philosophy

Luke has been teaching law, philosophy and social policy at Surrey since 2011 and was appointed as Director of Learning and Teaching for the School of Law in December 2015.

Luke led the recent successful quin-quennial review of all LLB programmes to deliver a more coherent and approachable curriculum while still meeting the requirements of a qualifying law degree.

He was described as “the best lecturer in the University” by one of his students in this years’ Module Evaluation Questionnaires (MEQs).
I am really delighted to have received this award and pleased that I am able to positively contribute to engineering education at Surrey.

Dr Esat Alpay
Director of Learning and Teaching in Chemical Engineering

Esat is Director of Learning and Teaching in Chemical Engineering. He is passionate about effective teaching and developing the future of engineering education.

Within his Department, Esat has transformed four modules through the use of innovative teaching methods. He frequently makes use of flipped lectures, project and problem-based learning approaches and formative assessment methods. The utilisation of these innovative methods, as well as his ingenuity and enthusiasm, have resulted in impressive MEQ scores. He is also currently working on introducing gamification, virtual reality and mobile apps into the teaching curriculum.

Furthermore, Esat was key to the successful validation and IChemE accreditation of the Chemical Engineering programmes and recently co-edited a Journal Special Issue on Formative Assessment Practices in Engineering Education.
How to support Surrey

Philanthropic donations are an important part of a university’s funding and will become increasingly so in the future, to help us grow and enhance our activities. Our community of supporters is making a real difference to the experience and opportunities of our students as well as the impact and breadth of our research.

Discover how you can become a part of our future and help us to create a world-class university:

surrey.ac.uk/content/chancellors-appeal

Our supporters
Four of our donors explain why investing in Surrey is so important to them:

Hashim Alsaidi
BSc Retail Management 2004
“In my first year I ran out of money and applied to the Hardship Fund. This tided me through to the end of the year and meant that I was able to carry on and get my degree. I donate because I like the idea that students in difficulty have somewhere to turn; the more people who help out the better.”

David Graves
BSc Metallurgy 1969
“I owe a great debt to the University; I graduated in 1969 and since then I have never been without employment. I hope that my donations help current and future students have the same success that I have enjoyed.”

Paul Sheffield
BSc Civil Engineering 1983
“I got so much from my placement year in South Africa; it really helped me get my first job. I want other students to have the same opportunities I had to work abroad – it gives them a head-start on the employment ladder.”

Matt Hutnell
Director Santander Universities
“Since Santander started its collaboration with the University of Surrey a large number of students and researchers have benefitted from our support. The University is doing a fantastic job rewarding talent and hard work and we are proud to be collaborating with Surrey in their philanthropic objectives.”
Celebrating alumni achievement

The Vice-Chancellor’s Alumni Awards honour former students who have made an outstanding contribution in their field or to society. The Vice-Chancellor, Professor Max Lu, is proud to recognise the tremendous impact our alumni have around the world and to announce the winners for 2016.

It is truly inspiring to learn of the achievements of so many of our alumni who have excelled in their professional lives, enjoyed entrepreneurial success or significantly given back to society.

Professor G Q Max Lu
President and Vice-Chancellor

Alumni Achievement Awards

- Dr Y Gavriel Ansara – MSc Social Psychology 2009, PhD Psychology 2014
- Dr Kathleen McGuire – MMus Music 1995
- Polly Risbridger – BA Dance and Culture 2002

Young Achiever Award

- Kanayo Phoebe Dike-Oduah – BSc Psychology 2015
- Lee Reynolds – BMus Music 2007
- Dr Tao Wang – PhD Physics 2009

UK Volunteer of the Year Award

- Janet Preston – Physics BSc 1978, MSc 2015
- Lewis Young – LLB Law 2012

International Volunteer of the Year Award

- Jincheng ‘Jaycee’ Feng – MSc Tourism Management 2013
- Lynal Low – BSc Tourism Management 2013

Odaline de la Martinez FRAM MMus Music 1977

Miss de la Martinez has been recognised for her high-profile international career as a conductor, composer, and record producer across five decades, including becoming the first female conductor at the BBC Proms. She is also trustee of the Mornington Trust, working with disadvantaged children and minority communities.

Dr Lina Fahmi Hammad MSc Medical Physics 1993

Dr Hammad is the first Saudi female graduate from King Saud University (Radiological Sciences) and the first Saudi female holder of an MSc and PhD in medical physics. She is the Dean of Health and Rehabilitation Sciences at Princess Nourah University, the only female university in Saudi Arabia. Her role, among others, is to empower and encourage staff and students to succeed and use their knowledge to help and educate society.
Focused research

Our aim is to ensure a coherent approach to the University’s research strengths and our three Grand Challenges are central to the strategy. These include the faculty-level research priority areas and cover a spectrum of cross-cutting research themes.

In 2016, these themes have brought together several of the priority areas and continue to intersect with the priority funding areas of the major research funding agencies in the UK and internationally.

Our commitment to driving this research agenda has been demonstrated through a robust research governance framework that supports and drives research excellence.

Grand Challenges
Our research Grand Challenges combine expertise from across the University to address key global challenges.

- Science delivering global wellbeing
- Sustainable cities, communities and economies
- Connecting societies and cultures

EPSRC funding success
Following the recent publication of the Engineering and Physical Sciences Research Council funding outcomes for 2015/16, the University was the ninth most successful in terms of value of awards. Additionally, of those with more than ten proposals considered, Surrey has the second best funding success rate across the UK, with 49 per cent compared to a sector average of 31 per cent.
Research highlights

Engineering and Physical Sciences

Discovering black holes
New research by the University of Surrey, published 6 September 2016 in the journal *Monthly Notices of the Royal Astronomical Society*, has shone light on a globular cluster of stars that could host several hundred black holes, a phenomenon that until recently was thought impossible.

“Due to their nature, black holes are impossible to see with a telescope, because no photons can escape. In order to find them we look for their gravitational effect on their surroundings. Using observations and simulations we are able to spot the distinctive clues to their whereabouts and therefore effectively ‘see’ the un-seeable.”

Lead-author Miklos Peuten
PhD student

Health and Medical Sciences

Promoting sun safe behaviour
In a new study, published 18 August 2016 in the journal *Cogent Psychology*, researchers from the University of Surrey examined the way sun safe messages are conveyed to young women, and found that visual communication using technology to age participants’ faces to emphasis sun damage and premature ageing is most effective.

“Malignant melanoma is on the increase, yet young women often don’t protect themselves by using sun screen. Our study explored the best way of framing messages to change their attitudes and promote healthier behaviour. The results showed that appearance based messages that used imagery to emphasise sun ageing were the most effective.”

Author Jane Ogden
Professor of Psychology

Arts and Social Sciences

Frequent travel negatively affects health and wellbeing
Researchers from the University of Surrey and Lund University (Sweden) investigated how frequent, long-distance travel is represented in mass and social media. The study, published 4 August 2015 in the journal *Environment & Planning A*, has described how the glamorisation of frequent, long-haul travel ignores and exacerbates the physiological, psychological, and societal costs of our ‘hypermobile’ lifestyles.

“The level of physiological, physical and societal stress that frequent travels places upon individuals has potentially serious and long-term negative effects that range from the breaking down of family relationships, to changes in our genes due to lack of sleep. By striving to travel far, wide and frequently we are damaging the environment, ourselves and potentially our closest loved ones.”

Lead author Dr Scott Cohen
Head of Department of Tourism and Events
Global research impact

Our research activities spanned the globe in 2016. Below is just a selection of our extensive and world-leading international projects and collaborations.

**Brazil**
Professor Debra Skene in collaboration with the University of São Paulo, Stockholm University, and Federal University of Paraná, are studying rubber tappers living and working in a remote area of the Amazon forest (Acre, Brazil).

This has provided a unique opportunity to assess the impact of electrification and artificial light on workers’ sleep patterns and daily activity. Workers with electricity had later sleep times, delayed melatonin rhythms and reduced sleep duration during the working week, disturbing the alignment between the circadian system and the natural light/dark cycle.

**USA / Europe**
Professor Roma Maguire is the Chief Investigator of a multinational research project involving one American and eleven European partners as well as cancer care clinicians from all partner countries.

The eSMART project (Remote Electronic Symptom Management system) aims to demonstrate the benefits for cancer patients using a real-time, mobile phone based remote patient monitoring system, the Advanced Symptom Management System (ASyMS). It is anticipated to greatly improve patient outcomes and delivery of care both during and after chemotherapy treatment.

**USA / Hong Kong**
Jason Li Chen has been working with colleagues from the University of South Carolina and the Hong Kong Polytechnic University examining the role of tourism development in reducing regional income inequality in China.

Their recent paper provides evidence that tourism development contributes significantly to this inequality, with domestic tourism making a greater contribution than international.

**Sweden**
Professor David Uzzell, in collaboration with Umeå University in Sweden, has been leading a research programme with Professor Nora Räthzel (Umeå University) examining the role of organised labour (e.g. trade unions) in constructing policies and practices of national and international trade unions in respect of climate change mitigation (FAS/Swedish Council for Working Life and Social Research).

**New Zealand / Europe**
Scott Cohen has been working with colleagues from the University of Otago (New Zealand), the University of Applied Sciences (Netherlands), Linnaeus University (Sweden) and the Western Norway Research Institute (Norway).

They are investigating the role that ‘technology myths’ (e.g. technological solutions to the problem of emissions increases from aviation) play in the enduring but flawed promise of sustainable aviation.

**India**
Researchers from Surrey and IIT Delhi have been supported through the UKIERI exchange programme to work on air pollution alleviation in Delhi.

Their work uncovered the underlying factors behind Delhi’s air pollution – a blend of geography, growth, poor energy sources and unfavourable weather.
China
Professor Yang Gao has collaborated with Chinese lunar geologist Dr Li Chunlai, Vice-Director of the National Astronomical Observatories (NAO) within the Chinese Academy of Science, on the recent Chang’E-3 mission that landed on a new area of the Moon.

Professor Gao has developed a novel methodology based on modern robotic vision and terramechanics to enable estimation of lunar soil strength. These new findings can provide reference to lunar soil mechanics for in-depth studies of the Moon and support future lunar missions.

USA / Australia
Professor Silva is working with Dr Huang (University of Wollongong) and Professor Chang (North Carolina State University) on a project aiming to grow high-quality hexagonal Boron nitride nanosheets (BNNS) and to then employ them in novel nanoscale electronics and in radiation shielding.

The research will alter the landscape of the electronic and space industries by advancing the development of new electronic devices that can dramatically improve productivity and quality of life, as well as by offering safer and more cost-effective space travel.

Malaysia
Professor David Bradley collaborated in a University of Malaya led Malaysian Ministry of Higher Education funded project of some £1M on the luminescence of irradiated doped-silica fibres. The Malaya group was led by Professor Dato’ Jamil Maah.

The collaboration produced 48 tier-1 journal publications, three university spin-off companies (Lumisyns Sdn Bhd and Flexilicate Sdn Bhd in Malaysia and True InVivo in the UK) and three gold medals at Trade and Innovations events.

Mexico
Surrey is collaborating with the National University of Mexico in order to identify biomarkers of resistance to intracellular bacteria in cattle.

This research (funded by Newton Fund-British Council) uses bacteriology, pathology and molecular biology for the identification of pathogenic intracellular bacteria in cattle with an important focus on bovine tuberculosis.
Research excellence

The University of Surrey is proud of its strong research environment that supports and promotes activity across the University. Annually, each faculty identifies a Researcher of the Year and Postgraduate Researcher of the Year at the Vice-Chancellor’s Awards.

Researcher of the Year
The Research Award celebrates staff who are independent researchers and whose recent work has successfully challenged dogma, created a new field of research, elucidated a new paradigm, made a fundamental change in thinking or impacted significantly on society.

Discover more about the finalists entered into the Research category of the Vice-Chancellor’s Awards 2016.

All of our finalists, whatever their role within the University, have played a vitally important part in Surrey’s continuing growth and achievements.

Professor G Q Max Lu
President and Vice-Chancellor

Dr Victoria Redclift
Lecturer and Researcher in the Department of Sociology

Victoria is an outstanding scholar in the areas of political sociology and ethnic and racial studies.

In the five years since she completed her PhD she has won three highly competitive research grants, including the prestigious Philip Leverhulme Prize in 2014 and an ESRC Future Research Leaders’ Grant in 2015.

Victoria’s research is highly relevant for current societal issues of displacement, migration and citizenship and she has extensive networks with a range of non-governmental and international organisations, and civil society groups.

She has a strong track-record of publications, including her field-defining first monograph which was shortlisted for the British Sociological Association Phillip Abrams Memorial Prize.

Dr Katriina Whitaker
Senior Lecturer and Researcher in the School of Health Sciences

Katriina’s internationally recognised work uses behavioural science to minimise delays in diagnosis of cancer. Her ground-breaking and high-impact research challenges current dogma and has attracted considerable media attention.

In 2015, Katriina was awarded the International Psycho-Oncology Society (IPOS) Hiroomi Kawano New Investigator Award. She also has a strong track record of publications and research funding.

Katriina’s research career is prolific and highly promising, and she has been invited to participate in numerous, prestigious and influential committees and advisory boards throughout her career.
I am delighted to have been recognised for my research efforts. It is an amazing feeling and keeps me motivated to continue pushing the boundaries of science for the betterment of our society.

Dr Prashant Kumar
Reader in the Department of Civil and Environmental Engineering

Prashant founded and leads the ‘Air Pollution and Health’ research group here at Surrey and established our Air Pollution Lab.

His ground-breaking research works to build an understanding of the formation and emission of nano particles, both from vehicle exhausts, and also from construction and demolition, where he was the first worldwide to initiate research in this area. He investigates their contribution to pollution, especially in megacity contexts, and is developing approaches to low-cost sensing as well as contributing to guidelines for policymakers to curtail pollution exposure at hotspots, with associated health benefits.

A prolific author, his research has also attracted approximately £1.5m to Surrey since 2015, and he has developed a network of collaborators across four continents. His work has featured in over 1500 news articles worldwide.
Postgraduate Researcher of the Year

The Postgraduate Research of the Year Award recognises third or fourth year full-time students, or final year part-time students, who have made a significant contribution to research. Below, discover more about the finalists entered into the Postgraduate Research category of the Vice-Chancellor’s Awards 2016.

James McQuilken

During his three years as an ESRC-funded doctoral candidate at Surrey, James has established himself as a leading global authority on small-scale mining in sub-Saharan Africa.

He has been extremely prolific with his publications, having already published one single-authored and two joint-authored papers from his PhD, and has provided important contributions to policy in the field through strong networking and organisational activities.

James helped organise a stakeholder workshop in Ghana attended by the country’s policymakers, international donors, researchers and non-governmental organisation officials, and is lead author of the Ghana report for the International Institute for Environment and Development (IIED) published in July 2016.

He also used an ESRC PG conference grant to deliver a highly successful event at Surrey Business School with officials participating from the United Nations Development Programme (UNDP), Adam Smith International, Natural Resource Governance Institute, S&P Global Market Intelligence and HSBC.

Anna Kostianko

Anna is an exceptional maths student in the fourth year of her PhD who has independently made internationally leading contributions in the field of analysis of nonlinear partial differential equations.

She has played a leading role in solving several open problems within UK mathematics, for example finding a non-trivial extension to the method of spatial averaging, and applying it in the truncated 3D Navier-Stokes setting, where previously only solutions in the 2D case were known.

Anna’s publication record is outstanding and she has already presented her work at several international conferences.

Wendy Marsh

Wendy is a CRNME-funded postgraduate researcher who submitted her thesis and successfully passed her viva within three years. She is a qualified midwife with expertise in safeguarding and child protection.

She conducts her research using innovative methodology and has generated new understandings in the field. It has had impact not only in Midwifery and Health Sciences but also in Medicine and Psychology.

Wendy’s research has attracted national and international interest which resulted in three awards from the Royal Society of Medicine, the Society for Reproductive and Infant Psychology, and the University of Bournemouth.

It is great to be recognised, thank you very much. Congratulations also to all the PGRs, nominees and finalists who I know work equally as hard towards completing their PhDs and make significant contributions in their own fields of expertise.

Wendy Marsh

Anna Kostianko

James McQuilken
Celebrating our staff

With more than 2,500 staff, the University of Surrey is home to plenty of remarkable people. At this year’s Vice-Chancellor’s Awards a number of our wonderful staff were nominated for awards, including ‘Colleague of the Year’ and an award for ‘Going the Extra Mile’.

Colleague of the Year award
Each year a ‘colleague of the year’ is named at the annual Vice-Chancellor’s awards. This year’s nominees have enhanced the working environment of other staff in the University in a number of ways.

Mrs Linda Bennett
Administrator in the Department of Chemistry

Mrs Sherri Bolton
Stores Manager in the Department of Estates and Facilities Management

Professor Susan Lanham-New
Professor of Human Nutrition and Head of the Department of Nutritional Sciences

Dr Raphaelle Winsky-Sommerer
Reader in Sleep and Circadian Rhythms

Going the Extra Mile award
The Vice-Chancellor’s Award for Going the Extra Mile is awarded to a member of staff who has undertaken, in their own time, innovative, creative and sustained activity, leading to significant social, cultural or economic benefit for the University.

Dr Ben Shenoy
Director, Business Insights Lab, Centre for the Digital Economy, Surrey Business School

Dr Alfred Thumser
Senior Teaching Fellow in Biochemistry

Miss Amy Woods
Receptionist at Battersea Court
Strong partnerships

2016 was another year of collaboration, innovation and impact for the University of Surrey.

We continued to nurture strong partnerships with both UK and international organisations.

We also looked back on a successful year for our 5G Innovation Centre and partnered with more companies than ever to provide our students with Professional Training placement opportunities and real-world experience.

The University also supported the regional and national economy in a wealth of other ways.

Contributing to the UK economy
In the academic year 2014-15 the University of Surrey and its Research Park generated £1.7bn Gross Value Added (GVA) and supported around 17,300 jobs across the UK.

From 2012–13 to 2014–15 the increase in the University and its Research Park’s contribution measured in terms of GVA has been an average of over 8 per cent per annum.

The 2014-15 study also found evidence that the University and Research Park generated £6.90 GVA impact across the UK for every £1 received in income and for each £1 the University generated as a result of its direct operations it supported £8.60 GVA impact across the UK.

SETSquared Surrey
The University has been incubating technology businesses since 2007 as a founding partner of SETsquared, the global number-one university business incubator, as awarded by UBI Global.

This year SETsquared Surrey Incubation, based on the University’s Research Park, is celebrating a new collaboration which will see us lead a new world-class acceleration programme for digital start-ups and SMEs.

More than 360 high growth ‘digital’ entrepreneurs will receive backing from the European Union European Regional Development Fund (ERDF) through this major new £2.4m three-year acceleration programme, announced 2 November 2016.

It is supported by the Enterprise M3 Local Enterprise Partnership and will be delivered by the University of Surrey through our SETsquared partnership and local, private and public partners.

This programme provides an excellent opportunity to stimulate digital business growth across the region and allow us to expand our services and build our partnerships in this exciting digital technology opportunity.

Caroline Fleming,
Head of Incubation at SETsquared Surrey

Professional Training placements
With access to a global network of 2,300 placement partners, Surrey’s undergraduate students have the opportunity to go on a Professional Training work and/or study placement as part of their degree programme. 1,075 of our students were on placement in the 2015–16 academic year.

As well as enhancing our students’ employability and university experience, these collaborations offer fresh and enthusiastic new talent to the organisations that partner with us.
Surrey Incubation success story – Crowd Connected Ltd

James Cobb of Crowd Connected Ltd joined SETsquared Surrey as a lone entrepreneur in March 2013 and has grown his business into a worldwide service delivery company employing six staff and now occupying their own unit in the Surrey Technology Centre.

Crowd Connected offer a brand new pixel mapping platform that enables a completely new generation of crowd effects, utilising the crowds’ own mobile phones.

During his time at the SETsquared Surrey Incubator, a bespoke programme of business support and mentoring was provided by the Entrepreneurs in Residence, including introducing him to Innovate UK funding, which proved to be “key to his journey” as it was used to develop a location insight platform for the Wireless festival.

Working within the SETsquared Surrey gives us contact with other start-ups, advisors, mentors and specialists on a day to day basis. That’s invaluable, providing a constant stream of information, thoughts and advice at every level as we grow our business.

James Cobb, Crowd Connected Ltd

Surrey Research Park

Supporting local businesses is at the heart of our vision for Surrey Research Park. It is one of the most successful science and technology parks in Europe and one of the few in the UK to be owned and operated by the university that founded it.

Surrey Research Park has been praised by the UK Science Park Association for its increasingly important role in the regional economy.

Surrey Research Park in numbers:

- **£583m**
  - The Economic Impact of Surrey Research Park, Incubators and 100 Club (2014–15)

- **£119m**
  - Current Value of the Site

- **£100m**
  - Contributed to University Finances since Inception

- **100+**
  - The Number of Companies housed on Surrey Research Park

- **4,000**
  - The Number of People employed by Companies on Surrey Research Park

5GIC

5GIC, our 5G Innovation Centre, is the world’s largest academic research centre dedicated to next-generation wireless connectivity and has attracted over £70 million of committed funding to date.

Our founding members included BT, EE, Huawei, Telefonica, Vodafone, Samsung Fujitsu and the BBC, and we now have 25 corporate members. We have also engaged with 315 small enterprise tech members and plan to launch a small enterprise apps members category after our 5G testbed is both operational and adapted for ‘open-use’.

Highlights

**September 2015**

5GIC is formally launched, securing the UK’s role in leading the development of the next generation communications technology, 5G.

**December 2015**

Delegates from China’s Ministry of Industry and Information Technology visit campus for a tour of 5GIC.

**July 2016**

5GIC and Digital Greenwich announce ground-breaking partnership to deliver the technology that will underpin future smart cities.

**September 2016**

A prestigious partnership between 5GIC and the South Korean Government’s Institute for Information and Communications Technology Promotion (IITP) is launched.

**October 2016**

5GIC produce the world’s first demonstration of virtualised 5G architecture, which points to a significant reduction in network operator costs for deployment, optimisation and upgrades.

**2017**

An exciting second phase of developments begins.

What does the future hold for 5GIC?

We plan to expand our links with other large-scale national programmes with the intention of hosting large-scale demonstrations of 5G and Internet of Things (IoT).

There will be an increased focus on important vertical market sectors for 5G applications, such as transport, health and urban living.

The evolution of our 5G testbed and its core network technologies will continue.

**2018**

5GIC aims to achieve full 5G capability by 2018; two years ahead of the anticipated commercial roll-out.
Looking ahead to 2027

In 2007, the University of Surrey embarked on an ambitious ten-year strategy to position itself as a leading national and international institution by 2017.

In 2017, we will launch a new corporate strategy with a vision into the next decade, taking us to 2027.

A successful 2016
Considerable progress has been made towards our strategic goals in 2016, with strong performance across all major national university league tables and in the National Student Survey.

The University was delighted to be named University of the Year and University of the Year for Student Experience in The Times and Sunday Times Good University Guide 2016. This prestigious accolade recognises Surrey’s achievements in delivering high-quality teaching and learning, an exceptional world-class student experience and excellent graduate employability.

Evolving corporate strategy
The current strategy comes to an end in 2017 and, following the recent appointment of Professor Max Lu as its new President and Vice-Chancellor and in the context of some significant challenges for the sector, it is now time that the University looks forward with a new strategy.

In the coming months the University will develop a new ten-year vision and refresh its corporate strategy. Building on its legacy and strengths, the University will grow into a leading global institution renowned for producing world-leading graduates and outstanding research, both of which will help shape the world for a better future.

In a decade, we foresee that the University of Surrey will be:

• A leading global research university and a destination of choice for higher learning
• A preferred and valued partner for government, business and industry
• An engaged and connected university - the intellectual home for alumni, supporters and community
The new strategy’s two key priorities will be:
1. To sustain excellence in teaching and maintain Surrey’s strong track record in providing an exceptional student experience.
2. To increase the scale and quality of research that addresses society’s greatest needs.

Broadening partnerships and engagement
Underpinning the delivery of these priorities and fundamental to the success in achieving these goals will be the University’s engagement agenda.

Support from Surrey’s alumni and partners and the broader community will be ever more crucial and the University will be keenly pursuing further collaborations and partnerships with international industry and other world-leading institutions.

The University is also committed to working with the local and regional communities to contribute more to social mobility and equality, on top of its already enormous impact on national and regional economy, and environmental sustainability.

The Chancellor’s 50th Anniversary Appeal

In this special celebratory year we are raising funds through the Chancellor’s 50th Anniversary Appeal to support students and our world-changing research but we need your help. Please join with us to help solve some of the biggest problems facing the world today and make a real difference to society.

surrey.ac.uk/content/chancellors-appeal

The University is a charitable and not-for-profit organisation and the work we do is of public good. Research is taking place at Surrey right now which addresses the most pressing issues faced by our society. We are also training and educating young people, changing students’ lives and supporting and developing the local and wider economy.
Financial review

2015/16 was another year of solid growth. Undergraduate enrolments exceeded 3,000 for the first time and the total student headcount of 15,280 was the highest ever achieved by the University.

Income
Driven by the growth in student numbers, total income rose by 8 per cent to £259.5m, with tuition fee income rising by £22.4m (21 per cent) to £129.7m. Research income of £38.9m was £3.4m lower than the previous year, mainly due to the closure (to universities) of the government’s research and development expenditure tax credit scheme.

Expenditure
2015/16 was the University’s first year of reporting under the new UK accounting standard FRS 102. Whilst the FRS 102 transition has had relatively little impact on reported income, it has introduced greater volatility in relation to expenditure shown within the financial statements.

Total expenditure fell in 2015/16 by £1.9m to £256.7m. Increased costs in operational areas were more than offset by a £12.3m lower charge in respect of the movement in the Universities Superannuation Scheme (USS) provision (reflected in staff costs and a consequence of FRS 102).

Surplus/deficit
Taking into account the results of the Surrey Research Park annual revaluation and other gains, losses and taxation, the net surplus for 2015/16 was £0.9m. This compared with a net deficit for 2014/15 of £1.6m.

Capital investment
2015/16 capital expenditure totalled £35.4m, with construction of the Engineering for Health Laboratory being the major project undertaken in the year.

Financing
In May 2016 the University successfully closed a £120m private placement deal providing £75m of funding for new student accommodation and £45m headroom for investment in support of the University’s strategic goals.

Looking forward
The Brexit vote creates new challenges and uncertainties in terms of recruitment of students and staff as well as access to research funding and collaboration. Nevertheless, the University’s enhanced reputation, resulting from its much improved league table position in recent years, puts it in a strong position as it heads into its 50th Anniversary year.

The University’s full financial statements for 2015/16 are available online at:
surrey.ac.uk/financialstatements
We have successfully secured £120m of funding for new student accommodation and strategic investment.

Philip Grainge  
Chief Financial Officer

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<th>Income</th>
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<td>Government funding grants</td>
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<td>Tuition fees</td>
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<td>Research income</td>
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<td>Other income</td>
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<td>Research Park/investments</td>
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<tr>
<td>Total income</td>
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<table>
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<th>Expenditure</th>
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<td>Staff costs</td>
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<td>Non-pay expenditure</td>
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<td>Depreciation</td>
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<td>Interest</td>
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<td>Total expenditure</td>
<td>258.6</td>
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<th>Surplus</th>
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<td>Income less expenditure (as above)</td>
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<tr>
<td>Surrey Research Park revaluation</td>
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<tr>
<td>Other gains, losses and taxation</td>
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<tr>
<td>Surplus / deficit for the year</td>
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The momentum behind Surrey is palpable, so I am looking forward to working with staff and students to grow the University’s reputation as a truly international institution.

Professor G Q Max Lu  
President and Vice-Chancellor