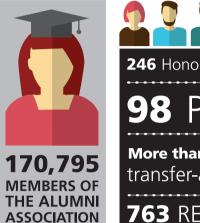




# YEAR in REVIEW

# **Our University today**

 $\star$  THE FIRST MODERN UNIVERSITY IN THE UK TO BE INCLUDED IN THE QUACQUARELLI SYMONDS (QS) WORLD UNIVERSITY RANKINGS  $\star$ 





One of the **largest** undergraduate research internship schemes in the UK with **over 400 students** having made major contributions to **high-quality research** projects

## THE TOP UK UNIVERSITY FOR ENTREPRENEURS

- **number 1 in the UK** for graduates still running thriving businesses after 3 years

Over £1 million of University funding has enabled more than

1,000 students to undertake a work placement or study period overseas



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### Foreword from the Vice-Chancellor



I am delighted to introduce the University of Central Lancashire Annual Review for 2015, which is my first since being appointed as Vice-Chancellor in December last year.

As you may know I joined the University in 2014 in the role of Deputy Vice-Chancellor and initially took the helm as interim Vice-Chancellor during the Spring of 2015. It was certainly a whirlwind eight-month 'apprenticeship' but I loved every minute of it.

For me 2015 was one of those years in the University's history where key decisions were taken that will have huge ramifications for our future development and success. Not only did we launch our £200 million Campus Masterplan development, a scheme which will radically improve our estate environment over the next ten years, we also engaged the entire University community in producing a new five-year strategic plan.

Via a series of roadshow events held across Campus, led by the Chair of the University Board and Pro-Chancellor David Taylor, we were able to gather and incorporate a huge range of suggestions from staff, students and University stakeholders into our final strategy blueprint.

The finalised document is a great example of the 'one university' culture we are creating here. Our staff have enthusiastically endorsed the plans, which are so important for our future success, because if we achieve the ambitious targets we've set ourselves then this University will be an educational leader for many years to come.

It is my view that a University of this size and calibre should always set itself objectives that are ambitious as well as realistic. For instance, by 2020, we want to be in the top 25 percent of UK universities for measures including student satisfaction, student retention and graduate level employment.

Globally we want to increase the number of international students in Preston and grow the number of students enrolling on Central Lancashire programmes overseas.

In terms of research we aim to more than double our annual research income, encourage more of our academic staff to publish their research findings, and we will increase the number of students studying PhDs to 1.000.

I also want to see us develop our extensive range of outreach activities even further. From our links with schools and colleges to community events such as the award-winning Lancashire Science Festival, I am committing the University to deep-rooted engagement with the wider communities of Preston, Lancashire and the North West.

But crucially, at the heart of the new strategy is a commitment to retaining our reputation as a beacon for access into quality higher education, enabling people, irrespective of their backgrounds, to fulfil their potential, meet their life and career goals and share their talents for the benefit of our communities. We will also develop strong themes on social engagement so that we can work more closely with our City, our region and globally.

To help us achieve our goals we have also embedded a new College structure, with the aim of promoting greater inter-disciplinary collaboration and communication, and we have a new professional services structure which underlines our commitment to put students at the heart of all we do.

Universities have the innate ability to change lives, individually and collectively, and for those living and working in our local communities a university's economic impact can also be huge.

That is why last year we decided to commission an independent economic impact study that established beyond all doubt that this University really is an economic powerhouse for the region.

You can read more about our economic contribution to the North West elsewhere in this Annual Review but some of the headline figures are astounding. For instance, in the period reviewed - 2013-14 - the University contributed more than £200m to the North West economy and supported an estimated 4,300 full-time equivalent jobs in the North West through its core economic footprint and through the expenditure of students. The University is also the largest in Lancashire, the third largest in the North West and has the ninth largest undergraduate population of all UK universities. We have known for a long time that the University has a positive impact on the local and regional economy, but to have it so comprehensively verified by independent analysis has been a great source of pride for everyone connected with the institution.

This year's Annual Review documents many more of our successes from 2015 – there really were a number of achievements that demonstrate the progress we are making. The launch of our hugely prestigious new undergraduate medical programme, aimed predominately at international students who lack opportunities in their own country, is one such example. The highest overall satisfaction score ever recorded by the University in the National Student Survey (85.2%) is another. Our global reputation was also boosted when the Centre for World University Rankings classified the University in the top 3.8% of all worldwide universities. The University scored well in the highly-cited research papers category and we also performed strongly in the alumni employment strand.

Indeed our focus on employment and employability skills is as strong as ever and last year it was encouraging to see that over 92% of those graduating from full-time first degree courses go on to employment or further study six months after graduation – a figure which has seen year-on-year improvements since 2012.

Growing the confidence, pride and expertise of our University community is critical if we are to achieve our future ambitions. It is why initiatives such as our newly launched 'UCLan Stars' staff award scheme, where we recognise excellence taking place at all levels of the University, is so important. In addition, to help underline our commitment to local

community engagement, I am keen to see more staff engage in volunteering activities. As a result Central Lancashire is now among a forward thinking group of universities to launch a volunteering scheme which provides staff with an additional day of paid special leave to be used for volunteering, charitable work or supporting positive community causes.

It is my view that a strong and competitive University, proud of its educational roots and Preston heritage, has never been more important. As I write these notes we are considering how greater use of the University's Coat of Arms can help project our values and pride at being at the centre of the community even further.

In one guise or another the University of Central Lancashire has been part of the fabric of Preston since 1828. 2015 was a year that really reaffirmed our educational values, which hark back to those early days. Values that pursue excellence in all that we do. Values of equality of opportunity for all, supporting the rights and freedoms of our community and the advancement and protection of knowledge and freedom of speech, as well as supporting all who are involved with the University.

I am extremely proud to have been given the opportunity to build on these beliefs and to help steer the University into the next chapter of its development and continuing success.

I hope you enjoy reading about our latest achievements and I look forward to updating you again in the near future.

Mike Thomas.

Vice-Chancellor Professor Mike Thomas

It is my view that a strong and competitive University, proud of its educational roots and Preston heritage, has never been more important.

### The University Year: highlights from 2015



















### **January**

### Government pledges more than £10 million for University engineering centre

The University receives more than £10 million from the Lancashire Enterprise Partnership towards the flagship Engineering Innovation Centre. Employment Minister Esther McVey MP visits the Preston Campus to announce the £10.5 million funding. The cash injection, which takes the overall funding pot for the state-of-the-art engineering facility to more than £30 million, is part of the Government's Growth Deal, which promises to invest more than £250 million in Lancashire.

### University is green league top performer

The University is recognised as one of the consistently top performing 'green' universities. The Guardian names Central Lancashire as joint fifth in a list of the best 'green' national higher education providers since 2010. Praise is given for its strong environmental and ethical performance. The honour comes as the institution is awarded a First Class degree classification in the 2015 People and Planet Green League. 2

### Students' Union announces registration drive with support of Preston City Council

The Students' Union announces a new project with the support of Preston City Council, in what is one of the first partnerships of its kind to encourage students to register to vote in time for the General Election. Many students run the risk of not being on the electoral register because they've moved home in the past 12 months. <sup>3</sup>

### **February**

### University announces £200 million development proposals for its Preston Campus

The University unveils far-reaching development plans that will transform the Preston Campus. The vision over the next 10 years is to create a unified, sustainable and welcoming Campus which will enhance the experience for all those visiting the University. It will integrate seamlessly with the rest of the City, benefitting current and future generations of students, staff, visitors and the wider community. 4

### Parliament hosts research poster exhibition

The UK's best undergraduate research is displayed to politicians in Westminster thanks to the Universitysponsored Posters in Parliament exhibition. 24 undergraduate students visit London to unveil research findings on a huge range of subjects including research into the human cost of antibiotic resistance, the forgotten art of memory, sustainable energy for the Playa Blanca community and British Empire sentimentality. 5

### University welcomes Japanese Minister to Preston

A Japanese Minister is welcomed to the University for a cultural festival known as Japan Bunkasai. Minister Hideki Asari, the Director of the Japan Information and Cultural Centre, celebrates student success in Japanese language and culture at the University. He spends the day watching traditional Japanese dances, street performances and a Kabuki face painting workshop.

### March

### Leading industrialist to lead EIC

One of Europe's leading industrialists is chosen as the person to lead the development of the £30m-plus Engineering Innovation Centre. Frank Hayden, Professor of Advanced Manufacturing, is appointed as the Centre's Director. During his illustrious career he has led the strategic and operational transformation of a number of hightechnology businesses, including Land Rover, BMW, Airbus, BAE Systems and Rolls-Royce.

### New support for Independent Mental Health Advocates

A researcher co-develops new resources to ensure people detained in hospital under the Mental Health Act have a voice. The University's Dr Julie Ridley and the Social Care Institute for Excellence launch 12 new resources at the House of Lords. The suite of briefings, reports and films offer straightforward information about independent mental health advocates for service users and mental health staff to improve access. 8

#### Launch of biomedical research facility

A state-of-the-art biomedical research facility is launched at the University. The series of high-tech laboratories are designed to focus multi-disciplinary postgraduate research across a breadth of biomedical fields, including research in the fields of brain tumours, anti-cancer, antibiotics, Alzheimer's, DNA profiling and molecular biology, 9





















### **April**

### Talented student creates life-saving mobile app

A Central Lancashire student develops a mobile app which he hopes will save lives. Third year physiotherapy student Patrick Shaughnessy creates TrustTalk24/7; a free app which provides help to anyone in suicide crisis or for those worried about a deterioration in their own or their loved ones' mental health. Patrick devised the idea a year ago after he lost a cousin and friends to suicide.

### Community flock to University hosted Health Mela

An annual health event, which brings together a wealth of information, free health checks and the opportunity to meet health professionals for advice in a relaxed environment, is held on the Preston Campus for the first time. It features more than 70 health-related stalls providing a wide-range of information on how to improve health and wellbeing. In addition, visitors take advantage of free health checks ranging from diabetes screening, cholesterol level tests to hearing and sight examinations.

#### Dental hypnosis wins national award

A dental student celebrates the award of a specialist undergraduate prize. Nicola Allison, who is in her final year of the Bachelor of Dental Surgery programme, wins the British Society of Clinical and Academic Hypnosis student prize. Her essay provides a brief history of hypnosis, some background into how it works and some useful hypnosis techniques specific to dentistry. 1

### May

### Stressed out students find puppy love

Stressed out students experience a relaxing day thanks to a dedicated puppy and guide dog room. The Students' Union-organised event gives 320 students the opportunity to meet and play with puppies and guide dogs to de-stress as end of year deadlines and exams loom. The session also raises funds for the Guide Dogs charity as each student donates £1.50. 13

### **BOB North showcases University talent**

The University showcases its creative talents at the Best of Britannia event that travelled north for the first time. Central Lancashire is a key sponsor of the three-day pop-up department store in Preston's historic Post Office building. Students and staff exhibitions include installations in architecture, applied arts, fine art, fashion, photography and design for sport and rehabilitation, alongside a variety of performances on the outdoor stage. 1

#### Senses heightened on South American field trip

When blind student Krishen Chauhan visits South America on an educational trip, he sees it as an opportunity to demonstrate how his disability does not hinder his educational experience. He travels to Guyana with eight of his second year geography/environmental management classmates to experience the exotic wildlife and to witness habitat conservation at first-hand. During the two-week research expedition he wades through knee-high mud to plant black mangrove seedlings, sleeps in a hammock and holds an array of animals and insects. 1

### June

### Central Lancashire motorsport enthusiasts top UK podium

Motorsport engineering students celebrate as their fuel efficient car is named the best in the UK. The five enthusiasts compete in the Shell Eco-marathon and their eco-friendly car produces 1,280 miles per gallon. This smashed last year's UCLan record and ensures the team topped the UK podium, 16

### Graduate wins prestigious television award

A Central Lancashire graduate celebrates winning a highly prestigious national media prize. Film and TV screenwriting alumna Lauren Clark collects the Undergraduate Open Category prize at the Royal Television Society's (RTS) Student Television Awards. She wins for her short film entitled 'LA Larry', about a man who brings his sunny Los Angeles disposition to the people and streets of Preston. Lauren also won the RTS North West prize. 1

### **University success at Graduate Fashion Week**

Students from the University catch the attention of industry designers at the annual Graduate Fashion Week spectacular. Fashion design student Megan Kimmance was one of only 25 who took part in the event's Gala catwalk show, beating off competition from more than 400 collections. Megan, whose collection is based on raw urban street gangland culture, made the shortlist for the Menswear Award. Fashion Brand Promotion with Business student Kim Ward and Fashion Promotion with Styling student Fran Scott walked away with the Ethical and the Arts Thread Diversity NOW awards respectively. 18



















### Honorary OBE for UCLan sign language and deaf studies expert

The Director of the University's International Institute for Sign Languages and Deaf Studies (iSLanDS), Professor Ulrike Zeshan, is recognised in the Queen's Birthday Honours List. The world-leading sign languages expert is honoured for her services to higher education and the international deaf community. Professor Zeshan focuses her research on the documentation and analysis of sign languages in non-Western countries, including endangered sign languages in rural communities with hereditary deafness.

### From dinosaurs to drones: Korean Ambassadors experience life at Central Lancashire

UCLan puts itself at the forefront of partnerships with Korea when dignitaries pay a visit. Ambassador Sung-Nam Lim, the South Korean Ambassador to the UK, and British Ambassador Charles Hay, the UK Ambassador to South Korea, are given a tour of UCLan as part of a sustained strategic initiative to link the University. Preston and the region with Korean universities, businesses and society.

#### Global ranking success

The University breaks into the top 3.8 percent of all worldwide universities for the first time in its history. The Centre for World University Rankings 2015 unveils its latest international figures, showing the University reached number 939 out of more than 25,000 degree-awarding institutions of higher education worldwide.

UCLan is highly rated in the 'Quality of Faculty' category, which measures the number of academics who have won major international awards, prizes, and medals, and the 'Ouality of Education' section, which analyses the number of a University's alumni who have won major international awards, prizes, and medals relative to the University's size. <sup>3</sup>

### **August**

### **Demolition of Fylde Building underway**

The University takes the first step in its 10-year £200m campus development plan by beginning the demolition of Fylde Building to make way for a new multi-million pound student support centre. The move forms a vital part of the University's Campus Masterplan to create a unified, sustainable and welcoming campus.

### Students use sporting knowledge to teach Zambian children

Students visit Zambia as part of an annual trip that uses the power of sport to deliver key health messages to young people about the dangers of drug abuse and HIV. More than 40 students from a range of sports, media, law, physiotherapy and sexual health courses spend a total of eight weeks across three cohort visits in the African country as part of the UCLan Sport for Development Project trip. The project involves University students working with peer leader volunteers from Sport in Action, a Zambian-based Sport for Development NGO, to deliver key health messages and life skills through sport and physical activity.

### Community leadership approaches shared in pioneering collaboration

Students join Finnish academics at a knowledge exchange initiative organised by the Centre for Volunteering and Community Leadership at the Burnley campus. Leadership students are given the opportunity to gain tips from the top as they join a party of social workers and academics from Finland to explore community dialogue and share best practice. As part of the programme the research party meet the Mayor of Burnley, Elizabeth Monk, in the Council Chambers for a discussion on community empowerment. 6

### Pioneering new route into mental health social work announced

The University plays a key role in a pioneering new scheme aimed at fast-tracking talented students and graduates into expert mental health social workers. The first year of the Government-backed 'Think Ahead' scheme aims to recruit 80 to 100 'remarkable people' to undergo an intensive programme, learning on the job from the outset. With one in four people now living with mental illness, placing strain on the NHS and public services, 'Think Ahead' aims to create leaders who can improve services and shape the future of mental health care.

### University hosts first International Veterans Conference outside of USA

At the first ever International Veterans Conference in Europe, research into Accelerated Resolution Therapy as a new and innovative way of dealing with Post Traumatic Stress Disorder is unveiled.

The collaborative event is delivered in partnership with the University of South Florida and brings together international experts in military and veterans education, health and social care to showcase advances in research, designed to meet the needs of veterans and their families. 8

#### Award-winning Chinese martial arts troupe wows Preston audience

The University welcomes an international award-winning Chinese martial arts troupe to Preston to mark the seventh anniversary of its Confucius Institute. The troupe, led by 2008 Beijing Olympic Wushu gold medallist Zhao Qingjian, entertains the crowd with their performance of The Beauty of Wushu and Dance, which includes nine set pieces and an audience participation Kung Fu set. 9

### **September**

### **University extends National Mountain Sports Centre partnership**

**October** 

The University confirms an exciting partnership with Plas v Brenin, the UK's top provider of outdoor adventure activities, allowing UCLan students to continue to enjoy practical sessions at the National Mountain Sports Centre in North Wales.

Students benefit from the expertise of UCLan and Plas y Brenin staff and develop their practical, coaching and leadership skills via a variety of activities including mountaineering, rock climbing, white water kayaking, sea kayaking, mountain biking and canoeing. 10

### Undergrads showcase top research talent

Gifted undergraduate research students demonstrate their educational abilities at an annual academic exhibition. The UCLan Undergraduate Research Internship Scheme showcases the work of forty undergraduates who worked with a range of academics for 10 weeks over the summer to produce postgraduate-level research. The exhibition covers a wide range of academic subject areas including engineering, pharmacy, medicine, health and psychology. For the second time in three years Jessica Oliver is named as the poster competition winner. 1

### New way of removing blood clots could soon be available across UK hospitals

Professor of Stroke and Older People's Care Caroline Watkins teams up with local, national and international stroke care experts to find new ways of delivering a pioneering treatment to remove blood clots from blocked arteries.

The treatment, known as thrombectomy, allows a special wire to pull out a clot from a blocked artery to restore blood flow as soon as possible.

### **November**

### Ground-breaking report shows the value of connected communities

Research by Professor David Morris and Dr Manjit Bola from the School of Social Work. Care and Community contributes to the publication of a ground-breaking report on the true value of UK communities by the Royal Society for the encouragement of Arts, Manufactures and Commerce.

The report details the findings of practical research in seven communities around England exploring the value of social networks. It warns the Government against assumptions of simply cutting back the size of the state and expecting 'communities' to spontaneously bloom and deliver the aims of the Big Society or to make up for funding shortfalls in the NHS. 1

### Public offered free legal advice from Law School

The University's Law Clinic opens up its doors to the community with support from several local solicitors.

Using National Pro Bono Week to launch the initiative, UCLan encourages as many people as possible to take advantage of the free service. The UCLan Law Clinic has been running for many years in-house before deciding to expand and offer the service to the general public. It is run by final year undergraduate and postgraduate law students and supervised by qualified solicitors from the Law School and from local firms who give up their time voluntarily. 14

#### Fylde building makes way for green space

The demolition of the Fylde Building is completed, marking the first visible implementation of the University's 10-year £200m Masterplan. During the three-month demolition 60,000 tonnes of rubble is removed and plans are put in place to turn the land into a temporary green space before work starts on the new community square and student support building in 2017. 15

### **December**

### Alumnus designs The Royal Mint's first UK £50 face value coin

Illustration graduate Jody Clark sees his second design turned into reality by The Royal Mint in less than a year, this time for the body's first UK £50 face value coin. It follows an earlier success for the Royal Mint engraver who also won an anonymous competition to design the 'fifth portrait' of Her Majesty The Queen on UK coins in March 2015. 16

### Shifting sand dunes reveal hidden **Bronze Age settlement**

Central Lancashire archaeology experts work with the University of Manchester and the University of the Highlands and Islands to unearth the remains of a Bronze Age settlement beneath sand dunes in the Orkney Islands. Amongst the millennia-old ruins on the island of Sanday, they find a series of circular stone spreads, which are revealed to be the remains of Bronze Age homes, each covered with a mass of stone tools. A total of 14 gatherings of stone ruins are found along a kilometre stretch of coastline. 1

### University community spreads Christmas cheer to sick youngsters

Staff and students diq deep at Christmas to bring smiles to the faces of sick children in Preston by donating books to patients on the children's ward of the Royal Preston Hospital.

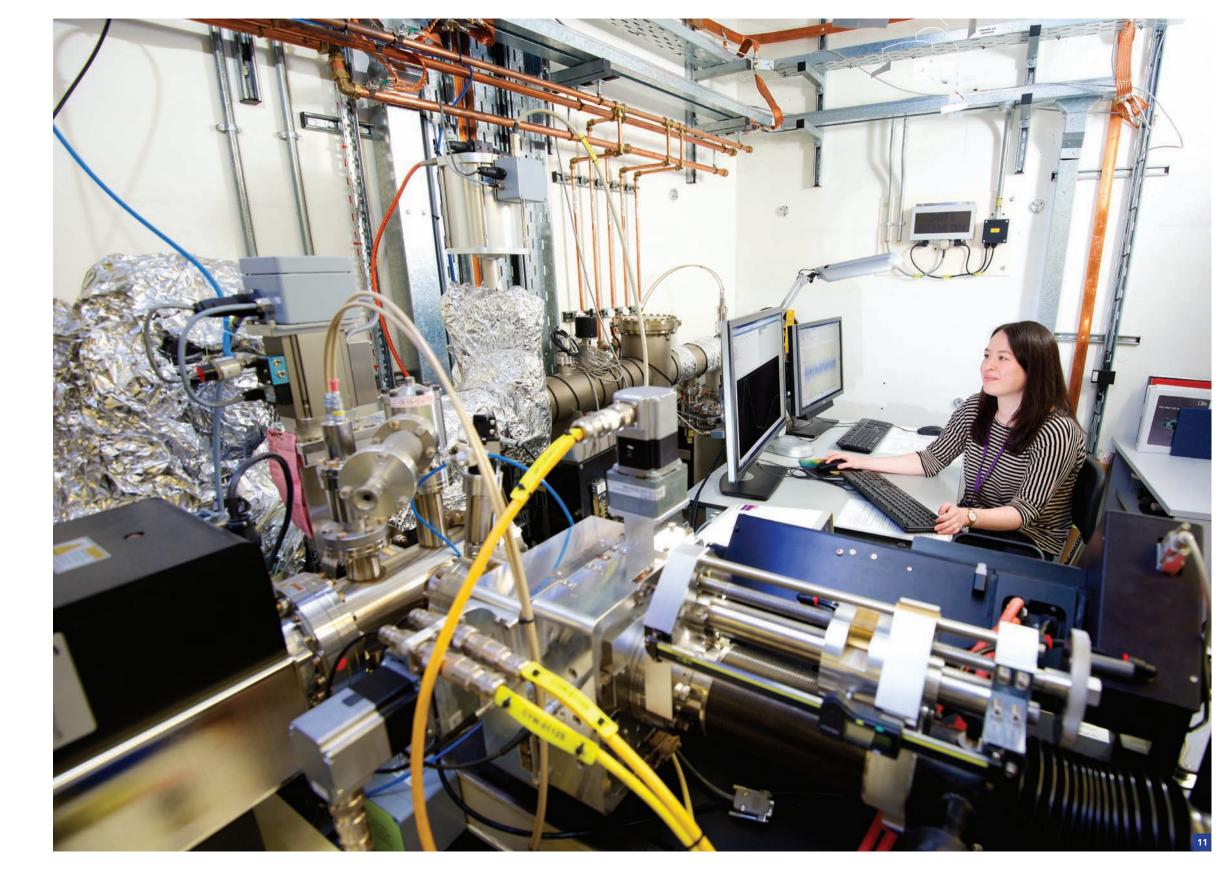
The 'UCLan Gives' book buying initiative is the work of six second year English literature and creative writing students. The books are bought by members of the University community and hand delivered by the students and staff, including the University's new Vice-Chancellor Professor Mike Thomas. In addition to the delivery, the Central Lancashire visitors also spend time reading and talking to the young patients and their parents in a bid to help add a little festive cheer.



### Research

"The University will be innovative and entrepreneurial in its approach to research and knowledge exchange in order to maximise its positive social, environmental and economic impact locally, nationally and internationally."

University of Central Lancashire Corporate Strategy 2015-2020



PhD student Charlotte Hughes working at the frontline in the war on superbugs.



Politicians can often be heard debating the impact of immigration in the 21st Century and most people assume it is a fairly modern trend, but in 2015 a UCLan archaeologist was involved in ground-breaking research that discovered the impact of immigration in England dating back to the 5th Century AD.

Dr Duncan Sayer was one of the authors on a paper, published in Nature Communications, which directly estimated the Anglo-Saxon ancestry of the British population from ancient skeletons, showing how Anglo-Saxon immigrants mixed with the native population. The samples for this study were taken from human remains found by Central Lancashire archaeology undergraduates who worked at Oakington Anglo-Saxon cemetery between 2010 and 2014.

The excavated human remains provided the material for the first whole-genome sequences of ancient Anglo-Saxon DNA. Using next generation sequencing to compare these ancient genomes with modern-day samples, researchers estimated that approximately a third of British DNA derived from Anglo-Saxon immigrants.

Dr Sayer explained: "By sequencing the DNA from 10 skeletons from three sites dating between the late Iron Age and the Anglo-Saxon period, we obtained the first complete ancient genomes for this time period. Comparing these ancient genomes with sequences of hundreds of modern European genomes, we estimate that 38% of modern English DNA derives from the ancient Anglo-Saxons."

Previous DNA studies into the Anglo-Saxon migrations have relied entirely on modern DNA and suggested anything between 10% and 95% contribution to the population.

One such study suggested Anglo-Saxons did not mix with the native population, keeping

segregated. However, this new study uses ancient genetic information and proves just how integrated the people of Britain were.

The human remains, from a cemetery in Oakington, Cambridgeshire, were radiocarbon dated to the Anglo-Saxon era (around 450-600 AD), and the DNA from these was compared with some late Iron Age remains found close by (dated approximately 50BC). Complete genome sequences were then obtained for selected DNA samples to determine the genetic make-up of these Iron Age Britons and Anglo-Saxons.

Dr Sayer collaborated with academics at Cambridge's Wellcome Trust Sanger Institute and Germany's Max Plank Institute on this unique research. He commented: "Combining archaeological findings with DNA data gives us much more information about the early Anglo-Saxon lives. Genome sequences from four individuals from the cemetery in Oakington indicated that, genetically, two were migrant Anglo-Saxons, one was a native, and one was a mixture of both. The archaeological evidence – the fact that these individuals were all found with gilt brooches, beads and other objects – shows they were treated the same way in death and proves they were all well integrated into the community equally despite their different biological heritage."

Modern British and continental European genomes were compared with the genomes from the ancient skeletons. Researchers discovered the Anglo-Saxon immigrants were genetically very similar to modern Dutch and Danish, and they contributed 38% of the DNA of modern people from East England, and 30% for modern Welsh and Scottish.

The genomes of northern European populations are similar and it is difficult to accurately distinguish between them. To help solve this problem, the study developed

a sensitive new method, called rarecoal, which could identify subtle genetic traces in individuals, using rare genetic variants identified in hundreds of present-day people. Earlier methods of mapping ancient DNA looked at common genetic variants from the very distant past, which are present in most people. The new rarecoal method did exactly the opposite, allowing researchers to map more recent events and unravel very closely related populations.

"We wanted to determine where ancient DNA samples would fit with respect to a modern population model and to map individuals into that model," said Dr Sayer. "This study, using whole-genome sequencing, allowed us to assign DNA ancestry at extremely high resolution and accurately estimate the Anglo-Saxon mixture fraction for each individual. Additional full genome sequences and further improvements in methodology will allow us to resolve migrations in even more detail in the future."





Three skeletons buried together and recovered from the dig in Oakington, Cambridge.

UCLan archaeologist discovers the English are one third Anglo-Saxon

# L-R: Dr Mary Phillips-Jones, Charlotte Hughes and Rohanah Hussain, Senior Beamline Scientist from Diamond Light Source.

# The war on superbugs

### Finding a lifeline for the drug of last resort

Infectious diseases remain a major cause of death in the UK, particularly amongst the very young and the elderly. The rapid rise of antibiotic resistance amongst bacterial infection agents means the world could be facing a global epidemic and possibly a post-antibiotic era in which drugs of last resort no longer work.

The fight is on to discover how these superbugs are able to develop resistance to such powerful antibiotics and a PhD student from UCLan is playing her part in tackling this world-wide problem.

Charlotte Hughes, from the School of Pharmacy and Biomedical Sciences, has spent the last three years focusing on an antibiotic called vancomycin, often used as a last resort drug against antibiotic-resistant bacteria found in hospital-acquired infections such as Methicillin-resistant Staphylococcus aureus (MRSA). In recent years superbugs such as MRSA have shown signs of resistance towards vancomycin and other penicillin antibiotics, causing concern for Public Health England. Charlotte's research, under the guidance of Dr Mary Phillips-Jones and jointly funded by UCLan and Diamond Light Source, the UK's national synchrotron science facility, focuses on finding out what causes the antibiotic-resistant bacteria to mutate and resist treatment.

The 24-year-old commented: "Generally, resistance towards a particular antibiotic arises as a result of the use of the antibiotic – almost a survival response of the bacteria. Antibiotics work by disrupting specific cellular processes to weaken and kill the bacteria. So once one organism is able to avoid being killed by the

drug, the trait that has enabled them to survive quickly spreads throughout the population. In the past, once resistance towards a drug had become widespread, alternative drugs were used, but this has helped to fuel the growth of resistant organisms.

"A major problem with treating bacteria found in hospital-acquired infections is that they are naturally resistant to many commonly used antimicrobial drugs, which kill microorganisms, and are gaining resistance towards previously effective antibiotics such as the glycopeptide vancomycin, considered the 'last-line' antibiotic for the treatment of MRSA. My work aims to investigate the activating signals leading to the onset of resistance towards vancomycin in hospital-acquired infections, with the long-term hope that it may aid the development of novel antimicrobial drugs which are able to bypass the current pathways for resistance."

Charlotte's research recently received wider recognition when she was invited to present her work in Parliament as part of a national competition. SET for Britain invites 210 early career science researchers from around the country to present their work to politicians and a panel of expert judges.

"This is one of the finest ways of engaging with the public through our research, hopefully encouraging as much excitement for our work in others as we have ourselves," she added.

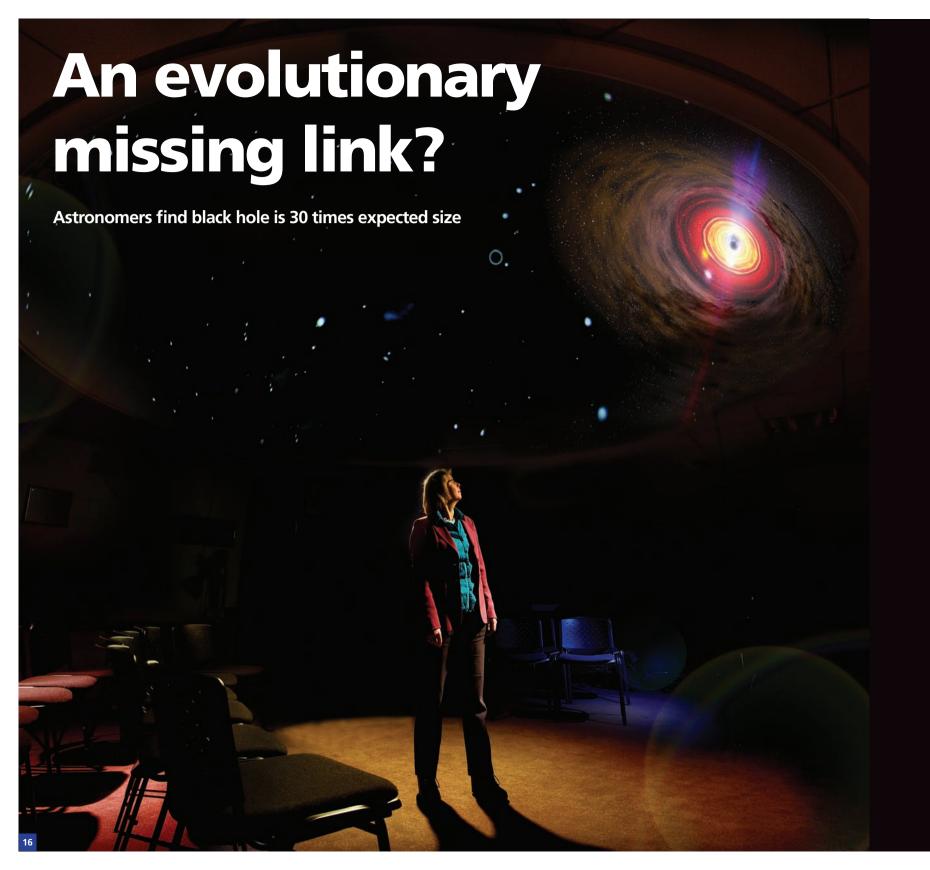
Charlotte is in the final year of her PhD. By taking advantage of the state-of-the-art facilities at the Diamond Light Source, she's immersed herself in an environment used by more than 3,000 academic and industrial researchers across a wide range of disciplines.

"The joint studentship has given me a widespread scientific appreciation and provided opportunities to gain experience in a range of techniques and learn from experts in diverse fields," she said. "Additionally, as the studentship has exposed me to both academic and industrial environments, it has prepared me to make informed decisions about my future career pathway."

Dr Mary Phillips-Jones, Senior Lecturer in Biochemistry and Microbiology, commented: "In England alone, the medical and economic costs of treating infectious diseases are estimated to be about £30 billion each year. Because we are running out of effective antibiotics with which to treat infections, we are losing the war to combat these diseases.

"Here at the University our research team is focused on determining how antibiotic-resistant bacteria 'switch on' their resistance machinery in the hope that ultimately we can find new medicines that interfere with that switch-on process, thereby keeping the bacteria sensitive to antibiotic treatments. Charlotte is part of our team and we are delighted that all her hard work and commitment has been recognised through SET for Britain."

"In England alone, the medical and economic costs of treating infectious diseases are estimated to be about £30 billion each year."



The central supermassive black hole of a recently discovered galaxy has been found to be far larger than should be possible, according to current ideas about galactic evolution. New work, carried out by University of Central Lancashire astronomer Dr Anne Sansom alongside research colleague Dr Jacco van Loon at Keele University, shows that the black hole is much larger than it should be, compared to the mass of the galaxy around it.

The galaxy, SAGE0536AGN – thought to be at least 9 billion years old – contains an active galactic nucleus, an incredibly bright object resulting from the deposit of gas by a central supermassive black hole. The gas, accelerated to high velocities due to the black hole's immense gravitational field, emits light.

Using the Southern African Large Telescope, of which the University has a share for astronomical research and student training purposes, the black hole in SAGE0536AGN was found to be 350 million times the mass of the Sun. But the mass of the galaxy itself, obtained through measurements of the movement of its stars, has been calculated to be 25 billion solar masses. This is seventy times larger than that of the black hole, but the black hole is still thirty times larger than expected for this size of galaxy.

"There is a well-established link between black hole mass and galaxy mass, however SAGE0536AGN does not follow this observed trend. Even though it is in a modest sized galaxy, its black hole is much bigger than expected.

"What is also unusual about this galaxy is that it contains a lot of dust. This is usually linked to star formation but there is no evidence of that here."

How did this happen? The research team think it could be that the black hole just grew much faster than the galaxy surrounding it, or maybe the galaxy's growth was prematurely stopped.

"We aren't sure whether SAGE0536AGN is just a fluke or whether we've found a new class of galaxy," Dr Sansom continued.

The researchers will now apply for further telescope time to look deeper into the dynamics of the galaxy to confirm its mass and discover more about its characteristics.

"What we want to do now is to obtain a two dimensional map of the motions of stars within this unusual galaxy and improve our calculations of its structure," Dr Sansom explained. "It could be that there are other galaxies like this but then again we may prove that this one is very rare indeed. If this galaxy is rare then we need to find out why. For instance, it might have violently interacted with another galaxy or there could be other environmental factors that we need to consider.

"Ultimately this research will help to further our understanding of the process of galaxy and black hole co-evolution - how we got from the early universe to where we are now – there's still a lot more to understand!"

Time will tell whether SAGE0536AGN really is an oddball, or simply the first in a new class of galaxies.

Dr Anne Sansom is a member of the University's Jeremiah Horrocks Institute which for over twenty years has carried out world-leading and internationally excellent research into stars, galaxies and the Universe.

"Ultimately this research will help to further our understanding of the process of galaxy and black hole co-evolution - how we got from the early universe to where we are now."

Dr Anne Sansom pictured in the University's Alston Observatory viewing an interpretation of an active galactic nucleus, with jets of material flowing out from a central black hole. Credit: NASA / Dana Berry / SkyWorks Digital.

# Does self-hypnosis reduce labour pains?

### UCLan international childbirth expert leads UK's largest hypnobirthing controlled trial

The popularity of self-hypnosis during labour, or hypnobirthing as it's more commonly known, has increased over the last few years as many women look for a natural way to manage labour pain. Up until now, there has been minimal data on women's views and experiences of using hypnosis for this purpose. In 2015 a three-year study, led by the University's international childbirth expert Professor Soo Downe, shared the results of the largest randomised controlled trial on self-hypnosis for labour undertaken in the UK and the second largest in the world.

Published in the British Journal of Obstetrics and Gynaecology, the trial, sponsored by East Lancashire Hospitals NHS Trust, involved 680 first-time mums from three hospitals in the North West. The findings of the NIHR (National Institute for Health Research) funded study showed that while the therapy only made a minor difference to the number of women requesting pain relief during labour, it did have a significant impact on the women's levels of postnatal anxiety and fear about childbirth.

Of the women who self-hypnotised during pregnancy, 27.9% requested an epidural in comparison to 30.3% of the women in the control group. When asked two weeks after birth, women in the self-hypnosis group had a greater reduction in anxiety and fear about childbirth than women in the usual care group.

Both the mums-to-be and their birth companions attended two 90-minute group self-hypnosis sessions at 32 and 35 weeks of pregnancy, as well as having a CD to listen to daily. They were then sent questionnaires at two and six weeks after giving birth. Both the hypnosis and the usual care groups received the standard NHS care, including antenatal clinic attendances and screenings. On average, the two sessions and the CD cost £4.83 per woman.

Professor Downe commented: "Adding prenatal self-hypnosis training to usual care in a UK setting does not seem to affect rates of epidural pain relief. However, the results do suggest that the therapy might reduce postnatal anxiety and fear about childbirth which would suggest there may be benefits for their next pregnancy."

One of the participants, who has since gone on to have another baby and practised self-hypnosis during both pregnancies, commented: "The hypnobirthing script provided during the trial was easy to listen to and during the latter stage of my pregnancy I practised it twice a day. I would highly recommend this technique to women as I had big babies and with the help of the hypnobirthing was relaxed and in control. I used gas and air with one labour and nothing with my second."

Maria Williamson, a Midwife at East Lancashire Hospitals NHS Trust who took part in the study, said: "Women and their families engaged so well with the sessions, you could see their confidence grow. Their ability to remain calm and relaxed enabled them to have a positive birth experience. For me as a midwife, to see a family begin is a privilege but to experience women and their birth companions leaving the sessions not terrified about giving birth, but actually feeling excited about meeting their babies, was truly amazing."

All of the women that took part were aged between early-20s and mid-30s, most were White British and some were of South Asian origin. All had never given birth before and none were receiving treatment for high blood pressure or psychiatric illnesses.

Professor Downe added: "The results suggest that self-hypnosis poses no danger to participants, and that two group sessions in pregnancy along with a CD is very inexpensive. However, if self-hypnosis is offered to women, maternity care staff will need to be made aware of how relaxed some women can appear when they are using self-hypnosis, even if they are actually in strong labour."

"I would highly recommend this technique to women as I had big babies and with the help of the hypnobirthing was relaxed and in control."





# Earthworm research leaves no stone unturned

Charles Darwin referred to earthworms as 'nature's ploughs' because of their mixing of soil and organic matter. They lack the charm or excitement of more familiar animals, but their contribution to our world is hugely significant.

Their burrows create pores through which oxygen and water can enter and carbon dioxide can leave the soil. Earthworm casts (their faeces) are also very important in soils and are responsible for some of the fine crumb structure of soils.

With more than 100 research publications produced, the University's Dr Kevin Butt, together with Earthworm Research Group colleagues, has been researching all kinds of earthworms and their various uses for more than 20 years. By manipulating the behaviour of these important organisms the research team is helping to bring life back to soils in regions across the world.

In 2015 Dr Butt and his team made a major discovery by uncovering Britain's largest earthworms on the Isle of Rum, off the coast of Scotland.

These earthworms, the common species Lumbricus terrestris, weigh up to 12.7 grams and measure nearly 40 cm, more than three times the weight and length of the average sized earthworm in the UK.

The Isle of Rum, in the Inner Hebrides, is an island managed for conservation and has been described as an 'outdoor laboratory' due to the intense study of its nature.

Between 2006 and 2011 Dr Butt and his team investigated what was thought to be some very large worm burrows. Upon further investigation they discovered the earthworms and began studying the surrounding area for factors that may have affected their size.

Thanks to the absence of predators, combined with incredibly fertile soil, the worms were free from danger providing them with the optimum conditions to live and grow. The average life span of an earthworm is only a couple of years, however because these particular worms have a better chance of survival it is believed that they could be up to 10-years-old.

Commenting on the discovery Dr Butt said: "I first noticed the large worm burrows in 2005, so I had my suspicions that there may be some pretty big worms in the area. We went back out to investigate the following year and finding worms of this size was very exciting, especially when the Natural History Museum team confirmed they had no similar specimens.

"There are still unanswered questions and we plan to continue our research to find out as much as possible about these creatures."

Dr Butt and his research team are about to return to the Isle of Rum to undertake another long term project; the recreation of agricultural activities which took place on land occupied by crofters more than 200 years ago.

"The quality of the land under investigation is poor and we think the only way the original occupants were able to sustain a living was by incorporating seaweed into the soil. Our aim is to mimic both the crofters' farming methods and the crops they grew. Once we have our initial results we may then add earthworms to see if this improves crop yield.

"Ultimately our research is about informing sustainable farming methods. Across the world there is a lot of poor quality soil and abandoned land and we want to see if it can be revived and reused. We think it's possible with the humble earthworm playing a key role in our ongoing research investigations."





# **Under Pressure**

### Research reveals shocking realities of teenage relationships

Teenage relationships have long been the inspiration for chart-topping pop songs, bestselling novels and blockbuster films with a safe and happy message, but according to new Central Lancashire research the reality for teenagers in 2015 is very different.

Staff from the University's Connect Centre for International Research on Interpersonal Violence and Harm published a report which revealed more than four in ten teenage schoolgirls in England have experienced sexual coercion. Most were pressured to have sex or other sexual activity, and some cases even included rape.

The research, undertaken by Dr Christine Barter, Professor Nicky Stanley and Dr Cath Larkins, discovered many of the 13 to 17-year-olds had also suffered physical attacks, intimidation or emotional abuse from their boyfriends, while a high proportion of teenage boys admitted to regularly viewing pornography and harbouring extremely negative attitudes towards women.

The study was carried out between 2013 and 2015 in Norway, Italy, Bulgaria, Cyprus and England by a team of researchers from UCLan and Bristol University. It was one of the biggest of its kind ever undertaken in Europe, involving a school-based survey of 4,500 children and 100 interviews with young people.

Dr Barter, a newly appointed Reader in the School of Social Work, Care and Community and Research Lead, said: "Our research findings show that across Europe violence and abuse is a major problem in young people's relationships, both offline and online, yet in most countries it remains unrecognised, leaving young people with little support or appropriate services."

Professor Stanley commented: "Teenage girls reported serious distress and harm following abusive behaviour from boyfriends. Education and campaigns need to challenge stereotypical behaviour and attitudes in boys, and the law in this area should be clearly communicated to young people, their parents and teachers."

The highest rates of sexual coercion were reported by teenage girls in England. In interviews with 100 of the children, many said the pressure to have sex was so great it almost became 'normal' and in some cases rape was not recognised.

Katie, a 15-year-old who took part in the survey in England, said: "I've had relationships where I wouldn't be able to go out with my friends because they'd get angry with me. I have been raped and other things like that."

Almost four in ten boys in England aged
14 to 17 admitted they regularly watched
pornography and around one-fifth strongly
agreed with statements such as: "It is
sometimes acceptable for a man to hit a
woman if she has been unfaithful," and
"Women lead men on sexually and then
complain about the attention they get."

Controlling online behaviour by partners, through constant checking of their social media activity, sending threatening messages or telling them who they could be friends with was closely associated with young people experiencing violence or abuse from their partner offline.

Young people who reported violence and abuse in their relationships were at least twice as likely to have sent a sexual image or text compared to those who had not.

England had the highest rate for children exchanging sexual images and messages with a partner among the countries surveyed. On the back of this Daphne III European Commission funded research, the National Society for the Prevention of Cruelty to Children (NSPCC) has called on the Government to take action to ensure teenagers get a clearer message about healthy relationships.

Claire Lilley, Head of Child Safety Online at the charity, explained: "The levels of victimisation revealed by this research shows action is urgently needed by the Government to make updated sex and relationship education a statutory right for every child and young person. We need to nurture children to have positive relationships based on mutual respect."

"Our research findings show that across Europe violence and abuse is a major problem in young people's relationships, both offline and online, yet in most countries it remains unrecognised, leaving young people with little support or appropriate services."



### Student Access, Experience and Success

"The University will create an inspirational student experience, enabling people, irrespective of their backgrounds, to fulfil their potential, develop as global citizens and meet their life and career goals."

**University of Central Lancashire Corporate Strategy 2015-2020** 





# Reach out... engage...inspire

Government figures suggest that a young person's chance of attending university still depends heavily on where they live, their background and whether they are male or female. In 2015 breaking down barriers to university education through outreach and social engagement activities remained one of the University's core priorities.

The University's outstanding record in attracting students from across the social spectrum was recognised through a £240,000 award from the Higher Education Funding Council for England (HEFCE) to lead and further develop collaborative outreach networks that encourage more young people across Lancashire into higher education.

The National Networks for Collaborative Outreach (NNCO) scheme aims to deliver a co-ordinated approach by providing information for higher education providers to work with schools and colleges. Local and regional higher education providers, including universities and further education colleges, will come together to form the networks, ensuring comprehensive coverage across England.

The local networks will host websites with information about outreach activity, and signpost other information to support schools and colleges as they prepare their students for higher education.

The University's Dr Lynne Livesey, Pro Vice-Chancellor (Academic Development), said: "Considerable progress has been made in widening access and achieving student success in recent years. But there is still a long way to go.

"At UCLan we already put aside a substantial amount of fee income to support outreach work, which is an expensive, long-term commitment. This new Government funding will provide a significant boost in our continued efforts to work together with other universities, colleges and schools to attract talented young people from a diverse range of backgrounds into higher education."

This NNCO agreement formalises and expands on existing work being undertaken by the University and goes some way to ensuring that Lancashire's schools have equal access to information about a wide range of social engagement and outreach opportunities. At UCLan these range from summer schools, open days and other social engagement activities such as those delivered by the Lancashire Science Festival and the Young Scientist Centre.

An activity week which was particularly successful in 2015 involved year 10 students from schools across Lancashire as they watched two fire engines from Lancashire Fire and Rescue Service and a paramedic car, from North West Ambulance Service, respond to an 'accident' involving two cars.

After the demonstration, the students chose one of three subject strands – health,

crime or media — to follow for the rest of the week, exploring the range of career paths involved in the mock accident. The health strand included the academic areas of paramedic practice, nursing, operating department practice and physiotherapy. The crime strand encompassed police, forensics, fire, law, criminology and psychology while the media strand entailed print, radio and television journalism.

Madeleine Atkins, Chief Executive of HEFCE, added: "As well as providing co-ordinated coverage of outreach activity, we are keen that the NNCO scheme contributes innovative approaches to the interaction between higher education institutions and schools and colleges. We will be evaluating the scheme to ensure that innovation can be shared amongst networks and quickly benefit schools and colleges and the students they support."



# **Building blocks of learning to create inspiring student experience**

In early 2015 the University announced its intention to create historic and transformational change at its Preston Campus through a 10-year, £200 million Campus Masterplan development.

The delivery of the first phase, including new buildings, green spaces, class-leading technologies and infrastructure, was soon underway with scaffolding erected and the bulldozers moving in to demolish the Fylde Building. The resulting space has been temporarily greened over and will be used to host University and community events, before the bulldozers return in 2017 to build a new multi-million pound student support facility, forming part of a new gateway to the University.

The exciting scheme will include a remodelled Adelphi roundabout with the construction of a new public square, drawing the University and City together like never before. The long-term vision is to spark a major focus on regeneration and business investment in the University quarter, with wider benefits for Preston and beyond.

David Taylor, Chair of the University Board, said: "It's incredible how 12 months ago this plan hadn't been talked about and yet 12 months on, work is well underway on many interlinking aspects of the programme. Once our vision is realised it's going to be fantastic, not only for the University but for the City too. Now we're looking ahead to the next major stage of the project, the construction of the Engineering Innovation Centre (EIC), which is due to begin in the summer of 2016."

A planning application incorporating detailed architects drawings for the £30 million-plus facility has been submitted, and if approved, will enable the University to create an integrated hub for teaching, research and knowledge exchange while moving a step closer to establishing itself as a national leader in engineering innovation.

The flagship project will deliver a range of key objectives, including the reclamation of Lancashire's role as a national centre for advanced manufacturing, ensuring that local skills reflect social and economic needs, and increasing the number of women in engineering careers.

The University's Rob Wallace, Dean of the School of Engineering, said: "We can now really start to look ahead to the EIC and the important role it will play in Lancashire's economy and the UK's wider Industrial Strategy. The University aims to close the skills gap by inspiring and shaping the next generation of engineering leaders, producing an extra 500 locally trained graduates a year and increasing the number of young people and, in particular, the proportion of women who choose to take up engineering at a local university."

The EIC has been identified as a signature project within Lancashire's Strategic Economic Plan and has secured £10.5 million via the Lancashire Enterprise Partnership's Lancashire 'Growth Deal' with Government.

A Lancashire Enterprise Partnership spokesperson added: "Lancashire is a

national centre of excellence in the advanced manufacturing and aerospace sectors and we are home to many world-class companies such as BAE Systems, Rolls Royce and PACCAR (Leyland Trucks), to name just a few. Lancashire also has top-class universities. This flagship project will help produce the engineers our advanced manufacturing and aerospace sectors need to thrive and support businesses and industry to achieve even higher levels of excellence."

The EIC is earmarked for completion during the summer of 2018 and throughout 2015 the University completed extensive consultation exercises with local residents, businesses, and University staff and students to gather views on the proposed facility as well as the Masterplan proposals in general.

More than 1,000 people gave their opinions either by visiting events and workshops or submitting their views on social media or via the Masterplan website.

Of the respondents, 84% expressed their support for the University's proposals, believing they would have a positive impact on the University and, more importantly, bring wider benefits for the City.

Opposite: Artist's impressions illustrate how the Engineering Innovation Centre will help to transform the University campus.

In particular the proposed new square, which will replace the existing Adelphi Roundabout, has captured the public's attention. The key theme highlighted was the area should be a flexible space that could be used in many different ways for people of all ages. Workshop participants said it should offer comfortable and safe places for people to socialise in all seasons and somewhere that local, independent businesses can flourish.

Charles Quick, Professor of Public Art Practice at the University, said: "There has been a lot of very constructive feedback. Each workshop presented different ideas while some themes have shone through in all sessions – free WiFi was frequently mentioned.

"Many people felt strongly that the square needs to be versatile, used for a variety of events and accessible to all." University Vice-Chancellor Professor Mike Thomas added: "I'm really excited to see the beginning of the future of the University. Our vision is shared and supported by our project partners Preston City Council and Lancashire County Council, and the links between the University, the City and the region are really coming together. Over the next few years we're going to see some outstanding regeneration – not just for students, but for the benefit of those people living and working in Preston too."



The new student support centre.

"Many people felt strongly that the square needs to be versatile, used for a variety of events and accessible to all."





# Britain's top potter

### Ceramics graduate shows off his talents by winning BBC's Great Pottery Throwdown

The creative industries add £77 billion to the UK economy each year with talented UCLan alumni continuing to play a part in this significant contribution across a variety of disciplines. The latest creative UCLan high-flier to hit the headlines is ceramics graduate Matthew Wilcock, who in 2015 inspired a new generation of pottery lovers after winning the BBC's **Great Pottery Throw Down. From making** 20 identical egg cups in 20 minutes to creating an original 12-piece tea set out of porcelain, Matthew triumphed over an original line up of 10 contestants who threw, turned, trimmed and fired in a bid to be crowned Top Potter.

Clay is in Matthew's blood. The son of two pottery teachers, he first touched wet clay at just 14-weeks-old when his parents made a tiny handprint on a family teapot. Matthew was brought up on clay inspired by dad Geoff, who has worked at UCLan as Head Ceramic Technician for the last 35 years.

Speaking about his win, the 23-year-old, who was the youngest contestant, commented: "Words can't describe it really, amazing, and I want to thank my mother and father for introducing me to clay.

"My parents were at the final and they didn't know until then I had been named Top Potter. I went home at half-term and there were all these medals in my old bedroom at my mum and dad's house, so I know they are proud of me as they have kept them all. They are both potters themselves and know my skills and determination. They have been incredibly supportive."

Matthew initially began training as a pilot but decided instead to follow his passion of working with clay. He began studying for a BA (Hons) Ceramics degree at the University in 2010 where he was able to work using a range of methods including studio, industrial and glaze, before specialising in studio ceramics for his final year.

"I always wanted to throw on the wheel but learning such a variety of techniques during my degree really gave me an edge going into the Great Pottery Throw Down. We never knew what we would be asked to produce next so we had to be ready for anything," said Matthew, who works as the Ceramic Artist in Residence and teacher at Giggleswick Boarding School in Settle, North Yorkshire.

"I don't have any favourite pots in my pottery, because I am a teacher and trained not to do that. I think I'm quite boring with my pots, they tend to be functional but I suppose that is good as they're used all the time. I am always chasing something better to improve and challenge myself which I think is something that all people working in creative industries do."

Speaking of Matthew's success, dad Geoff said: "When Matthew won the Great Pottery Throw Down his mum and I were both emotional and quite speechless. To say we were proud is an understatement. We were proud that he had progressed through every challenge with commitment and confidence.

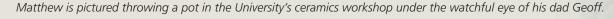
"Matthew is very passionate about his work and has some great skills throwing on the wheel but it is a very tough field, which is why he decided to have a dual career path. He enjoys making but is also passionate about teaching and passing on traditional skills to the next generation."

Despite currently enjoying national recognition, Matthew has remained close to his roots and still exhibits work with his dad and the Northern Potters Association West at the University.











# Lights, camera, action on new city street

For students who dream of a blossoming career in the creative industries, a crucial first step is gaining practical work experience and a foot in the door. Scores of students compete for the golden opportunity to impress major industry players and showcase their talents working either in front of, or behind, the cameras.

An innovative industry-first opportunity arrived for more than 90 undergraduates and alumni after the University announced the start of a unique educational partnership with ITV North. The media powerhouse, based at Salford's MediaCity, chose to work with Central Lancashire to create a 15 minute 'Soap in a Week'.

The students worked alongside 50 cast and crew to write, produce, act and direct the drama. It featured Coronation Street's Connor McIntyre and Tisha Merry and Emmerdale's Michelle Hardwick and Anthony Quinlan.

Connor, who plays Pat Phelan in the world's longest running TV continuing drama, said: "It was a fantastic initiative and one which I was delighted to be part of. I was really impressed with the commitment of the students. They grasped the unique chance with both hands, they were very professional in their attitude and they worked so hard. It was a very professional set up and everyone should be proud of the work they did."

Television production student Sam Green was given a key role throughout the week as one of the producers. The 19-year-old said: "It

was a phenomenal week and I'm delighted it went so well. One of the best things about this whole experience was getting access to some of the biggest names in the business."

Acting graduate Samantha Allen came back to the University to take part in the exciting project after graduating in 2014. She said: "Having this opportunity to work with these industry professionals from ITV in an exciting environment was amazing."

Mark Bickerton, ITV's Head of Editorial Engagement, has been integral in nurturing a collaborative working relationship with staff from the University's College of Culture and the Creative Industries. He added: "I'm delighted Central Lancashire gave us the chance to do this together and it exceeded my expectations in so many ways. The students were absolutely fantastic; their commitment was great and the skills they brought were industry standard. I'm really confident they can be the next generation of ITV creatives."

The filming took place across the Preston Campus, including the new outdoor 'street' set – a purpose-built facility featuring the external frontage of a pub, a newsagents and two houses. A pavement and a road have also been created to allow students to film external scenes using a range of props and vehicles, and even a green screen so the set can be extended further using computer graphics.

The set was officially opened by ITV Development Producer Phil Collinson. The former Doctor Who and Coronation Street

producer said: "The facilities are fantastic. The new set is amazing and it will be such a great educational tool to help students come out at the other end with practical industry knowledge."

Dr Andrew Ireland. Executive Dean of the College, commented: "This is a fantastic initiative and one we believe is crucial to the development of our creative students.

"We are passionate about giving our students the best chance of gaining a job in the media industry once they graduate. Our industry contacts have told us there are skills' gaps in the television production industry. Having this television set on campus means our students will work in an environment similar to a television production company, developing the required level of technical skills. The University's ethos is about innovative thinking for the real-world and this is a prime example of that in action."

He added: "The College of Culture and the Creative Industries is planning a number of initiatives that use simulations of real world experiences to address skills gaps in graduates wishing to work within broadcast industry. This Soap in a Week project is an excellent vehicle to launch these initiatives. Watch this space."

"This is a fantastic initiative and one we believe is crucial to the development of our creative students."



# On the engineering fast track

Despite their vital importance, the UK has an annual shortfall of more than 55,000 engineers and scientists. Experts predict that by 2022 UK companies will have 1.82 million job vacancies for people with engineering skills.

Recent research has found that, to meet this demand, the UK needs to double the number of entrants into engineering. The creation of the University's £30million-plus Engineering Innovation Centre, due to be completed in 2018, will help the North West region address that challenge.

The benefits of a career combining theory and practical engineering can be found in the University's workshops where students are racing ahead of their UK competitors. Every year undergraduates from all engineering disciplines compete against fellow students in the Shell Eco-marathon Europe race. In May 2015 the UCLan team's eco-friendly, super-fuel efficient car was named the best in the UK, producing 1,238 miles per gallon. This smashed their previous records and ensured the team topped the national podium.

The Shell Eco-marathon, which has been running for nearly 30 years, challenges students to design and build ultra-energy

efficient cars, then drive them on a purposebuilt track to see which can travel the furthest on a single litre of fuel.

The University's team for the Rotterdam-based event consisted of five second year students who spent eight months building, developing and testing their eco-friendly monocoque chassis creation before racing against more than 200 teams from over 30 countries.

Team Leader Adam Ludgate explained: "It was the hardest week of my life but also the best. It was really amazing and worth all the hours we spent in the paddock. We only got five hours sleep every night but I'm delighted with our performance considering we had some extreme highs and lows."

The team was asked by a Shell research engineer to trial a fuel flow sensor on their car. Unfortunately it developed a leak which compromised the performance of the 50cc machine during their first two competitive qualifying sessions.

"We helped Shell to test one of their new ultra-sensitive fuel flow meters but leaks in the system caused the car to stop during the competition. Shell made great efforts to put everything right and we eventually got back out on track," said Adam.

During the race weekend Shannon Hill and Dom Strange raced the car five times over 20 laps of the circuit, while Joe Wackrill and Danny Potter were in the pits to make adjustments to the engine mapping and steering.

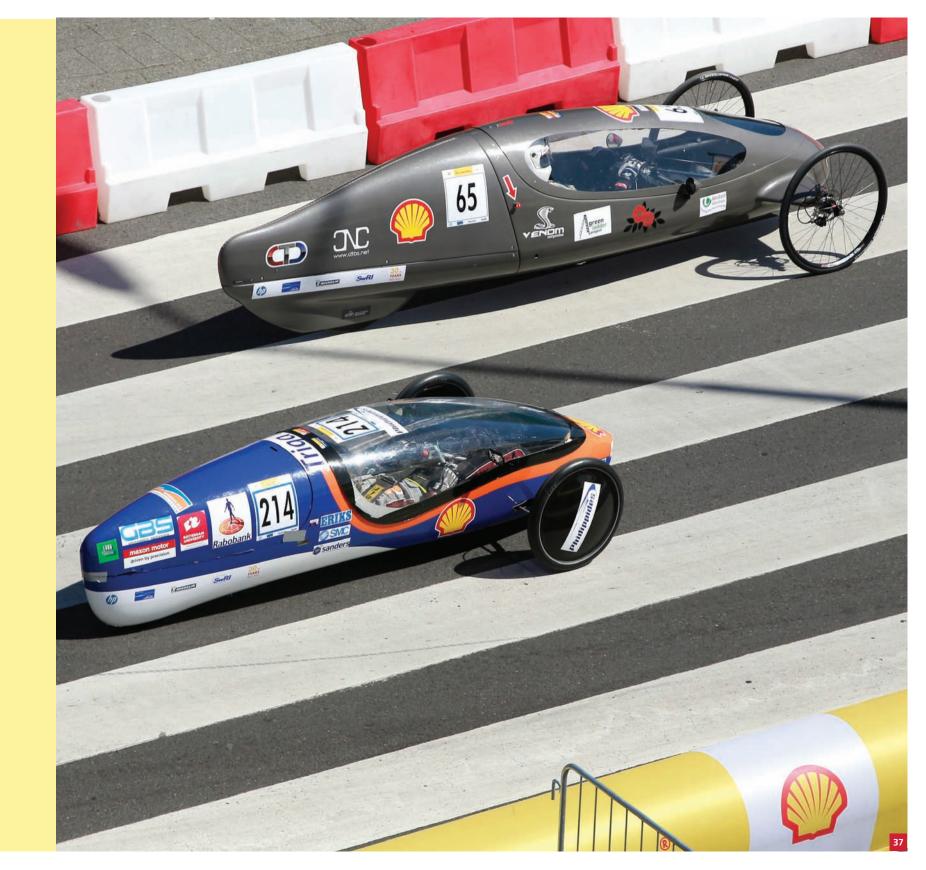
Senior Lecturer Tony Broad served as a mentor for the team, offering advice and steering them in the right direction throughout the car's development. He commented: "The Shell Eco-marathon is a fantastic engineering project for our undergraduates to really motivate and inspire them in the world of science and technology, as well as the fact it is an internationally renowned competition."







In the fast lane: Central Lancashire students pictured in Rotterdam competing in the Shell Eco-marathon.



## **Social Engagement**

"The University will continue to inspire positive change in organisations and people from all walks of life, to enable them to achieve their full potential."

University of Central Lancashire Corporate Strategy 2015-2020



# Community calling

Becoming a force for good in the community was central to the University's social engagement achievements in 2015. In addition to opening up the Preston City Campus for major public events, including the award-winning Lancashire Science Festival, staff and students were encouraged to interact with the wider community in a variety of voluntary and charitable ways.

In May the efforts of the students were celebrated at a special awards ceremony, while later in the year the University announced the 'Time to Shine' initiative, which encourages all staff to take a day's paid special leave to help support positive causes within the local community.

At the annual volunteering awards ceremony, more than 100 students were honoured in 12 categories for giving up their own free time to make a difference to communities across the county, with the big winners on the night being the University's policing students who won two awards.

Forty four students from the foundation policing programme collected the Joe Medforth Challenge Award. The students, who volunteer as Special Constables with Lancashire and Merseyside police forces, won the annual memorial prize for their work to improve the quality of life of individuals who feel isolated as well as solving local problems and deterring anti-social behaviour.

A further 18 policing students won the UCLan Community Team of the Year for their volunteering efforts with the British Transport Police (BTP) C-Division Special Constabulary. During a 10-week placement with the BTP, the undergraduates were allocated investigations, supported rail staff and passengers and provided a visible presence to deter crime on the network. They also assisted with policing large events such as the Grand National, at Aintree Racecourse, and various football fixtures.

Bob Helm, Senior Lecturer and Course Leader of the Foundation Degree in Policing at UCLan, said: "These prestigious awards specifically recognise those Special Constables who are students from the Foundation Degree in Policing and rightly so. They chose to step out of their comfort zones and make a difference and I know how hard they have all worked."

In 2015 the students performed around 25,000 hours of duty which is the equivalent of one officer working for free over a 12 year period.

"These prestigious awards specifically recognise those special constables who are students from the Foundation Degree in Policing and rightly so. They chose to step out of their comfort zones and make a difference and I know how hard they have all worked."

During the academic year, the University's Centre for Volunteering and Community Leadership (CVCL) recruited and inducted 1,804 students into volunteering. Together with more established volunteers they contributed 20,408 hours to the region. Since 2001 the CVCL has supported 15,031 student volunteers and they have helped at home and across the globe including Cyprus, Spain, Belgium, Russia, Turkey, Kazakhstan, Pakistan, Morocco, United Arab Emirates, South Africa, Zambia, Saudi Arabia, USA, Brazil and New Zealand.

The year also saw the University become one of a select group of forward thinking universities to launch a staff volunteering scheme. The initiative enables University staff to take an extra day's leave to undertake voluntary activities including:

- Supporting disadvantaged persons in the community as part of an organised programme
- Engaging in local or regional community events
- Providing discipline-specific skills and expertise in a pro-bono capacity
- Contributing to the provision of community sports, arts or cultural activities.

Vice-Chancellor Professor Mike Thomas said: "More than 3,000 of our students already volunteer both at home and abroad. While many of our staff are also involved, in the coming years I'd like to see even greater numbers putting something back and undertaking some form of voluntary work within our community."



Opposite: The University of Central Lancashire Community Team of the Year 2015 with British Transport Police Superintendent Peter Mason.

# Lancashire Science Festival strikes gold

Double award for flagship event that inspires thousands year-on-year

High on the Government's agenda is inspiring the next generation of scientists through interactive and handson science, technology, engineering and maths (STEM) initiatives designed to bring research to life. The aim is to fire up young people to develop a passion for STEM subjects and be ready to tackle many of the challenges and problems facing society both now and in the future. The University has always aimed to push the boundaries in this area and its free annual Lancashire Science Festival is a shining example of a longterm commitment to engaging with the region's young people through science.

In 2015 more than 11,000 visitors from across the North West flocked to the three-day science extravaganza to see awe-inspiring shows, experiments and hands-on activities designed to enable school children, their families, and the wider community to see first-hand the breadth of science-related expertise and its real-world applications. Highlights

included life-like animatronic dinosaurs, Titan the Robot, a mind-controlled scalextric, a chemistry magic show and the Science of Superheroes.

Lancashire Science Festival's success hasn't gone unnoticed and in 2015 the University picked up two prestigious awards in recognition of its achievements. The University beat off competition from four other shortlisted universities to secure a Gold Award at the national Heist Awards for Education Marketing, after judges described the Festival as "an imaginative event with wide participation across a diverse audience".

This was quickly followed by another award – the prize for the Best Corporate Social Responsibility (CSR) Campaign at the Northern Marketing Awards, for the marketing, promotion and social impact of the Festival. Judges said: "It had a wide CSR impact and demonstrated a dedication to community engagement and widening participation. An interactive, focused and engaging campaign, with a good sense of pride behind it. A clear winner in this category."

Dr Jo Heaton-Marriott, Director of the Lancashire Science Festival, said: "We were overjoyed to win two awards for the Festival, which is built around community engagement and attracts visitors from all over the North West. It does a fantastic job of breaking down the barriers to science and technology and presents so many opportunities to get hands-on with science and explore new ideas in a fun and interactive way."

The event is delivered in partnership with regional employers, businesses and scientific organisations, and draws on the expertise of staff, students and volunteer ambassadors. The popularity of the Lancashire Science Festival has increased each year with the number of visitors in 2015 up by 60% on the first event in 2012. Last year, 104 schools visited the event over two days with the schools' programme being booked up within 48 hours of going live online.

Dr Heaton-Marriott added: "The Lancashire Science Festival brings out the best in people and really captures the ethos of our University – that of unlocking potential and offering opportunity. The strength of the Festival is that it is a free event for our regional community with no hidden agenda, meaning there is genuine buy-in from staff, students and visitors."

Awe-inspiring: more than 11,000 visitors attended the 2015 Lancashire Science Festival.



# Lending a helping hand to the region's flourishing creative and digital small businesses

### UCLan celebrates success of business mentoring support initiative

According to Government statistics, small businesses accounted for 99.3% of all private sector businesses at the start of 2015 and nearly all of them were small or medium-sized enterprises (SMEs). Last year the combined annual turnover of SMEs was £1.8 trillion. which accounts for 47% of all private sector turnover in the UK and highlights just how significant small businesses are to the UK economy. The University is keen to play a key role in stimulating enterprise, business growth and regeneration in the North West and in 2015 it celebrated the success of a business mentoring support programme that has helped more than 165 established and new regional businesses over the last three years.

It is within the digital and creative sector, which according to the UK Commission for Employment and Skills, will need 1.2 million new workers to keep up with growth, that the University is keen to nurture entrepreneurial talent.

The free MORE Programme provided a combination of advice, guidance, business support and access to facilities to help the growth of creative, digital and media sector companies in the North West of England. It helped a mixture of businesses that have set up over the last five years and pre-start businesses that are looking to establish themselves within the next three years. All of

the businesses who signed up to the MORE Programme received a minimum of 12 hours support with many receiving considerably more. Out of the businesses that had already begun trading, 81% reported an improvement while working with the project. In total, the businesses and pre-starts received more than 4,850 hours of support over the three years.

The University's Project Manager Peter Rawling commented: "The achievements of the MORE Programme are reflected in the figures and, perhaps more importantly, in seeing the businesses go from strength-to-strength and the positive feedback we received from many of the participants."

Central Lancashire has a strong history of nurturing new business and retains its status as the top University in the North West for graduate start-ups and second nationally for the number that are still active after three years according to the Higher Education Business and Community Interaction Survey.

Manufacturer Irma Gilbert was one of the programme's participants. She said: "Before the MORE Programme I was working as a freelancer from home and my website was very basic. From joining I had access to the University's Media Factory and with help from my mentor Andrew, I built a new sleek website that was very professional.

"My business managed to reach new customers around the world including India, Portugal, Angola, Mozambique and Brazil. The result was a real increase in turnover from £6,000 to £90,000 last year."

Joanne Victoria Hill also took part to boost her BitchinTs business; a digital graphic and illustration manufacturer of canine, feline and equine-themed apparel for both people and their pets.

She said: "I'm grateful for all the incredible support I've received via the mentoring programme. It's been educational, enlightening and inspiring. I want to thank the organisation for giving me access to such a comprehensively empowering resource.

"Without the University's guidance and insight I wouldn't have the courage of my convictions to pursue my business idea."

All of the participants were supported by experienced business mentors including North West businesswoman Naomi Timperley, who last year was honoured in the Maserati100 which acknowledges those who actively support young entrepreneurs.

The project was part funded by the European Regional Development Fund (ERDF) and was open to companies working business-to-business in the creative and digital sector that were less than five years old.



# From Beijing to Preston:

### People's Canopy highlights cross-cultural collaboration

Embracing the world beyond its campus is at the heart of the University's ethos. Hosting community events that celebrate learning, diversity and integration help to create a universal sense of pride within the University and the local community.

In September 2015 an exciting and unique project came to Preston to celebrate connections between Central Lancashire and the city centre as well as highlighting the University's international links. More than 50 volunteer cyclists from the University brought the People's Canopy, a series of mobile structures on bicycle wheels, from St Peter's Square to the Flag Market accompanied by a procession of cyclists and cycle groups. Crowds of people came to watch the giant canopy cycle procession pedal through the streets to launch the inaugural Lancashire Encounter festival – a weekend of interactive activities and performances.

The spectacle was the brain child of In Certain Places (ICP), a programme of artistic interventions and events led by the University. Commissioned by ICP and designed by the People's Architecture Office in Beijing on the theme of the city as a meeting place, the People's Canopy is a two-storey high expandable roof structure on bicycle wheels. The 10 units were designed to collapse to the size of a double decker bus to be pedalled from one location to another and thereby transform underused public spaces.

The Canopy was greeted by a pop-up cycle hub on the Flag Market with refreshments, bicycle powered smoothies and information stalls. During its stay the unusual structure hosted commissioned artworks, community gatherings, performances, workshops, meetings, interventions, an arts' market, a day of activity presented by the University and a whole spectrum of creative activity across the festival weekend.

IPC Curator Elaine Speight said: "The People's Canopy project was developed with the aim of creating new visible connections between the University and the city centre, and celebrating the University's international links.

"As well as encouraging greater movement and exchange, the canopies were designed to provide the temporary market place for local, independent businesses and a social space in which communities from within the University and wider city could share ideas, culture and traditions, and disseminate research through performances and events."

The project was such a success that it was taken to Hong Kong just a few months later to take part in the Bi-City Biennale of Urbanism/Architecture and it played a central role in the festival.

Canopy designer and architect James Shen said: "After its launch in Preston, Hong Kong is the second site to host the People's Canopy; an apt location to highlight the historic and cultural ties between these two parts of the world."

Professor Charles Quick, of ICP, added: "The presentation of the Canopy at the Hong Kong Biennale of Urbanism/Architecture marks a new important step in this cross-cultural collaboration, which celebrates the connections and specificities of two very different places."

"After its launch in Preston, Hong Kong is the second site to host the People's Canopy; an apt location to highlight the historic and cultural ties between these two parts of the world."







### **Innovation**

"The University aims to nurture a growing and vibrant community of academic innovators, deepening its enterprise activities while maximising the resulting economic and social impact."

University of Central Lancashire Corporate Strategy 2015-2020



# Lift off for pioneering aerospace collaboration

Graphene, the world's thinnest material, could play a key role in revolutionising the aircraft industry over the next 20 years

Flying high: Billy Beggs, Engineering Innovation Manager (left) with Dr Darren Ansell, Space and Aerospace Engineering lead.

An innovative and entrepreneurial approach to research and knowledge exchange is a key pillar of the University's new corporate strategy. In 2015 an aerospace research team from the University's Engineering Innovation Centre linked-up with the University of Manchester's National Graphene Institute resulting in the world's first flight of an unmanned aerial vehicle (UAV) part constructed with graphene.

Among many applications the new nano-material could be of major benefit to the aviation industry; it is the thinnest material on Earth, 100 times stronger than steel, fire resistant and a powerful insulator and electrical conductor.

The test flight, carried out in Preston, sought to trial graphene on the wing of a UAV to test its robustness, aerodynamic properties and how it might be integrated into the manufacturing process.

Billy Beggs, the University's Engineering Innovation Manager, said: "This demonstration was a world first and our initial flight tests were very encouraging.

"Graphene has huge potential for aerospace; it is incredibly strong, yet lightweight and flexible at the same time. Through our partnership with the National Graphene Institute at the University of Manchester, and alongside a number of Lancashire-based SMEs, we aim to develop a road map that enables graphene to play a key role in the future development of the aviation industry.

"The phrase 'Northern Powerhouse' is sometimes overused but this is a real and fantastic example of expertise within the public and private sectors working together for the long term benefit of our local, regional and national economies."

"This demonstration was a world first and our initial flight tests were very encouraging."



The world's first UAV test flight incorporating a wing part constructed with graphene.

James Baker, Graphene Business Director at the National Graphene Institute, added: "This was the first demonstration of a UAV containing graphene components, in this case a graphene coated wing. The aim is to investigate the potential effects of graphene in drag reduction, thermal management and ultimately the ability to achieve lightning strike protection for aerospace and other related opportunities.

"Working with a number of universities and SMEs we aim to provide further demonstrations and enhance engagement between academia and the supply chain to achieve the goals of commercialising graphene applications."

Through the data collected from the first flight the research has moved on to the next level by developing processes of infusing graphene into composite structures. A new 'skinned' wing is currently in production, aiming to test the structural and weight saving benefits of graphene, with a demonstration flight planned at Farnborough Air Show in the summer of 2016.

Dr Darren Ansell, the University's Space and Aerospace Engineering Lead, concluded: "We are at the forefront of a research journey which could have a huge impact on the aerospace industry in the years to come. Although our research road map covers a 20 year period it's quite possible that the aerospace industry could begin using graphene within the next 12 months."





In 2015 the University published the results of a major independent study which looked at UCLan's economic impact not only in Preston but across the whole of the North West region.

Produced by leading economic consultancy Regeneris Consulting, the report focused on the most up-to-date figures available from 2013/14. During that year the University contributed £200m to the North West economy and, through a range of economic effects, supported 4,300 full-time equivalent jobs across the region. In that time the University directly employed 3,290 staff, making it one of the largest employers in Preston.

The University, with additional campuses in Burnley and Westlakes in West Cumbria, was also an important contributor to the economy as a purchaser of local goods and services. In 2013/14 it spent £15 million on suppliers based throughout Lancashire and the wider North West area.

UCLan was also found to have the ninth largest undergraduate population of all UK universities; a huge asset to both the financial and academic power of the area. With 36,000 students it was the largest University in Lancashire and the third largest in the North West. The 18,390 full-time students residing in the North West spent a total of £210m throughout the region, with £155m of that being spent in the red rose county.

The University was also highlighted as being Lancashire's largest provider of graduate level qualifications, supplying large numbers of highly skilled graduates into the workforce. Graduates in 2013/14 were expected to contribute an annual average of £24m to the North West and £15m to the Lancashire economy over their working lives. The figures also show the University educated half of all students at higher education institutions

in Lancashire, while 1% of all the county's residents were enrolled at Central Lancashire at any given time.

Commenting on the report, Vice-Chancellor Professor Mike Thomas said: "We have known for a long time that the University has a positive impact on the local and regional economy, but to have this verified in this comprehensive report is fantastic news. We work very closely with the Local Enterprise Partnership and the report helps us understand how we can continue to maximise our local economic and social impacts as we implement the University's new corporate strategy.

"As an 'anchor institution' within Preston, the University has a key stake in the future of the area and generates significant levels of spend and numbers of jobs. Importantly, we help bring talented people into the region and to Preston which brings additional benefits to the visitor economy."

Professor Thomas continued: "Alongside other universities in the region, we are making an important contribution to increasing skills and sharing our knowledge with organisations to ensure they develop a competitive edge, creating additional employment."

Babs Murphy, Chief Executive of the North and Western Lancashire Chamber of Commerce, of which the University is a member, said: "UCLan's contribution to the economy of Preston, Lancashire and the North West as a whole cannot be underestimated.

"To have one of the country's best universities situated at the heart of our capital city is yet another reason for Prestonians to be such a proud group of people.

"To see this backed up by such strong figures in terms of economic footprint, employment figures and gross value added is very pleasing.

"And we are well aware that the contribution of the University is only going to increase with the ongoing campus redevelopment, the results of which I cannot wait to see."

Tim Fanning, at Regeneris Consulting, added: "Our report shows that the University is making a very strong contribution to the local and regional economy. It is also playing a key role in providing the skills for local priority sectors, especially within the areas of health and social care. A range of developments planned for the coming years will bring opportunities for this role to be enhanced."

"To have one of the country's best universities situated at the heart of our capital city is yet another reason for Prestonians to be such a proud group of people."

Babs Murphy, Chief Executive of the North and Western Lancashire Chamber of Commerce.

# Just the tonic

### Prestigious new medical programme to help meet region's health needs

In a climate where the NHS is suffering a staff shortage and desperately needs doctors in hospitals and surgeries, the University has placed itself in a prime position to benefit the North West's healthcare economy by training new doctors to work in some of the biggest hospitals in the North of England.

Central Lancashire's new five-year undergraduate medical programme, the Bachelor of Medicine and Bachelor of Surgery (MBBS) for self-funded international students, welcomed its first cohort of 35 students in September 2015 to study medicine within the University's new multi-million pound medical facilities, with the undergraduates also undertaking clinical placements as part of their course. The University aims to improve local NHS services by attracting the best international medical students to study in East Lancashire, Preston and West Cumbria, and possibly return to work in the area.



L-R: Dr Kate Granger MBE; Professor StJohn Crean, Executive Dean of the College of Clinical and Biomedical Sciences with Professor Cathy Jackson, Head of the School of Medicine.

East Lancashire Hospitals NHS Trust (ELHT), Lancashire Teaching Hospitals Foundation NHS Trust (LTHT), North Cumbria University Hospitals Trust and other regional NHS Trusts are providing clinical placements in secondary care, while primary care placements are taking place in regional GP practices and community settings in Bridgewater Community Healthcare NHS Foundation Trust and 5 Boroughs Partnership NHS Foundation Trust, helping to meet the significant health needs across the North West.

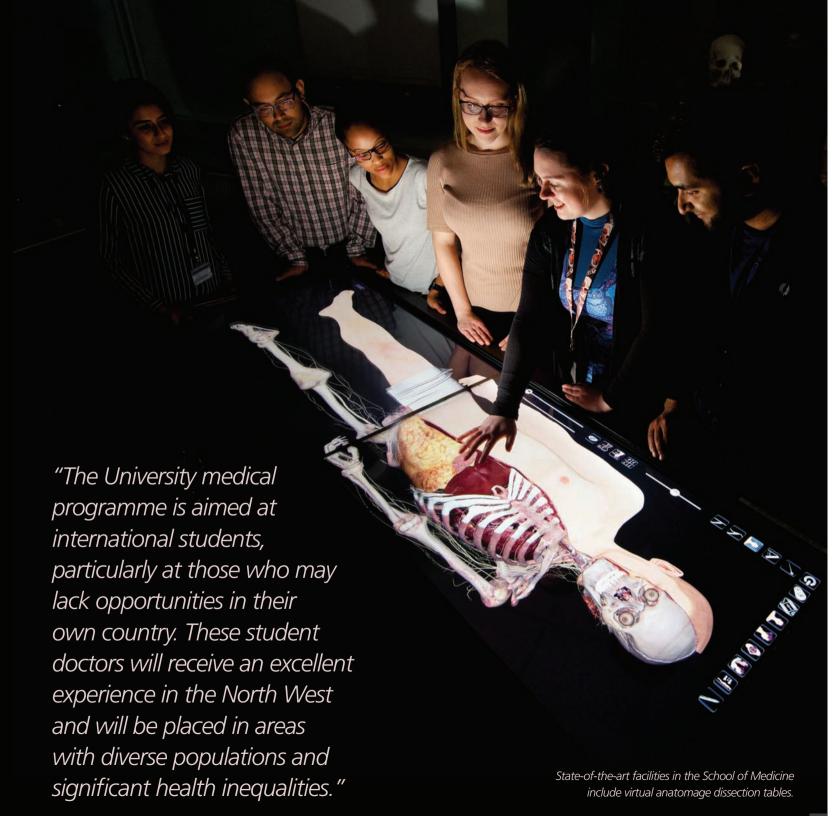
Professor Cathy Jackson, Head of the School of Medicine, explained: "The University medical programme is aimed at international students, particularly at those who may lack opportunities in their own country. These student doctors will receive an excellent experience in the North West and will be placed in areas with diverse populations and significant health inequalities."

The University's School of Medicine was officially opened towards the end of 2015 by Dr Kate Granger MBE, a terminally ill doctor whose #hellomynameis campaign to bring compassion to the forefront of healthcare is taking the NHS by storm. Dr Granger gave her support to the School saying: "The NHS desperately needs more doctors and the high quality training providing in this institution will no doubt supply them."

Over the years the University has established a strong track record in the development and delivery of innovative courses to meet the health needs of the North West. For instance the University's pioneering undergraduate dental programme has now produced 120 new General Dental Council registered dentists since its launch in 2007. That programme was developed in line with General Dental Council requirements and, likewise, the new MBBS programme has been launched in adherence to the General Medical Council quality assurance process.

Already strategic alliances with new Health Trust partners are being developed. Following the opening of the new West Cumberland Hospital in Whitehaven last year, new partnerships with North Cumbria University Hospitals NHS Trust, the Cumbria Clinical Commissioning Group and the Cumbria Partnership NHS Foundation Trust have been developed with the University to produce the West Cumberland Medical Education Campus (WCMEC) at the University's West Lakes Campus. The aim of the WCMEC is to develop a centre of excellence for remote and rural medical education and research.

Professor Jackson concluded: "Our students are not part of the NHS quota, but once fully qualified they could return to the UK and we believe they could represent a crucial part of the overall solution to fill the urgent skills gap that currently exists in areas such as East Lancashire and West Cumbria. Although at the moment UK and EU students can't apply to study medicine at UCLan, this is something we hope the Government will change in the future to allow the University to play an even greater role in working with the NHS to train and deliver a sustainable workforce for health services in the region."



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### Internationalisation

"The University operates in a global marketplace. Its activities, from internationally focused research to curriculum and study opportunities, will be international in their outlook."

University of Central Lancashire Corporate Strategy 2015-2020



The Chongqing Chuanju Theatre Troupe star at Preston's Chinese New Year celebrations, a community event organised by the University's Confucius Institute.

### **Educational partnerships in Oman and Qatar point way ahead**

International links between universities and partner institutions are vital, growing and global. These relationships will come to define the nature of UK higher education in the years to come. Increasing competition and the knowledge that working together can often reap greater rewards internationally is affecting the way UK universities think about their aspirations and how to maintain their international competitiveness.

At UCLan the University's new strategic plan points to a much broader and innovative approach to internationalisation. While international student recruitment remains important, it is the development of long-term, international partnerships and collaborations at both an individual and institutional level which are seen as key drivers toward a longer term and more partnership-based approach to internationalisation.

Demonstrating this new outlook the University recently signed two international, multi-million pound agreements to deliver courses in the Middle East.

The first of these contracts will see the University extend its long-term partnership with the International College of Engineering and Management (ICEM) in the Sultanate of Oman for a further five years.

The milestone agreement means students will be able to complete entire undergraduate degree courses in Oman, whereas they were previously required to study part of the programmes in Preston.

The University and ICEM have been partners in Oman for over 15 years delivering unique undergraduate degree courses in fire safety engineering, well engineering, facilities management and health, safety and environmental management.

With this announcement ICEM will continue to provide Central Lancashire-approved courses in Oman focused on providing a truly world-class higher education learning environment based on practical vocational teaching, with a strong bias towards producing graduates who are 'employer ready', well rounded and internationally experienced.

A separate deal with the Ministry of Interior of Qatar will see the University deliver fire safety engineering management courses from the new state-of-the-art Ras Laffan Emergency and Safety College in Doha.

The University will work closely with Qatar Civil Defence to develop a range of courses that will utilise the £302 million world-class facility, the Middle East's leading training institution for fire services and emergency responders.

This collaboration, the University's first in Qatar, will be led by a dedicated team of UCLan staff based at the college working in partnership with a vocational provider, Texas A & M Engineering.

It is also planned that existing Central Lancashire students based in Preston will have the opportunity to visit the college and use its cutting edge facilities to expand their own knowledge and experience.

Pro Chancellor and Chair of the University Board David Taylor, who led the visits to Qatar and Oman to agree the deals, said: "The extension of our partnership with ICEM is a real milestone and evidence of its past success, while the new relationship with Qatar Civil Defence will complement this and the University's other global partnerships, such as those in China and Mauritius.

"What's more, these initiatives will result in enormous benefits for students. For instance, they'll have access to world-class facilities, they'll be taught by academic staff with wide ranging industrial experience and they'll benefit from collaborative research which will feed into the teaching curriculum.

"The programmes will generate graduates who are highly trained and highly employable, both vocationally and academically, ready to apply their skills to national and global challenges."

The milestone agreement means students will be able to complete entire undergraduate degree courses in Oman, whereas they were previously required to study part of the programmes in Preston.

Opposite: Hands-on training for Fire Safety Engineering students at ICEM.



# Bridging the international entrepreneurial gap

China offers great opportunities for UK companies of all sizes, with growing demand for 'brand Britain'. It is, however, recognised that access to Chinese markets requires substantial knowledge, expertise and connections, and it's an area where the University is making a real difference.

In 2015, Central Lancashire's sector-leading approach to business incubation and entrepreneurial ethos led to an invitation from the Shenzhen Government to organise the UK stage of the seventh China (Shenzhen) Innovation and Entrepreneurship Competition, the most prestigious competition of its kind in China.

Winners of the UK round travelled to Shenzhen where they joined other businesses from around the world competing to win one of the top prizes (£30,000+) and the chance to pitch their winning ideas to some of China's biggest venture capital investors.

And it was the entrepreneurial ability of a Central Lancashire graduate which shone through all the way to the grand final in China, seeing off the business proposals of nearly 4,000 competing companies in the process.

Jerry Yang graduated from the University in 2008 with a degree in International Business Communication. He'd always wanted to start his own business and he said the University played a key role in helping him to achieve his career ambition.



Entrepreneurial graduate Jerry Yang.

"The University works extremely hard to cultivate an ethos of entrepreneurialism among its students and through its Northern Lights Business Incubation Unit this continues beyond graduation," he explained. "For me it was no different. I'd been given a taste of the business world when I set up a social enterprise during my placement year in China.

"Then, once I'd graduated from Central Lancashire I worked as an assistant within the University's Confucius Institute teaching Mandarin. It was a chance for me to perfect my English as well as a fantastic networking opportunity."

It was during this time that Jerry met his future business partner who was an experienced consultant. "We both realised we had complementary skills so we decided to form our own company; London Shanghai Venture Partners (LSVP)." A major factor which prevents successful business transactions between companies in Britain and China is a lack of country-specific knowledge and expertise. Specialising in all aspects of marketing and intellectual property, LSVP aims to solve this problem enabling market access for innovative products from both Britain and China.

Jerry continued: "DCT China is a core company within our portfolio and they have a product called 'NeedleBay' which represents a major development in the diabetes market. The company's five year goal is to becoming the leading brand of

insulin injection solutions in China. Over 114 million people in China have diabetes so there is a huge market for this product, possibly up to 20 million people."

Throughout the different stages of the competition the judging panels were highly impressed with Jerry's business strategy to educate Chinese consumers about the product and his innovative marketing strategy.

He said: "Ultimately we did not win the top prize but the competition and the encouraging feedback we received from the judges really helped to build our confidence. Our business strategy also evolved and improved as we completed different phases of the competition. We are now planning to expand our company by setting up a subsidiary in Shenzhen."

John Lonsdale, the University's Director of Innovation and Enterprise, said:
"Entrepreneurs love a challenge and an international competition like this one brings out some excellent ideas, plans and entrepreneurial spirit. We believe the competition will grow year-on-year as more UK businesses look for new ways to connect with their Chinese counterparts with a view to establishing a business in China.

"I have no doubt that Jerry has all the attributes to forge a very successful business career. He is a prime example of how our own Chinese-speaking students and graduates can help UK businesses to overcome the linguistic and cultural barriers and build bridges between the UK and Chinese market."

"Once I'd graduated from Central Lancashire I worked as an assistant within the University's Confucius Institute teaching Mandarin. It was a chance for me to perfect my English as well as a fantastic networking opportunity."

# From Pyla to Preston: a strengthening educational connection

When the University first opened the doors of its Cyprus Campus back in 2012, it became a beacon of progress for both the University's international strategy and the Mediterranean island's higher education provision. Three years on and the Pyla Campus has been hailed as an example of educational excellence and is proving to be a key force for change for the country.

In 2015, the Campus received a full licence to operate as a private Cypriot university – this was granted a full year ahead of schedule by the Council of Ministers. The landmark decision enables the facility to operate as a legally autonomous Cypriot university with its own charter and degree awarding powers.

Vice-Chancellor Professor Mike Thomas said: "This is an excellent achievement for the campus and well-deserved recognition for all our staff and partners in Cyprus, who have helped us achieve this goal ahead of schedule.

"With the approved operating licence, our dual awards will now be fully recognised by countries such as China, Oman and Greece, opening the door to international students seeking a high quality university experience in a modern campus setting."

UCLan Cyprus Rector Dr Melinda Tan, who led the submission for the final licence application, added: "The Council of Ministers decided that the University had met all the provisions under Cypriot law to operate with full licence status.

"The news is a fantastic boost for our first cohort of students who will graduate in 2016 from our pioneering four-year undergraduate degree programmes."

The connection between Preston and Cyprus was further strengthened when the star of the Pyla Campus football team was brought to the attention of Preston North End Football Club's Deputy Chairman David Taylor, who is also the Chair of the University Board.

David, who was visiting the campus, witnessed Sergios Avraam's talents at first-hand and invited him over to England to train with the (then) League 1 club. The striker trained at the UCLan Sports Arena with the PNE Academy Team (under 18s) for three-and-a-half weeks.

The sports science undergraduate, who also stars for Cypriot second division team Elpida Xylophagou, said: "This is a once-in-a-lifetime opportunity. To be able to play football professionally is a dream come true so I hope I impress the coaches. I'm so thankful to David, the people at Preston North End and the staff at the University for making this happen.

"It's been very interesting and challenging so far but it's definitely been enjoyable. The coaches and the players have been very friendly and encouraging so I couldn't have asked for more."

David said: "I'm delighted I had the chance to see Sergios playing while I was visiting our Cyprus Campus. To see him now in Preston making the most of this opportunity is great. He is a very talented footballer and I'm delighted I could help. UCLan's Cyprus Campus is one of our best assets and this helps to build further links between us."

While in Preston he was under the watchful gaze of PNE Academy Manager Nick Harrison. He said: "Credit to Sergios for coming over and joining in so well. He's taken to all the training sessions really well; he's coped with the physical demands, displayed his technical ability and has shown he's a good footballer.

"For me it's been a positive experience for both parties. He's been able to learn from us while the rest of the players have come up against an older player who has a different style of play to what they're used to. The way he's integrated so well with the group is a bonus."



Chair of the University Board David Taylor with Sergios Avraam and UCLan Cyprus football coach Miodrag Stijovic.





# Global Sound Movement hits fundraising high notes

### UCLan students and staff travelled to Uganda to record rare instruments

The University's global reach is increasing year-on-year. From partnerships with 125 institutions around the world to providing travel bursaries for students to study in far-flung places such as Peru, South Africa and the Arctic Circle, the University aims to produce internationally aware global citizens. In 2015 the University launched a revolutionary sustainable fundraising platform that enabled students to work in Uganda on a project that is not only making waves in the music industry, but is also benefitting economic growth in small communities in the developing world.

The Global Sound Movement is made up of University music production and fashion brand management students and academics in connection with London-based charity Sound Foundation. Last year the group travelled to Uganda to record sounds from extremely rare and exotic instruments. The aim is for the resultant recordings to be used commercially by music producers: it is thought that the unique sounds will appeal to the diverse nature of western music. The money generated by the sample library will be donated back to the communities from which the sounds were recorded, helping to fund economic growth and creating a sustainable and mutually beneficial fundraising cycle.

The work carried out by the Global Sound Movement not only benefits remote communities and the music industry, but the trips also offer Central Lancashire students on the BA (Hons) Music Production course practical experience in how to create a sample library and how to plan, manage and roll out a marketing campaign based on their music production skills.

Phil Holmes, Senior Lecturer in Music Production, said: "The Global Sound Movement offers a unique and sustainable way of fundraising for areas of social and economic need across the world.

"The aim is to connect communities through music, and it's a win-win situation – the communities receive funding and the donators get something they can work with and benefit from commercially, in return for their contribution."

The sample library is an ongoing project for the Global Sound Movement, and one

that the group will continue to expand following a very successful trip to Cyprus and further projects planned for Indonesia and Myanmar, Burma.

Senior Lecturer in Brand Management Paresh Parmar added: "The sample library we've created has massive potential for growth. There are so many unusual instruments across the globe that produce fantastic sounds, but some are so rare that they are only heard by a handful of people.

"The Global Sound Movement was created to share these sounds with the rest of the world and use them as a way to generate funds for communities at the same time. The library will expand as we discover more unique instruments and we look forward to hearing some of these new sounds being fused with western music."

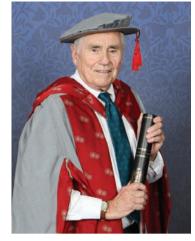


### **Honorary Awards and Graduation**

The University's Degree and Award Ceremonies in Preston's Guild Hall are the climax of the academic calendar. Over the course of 2015, more than 5,400 graduates received deserved recognition for all their hard work from the University, family and friends.



**During each graduation** ceremony the University confers Honorary **Doctorates or Fellowships** on distinguished citizens who have made significant contributions to their field or who have strong links with the region. In 2015 Honorary awards were conferred to the following individuals:



**Donald Phinney Gregg** was recognised for the contribution he has made through his career in public service and, in particular, his work in Korean affairs.

Donald's illustrious career started in 1951 when he joined the CIA. Over the next 25 years he served in Japan, Burma, Vietnam and Korea, before he was seconded to the US National Security Council staff, where he was in charge of intelligence activities and Asian policy affairs.

In 1982 he retired from the CIA and became the national security advisor to the then Vice-President George Bush. A significant moment in Donald's career came in 1989, when he was appointed as American Ambassador to South Korea. He retired in 1993 and became the president and chairman of The Korea Society. His interest in Korea has continued and Maiesty the Oueen. in 2014 he formally opened the University's International Institute of Korean Studies.



Dr Shiv Pande MBE was acknowledged for his contribution to the community as a GP and medical educator.

Shiv was born and educated in India. After gaining his medical qualifications he moved to England in 1971 to work in cardio-thoracic surgery. Four years later he entered general practice and spent the next 30 years in Liverpool. During this period, Shiv held a number of prominent positions on professional medical bodies, including becoming the Genera Medical Council's first Asian or black ethnic minority treasurer.

His knowledge has led him to become a vital member of the University's Bachelor of Medicine Bachelor of Surgery working group while Shiv's charity and community work was rewarded in 1989 when he received an MBE from Her



**Professor Andrew Hartley** was honoured for his contribution to academia.

After studying English in Manchester Andrew decided to undertake his Masters and PhD in America. It was here the Prestonian landed his first Shakespearean iob at the University of West Georgia. During this time he became resident dramaturg, which deals with the research and development of plays. The role led him to write The Shakespearean Dramaturg, which was the first book of its kind. He then moved to the University of North Carolina and produced numerous articles on Shakespeare. In 2006 his debut thriller, The Mask of Atreus, was published – the first of four bestselling thrillers. Andrew has also published fantasy novels for children and adults in addition to his collaboration in the adaption of Shakespeare's Macbeth and Hamlet into audio novels.



**Arthur Parsons** was acknowledged for his contribution to video games design.

It was during his time at boarding school that Arthur developed a love of early video games on platforms like the Spectrum, Amiga and Nintendo. After a brief period studying engineering at university he landed a job as a game tester. After two years he moved to Traveller's Tales, now TT Games, where he has been for 18 years. During this time he has progressed from testing games, to designing them, and from there to creating a design team of 150 people who make globally marketed games, including Lego Marvel. Since 2006, Arthur has regularly visited the University, speaking with undergraduates and giving inspirational presentations about the work he does at TT.



**Dave Myers** was recognised for the contribution he has made to the community through his varied career and his work as a television presenter.

Dave was educated in his home town of Barrow-in-Furness before studying an art foundation course run by Preston Polytechnic, now the University of Central Lancashire. He continued his education in London and became a make-up artist, firstly for the BBC and then as a freelance artist specialising in prosthetics.

He met Si King on the set of a TV drama and their shared love of food, motorbikes and travel led to the creation of the Hairy Bikers. Since 2004 they have travelled the world on their bikes to explore different cuisines and have written a range of cookery books, including their best-selling Hairy Dieters' books. Dave, who is a BAFTA nominee, also lit up the dancefloor on Strictly Come Dancing in 2013.



Paul Hancock was honoured for his contribution to the community as Chief Fire Officer of Cheshire Fire and Rescue Service.

Paul's distinguished 30 year career started at Workington Fire Station. Promotions saw him move to Barrow-in-Furness and to Kendal where he was the Fire Station Commander. Paul continued to climb the career ladder and by 2005 he was named Divisional Commander and Area Manager, the same year he led the search and rescue efforts during the Cumbria floods. Further promotions came his way and in 2007 he joined Cheshire Fire and Rescue Service as Deputy Chief Fire Officer. By 2009 he was promoted to Chief Fire Officer. In his latest role he has provided the University's fire students with access to Cheshire's state-of-the-ar Command Development Centre and released staff to teach on Central Lancashire programmes.



**Brian Harris** was recognised for his significant contribution to the development and success of the University.

The chemical engineer spent 34 years working his way up the ranks at ICI, becoming Vice-President of Global Operations. His career took him all over the world but he returned to the UK to become Managing Director of Eutech Engineering Solutions Ltd and then Engineering Director at BNFL.

In 2001 he joined the University Board and two years later he was made Chair of the Audit Committee. Brian was named the Chair of the Board in 2007 and worked tirelessly to achieve strategic leadership and high performance of the University's global objectives while sustaining a focus on the UK business. Under his leadership, the University built a campus in Burnley, opened a campus in Cyprus and created the dental school in Preston He retired last year.



# **Graduation success 2015**



The end goal of any University student is to graduate with a good degree and to land a great job. If that job offer comes from attracting the attention of the biggest name in technology during the week you graduate with a First Class degree, then it is safe to say you have fulfilled your academic potential.

This happened for Austrian software developer Felix Krause whose final year software engineering project caught the eye of company bosses at global powerhouse Apple. He created a programme called Fastlane which speeds up the submission procedure that developers need to go through to submit an app to the App Store by combining them together in an automated process.

Within days of releasing Fastlane more than 5,000 developers had used the programme, saving at least 200 hours of time per day. The tool's popularity was spotted by Apple who emailed Felix to say it was interested in his work and invited him to take up a threemonth internship at its headquarters in Silicon Valley, near San Francisco.

The 21-year-old, who is from a small village near Vienna, commented: "It was a massive surprise to find that Apple had contacted me directly to say the company was interested in exploring my work further. I have always wanted to work for Apple but never thought I would be good enough so for its developers to approach me was amazing."

Felix moved to the United States to begin his internship after graduating in the summer with a First. He came to Central Lancashire for the final year of his studies from HTL Wiener Neustadt, a partner college in Austria.

His tutor Chris Casey, Principal Lecturer in computing, added: "To land an internship with one of the world's top companies straight out of university is a massive achievement and something that Felix should be very proud of.

"Felix came up with an original idea for a project and implemented it very professionally. It's an outstanding software engineering project; a creative and beautifully designed solution to a significant problem."



Another success came in the form of the first cohort of Masters in Architecture students to graduate. Among the proud recipients of the award was mature student Keith Tasker who achieved his childhood dream of becoming an architect and became a dad during his studies.

He spent six years training for the profession and toasted his success with his wife Emily and 18-month-old daughter Brooke at his graduation ceremony. The 26-year-old successfully managed to juggle full-time study with fatherhood and working part-time for Alan Jones Chartered Surveyors.

"I've wanted to be an architect since I was sixyears-old and asked for straws and Sellotape for Christmas so I could make things, so realising this ambition is a dream come true," said Keith.

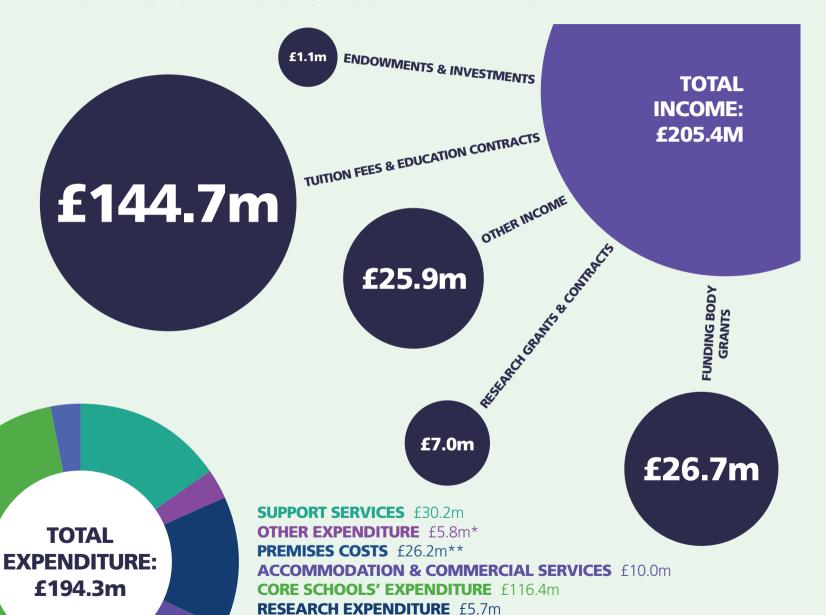
"It's been difficult at times trying to fit everything in, and of course becoming a dad in the middle of my course meant I had lots to juggle, but it's all been worth it. I've had a lot of support from my wife and course tutors."

Due to his long-held ambitions of becoming an architect, he has worked part-time in the industry since leaving school and it means the designer has already made his mark on the Blackpool landscape.

He commented:

"I worked on the designs for Flamingo's Nightclub which I'm really proud of and more recently I've also helped to design a house in Lytham which is now being built. It's a great feeling to see a project through from conception to construction and know I've put my stamp on it."

# **UCLan facts and figures:** Financial results 2014/15



\*includes income generating activities and other external activities

\*\*includes infrastructure costs such as depreciation, maintenance, utilities and rates

NET INCOME £205.4m

EXPENDITURE - £194.3m

**OPERATING SURPLUS** = £11.1m

WHY DOES THE UNIVERSITY MAKE AN OPERATING SURPLUS?



TO ENSURE THAT THE UNIVERSITY'S **ACTIVITIES REMAIN FINANCIALLY** SUSTAINABLE IN THE LONG TERM.



TO ALLOW INVESTMENT SUCH AS FOR ADDITIONAL STAFF. **FACILITIES AND SERVICES.** 



TO ENSURE THAT THE UNIVERSITY HAS SUFFICIENT RESOURCES AVAILABLE TO REPLACE, IMPROVE AND INVEST IN ITS PHYSICAL ASSETS IN ORDER TO **ACHIEVE ITS ACADEMIC STRATEGY.** 



**TO MITIGATE AGAINST UNFORESEEN EVENTS THAT** MIGHT JEOPARDISE THE FINANCIAL **HEALTH OF THE UNIVERSITY** IN THE SHORT TERM.

### **KEY PERFORMANCE INDICATORS**

5.4% **OPERATING SURPLUS AS % OF TOTAL INCOME** 

0.7% **ANNUAL DEBT SERVICING COSTS AS % OF TURNOVER** 

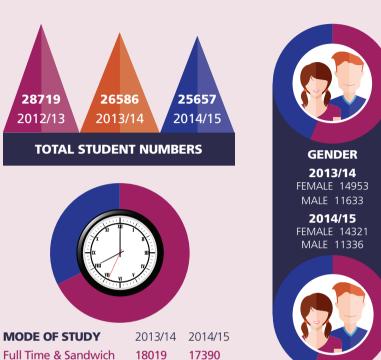
**MAXIMUM: 4%** 

56% **STAFF COSTS AS % OF TOTAL EXPENDITURE** 

**TARGET: 5% + 10%** 

MAXIMUM: <60%

# Students and study 2014/15



8267

8567

#### PARTICIPATION

**Under-represented groups in higher education**Percent of young full-time students from state schools or colleges - 2014/15

First Degree Entrants		
UCLan <b>98.2%</b>	Total UK <b>89.8%</b>	
Other Undergraduate Entrants		

....

UCLan **97.6%** 

Total UK **97.2%** 

**All Undergraduate Entrants** 

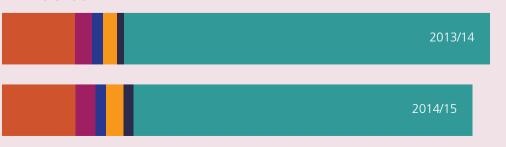
UCLan **98.1%** 

Total UK **90.0%** 

# STUDENT AGE AT 1ST SEPT 10000 8000 4000 2000 Under 18 18 to 20 21 to 24 25 to 29 30+

### **ETHNIC GROUP**

Part-Time



	2013/14
	3988
	928
	596
No	774
Otl	371
	19929

4		2014/15
3	Asian	4015
	Black	1089
	Mixed	599
	<b>Not Known</b>	958
	Other Ethnic	523
9	White	18473

### **LEVEL OF STUDY**

Postgraduate 2013/14 4589 2014/15 4448



### **Undergraduate 2013/14** 21997

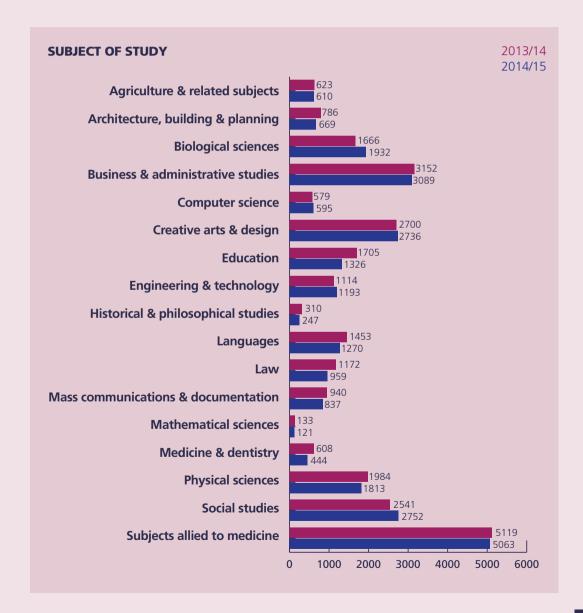
**2013/14** 21997 **2014/15** 21209



### **NATIONAL STUDENT SURVEY**

Question 22 (Overall Satisfaction)

	2013	2014	2015	In 2014/15 UCLan achieved its overall satisfaction benchmark figure of 85%
UCLan	84%	84%	85%	



# Staff profile

Source: HESA Staff Record 2014/15

Gender	Academic Professional	Managers and Support Staff	Total
Female	540	755.5	1295.5
Male	603.8	384.8	988.6
Total	1143.8	1140.3	2284.1

# UCLan's importance to the local economy

**UCLAN GRADUATES ADD ON AVERAGE** 

# MILLIEN

TO THE NORTH WEST ECONOMY PER ANNUM THROUGH **INCREASED SKILLS AND PRODUCTIVITY** 

THE 18.390 FULL-TIME **STUDENTS RESIDING** IN THE NORTH WEST **SPENT A TOTAL OF** £210M THROUGHOUT THE REGION, WITH £155M OF THAT BEING **SPENT IN THE RED ROSE COUNTY.** 



UCLAN CONTRIBUTED E



£200M

EMPLOYERS IN PRESTON

**SUPPORTED APPROXIMATELY** 

**FULL-TIME EQUIVALENT JOBS IN** THE NORTH WEST



**NINTH LARGEST UNDERGRADUATE POPULATION OF ALL UK UNIVERSITIES** 

3RD LARGEST UNIVERSITY IN THE NORTH WEST

AND WITH

36,160 STUDENTS WAS THE **LARGEST UNIVERSITY IN LANCASHIRE** 











# **Best of UCLan 2015**

Hundreds of guests including key business contacts, educational partners and Honorary Fellows attended the Best of UCLan 2015 event - a window on the outstanding teaching, learning, research and innovation taking place across the University.



# Sir Francis Kennedy:

### A tribute to a fine ambassador and a great man

In January 2016 the University community mourned the loss of its first chancellor, Sir Francis Kennedy, who died at the age of 89. Frank's first involvement with the University was in 1989 when he joined the Board of Governors. During that time he played a crucial role in the institution's transition from Lancashire Polytechnic to the University and in 1995 he became the first chancellor of the University, a position he held until 2001. A year later he was recognised for his service to the University through the award of an Honorary Doctorate.

Former Deputy Vice-Chancellor Alan Roff, who worked alongside Frank throughout his association with the University, provided the following tribute for a man who made such an outstanding contribution to the development of the University of Central Lancashire.

Frank was a role model for the University, having been born locally and, despite his humble origins, rising through his education to have an extremely successful career in the Civil Service, the Diplomatic Service and then business. He worked in countries all over the world and was always an internationalist but he had a particularly affinity for Nigeria. He had already received his knighthood by the time he first became associated with the Polytechnic in 1988. He was a founder member of the independent Board and was the first chancellor, able to use his influence in the city and elsewhere to help us facilitate a very rapid growth plan that enabled the smallest polytechnic in England to become one of its largest universities by the time he stood down as chancellor.

Frank was born in Brinscall in 1926, a third generation Irish immigrant from Tipperary. He passed his 11 plus and won a scholarship to be educated by the Jesuit priests at Preston Catholic College. From there, he obtained a scholarship to read English at Manchester University, where he also trained as a teacher.

On leaving the university, he successfully applied for graduate entry to join the Civil Service where his first posting was as an accounts officer at the Royal Ordnance Factory in Chorley. He went on to postings in the Foreign and Commonwealth Office and the Diplomatic Service in Asia, Africa and USA, where he retired as Consul General in New York.

After his retirement from the Diplomatic Service, he returned to live in Lancashire, and by the time the polytechnics were given independence from local authorities Frank was already associated with Lancashire Polytechnic, and we invited him to be one of four local business people who would select the new Polytechnic Board. He became a founder member of the Board when it was created in 1989 and remained on the Board until he became our first chancellor in 1996.

Immediately after gaining independent status, we developed a very ambitious expansion plan for students, staff and buildings. Frank and other senior Board members strongly backed that plan and its underlying rationale that Lancashire deserved and needed a large, thriving polytechnic, so that all the people of Lancashire who would benefit from higher education could achieve their full potential.

This rapid development of the estate required the ability to borrow significant sums of money from major UK banks. Although our business plan was sound and approved at regional level, the sums of money involved required 'London' approval and the bankers in London were wary of lending to a polytechnic in Preston when none of them had ever lent such sums to any polytechnic – even in the south - before. Frank picked up the phone to the chairman of the bank concerned and the approvals arrived the next day. New academic buildings and student residences followed, creating the basis for the University we have today.

For 20 years, Frank was a regular visitor to the University not only in an official capacity but also because of his interest in history and, particularly, philosophy. By chance, I shared that interest and often met him at postgraduate seminars or lectures from visiting professors. Whether in an official capacity or not, Frank was unfailingly polite but also extremely perceptive. His advice to me over the years was always well meant and wise. I know that former Vice-Chancellors Brian Booth and Malcolm McVicar also valued Frank's advice and support.

The University has lost a great ambassador. Lancashire has lost a great man.

#### Alan Roff

Deputy Vice-Chancellor, University of Central Lancashire 1995-2011





### University of Central Lancashire, Preston PR1 2HE

Tel: +44 (0) 1772 201201 Email: cenquiries@uclan.ac.uk www.uclan.ac.uk









