



NORTHUMBRIA

UNIVERSITY NEWS

Issue 20



BARONESS TANNI GREY-THOMPSON

Northumbria Chancellor and 11-times gold medallist in exclusive interview

Turn to page 11 for the full story



£1.2 MILLION FORENSIC BOOST

Research grant will help identify previously unidentified bodies

Turn to page 12 to find out more



HOW SAFE IS SOIL?

Study investigates if lead in soil is impacting gardeners' health

Turn to page 24



THE ANTARCTIC

Predictions to protect the planet

While some parts of the environment may respond gradually to changes in climate, others may potentially undergo large and sudden, irreversible step changes with global implications, which is known as a tipping point.

Researchers will be working to find out what tipping points within the Antarctic Ice Sheet and the Southern Ocean will cause the ice sheets to become permanently unstable, leading to sudden changes in the environment with significant global implications.

Antarctica's ice is situated both on land – known as the ice sheet – and on the sea, where it forms floating ice shelves bordering the land. The point where the ice sheets and

Experts from Northumbria University are playing a major role in a £4 million study investigating how changes in Antarctica may lead to large and unexpected rises in global sea levels over the coming decades.

ice shelves meet is called the grounding line. The ice shelves act as a safety band holding the land-based ice sheet in place. If the grounding line becomes unstable and retreats it will result in a greatly increased flow of ice into the ocean. Hilmar Gudmundsson, Professor of Glaciology and Extreme Environments, at

Northumbria said researchers have recently discovered that the position of the grounding line can become unstable, which can cause an uncontrolled and unstoppable advance of ice moving into the sea. "We are very concerned at how much ice mass can flow from the land into the ocean across the grounding

line," he said. "This could have catastrophic global impacts and raise sea levels by several metres in as little as 100 years."

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Northumbria University
NEWCASTLE

"WE ARE VERY CONCERNED AT HOW MUCH ICE MASS CAN FLOW FROM THE LAND INTO THE OCEAN. THIS COULD HAVE CATASTROPHIC GLOBAL IMPACTS AND RAISE SEA LEVELS BY SEVERAL METRES IN AS LITTLE AS 100 YEARS."

PROFESSOR
HILMAR GUDMUNDSSON

IN THIS EDITION

AUTUMN 2019



**Northumbria
University**
NEWCASTLE

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Keep up to date with the latest news from Northumbria University at northumbria.ac.uk/news

Predictions to protect the planet cont.

The research team, which includes academics from universities in the UK, Norway, Germany and France, is intending to put their findings forward for the sixth Intergovernmental Panel on Climate Change (IPCC) Assessment report in 2022 to provide guidance for policy makers ahead of the 2023 Paris Agreement. The IPCC is a United Nations panel which provides regular assessments of the scientific basis of climate change, highlighting its impacts, future risks and potential options, while the Paris Agreement brings nations together to strengthen the global response to the threat of climate change.

The £4 million study has been funded through the European Commission's Horizon 2020 scheme. The six partner organisations involved will each work on different elements. The largest individual sum, worth £1.2 million, has been awarded to Northumbria due to the University's expertise in modelling the behaviours of ice sheets.

Northumbria is quickly becoming known as one of the UK's leading universities for research into Antarctic and extreme environments. Within the past 12 months, researchers have uncovered a vast range of hidden valleys and canyons buried under the continent and have provided evidence

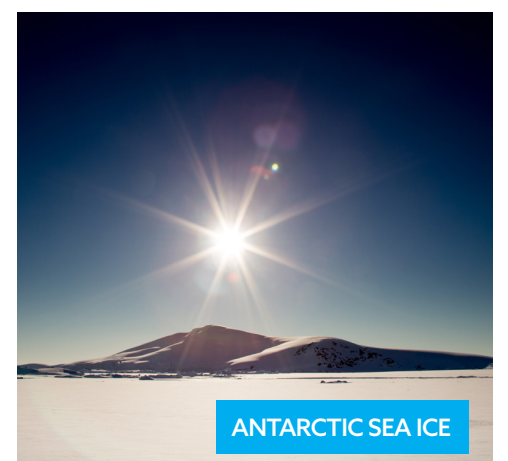
of the imminent break-off of a section of the Brunt Ice Shelf, which will lead to a large iceberg twice the size of New York City floating in the Weddell Sea. They have also begun work on a major NERC-funded study worth £754,000 to investigate the future of Antarctica's enormous Thwaites Glacier.

For more information on Northumbria's research into cold and palaeo environments, visit northumbria.ac.uk/cape

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northumbria.ac.uk/extremeenvironments



ANTARCTIC SEA ICE

CLIMBING THE LEAGUE

Northumbria is officially the fastest rising UK university in the most prestigious league table of universities worldwide, and has also been ranked one of the top 100 universities across the globe for graduate employability.

No other university in the country has climbed the league of the Times Higher Education (THE) World University Rankings faster than Northumbria in the past five years, highlighting the success of the University's strategic vision.

THE compiled its largest ever annual league table rankings this year. It reviewed the activity of almost 1,400 universities across 92 countries, measuring their success in teaching, research, citations, industry income and international outlook. In order to evidence the quality of research originating from universities, the THE team analysed 12.8 million research outputs and 77.4 million citations produced worldwide.

The results show that Northumbria is rated within the top 15% of universities globally for research citations. This is a measure of how often research from the institution is cited outside the university, for example in other academics' research, which is an indication of which universities are performing best when it comes to creating and sharing new knowledge. Linked to this, Northumbria also scored highly for international co-authorship, which demonstrates how often experts conduct original research with colleagues in universities around the world.

Vice-Chancellor and Chief Executive, Professor Andrew Wathey, believes the University's strategic focus and investment to drive both the volume and quality of research generated have led to this remarkable rise in these global rankings. "Just five years ago, Northumbria was rated in the 601-800 group and today we rank within the top 351-400," he said. "Northumbria is a challenger institution which is catching the attention of many within the higher education sector."

Northumbria has also been named one of the best universities in the world for graduate employability, according to the QS Graduate Employability Rankings 2020. The University improved its position

in the Graduate Employment Rate category to be ranked within the top 100 universities in the world for the proportion of graduates in employment within 12 months of graduation.

QS reviewed more than 750 universities worldwide to identify which are producing the most employable graduates. Northumbria's excellent reputation for graduate employability and entrepreneurship resulted in the University climbing up the league tables, having moved up 61 places since last year.

Northumbria is already ranked 7th in the UK for the total number of graduates in professional and managerial roles and it is the number one university in the country for business start-ups, based on turnover.

The University has been helping students and graduates to create their own businesses for more than a decade, providing support, mentoring, advice and office space to help their businesses grow and develop. Today, graduate start-ups from Northumbria have a collective annual turnover of £81.4 million and have created over 1,000 jobs in the North East.

The University recently announced ambitious plans to launch a new business incubator space to help the next generation of student and graduate entrepreneurs and is inviting business partners to get on board to offer mentoring and financial backing.

Looking for talented graduates? Visit northumbria.ac.uk/incubatorlaunch

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northumbria.ac.uk



"NORTHUMBRIA IS A CHALLENGER INSTITUTION WHICH IS CATCHING THE ATTENTION OF MANY WITHIN THE HIGHER EDUCATION SECTOR."

PROFESSOR
ANDREW WATHEY CBE



**Northumbria
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NEWCASTLE**

TACKLING TOMORROW'S CHALLENGES

At Northumbria our academics are working together to make a real and tangible impact on the world. Through their ground-breaking research they are, among other things, fighting disease, helping people live longer and healthier lives, and protecting the planet. They ask how we can shape the world we live in by reflecting on the past, understanding the present and planning for the future.

Throughout 2019 we have been showcasing examples of this remarkable work through *Northumbria University News* – highlighting research which is literally tackling tomorrow's challenges head on. In this final issue of the year, we explore how a new Northumbria-led satellite space mission will answer fundamental questions about solar storms, and how an innovative new solar paint could help meet our increasing demand for electricity in the future.



SATELLITES TO REVEAL SOLAR STORM SECRETS

The aurora borealis, or northern lights, is a stunning natural phenomena, seen in the skies above high latitude countries such as Norway and Iceland every year. But despite their beauty, the powerful solar storms which cause the dazzling natural light displays can lead to dangerous consequences here on earth.

Power grid outages, disruption to GPS and other navigation systems and increased radiation levels at high altitude are just some of the ways severe 'space weather' or solar storms can impact our lives. The danger posed is considered so serious that the UK government has added space weather to the UK National Risk Register, meaning government departments including military, energy, civil aviation, and transport must

plan their responses in case such an event were to occur.

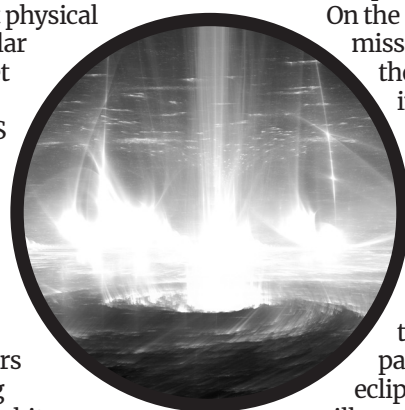
Using current methods of forecasting, solar storms are usually only detected a few days before they reach earth. However, our understanding of these space weather events could become much clearer in the future thanks to research being carried out by solar physicist Dr Eamon Scullion, of Northumbria University. He is heading up the SULIS project – a UK-led solar science mission which will use a cluster of small satellites to carefully monitor solar storms, allowing scientists to study them in greater detail than ever before.

Solar storms occur when the Sun releases enormous bursts of energy as solar flares, launching huge magnetic clouds of charged gas, known as coronal mass ejections. It is the interaction of

these charged particles with the Earth's atmosphere that results in the aurora borealis effect. The coronal magnetic field is one of the most important physical properties of the solar atmosphere, and yet it is one of the least explored. The SULIS mission will use specially designed technology to directly measure the magnetic field of the solar corona for the first time, with three pairs of formation-flying satellites sent into orbit around the Sun.

"Solar storms are unavoidable" explains Dr Scullion, "but with SULIS we will learn about their basic building blocks in order to more accurately forecast when

the next 'big one' will arrive. Having advanced warnings will enable us to take steps to minimise the impact".



On the SULIS mission, one of the satellites in the formation-flying pair will be shadowed by the other, meaning that the partially eclipsed satellite

will require some additional power. To achieve this, the front satellite will direct a laser beam at the satellite behind it which will charge the second satellite. The ability to transfer power to otherwise

"dead" satellites could be highly useful for future small satellite cluster missions, increasing their longevity, and helping to manage the ever-growing space debris problem.

"We are excited to be developing a mission to expand the UK's role in solar physics," said Dr Scullion. "The SULIS mission complements existing and proposed operational space weather missions from NASA and the European Space Agency (ESA) and will help pave the way for future space weather instruments."

Find out more about the SULIS mission online at sulis.space

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northumbria.ac.uk/tomorrow

THE AURORA BOREALIS

"SOLAR STORMS ARE UNAVOIDABLE, BUT WITH SULIS WE WILL LEARN ABOUT THEIR BASIC BUILDING BLOCKS IN ORDER TO MORE ACCURATELY FORECAST WHEN THE NEXT 'BIG ONE' WILL ARRIVE."

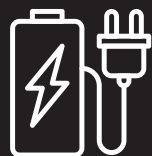
DR EAMON SCULLION

Left: Illustration of a solar storm



More than
227,000
new plug-in vehicles
were registered between
January and August 2019
– compared to just 3,500
in the whole of 2013.

(source: nextgreencar.com)



In June 2018 there were
16,700
public charging stations
available across the UK,
up from 12,800 in
June 2017.

(source: Committee on
Climate Change)

POWERING THE FUTURE



As our demand for electricity to power everything from our cars to our mobile phones increases, one Northumbria academic explores innovative new ways to harness power from the sun.

The face of transport in the UK is changing. Concerns about the impact of nitrogen oxide emissions on the health of both people and the planet have led to many countries, including Britain, announcing a complete ban on the sale of petrol and diesel cars by 2040. In their place, a new generation of electric vehicles will play a key role in achieving the goals set out in the UK government's 2019 Clean Air Strategy.

But in order for drivers to embrace the idea of electric vehicles, the issue of charging first needs to be addressed. Range anxiety – or the fear of running out of power between charging points – is a real concern for many would-be electric vehicle owners.

On the back of recent research, Scientists at Northumbria University have proposed an innovative and cost-effective solution which could accelerate the transition from petrol and diesel cars to electric vehicles. Their research involves a 'solar paint' which could be applied directly to the surfaces of new cars during the manufacturing process. The paint contains photovoltaic elements which would capture light from the sun and convert it into clean, zero carbon electricity. This would extend the range of an electric vehicle and be particularly useful in the urban environment, where journeys are often short and cars are parked for long periods in between.

The paint has the potential to be applied to a wide range of products, not just electric vehicles, creating a whole new manufacturing sub-field – product integrated photovoltaics

(PIPV). From personal devices to mobility scooters, this technology would reduce our reliance on electricity from fossil fuels and allow a range of new products to be designed which improve our quality of life in a sustainable way.

Leading the project is Dr Neil Beattie, Associate Professor of Physics at Northumbria University. He believes that new innovations and developments in renewable energy technologies are essential to produce the power required for the increasing number of distributed energy applications in coming years. As he explains: "Our demand for electricity is set to increase significantly over the coming decades and it is therefore critical to have innovative and sustainable power solutions. In addition, part of this increased demand will come from a transition to more distributed energy applications – that is devices that generate electricity at or near where they will be used – particularly in the fields of healthcare, construction, transportation and consumer electronics."

Dr Beattie is no stranger to developing new ideas and technologies, having previously worked as an innovation consultant for companies including Shell, Boeing, Rolls-Royce and P&G. Making use of his links with industry he will develop his research into photovoltaic paint over the next two years and work to find ways of incorporating it into the manufacturing process.

His project has received a grant of almost £240,000 from the Engineering and Physical Sciences Research Council (EPSRC) and will be supported by specialist

project partners, engineering and project management firm Arup and photovoltaic specialists Solar Capture Technologies.

Dr Beattie hopes his research will stimulate global efforts to finding alternative solutions to powering the cars, phones, household appliances and other electric devices of the future. As he explains: "This research has the potential to transform manufacturing, and for the UK to take the lead in a new kind of high-value manufacturing which relies on high-level knowledge and skills."

Find out more about the work of Dr Beattie and the Northumbria Photovoltaics research group at sites.google.com/view/nupv

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northumbria.ac.uk/tomorrow

"OUR DEMAND FOR ELECTRICITY IS SET TO INCREASE SIGNIFICANTLY OVER THE COMING DECADES AND IT IS THEREFORE CRITICAL TO HAVE INNOVATIVE AND SUSTAINABLE POWER SOLUTIONS."

DR NEIL BEATTIE



UNITED NATIONS BUILDING
IN GENEVA, SWITZERLAND

Promoting peace with research

Northumbria academics have used their research to support this year's United Nations' International Day of Peace.

The UN International Day of Peace (Peace Day), observed globally each year on 21 September, provides an opportunity for people around the world to commit to peace above all differences, and to contribute to building a culture of peace. It was established in 1981 by a unanimous UN resolution.

This year Northumbria supported Peace Day with an initiative called Be the Change, and invited staff and members of the public to take part in a programme of inspirational events and presentations given by academics. These included a live stage performance, a film screening and interactive discussions – all based on their research.

Lucy Jowett, Research Impact Manager at Northumbria, said "Be the Change was a fascinating and insightful day during which academics were able to share their knowledge about global justice and inclusion with members of the public, students and staff." She added: "It was an opportunity to hear about some of the

world-class research and other incredible work our academics are doing. The UN International Day of Peace is a global initiative and it was fitting that we were able to do our part to support it."

To find out more about research at Northumbria, and opportunities for collaborating with our academics, please visit: northumbria.ac.uk/research

DISCOVER MORE



internationaldayofpeace.org

"BE THE CHANGE WAS AN OPPORTUNITY TO HEAR ABOUT SOME OF THE WORLD-CLASS RESEARCH AND OTHER INCREDIBLE WORK OUR ACADEMICS ARE DOING."

LUCY JOWETT

BE THE CHANGE EVENTS



Associate Professor Jane Arnfield gave a performance of *The Tin Ring*, the story of Holocaust survivor Zdenka Fantlová – a Czech-Jewish woman who fell in love at the age of 18 but whose life was changed forever when her country was invaded by the Nazis. While in the ghetto of Terezín, her soulmate, Arno, gave her a ring made from tin as a token of his love. *The Tin Ring* has been performed to thousands of people internationally, addressing issues around human rights, the Holocaust, war and migration.

Find out more about *The Tin Ring* at: northumbria.ac.uk/tinring



There was a special screening of the award-winning film *Sanctuary*, which highlights a former Irish law which prohibited sexual relationships between people with intellectual disabilities. Directed by Northumbria academic and screenwriter Len Collins, the film helped lead to a change in this law. It has toured internationally in cinemas and at festivals, winning the 2017 Dublin Film Critics Circle award for Best Irish film. Director Len is known for working on TV shows such as *The Bill*, *EastEnders*, *London's Burning* and *Holby City*.

For more information about *Sanctuary* visit: northumbria.ac.uk/sanctuaryfilm



Professor Matt Baillie Smith, an expert on volunteering, activism and civil society and Director of Northumbria's Centre for International Development, facilitated an interactive discussion on international volunteering and activism. Working with the United Nations and the International Societies of the Red Cross and Red Crescent, the Centre's work has changed the way volunteers operate in disaster zones across the globe.

Details of Northumbria's Centre for International Development can be found at: www.northumbria.ac.uk/cid



Northumbria Human Geographer Inga Freimane gave a talk entitled, *Where is War Located?* exploring activists' experiences of war in Ukraine, how conflict spills over into everyday life, and how the lines between peace and war are blurred.

Photos, from top to bottom:

- Jane Arnfield and Zdenka Fantlová
- A scene from the film *Sanctuary*
- Matt Baillie Smith
- Inga Freimane

Meet our inspirational honourees

Three eminent figures from the fields of politics, physics and fashion, were awarded honorary degrees from Northumbria during the University's annual summer congregation ceremonies.



DR TRISTRAM HUNT

Historian and former Labour politician Dr Tristram Hunt, Director of London's Victoria and Albert Museum, received an Honorary Doctorate of Civil Law. The former MP and Shadow Education Secretary has always had an interest in the relationship between science and the arts, having previously held the role of Special Adviser to Science Minister, Lord Sainsbury. He is perhaps best known for his history expertise. After being appointed Senior Lecturer in History at Queen Mary University of London in 2001, he went on to present a variety of radio and television history programmes for both the BBC and Channel 4, as well as publishing four history books, including the award-winning biography, *The Frock-Coated Communist: The Revolutionary Life of Friedrich Engels*. Dr Hunt stood down from the House of Commons in 2017 following his appointment as Director of the Victoria and Albert Museum, where he has since overseen the opening of V&A Dundee. With an interest in the history of great exhibitions – the V&A itself born from the Great Exhibition of 1851 – Dr Hunt was an advocate of the Great Exhibition of the North, held in Newcastle and Gateshead last year.



LOUISE TROTTER

North East-born designer Louise Trotter was awarded an Honorary Doctorate of Civil Law. One of the most influential British women in fashion, Louise was last year appointed to the role of Creative Director at French brand Lacoste. After graduating from Northumbria's prestigious Fashion degree in 1991, her early career began at British high-street clothing store Whistles, where she progressed quickly to become Creative Director, overseeing design and buying. Her success continued when she relocated to New York to take the position of Head of Womenswear at Calvin Klein. This was followed by time at Gap, where she held the position of Vice-President of Womenswear Design, then Tommy Hilfiger, as SVP Creative Director. In 2007, Louise moved back to the UK and joined British label Jigsaw as Creative Director, taking over the reins at Joseph as Creative Director in 2009. Following nine game-changing years at Joseph, Louise arrived at the helm of Lacoste ready to write the label's next chapter. She delivered her first Ready-to-Wear show for the prestigious French fashion institution during Paris Fashion Week in March 2019.



PROFESSOR JULIA YEOMANS

Prize-winning physicist Professor Julia Yeomans was awarded an Honorary Doctorate of Science. As a theoretical physicist Professor Yeomans researches how mathematics can be used to understand topics as diverse as waterproofing and the movement of cells. She began her academic career at the University of Oxford graduating with a first class degree in Physics, going on to be awarded a Doctor of Philosophy in 1979, before moving to the USA as a Research Associate at Cornell University. She returned to the UK in 1981, taking up a post at Southampton University before moving to St Hilda's College, Oxford in 1983. In 2002 she was appointed Professor of Physics at the University of Oxford. As well as being an official role model for Women in Engineering, Professor Yeomans serves on the advisory panel of the Institute of Physics' Women in Physics Group. Here in the North East, she has completed four years as Chair of the Advisory Board for Northumbria's own Think Physics/NUSTEM project, which works with primary schools across the region to encourage children to participate in science, technology, education and maths activities.

Right:
Photo credit –
Newcastle
Gateshead
Initiative



Right:
Photo credit –
Rich
Kenworthy



Northumbria welcomes the World Transplant Games

The North East was bustling with World Transplant Games activity this summer as the region welcomed more than 2,500 transplant athletes, and their family, friends and supporters, in a mass celebration of the gift of life through organ transplantation.

The World Transplant Games, held every two years, celebrate a second chance of living – showcasing the success of transplant surgery and highlighting the importance of signing up to the Organ Donor Register. Athletes who have all had transplant surgery or are living donors, travelled from more than 60 different countries to compete in 17 different sports at venues across the region.

Marking the start of the event, athletes paraded through Newcastle City Centre in their team colours, before congregating at Northumbria

University for the official opening ceremony. Professor Jon Reast, Pro Vice-Chancellor (International) at Northumbria University, said: “The World Transplant Games is a truly inspiring event and it’s a great honour that Northumbria was able to play such a major role.

“The atmosphere on campus was electric as we welcomed all the teams and their supporters from around the world, and it was a fantastic opportunity to showcase our university and our world-class research to an international audience.”

As well as hosting the opening ceremony, Northumbria was also home to the badminton and table tennis fixtures over the course of the week.

Find out more about the World Transplant Games at worldtransplantgames.org

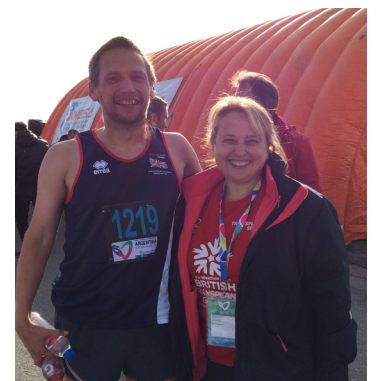
“THE ATMOSPHERE ON CAMPUS WAS ELECTRIC AS WE WELCOMED ALL THE TEAMS AND THEIR SUPPORTERS FROM AROUND THE WORLD”

PROFESSOR JON REAST



Isabel Maguire

Northumbria University graduate, Isabel Maguire, gave up a week of her summer to volunteer as an athlete physiotherapist. After working on placement in the Institute of Transplantation in Newcastle as part of her studies, Isabel signed up to support the Games, seizing the opportunity to work with elite transplant athletes at a number of different live sporting events.



Kay Heslop

Northumbria Senior lecturer and programme leader, Kay Heslop was an event volunteer for the World Transplant Games. Kay’s brother received a liver transplant in 2011 aged 42 after being diagnosed with primary sclerosing cholangitis when he was 18 years old. During his recovery John set himself the target of competing in the World Transplant Games and, within six years, had competed in Argentina and Malaga. Having accompanied John to both events, Kay decided to sign up as a volunteer for the NewcastleGateshead World Transplant Games and dedicated a massive 43 hours of her own time – while John took part in his third World Transplant Games event, competing in the middle distance running category.



Above:
Photo credit – Rich Kenworthy

Left:
Photo credit – Rich Kenworthy



DR ALAN PLATT
(FRONT RIGHT)
WITH STAFF
FROM NHS
BLOOD AND
TRANSPLANT

National training centre for organ donation

Hundreds of specialist nurses and critical care doctors from across the UK are to receive the latest in simulation education training at Northumbria after the University was selected to be a national training centre for organ donation.

NHS Blood and Transplant selected Northumbria University to deliver the specialist training to healthcare professionals because of its expertise in simulation education and its first-class training facilities. Simulation training combines virtual reality with computerised manikins and trained actors, to create situations which are as close as possible to real-life.

Dr Alan Platt, Associate Professor in Simulation-based Education at Northumbria University, explains: “We will be training the specialist nurses and doctors who are on the frontline of organ donation with meaningful, practical and theoretical clinical practice, which will help NHS Blood and

Transplant in providing excellent care for patients receiving transplants, families considering organ donation and potential donors.”

The training will be delivered at the University’s Clinical Skills Centre within the Department of Nursing, Midwifery and Health. Northumbria has invested heavily in recent years to provide the latest technology-enhanced learning to enable students and other medical professionals to take part in virtual reality training exercises.

The centre, which includes an anaesthetic room, operating theatre and recovery room, alongside hospital wards and a home setting, observation suites and an immersive studio, provides a realistic and unique training environment.

To find out more about training in the Clinical Skills Centre visit
northumbria.ac.uk/clinicalskills

Spotlight on organ donation research

While celebrating the inspirational stories of thousands of transplant athletes, the World Transplant Games also honour the medical advances and research behind transplant surgery.

Research by Northumbria academics has made a significant impact on the medical world.

Through their work, academics have helped introduce heart and lung transplant surgery to Southern Asia, developed ground-breaking 3D modelling techniques to prepare for complex surgeries, and transformed patient rehabilitation with digital technologies.

Tackling the organ donor shortage



Writing for The Conversation, Senior Lecturer in Journalism, Gabriel Moreno Esparaza and Professor of Cardiothoracic Surgery and Cardiopulmonary, Stephen Clark, discuss how the World Transplant Games and changes to the organ donation system could affect transplantation.

More than 100,000 transplants have taken place around the world every year since 2008 but this is way below what’s needed. In the UK 6,077 people were on the waiting list for an organ transplant in March 2019 and 408 people died in the previous 12 months while waiting for a donor.

While the number of people signing up to be an organ donor in the UK has risen for nine years in a row, it is still below rates in other countries. Spain, for example, has the highest organ donation rate of any country and operates an opt-out system which means that a far greater percentage of its population are eligible to donate their organs.

It’s hoped that there could be a rise in organ donations in England, when the country moves to an opt-out system in spring 2020. “Presumed consent”, or opt-out donation systems – are seen as instrumental in increasing the availability of organs.

They consider all adults, with some exemptions, to be a donor when they die. While presumed consent is an important step towards increasing the pool of available organs, it is not a cure all.

This is where the World Transplant Games can make a difference – by giving people who have received an organ transplant, the opportunity to compete and showcase their health while raising awareness of the power of donation.

The games guarantee positive coverage of a subject that tends to receive little media attention – a fact that may contribute to knowledge gaps on the subject, misinformed attitudes and distrust in the organ donation process. This, alongside beliefs that if someone signs up to donate they may be “tempting fate” and the “ick” factor, can be enough to put people off donating.

Following the 2013 World Transplant Games in South Africa, organ donors registering online increased by 30%. Now it’s hoped a similar effect will be experienced in the UK.

This article was originally published in The Conversation
theconversation.com/uk

Making waves in mathematics

Experts from around the world will meet to discuss breakthroughs in a new field of mathematics as part of a major event, organised by academics from Northumbria University.

A six-month long programme of workshops, seminars and group discussions will take place at the prestigious Isaac Newton Institute (INI) for Mathematical Sciences in Cambridge. The Institute was established to host international mathematical research programmes, with all proposals subject to a rigorous review process. Following the successful Northumbria-led bid, it has been announced that academics from Northumbria's department of Mathematics, Physics and Electrical Engineering will host a programme next year.

Their event will be based on a field of mathematics known as 'dispersive hydrodynamics' – a relatively new discipline and one which impacts on many areas of everyday life. For example, it can be used to help us understand more about the formation and development of rogue waves and tsunamis in the ocean.

Northumbria's Professor of Applied Mathematics Gennady El and Dr Antonio Moro are both



L-R: PROFESSOR GENNADY EL AND DR ANTONIO MORO

key figures in this sphere of research. They applied to host the event at the INI in order to bring together researchers specialising in this field from all over the world, with the aim of sharing ideas and making new scientific discoveries.

As Professor El explains: "We want to give people the time and the freedom to interact and exchange ideas in the best possible environment. There will be a particular emphasis on bringing together researchers from different areas to explore new connections and ways of enhancing the impact of the

dispersive hydrodynamics research on science and technology".

The Northumbria-led programme is being organised in collaboration with international partners from the University of Colorado Boulder, North Carolina State University and the University at Buffalo. The proposal was successful because it identified major challenges that will shape future directions and developments in the field of dispersive hydrodynamics. According to one of the reviewers involved in the selection, the programme will have a

"lasting impact in Mathematics and related fields".

The Dispersive Hydrodynamics: mathematics, simulation and experiments with applications in nonlinear waves event takes place from 6 July to 18 December 2020.

For more information, please visit newton.ac.uk/event/hyd

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northumbria.ac.uk/maths

Below:
Undular bore on the Severn
river near Gloucester
© Mark Humpage



"WE WANT TO GIVE PEOPLE THE TIME AND THE FREEDOM TO INTERACT AND EXCHANGE IDEAS IN THE BEST POSSIBLE ENVIRONMENT."

PROFESSOR GENNADY EL

National recognition for cyber security excellence

Northumbria University has been named as one of the UK's official Academic Centres of Excellence in Cyber Security Research (ACE-CSR), supporting the Government to protect the UK from cyber-attacks.

After successfully meeting the scheme's tough requirements, Northumbria became one of only two universities to be recognised as an ACE-CSR this year. It is one of a number of initiatives outlined in the UK Government's £1.9 billion National Cyber Security Strategy 2016–2021, 'Protecting and Promoting the UK in a Digital World', which outlines how Government is working with academia and industry to make the UK more resilient to cyber-attacks.

The Northumbria Cyber Security Research Group, a multidisciplinary research group leading the University's cyber security research activity, specialises in combining technical research on biometric encryption,

wireless sensor networks, web security protocols, and image recognition – with a human perspective on usable security, privacy, trust and behaviour change.

Leading the Northumbria Cyber Security Research Group, Professor Lynne Coventry, Principal Investigator and Research Director Psychology, said the group's work addresses the current lack of research around protecting people in relation to cyber security. As she explains: "Cybersecurity research has typically been directed towards finding technological solutions, but as our technological perimeter has strengthened, people have been left behind and become prime targets for cyber attackers. To stop today's advanced

attacks we need to understand how to better protect the general public by adopting a people-centric cybersecurity strategy and exploring how to design security technology and policies which support individuals in their endeavours, rather than being perceived as a barrier."

Cyber Security Northumbria will join a total of 19 Academic Centres of Excellence in Cyber Security Research, involving many hundreds of academic researchers across the full range of Cyber Security disciplines and representing the very best academic research capability in the UK.

Northumbria's Department of Computer and Information Sciences specialises in artificial intelligence, digital forensics and cyber security, digital networks,



NORTHUMBRIA'S
COMPUTER AND
INFORMATION SCIENCES
BUILDING

social computing, human-computer interaction, games, internet of things, big data and information sciences.

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BARONESS TANNI GREY-THOMPSON DBE, DL

In 2015 11-times Gold Paralympic medallist, Baroness Tanni Grey-Thompson, was appointed Chancellor of Northumbria University. Now entering her fifth year in the role and having proudly witnessed over 50,000 students graduate from the University, *Northumbria News* speaks to Tanni about her Chancellorship so far.

Why is being Chancellor important to you?

At the graduation ceremonies I speak about the fact that I firmly believe that education gives you choices. Education, without a shadow of a doubt, has ensured I have had choices and has helped to shape the life I have today, and so to be a small part of an institution that gives people those choices is very important to me. When I wander round after the ceremonies and ask graduates “what are you going to do now?”, I hear a huge range of answers. Some have secured terrific new jobs, others are going on to further study and some don’t know yet. But regardless of future plans, the new graduates, with barely an exception, tell me about the great things they have been involved in through their studies. Whether it is internships, volunteering, sport or student clinics, everything they have done has helped them to develop professionally and personally. Northumbria gives students the opportunity to learn academically but also to develop the skills and experience to be become job-ready graduates. I love feeling part of that.

What attracted you to Northumbria?

Although I was flattered to be approached about becoming Chancellor of Northumbria University, I just couldn’t see how I could fit such a significant commitment into my already chaotic schedule! My mind was firmly made up...until I was let loose to roam the campus and talk to students and staff. Two hours later I was on the phone to my husband who said “you want to do it don’t you?”. I was so overwhelmed by the honesty, openness, positivity and confidence of everyone I spoke to, I knew I couldn’t let the opportunity pass me by. Northumbria felt like something special and I wanted to be part of it.

How does your role as Chancellor connect to other things you are passionate about?

Having the opportunity to connect with students and academics across different disciplines is hugely beneficial to me. What I learn from these relationships informs my work in the House of Lords; for example, if we are discussing matters relating to

The Big Interview: “Education gives you choices”

social work, having experts at my fingertips from Health and Life Sciences as well as the Law School, who can advise on how certain legislation might affect social workers, is invaluable. The power of sport is something else I am of course hugely passionate about. As an athlete, sport was my job, but even just taking part in sport can teach us so many skills such as leadership, teamwork, commitment and focus. I personally have found that the skills I learnt as a sportsperson have helped me tackle perceived gender inequalities in business and leadership. Although there are places where equality has seen a dramatic improvement, the reality is that we do not yet live in an equal society. I read some fascinating research from the states recently that shows that women in senior leadership positions in the top 250 companies virtually all played sport at university. The skills sport can teach you, such as confidence, dealing with misogynistic behaviour and being able to stand up for yourself are so important, especially for young women entering the world of work.

You are often acknowledged as one of the most gifted and courageous sportswomen of your generation. Who or what inspired you?

Initially it was about being fit, healthy and independent, then later my competitive side kicked in. I was inspired by an amazing Welsh athlete and good friend, Chris Hallam. He challenged perceptions of disability and impairment and relentlessly encouraged me to do the same. I remember watching him win the London Wheelchair Marathon in '81 and saying to my mum “wow, I’m going to do that one day”. Eight years later I was on the start line and in 1992 I won!

Who or what inspires you now?

Parental expectation – but in a good way! I was fortunate to have a privileged upbringing in terms of education and sport, and when I was about 10 or 11, my dad told me that I should drive change, give something back and create opportunities for others. So that, I hope, is what I am doing.

At 19 you won your first Paralympic medal in Seoul. What would tell your 19-year-old self?

Work hard. Be honest with yourself about where you are. Don’t be afraid to try. I was under the radar for a long time which gave me time to figure out what I wanted to do and how I was going to do it. Now, there seems so much more early pressure on young athletes and students. But I would give them the same advice – though maybe add “take the time” to do those three things.

What do you think universities can do to help alleviate the pressure of building a dual career of study and sport?

It’s about understanding, supporting and connecting with students, so establishing strong relationships between students, personal tutors, academic staff, support staff and student unions are vital. We need to ensure students know where they can seek help if they need it. In my experience supporting the development of dual careers produces a much more balanced athlete. Michael Jordan said that the best advice he ever received was to read the Wall Street Journal every day, because if you’re a successful athlete, you’ll need something to talk about other than training when you speak to potential sponsors at dinner. A dual career provides that wider exposure and something to talk about!

Northumbria is offering students more and more opportunities to participate in sport. Why would you encourage involvement in sport at university?

A balanced student life is important. As well as all the life skills I have already mentioned, sport gives you the chance to meet different people, make great friends and have fun, which is all a really important part of university. With sport there is no script – you have to learn how to deal with the unexpected – another great life skill. And of course, students need to work hard, but a break to focus on other activities boosts energy and helps to maintain a healthy mind, which in turn benefits study. University is also

a time when you can reinvent yourself and try different things – taking part in new sports is a great way of doing this, especially for women. Horrifyingly, research tell us that 80% of women are not fit enough to be healthy. With many female students reportedly stopping participation in sport at school, university is an ideal time to encourage them back to being physically active. To do this a great choice of sports and good facilities are essential – the choice of activities on offer and the standard of the sports facilities here at Northumbria are brilliant.

How do you think Northumbria is Taking on Tomorrow?

The education sector is not static, and Northumbria recognises that. I never see the University resting on its laurels, it’s an ever-evolving institution that drives and reacts to change. The same applies to our students – they are ambitious and forward-thinking and have carefully considered Northumbria as a stepping stone towards their future career.

What does the statement ‘I am Northumbria’ mean to you?

To me it means lots of things but probably the strongest message is ‘proud’. I reflect back on graduation day: Students proud of what they have achieved. Families proud of what their sons or daughters, brothers or sisters, grandchildren have become. Staff proud of the opportunities they have created. Northumbria proud of the future they are helping to shape. I am incredibly proud to be Chancellor of Northumbria.

Are you ready to Take On Tomorrow? Explore our courses and take control of the choices available to you, visit northumbria.ac.uk/study

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Three words Tanni would use to describe Northumbria:

TRANSFORMATIONAL

CHALLENGING

EXCITING

£1.2 million to help forensics research



*Left:
Dr Noemi Procopio,
Lecturer in Forensic
Science, Department
of Applied Sciences*

“UKRI IS COMMITTED TO CREATING MODERN RESEARCH AND INNOVATION CAREERS AND OUR FUTURE LEADERS FELLOWSHIPS AIM TO SUPPORT AND RETAIN THE MOST TALENTED PEOPLE.”

UK RESEARCH AND INNOVATION CHIEF
EXECUTIVE, PROFESSOR SIR MARK WALPORT

A Lecturer in Forensic Science at Northumbria University has been awarded more than £1 million to develop a world-leading new technique that will help identify previously unidentified bodies.

What is the study about?

It is estimated that there are currently at least 1,500 unidentified bodies in the UK and approximately 40,000 in the USA. Dr Noemi Procopio of Northumbria's department of Applied Sciences is developing a forensic technique that could help to reduce those numbers. Using some of the most cutting-edge technologies available, her research will focus on the two vital questions asked in order to solve a crime or to assist in the identification of a body: the time elapsed since death (or post-mortem interval) and the age of the victim.

How is the research supported?

One of UKRI's flagship schemes, the Future Leaders Fellowships is a £900 million government investment fund that is helping to establish the careers of world-leading researchers and innovators across UK academia and business. Dr Noemi Procopio is one of a selected number of researchers to be awarded a UK Research and Innovation (UKRI) Future Leaders Fellowship. The award of £1.2 million, of which £930k is funded by the Future Leaders Fellowship grant, will enable Dr Procopio to benefit from outstanding support to develop her career and to tackle challenging research in the field of forensic science. As for the samples of human skeletal remains, Dr Procopio will be going out to two Forensic Anthropology Centres in Texas and Tennessee that are collaborating with Dr Procopio on the project to provide access to bone samples.

Why is this research needed?

While the questions relating to post-mortem interval and age of the victim can currently be addressed, the methods involved have been criticised for their lack of objectivity, quantifiability and accuracy. There are three main reasons for the inaccuracies. Firstly, the methods rely on the visual examination of the skeletal remains and the expertise of the forensic anthropologist who performs the analysis. Secondly, most of the techniques currently used to estimate the post-mortem interval rely on investigations performed on soft tissues, which have to be carried out shortly after death. Finally, techniques aimed at determining the victim's age often also rely on the completeness of the skeleton. This becomes challenging when victims derive from situations such as cold cases, natural disasters, war, terroristic attacks, human trafficking, or archaeological excavations.

What will the study do?

To overcome the shortcomings of current techniques used to estimate the post-mortem interval and the age at death of victims, Dr Procopio will use pioneering technology known as 'omics' which enables the extraction of biological information including DNA and proteins from very small amounts of materials, such as a tiny fragment of bone. She will then analyse on these biomolecules to deduce quantifiable features – also known as biomarkers. This information, combined with advanced bioinformatics tools known as machine learning algorithms, will be used to develop a mathematical model that will estimate more accurately the time elapsed since death and the age of the victim.

What impact will the study will have?

Ultimately the newly found biomarkers will be used to develop a new piece of commercial kit for forensic

examiners, police officers or researchers, which will give a more accurate estimate of time since death and the victim's age. The kit will also help to support investigations into crimes involving the presence of skeletonised or highly fragmented remains. Dr Procopio believes that this research will have a strong national and international impact: “This is an amazing opportunity for the world of forensic science and for the whole of society.” “The results will potentially benefit the overall community, reduce the costs of the criminal investigations and ultimately promote faith in the justice system.”

Fascinated by forensics? Find out about our courses by visiting northumbria.ac.uk/forensicscience

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northumbria.ac.uk/appliedsciences

Reporting from the frontline – students support terrorism training



NURSING STUDENTS TAKING PART IN TERRORIST INCIDENT TRAINING

Nursing students from Northumbria recently took part in a staged firearms training event, designed to give doctors and paramedics a taste of working in a mass casualty terrorist incident. Organised in partnership with Great North Air Ambulance Service and Northumbria Police, the students played the part of injured casualties and bystanders. Third year Media and Journalism BA (Hons) student **Ben Young** was there to capture the event on film and camera. Here, he describes his experience in his own words.

I was very lucky to be invited to film and photograph the Great North Air Ambulance terrorist simulation on behalf of Northumbria University's Marketing Department, during which nursing students were taking part in the practice situation.

It would be a lie to say that I wasn't nervous about the situation I was about to walk in to. We had been briefed that there would be fake injuries and gunfire on the day and since I had studied nursing briefly before switching my degree to Media and Journalism, I felt this

might help prepare me slightly for what would no doubt be a shocking experience.

The simulation was held at Northumbria Police's Operational Tactical Training Centre in Gateshead, in a realistic mock street. As we stood waiting for the simulation to start, a large



boom and gunfire rang through the air. Then we heard screams of pain and fear from the student actors who were already in place.

The setting and the actors helped to bring the situation to life and, on reflection, I don't think I mentally prepared myself for how real everything would feel. It was very easy to lose yourself in the moment as nursing students from Northumbria University took on the role of distressed parents, bystanders and injured patients.

Once I got over the initial rush of adrenaline, it was a truly inspiring opportunity to observe the paramedics and doctors assess and prioritise patients. You could really see how seriously the medical professionals took this simulation as they hastily discussed how best to proceed and, on more than one occasion, butted heads on the best course of action.

From a photographer's point of view, it was an invaluable experience to have under my belt. I have a deep rooted passion for photographic journalism and capturing scenes as they unfold. It takes time and practice to be able to capture high quality footage while responding to a changing environment. You have to be aware of the lighting, the

sound, and the people you are capturing but also the situation and how to keep yourself safe, so this was a fantastic opportunity to develop my skills on a number of levels.

It gave me an appreciation for journalists that cover conflicts, both at home and abroad. The gunfire and injuries we were dealing with were fake, and I can only imagine how dangerous and genuinely scary it must be when you are confronted with the real thing.

The whole experience is something I will take back with me when I return to my studies and it will help me apply the theory I have learned to real life situations. This was an unmissable experience that I know will prove invaluable in the years to come. I am immensely grateful to Northumbria University for providing me with the opportunity and to the Great North Air Ambulance service for trusting me to be part of their exercise.

Watch Ben's video of the training exercise at northumbria.ac.uk/terrortraining

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northumbria.ac.uk/nwh



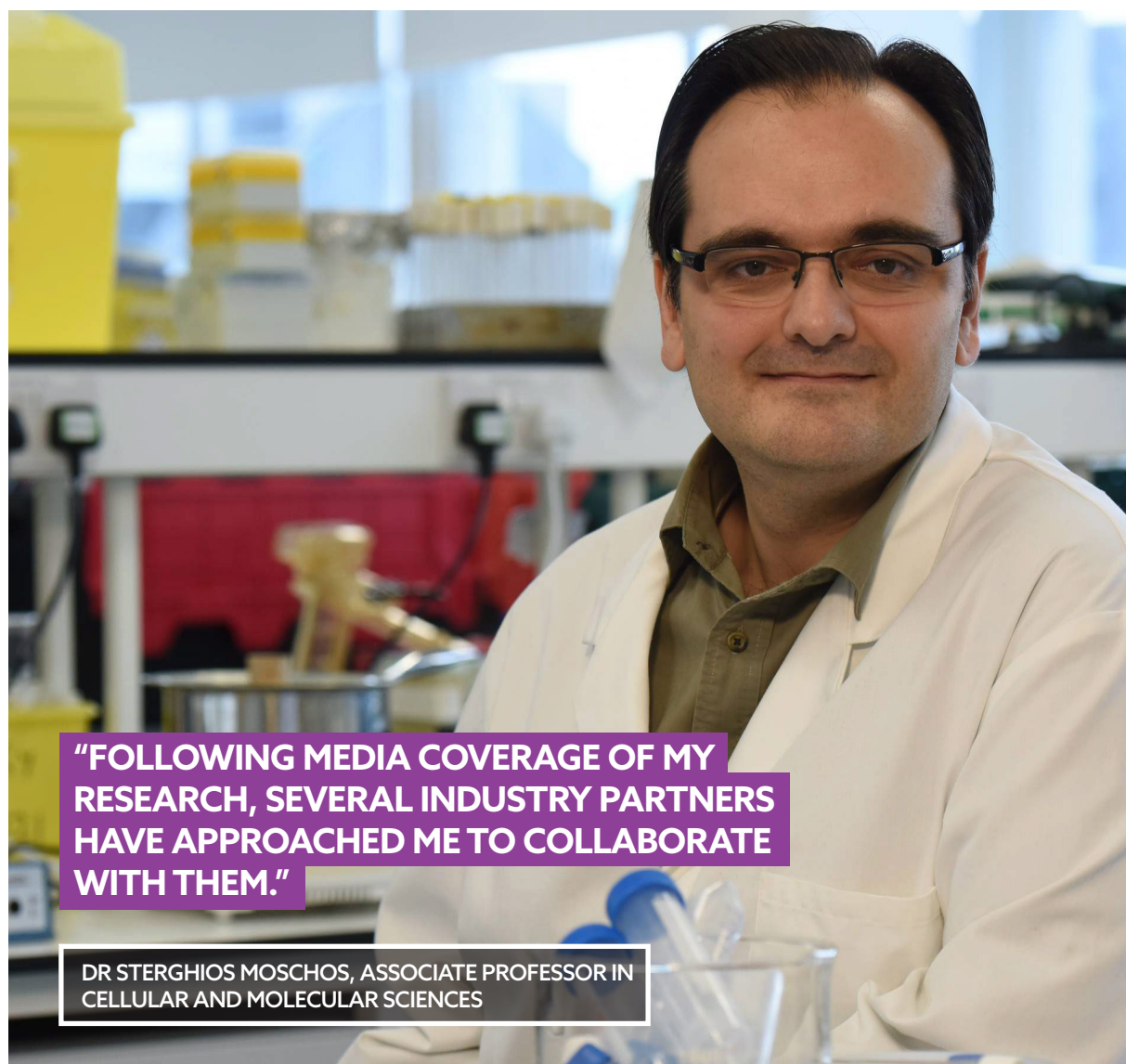
**Northumbria
University**
NEWCASTLE

IN THE MEDIA: HELPING TO END THE EBOLA EPIDEMIC

The 2014–2016 Ebola epidemic in West Africa was the largest outbreak since the virus was first discovered and was responsible for over 11,000 deaths. So when it was revealed in 2017 that a new, quicker, cheaper, safe and field-deployable way of diagnosing the Ebola virus had been developed by an academic from Northumbria University, national and international news outlets were quick to jump on the story. Dr Sterghios Moschos tells *Northumbria News* about the media's interest in his ground-breaking discovery.

After leading the development of a pioneering diagnostic platform – Quantitative, Rapid Identification (QuRapID) – Dr Sterghios Moschos, Associate Professor in Cellular and Molecular Sciences, was inundated with requests for interviews from newspapers and broadcasters all over the world. News of his research team's discovery reached over six million people through more than 30 different newspapers, websites, radio stations and TV news programmes. The media wanted to know what the specific problems were in the diagnosis of Ebola and why those challenges were difficult to overcome.

"Ebola is hard to diagnose because it shares its initial symptoms with other diseases such as malaria," Dr Moschos explains. "During the Ebola outbreak in 2014, patients tested for the disease had to provide a blood sample for testing in a specialist lab by highly trained staff. There are only a few of these facilities in the world, with



"FOLLOWING MEDIA COVERAGE OF MY RESEARCH, SEVERAL INDUSTRY PARTNERS HAVE APPROACHED ME TO COLLABORATE WITH THEM."

DR STERGHIOS MOSCHOS, ASSOCIATE PROFESSOR IN CELLULAR AND MOLECULAR SCIENCES

each diagnosis of the Ebola virus genome taking between five and eight hours to confirm.

"The QuRapID can be deployed to the scene of an outbreak yet its reliability is comparable to laboratory testing. The test can be carried out on an amount of blood 700 times smaller than previously needed – literally a drop obtained by 'pin pricking' a finger – and this whole process takes less than 70 minutes to complete. As a result, the test is much safer to administer, requires minimal training and speeds up and reduces the cost of diagnosis significantly."

Two years on, Dr Moschos remains the go-to authority for news channels such as Al Jazeera in pursuit of expert comment on the complexities of the current Ebola outbreak in the Democratic Republic of Congo (DRC). "The subtleties of societal norms often escape the media and the general population. The outbreak in eastern DRC is

highly complex, with insecurity adversely affecting public health response activities," said Dr Moschos. "Raising awareness worldwide of the DRC's distrust in its own government and Western civilisation as a whole is very important in ensuring that the West does not go in with a feet-first, 'we know best' attitude. We need to engage, work in their ways, with their religions, and their leaders, to empower these communities to stave off this disease."

Dr Moschos says it is humbling but empowering to know that his expertise is being seen and heard, by potentially millions of people across the globe; he firmly believes that it is essential for academics to engage with the media to dispel false expertise brought about by self-proclaimed opinion leaders or populist manipulators. "Public statements in the context of death and socioeconomic disruption compounded by war

and conspiracy theories carries the tremendous responsibility of being factual and evidence-based, rather than opinionated. The slightest misphrasing could inadvertently lead to actions that have lethal consequences, particularly among those impressionable or less well educated."

Various opportunities have arisen as a result of Dr Moschos' appearances in the media, including the chance to influence decisions such as whether anthropological research should be the investment focus of overseas aid where it is needed. Articles he has written have been republished by news outlets worldwide through working with The Conversation, a unique news outlet that delivers news from the academic and research community directly to the public.

"I've also had meetings and telephone discussions with members of the House of Lords who have relayed the outcomes

of my research in the House. Several industry partners have approached me to collaborate with them, with some of those enquiries materialising into live projects. I've received a number of keynote conference presentation invitations, and many consultancy requests from a diverse range of organisations including biotechnology companies, investment funds, and even shipping magnates." On a lighter note, Dr Moschos quips that the highlight of his media appearances was, "a free pint at my local when the landlord recognised me on the front page of the Chronicle!"

To hear more news about our academics' research, sign up to receive updates from our newsroom at northumbria.ac.uk/news

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Dr Moschos' research has been featured by

34

different media outlets



Reaching an audience of

6.5

million people.

Connecting the countryside



Left:
Village in the
Province of
Guizhou, China

"OUR PROJECT WILL COMBINE SMART TECHNOLOGIES SUCH AS ARTIFICIAL INTELLIGENCE WITH BIG-DATA ANALYSIS TO FIND OUT WHAT SERVICES ARE CURRENTLY AVAILABLE AND WHICH AREAS ARE LACKING."

PROFESSOR SHENGFENG QIN

Below:
Professor
Shengfeng
Qin

A project which uses the latest technology to connect people living in the countryside to vital services such as healthcare and education has been shortlisted for the 2019 Newton Prize.

The gap in the services available to people living in urban and rural areas could soon be narrowed thanks to a project entitled *Transforming Service Design and Big Data Technologies into Sustainable Urbanisation*.

Jointly led by Northumbria University and the Chinese Academy of Sciences, the project will use smart devices and big data technology to improve life for country dwellers in China. It will develop new ways of providing essential services like healthcare and transport to people living in remote villages, especially vulnerable residents such as the elderly or very young. The research will begin in China but the findings could then be applied to rural populations in any country, including the UK.

The project has been shortlisted for the prestigious Newton Prize – an annual prize awarded for

the best research or innovation promoting the economic development and social welfare of Newton Fund partner countries. This year the focus is on projects tackling challenges in China, Indonesia and the Philippines. Three prizes of up to £200,000 each will be awarded, one for each focus country. The prize recognises outstanding international research partnerships which are helping to achieve global development goals and improve the quality of life for people in developing countries, and in the UK.

Shengfeng Qin, Professor of Design at Northumbria University's School of Design, believes the project is essential to ensure people living in the countryside are given access to the same opportunities as their urban counterparts. As he explains: "Like many countries,

China has seen rapid urbanisation in recent years which has resulted in many young professionals moving to the cities, meaning the populations of more rural areas are increasingly made up of either the elderly or children. These more vulnerable groups require access to services such as healthcare, education, transport and energy, but up until now these have not been as readily available in the countryside as in cities.

"Our project will combine smart technologies such as artificial intelligence with big-data analysis to find out what services are currently available and which areas are lacking. We will then take a design-led approach to propose new ways of providing essential services such as health and social care."

The project will be delivered in partnership with the British

Council and National Natural Science Foundation of China. It will see academics from the UK and China working to find new solutions to the challenge of urbanisation. Together they will explore three themes – health care and mobility for the elderly, remote healthcare systems, and alternative ways of generating power. In addition, Professor Qin will lead on the creation of an online platform through which people can contribute to the design of new services. The site will engage with service users, businesses, policy makers and other stakeholders in the UK and China. This will create large amounts of data, known as 'big data', which can be analysed to reveal patterns, trends, and associations in behaviour.



This can then be used to shape future developments in essential areas such as healthcare.

The project is one of 20 shortlisted for the 2019 Newton Prize. Throughout November the shortlisted projects will be showcased at award events taking place in each of the focus countries, during which the winning project for that country will be announced.

Follow the progress of the shortlisted projects at newtonfund.ac.uk/newtonprize

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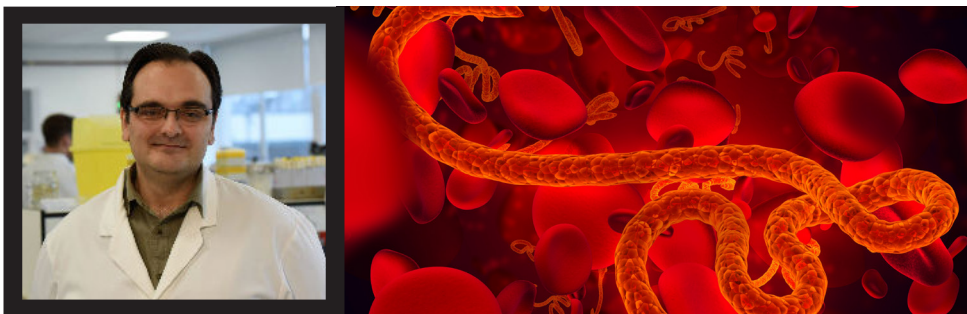
northumbria.ac.uk/design

THE CONVERSATION

The Conversation is an independent source of news and views, sourced from the academic and research community and delivered direct to the public.

At Northumbria, our academics have been working with The Conversation to produce quality current affairs journalism on some of the latest topics to hit the news.

HERE ARE SOME OF OUR TOP PICKS



Ebola outbreak spreads to Uganda – it should never have happened

Dr Sterghios Moschos, Associate Professor of Cellular and Molecular Science, discusses the spread of the Ebola virus to Uganda.



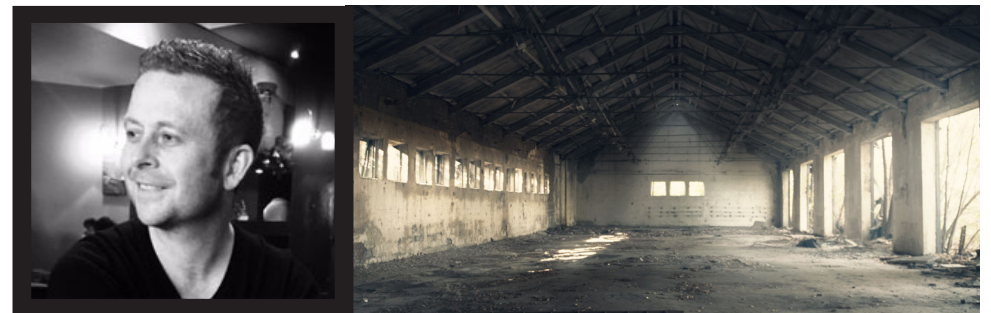
My book 'Tell It to the Bees' was made into a film – but they changed the ending for a straight audience

Dr Fiona Shaw, Senior Lecturer in Creative Writing at Northumbria University, discusses film adaptations of novels, and the film ending of her own book.



Neoliberalism has tricked us into believing a fairytale about where money comes from

Emeritus Professor, Mary Mellor, discusses where money comes from, myths about money, how it is used, and how it is being redefined.



Climate change: real estate worth billions could become obsolete – unless owners act now

Kevin Muldoon-Smith, Senior Lecturer in Real Estate Economics and Property Development, and Paul Michael Greenhalgh, Professor of Real Estate and Regeneration, discuss real estate in relation to climate change.



Pseudoscience is taking over social media – and putting us all at risk

Dr Santosh Vijaykumar, Vice Chancellor's Senior Research Fellow in Digital Health at Northumbria, discusses the role of social media in spreading conspiracy theories.



Stop that car, and plan cities around bikes to make cycling a real option for more women

Phd Candidate, Katja Leyendecker, discusses how the infrastructure of our cities needs to change to make cycling a more viable option for more people.



Find out more about The Conversation, and keep up to date with articles by Northumbria academics, by visiting theconversation.com or visiting our online newsroom at northumbria.ac.uk/news

Working together for business success

The world is changing faster than ever before. The future is there to be won by businesses and organisations who want to find ways to turn today's possibilities into tomorrow's reality – who want to make the impossible, possible. But in a connected world, collaboration is the key to success and Northumbria University is working with partners in the UK and overseas to pursue new thinking and create and exchange new knowledge. A university that challenges the status quo, Northumbria is becoming the natural choice for outstanding partners who really do want to take on tomorrow.

Northumbria News takes a look at some of the latest exciting collaborations, including an innovative new project which will transform the way homes are built, an interdisciplinary Knowledge Transfer Partnership, and our latest internship success story.



i To find out more about collaborating with Northumbria University please visit

northumbria.ac.uk/business

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George Clarke supports smart homes initiative

The ways homes are built in the future could be completely transformed thanks to a new project between Northumbria University and well-known architect, TV presenter and campaigner, George Clarke.

Better quality homes driving better quality of life for everyone – that is the aim of a new partnership between Northumbria and George Clarke's charity, the Ministry of Building Innovation and Education (MOBIE).

The MOBIE Northumbria Homes for the Future Innovation Centre was set up to help businesses address the housing crisis by implementing digital technologies to build next generation homes quicker, at a lower cost and with less

environmental impact.

Over the next three years, Northumbria will offer 15 co-funded PhD studentships to partners involved in the design and delivery of homes, including architects, engineers and contractors. These partners will work with academic experts in the field to develop a bespoke research project that will catalyse innovation, drive business growth and create positive change in the industry. A PhD student will then be appointed to work exclusively on that project.

The partnership was officially announced this October, with the first five PhD students expected to join the project in April 2020.

Find out more about the opportunities to get involved with the MOBIE Northumbria Homes for the Future Innovation Centre by visiting northumbria.ac.uk/mobie

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GEORGE CLARKE PICTURED AT A PUBLIC LECTURE HE GAVE AT NORTHUMBRIA IN 2016

Business growth by design

An engineering company has completely transformed the way it develops new products thanks to a partnership with Northumbria University.

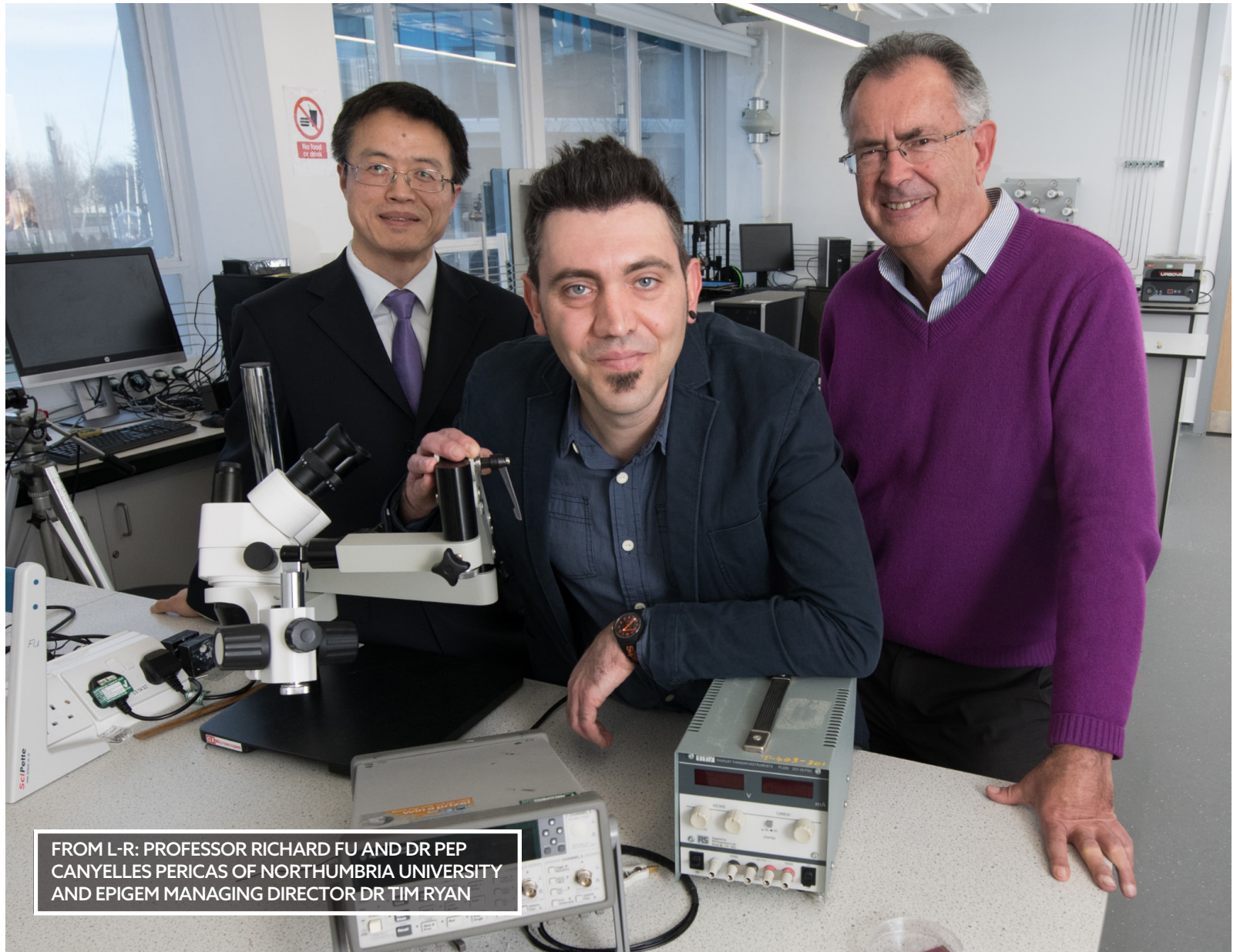
Two years ago micro-engineering company Epigem joined forces with academics from Northumbria in a bid to combine their expertise and develop a new medical device to test for diseases in cattle. Little did they know that what they learnt along the way would also subsequently change how the company develops new products.

In the past, Epigem's core business was manufacturing specialist parts for diagnostic devices made by other companies. Now, after working with Northumbria, Epigem will incorporate product design into its own business, enabling it to reach new markets by designing and producing own-brand, consumer-ready products.

The project between Epigem and Northumbria is a Knowledge Transfer Partnership (KTP).

Funded by Innovate UK, the aim of KTPs is to encourage experts from industry and academia to work together, sharing knowledge and technology to promote innovation. Rather than working with Northumbria experts from just one subject area, Epigem's team joined forces with academics from a wide variety of disciplines, including engineering, smart materials, electronics, physics and industrial design. The design element in particular led Epigem to change the way it works, embracing product design and allowing the company to produce its own branded products in the future.

The KTP between Epigem and Northumbria has now been awarded an 'Outstanding' rating from Innovate UK. Speaking about the KTP's success John Clayton, a Knowledge Transfer



FROM L-R: PROFESSOR RICHARD FU AND DR PEP CANYELLES PERICAS OF NORTHUMBRIA UNIVERSITY AND EPIGEM MANAGING DIRECTOR DR TIM RYAN

Adviser at Innovate UK's Knowledge Transfer Network, said: "Projects that are awarded an Outstanding grade typically demonstrate an innovation-led approach to disrupt the market and embed a new process and culture in the business that facilitates further innovation. Bringing together Northumbria researchers from physics, engineering and design helped Epigem not only develop a new product for the global health market but also new techniques to grow their business."

Epigem specialises in producing bespoke microengineering for microfluidics devices and flexible electronics, with customers all over the globe. Discussing the KTP, Managing Director Dr Tim Ryan explained: "We have always produced the technical components for other people's instrumentation, but this means

we rarely hear feedback from the end users about the products, or how it could be effectively improved. That is why a few years ago, we made the decision to start developing Epigem own-brand products for the first time, with a real focus on customer experience.

"We knew working in partnership with a university would give us the academic expertise and innovation we needed. It was clear that Northumbria encouraged a multidisciplinary way of working, with academics from different faculties and departments able to work alongside each other and share their skills to create both the technology required for our device and the final product.

"The product we wanted to develop required expertise in micro-electronics, software

engineering and smart materials, as well as industrial and product design, which was a completely new area for us. Northumbria University has academics working in all these fields and, more importantly, has the ability to bring them together to work on this project collaboratively."

If you are interested in finding out more about how a Knowledge Exchange Programme with Northumbria University could benefit your organisation, email our Business and Enterprise team at businessenquiry@northumbria.ac.uk quoting KTP in the subject heading.

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northumbria.ac.uk/ktp

"BRINGING TOGETHER NORTHUMBRIA RESEARCHERS FROM PHYSICS, ENGINEERING AND DESIGN HELPED EPIGEM NOT ONLY DEVELOP A NEW PRODUCT FOR THE GLOBAL HEALTH MARKET BUT ALSO NEW TECHNIQUES TO DEVELOP THEIR BUSINESS."

JOHN CLAYTON

Landing the perfect placement

Northumbria student Rachel Dickinson has landed a dream placement with a leading events management company thanks to a highly successful internship programme funded by Santander Universities UK.

The 21-year-old Tourism and Events Management student has joined BeaconHouse on a year-long paid internship. Her placement comes on the back of a short-term summer internship with the Newcastle-based company, funded as part of a long-standing partnership between Northumbria and Santander, aimed at supporting small and growing businesses.

BeaconHouse specialises in running professional conferences, award ceremonies, outdoor events, exhibitions and festivals. After gaining valuable experience at a number of high-profile events with the company during the summer, including the international Building Information Modelling (BIM)

Conference, Rachel wanted to develop her skills even more with a full-time internship.

Delighted with the offer of a year-long placement, she said: "I'm over the moon, this is an incredible opportunity. Last year I worked on around 10 events and being on site where the action takes place was incredibly valuable. Being able to enhance our university learning with actual hands-on experience makes a huge difference and I would recommend it to anyone. The team at BeaconHouse have been so helpful and brilliant to work with. I'm doing something I really enjoy and learning so much at the same time."

The Santander Internship scheme has made it possible



RACHEL DICKINSON, FRONT, WITH SHARON WILSON FROM NORTHUMBRIA AND SOPHIE FLANNIGAN FROM BEACONHOUSE ON THE LEFT.

for Northumbria to work with a number of innovative events companies in the region. Sharon Wilson, Senior Lecturer in Tourism and Events at Northumbria, believes these opportunities are enriching the learning experience and career prospects for students, reflecting: "This relationship with Beaconhouse is a very special one, in how it engages our students creatively in the world of work."

Sophie Flannigan, from BeaconHouse, said the ability to recruit enthusiastic students with work-relevant skill sets was a real benefit for SMEs. "Rachel has already shown her value to

the business and I'm sure this will continue for the next 12 months. I'm also confident she will find it rewarding and beneficial to her future career."

The Santander Universities SME Internships Programme provides Northumbria students and graduates with the opportunity to secure paid summer internships with small to medium sized business – typically for between two and 10-weeks.

Businesses looking to recruit a Northumbria student can contact internships@northumbria.ac.uk for more information.

"THIS IS AN INCREDIBLE OPPORTUNITY. LAST YEAR I WORKED ON AROUND 10 EVENTS AND BEING ON SITE WHERE THE ACTION TAKES PLACE WAS INCREDIBLY VALUABLE."

RACHEL DICKINSON

DISCOVER MORE

northumbria.ac.uk/tourism

CONTINUING PROFESSIONAL DEVELOPMENT COURSES TAKING PLACE AT NORTHUMBRIA

NEW SKILLS.



Gold standard for health and safety

NEBOSH, the National Examination Board in Occupational Safety and Health, has awarded Northumbria its highest award for the quality of teaching on their professional qualifications programmes.

For over 20 years Northumbria has offered NEBOSH courses, including the NEBOSH Diploma, Construction Certificate, Health and Safety at Work qualifications and new HSE Introduction to Incident Investigation, amongst others.

Available through the University's Continuing Professional Development (CPD) programme, the courses are aimed at those responsible for health, safety and environmental management, in workplaces across the public and private sectors.

Now, the University has gained the highest accolade, Gold Learning Partner status, as part of the national awarding body's new Learning Partner Programme. Reflecting on the recognition, Dr Michael Deary, Associate Professor and Head of NEBOSH Programmes at Northumbria, said: "We are delighted to have attained Gold status from NEBOSH in their new Learning Partner Programme. We pride ourselves on offering a high-quality learning experience for students on our courses, providing them with the platform from which to gain

advancement in their careers. We are also proud that our students will be helping to create safer and healthier workplace environments, with all the improvements in morale, motivation and productivity that this brings to their organisations."

NEBOSH courses are offered in a variety of ways, including part-time, distance learning and block study. Find out more about the courses offered by Northumbria at northumbria.ac.uk/cpd

"WE ARE ALSO PROUD THAT OUR STUDENTS WILL BE HELPING TO CREATE SAFER AND HEALTHIER WORKPLACE ENVIRONMENTS, WITH ALL THE IMPROVEMENTS IN MORALE, MOTIVATION AND PRODUCTIVITY THAT THIS BRINGS TO THEIR ORGANISATIONS."

DR MICHAEL DEARY



"THE DIFFERENCE A CARE HOME NURSE CAN MAKE TO SOMEONE IS VAST. YOU REALLY BECOME THE HEART OF THE FAMILY."

JEMMA JAMES

Recognition for elderly care internship

A Northumbria University programme designed to increase the number of nursing students who choose to work within care homes after they graduate has won a national award.

Northumbria University's Integrated Health and Social Care Internship programme for caring for older people with complex needs is the first of its kind in the country.

Students studying nursing degrees at Northumbria spend half of their time in university, and the other half on placement in hospitals and community settings across the region, where they put their new-found skills into practice.

The new programme sees final year Adult Nursing students spending their management placement working across health and social care sectors, including care homes, NHS and voluntary sector.

Jemma James, of Durham, graduated from Northumbria with a degree in Adult Nursing in March 2019. The 39-year-old was previously nominated for the Royal College of Nursing Institute (RCNI) Student Nurse Award for work she did as part of the new internship programme. Jemma in

turn nominated the programme creators who won a Cavell Nursing Star Award at the Care Home Matters Conference.

The award went to senior lecturers Dr Juliana Thompson and Sue Tiplady who set up the programme, care home nurse Julia Stephens who mentored Jemma in the care home setting, and Professor of Nursing, Glenda Cook.

Dr Thompson said: "This internship model has been successful due to the commitment and collaboration of a number of health and social care organisations including care homes, clinical commissioning groups, the wider NHS and the voluntary sector. This has led to a 'joined up' education experience for the interns – they get to understand the whole health and social care journey for older people, which helps them to deliver person-centred, individualised care."

Jemma, who now works as a Staff Nurse in an Acute Elderly

Care Ward at the Freeman Hospital, said: "How a care home works is very different to working in a hospital. You need to learn about multi-morbidities, frailty, end of life care, understanding budgeting and funding, and care transfers. How you communicate with your colleagues, patients and their families is key."

"I loved doing the internship. In a care home you are an autonomous nurse practitioner. The difference a care home nurse can make to someone is vast, having a good quality of life, being happy, healthy, engaged, active and stimulated. You really become the heart of the family."

To find out more about the internship programme and hear from the students and staff involved, please visit northumbria.ac.uk/nursingintern

DISCOVER MORE

northumbria.ac.uk/nursing

Multi-million pound investment into the region's health

A team at Northumbria University is among a group of experts in the region who are leading a national project to address health inequalities and prevent poor health.

The new government funded £16 million health improvement Applied Research Collaboration in the North East and North Cumbria has been launched to tackle issues causing health and care inequalities in the region.

The funding was awarded by the National Institute of Health Research (NIHR), a body which invests in people, centres of excellence, collaborations, services and facilities to support health and care research in England.

NIHR has awarded £135m funding in total to 15 Applied Research Collaborations (ARCs) across the country – bringing together the UK's best universities, leading innovators and local authorities to solve some of the biggest issues facing health and social care over the next five years.

It is the first time that the North East and North Cumbria has received this funding. The research includes themes which focus on aspects such as prevention of poor health, how to stay healthy while living with a long-term condition, and supporting the health of children and families.

Research will also focus on integrating health and social care for both physical and

mental health difficulties, health inequalities across communities, and using new technology and information to improve lives.

During the course of the research academics will engage with patients, their families and members of the public to better understand the issues that are important to local communities.

Professor Dianne Ford, Pro Vice-Chancellor for Health and Life Sciences, at Northumbria University, said: "Northumbria University brings to the partnership academic excellence in applied health research, implementation science and marginalised groups. This investment recognises the strength of our existing collaborations, the complementarity of our strengths and our drive to make real differences, informed by innovative new approaches, to the region's health, care and wellbeing."

For more information on all of the ARCS including the North East and North Cumbria please visit nihr.ac.uk

DISCOVER MORE

northumbria.ac.uk/nmh

"THIS INVESTMENT RECOGNISES THE STRENGTH OF OUR EXISTING COLLABORATIONS, THE COMPLEMENTARITY OF OUR STRENGTHS AND OUR DRIVE TO MAKE REAL DIFFERENCES, INFORMED BY INNOVATIVE NEW APPROACHES, TO THE REGION'S HEALTH, CARE AND WELLBEING."

PROFESSOR DIANNE FORD

Mystery of the missing millions

Millions of pounds allocated to local authorities to provide free school meals for some of England's poorest children has 'disappeared.'

Research by Professor Greta Defeyter and Professor Paul Stretesky of Northumbria University's Healthy Living Lab, estimates that £88.3 million of free school meal funding went unaccounted for in the space of a year. Their findings were published in the paper *Hungry for Change*, commissioned by the anti-poverty charity Feeding Britain.

As part of their research, Professors Defeyter and Stretesky analysed data for all primary and secondary school students in England who were eligible for and claiming free school meals. On the date of their census they found almost 20% of eligible pupils did not claim a free meal due to being absent from school. However, it is not clear where the money allocated for those meals went.

As Professor Defeyter explains: "Free school meal funding is administered by local authorities, with many secondary schools



using smart cards to manage meal payments. Secondary school pupils who are in receipt of free school meals have money credited to their smart cards to pay for their daily meals. At the end of each day, the card is wiped of its credit. This means if a pupil is absent from school, misses lunch or does not use the full monetary entitlement, it is removed from the pupils account."

This system was found to be in direct contrast to pupils whose parents pay for their school meals. For these children, any unspent credit remains on their card and is allowed to roll over and accumulate. The researchers argue this is creating a two-tier system of treatment, as Professor Defeyter explains: "We potentially have a situation where the most disadvantaged in our society are

subsidising the meals of those who are better off."

They also believe the figure of £88.3 million is likely to be a conservative estimate as it does not include those skipping lunch or not using their full daily allowance.

The question of where this unused balance goes was raised by Frank Field MP during a House of Commons debate, in which he

called for ministers to ensure all unspent money was recycled back into the free school meal system.

Find out more about the work of Northumbria's Healthy Living Lab at healthylivinguk.org

DISCOVER MORE



northumbria.ac.uk/psychology

Student nurses experience courtroom drama

Northumbria Nursing students have been given an insight into medically-based legal proceedings through a unique mock courtroom experience.

"Educating students to become professionals who are ready and able to practice in all aspects of their work when they graduate is an important component of preparing our students for successful careers," says Dr Melanie Fisher, a senior lecturer in Northumbria's Department of Nursing, Midwifery and Health, who instigated the unique mock court experience.

An experienced nurse, clinician and academic, Dr Fisher is interested in the

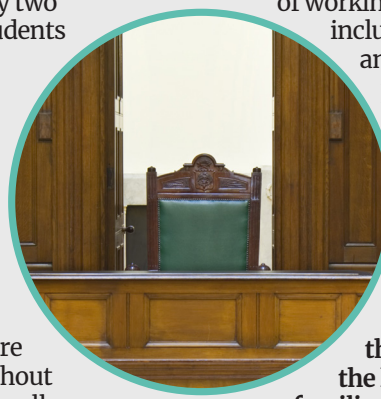
factors that can influence patient care such as medical law, patient safety and human factors. She approached nationally recognised law firm Irwin Mitchell solicitors to help develop a legally robust and realistic scenario that could be delivered in a courtroom environment. As she explains: "Working with Irwin Mitchell, we developed a scenario that involved a death, which was alleged to have been the result of sub-optimal care."

Presided over by a Judge,

and argued by two solicitors, students were able to observe the processes involved in prosecuting and defending a life-like scenario.

Expert witnesses were called throughout and professionally-produced evidence offered, which allowed students to think about some of the issues that can arise for those working in the medical and nursing environments.

Dr Fisher added: "This experience brought to life the importance of key aspects



of working in this field including the impact and consequences of poor record keeping and not following processes and policy."

Do you think you've got what it takes to develop a caring career that transforms the lives of patients, families and communities?

If so, Northumbria's Nursing, Midwifery and Health courses might be for you. Find out more at northumbria.ac.uk/nursing

DISCOVER MORE



northumbria.ac.uk/nhm

"THE MODULE BROUGHT TO LIFE THE IMPORTANCE OF KEY ASPECTS OF WORKING IN THIS FIELD INCLUDING THE IMPACT AND CONSEQUENCES OF POOR RECORD KEEPING AND NOT FOLLOWING PROCESSES AND POLICY."

DR MELANIE FISHER

SPOTLIGHT ON FORENSICS

WHO LIVES IN A HOUSE LIKE THIS?

Hidden inside what looks to be a regular Tudor-style manor house is a facility that plays a vital role in the University's undergraduate and postgraduate forensic science-based degree courses.

HANDS-ON LEARNING

As any police crime drama aficionado will know, the work of forensic scientists is central to crime scene investigations. Gathering evidence and analysing findings are essential for supporting a case in a court of law. Through further development of the University's facilities, these critical skills can be taught through a practical, hands-on approach. Situated at Northumbria's Coach Lane Campus, the Locard Wing, also known as the Crime Scene House, is a dedicated facility where students can learn and practise the skills needed to investigate a crime. The property is used to simulate a variety of scenarios, with students assuming the role of a forensic scientist to learn how to consider, analyse and interpret the scene, all within real-life contexts. Offering an authentic learning environment, the house comprises a two bedroom flat, a two bedroom bedsit, a blood pattern room, a scientific laboratory, a control room, a lecture room and breakout spaces.



CONTROL ROOM

On arrival at the facility, students are briefed in the control room. Here they also don a scene suit, gloves and a mask as they would in a real-life examination to ensure the simulated investigations are as true to form as possible. This space also houses a CCTV system which enables two-way audio recording from each of the crime scene rooms, providing the opportunity for real-time monitoring and feedback from teaching staff. Students can also review the footage while self-analysing their processes or constructively critiquing in groups.



CRIME SCENE ROOMS

The crime scene rooms are used to mock up a broad range of scenarios from assaults and burglaries to homicides and drug-related crimes. The scenes created by the facility's lab technician, Suzanne Lonsdale, are continuously remodelled and, as such, frequently change in appearance. Different types of evidence can be added or removed depending on the scenario, something which is crucial to help prepare students for the diverse range of crime scenes they could encounter once in-post. It's in these imitation scenes that students learn crime scene management, fingerprinting, photography, gathering footwear impressions and blood pattern analysis.



LABORATORY

Once students have collected their evidence, the on-site lab allows for closer examination under the microscope. There is also the option to return to the University's City Campus where state-of-the-art laboratories are equipped with a full range of microscopes, analytical equipment and DNA profiling apparatus to facilitate further investigation.





LECTURE ROOM AND BREAKOUT SPACES

The classroom and breakout areas provide additional teaching space, as well as a communal area where students can come together to discuss and consolidate findings from their investigations. And once conclusions have been drawn, students even have the opportunity to present evidence in a court of law. Repurposed from Newcastle's Magistrates Court, Northumbria Law School's replica courtroom is based at the City Campus and offers a realistic environment where students gain real-life exposure to a courtroom experience.



VIRTUAL CRIME SCENE INVESTIGATION

In addition to physical exploration of the house, as the use of technology has rapidly expanded in higher education, Dr Alan Langford, Senior Lecturer in Forensic Science, has been focussing on developing innovative virtual learning materials to further enhance the students' experience. Crime scene rooms in the Locard Wing have been captured in full resolution and imported into the case management multimedia presentation tool Return to Scene (R2S™) to create a 360° panorama, enabling remote crime scene investigation. Interactive theory, tutorials, animation and self-evaluation tools have then been embedded into R2S™ to allow students to investigate scenes autonomously and remotely from a computer or laptop.

Building on existing resources, the University is currently developing an immersive virtual reality experience in crime scene investigation. The virtual reality (VR) resource will further support student learning by allowing the user to fully interact with the environment.

"The headsets project a virtual environment featuring places, objects and people, where imagery can be physically manipulated by the user. We have established a proof of concept and are now working towards developing this innovative tool further to be able to offer a unique learning experience to our students" explains Dr Langford.

VR training will inject an additional element of realism into learning; once students put the headset on they will feel like they are in the place they can see in front of them. One of the other key benefits of this tool is that it will allow even more flexibility in terms of the variety of the mock crime scenes and scenarios that can be set up for students to examine.

As well as being used by Northumbria students, including those on the Police Constable Degree Apprenticeship which is run in partnership with Northumbria Police, the Crime Scene House is also available to external clients for staff training and Continual Professional Development courses.

To find out more about hiring Northumbria's forensics facilities at the Locard Wing, please contact businessenquiry@northumbria.ac.uk quoting 'Locard Wing Enquiry'.



BLOOD PATTERN ROOM

From pools of blood and spatter patterns on a wall, to microscopic droplets on an item of clothing, the specific shapes and features of blood patterns can reveal clues as to what happened at a crime scene. The dedicated analysis suite allows students to learn how to analyse blood patterns under industry-standard lighting conditions by recreating patterns they have observed in the crime scene rooms. "Deciphering the direction, angle and size of the blood stain within a pattern helps us to determine the type of action or weapon used, where the victim was located, the level of force used, how close the offender was to the target, or whether someone was an active participant or a bystander to the incident" explains Dr Sophie Carr, Associate Head of Department for Applied Sciences.

How safe is soil?

*Below:
Researchers taking soil samples
from a Newcastle allotment*



"THIS STUDY PROVIDES USEFUL EVIDENCE ON THE COMPLEX RELATIONSHIP BETWEEN LEAD LEVELS IN SOIL AND HUMAN EXPOSURE."

IAN MARTIN

Many urban allotments have higher levels of lead in their soil than national guidelines recommend being safe. However, new research from Northumbria has found that these guidelines do not accurately recognise how lead is stored in the soil and transfers to vegetables, which has led to calls for them to be amended.

Guidelines by the Department for Environment, Food and Rural Affairs (Defra) state that 80mg of lead per kilo of soil is safe, yet many areas of the country have levels ten times higher. As lead exposure can cause health issues such as high blood pressure, reduced fertility and anaemia, Newcastle City Council commissioned a study to investigate if lead in its allotment soils was impacting on the health of gardeners, and finding its way into the produce they grew.

Surprisingly, researchers from Northumbria's Department of Geography and Environmental Sciences who led the two-year study found no statistically

significant health impacts on the gardeners using the allotments. In addition, the amount of lead finding its way into vegetables grown on the allotments was below national food safety guidelines. What they did find evidence of, however, was that the type of soil had an influence on how safe it was.

The UK has more than ten major groups of soil which differ depending on the region. Most soils contained lead which has aged and weathered naturally over the years, meaning it could be considered safe. Defra's guidelines included soils which had been artificially contaminated in a lab, or which

had come from wastewater and sewage treatment areas.

Environmental geochemist, Professor Jane Entwistle, co-led the study and said that the national guidelines should be revised as they over-estimate the amount of lead going into plants. "How the lead is held in the soil is more important than its presence," she explains.

Mark Todd, Newcastle City Allotment Officer, said that the findings would be reassuring for gardeners, saying: "Allotment gardening has always been considered a healthy and beneficial activity in terms of physical and mental wellbeing of individual allotment gardeners

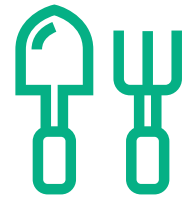
and for the social health of their local communities. These study findings give allotment gardeners peace of mind that they can continue their passion for gardening without the worry that the site will be closed because of unfounded health concerns."

Ian Martin, Principal Scientist in Air, Land and Water at the Environment Agency, commented: "This study provides useful evidence on the complex relationship between lead levels in soil and human exposure, which improves our understanding and assessment of potential risks to health in the urban environment from a legacy of land contamination."

Professor Entwistle is a member of Northumbria's Environmental Geochemistry and Ecology research group which provides environmental and analytical training and consultancy for industry and public sector organisations.

To find out how to collaborate with our researchers, please visit northumbria.ac.uk/business

ALLOTMENTS KEY FACTS



Allotments in the UK date back to the 18th century.



Today there are an estimated

300,000

allotments producing around

215,000

tons of fresh produce each year.



Traditionally, the rent for British allotments is due on St Michaelmas Day, 29 September.

DISCOVER MORE



northumbria.ac.uk/geography



PROFESSOR MATT BAILLIE SMITH (LEFT) CHAIRS A PANEL DISCUSSION AT THE 2019 GLOBAL CHALLENGES SUMMIT



A TROPICAL CYCLONE

"THIS ANNUAL EVENT PROVIDES A FORUM FOR SHARING UNDERSTANDING, INSIGHTS AND INNOVATION IN RESEARCH TO ADDRESS GLOBAL CHALLENGES IN DEVELOPING COUNTRIES."

PROFESSOR MATT BAILLIE SMITH

As Matt Baillie Smith, Professor of International Development at Northumbria, explains: "This annual event provides a forum for sharing understanding, insights and innovation in research to address global challenges in developing countries, as well as an opportunity to develop new partnerships to maximise the positive impacts of the research."

The annual conference brought together experts from around the world to discuss ways of tackling sustainable development challenges such as poverty and food security, health and well-being, sustainable water and climate change. The event also celebrated the innovative research being carried out by academics and development organisations globally.

During the Summit, academics from all three universities spoke about their involvement in UK Research and Innovation's recently announced Global Research Hubs. Funded through a £200m investment, the 12 Hubs will work with governments, international agencies, partners and NGOs across 85 countries to develop creative and sustainable solutions which help make the world safer, healthier and more prosperous.

DEALING WITH DISASTERS

Academics from Northumbria's Disaster and Development Network are involved in another of UKRI's 12 Global Research Hubs. They recently hosted the Dealing with Disasters Conference, exploring the causes of, and risks associated with, global disasters.

Held across three days, the conference was attended by more than 130 people from 17 different countries, including representatives from the World Health Organisation, UK Space Agency and the European Commission. Workshop topics included using satellite and modelling technologies to improve the response when disasters occur, ensuring disaster victims have adequate access to food, and exploring how disasters are defined.

Andrew Collins, Professor in Disaster and Development at Northumbria, said the conference aimed to find new ways of preventing disasters in future, and dealing with them more effectively when they take place. He explained: "Despite the advance in effort and consciousness in the field of disaster recovery, actions in practice are lagging behind and at current rates fall far short of bringing safety, security and quality of life for future generations."

For more information about Northumbria's Disaster and Development Network visit northumbria.ac.uk/ddn and to find out more about the work being carried out by academics at Northumbria's Centre for International Development visit northumbria.ac.uk/cid

DISCOVER MORE

northumbria.ac.uk/socialsciences

Summits safeguard global future

The role Northumbria is playing in finding solutions to some of the world's most serious challenges has been showcased in recent months. Academics from the University welcomed colleagues from across the globe to discuss their latest research during two international events – the Global Challenges Summit and Dealing with Disasters Conference.

GLOBAL CHALLENGES SUMMIT

In recent years the North East has developed a reputation as a centre of excellence in the area of sustainable international development. Three of the region's universities – Northumbria, Newcastle and

Durham – are home to specialist research centres, focusing on addressing some of the biggest challenges facing the world today. Academics from Northumbria University's Centre for International Development,

Newcastle University's Global Challenges Academy and the Global Challenges Centre for Doctoral Training at Durham University collaborated to organise the 2019 Global Challenges Summit.

Woon Prize winners announced

The 2019 winner and runners up of one of the UK's most generous art prizes were revealed in July during an event at Northumbria's University Gallery.

With a £20,000 year-long fellowship on offer, the Woon Foundation Art and Sculpture Prize provides a unique and highly sought after opportunity for a graduating Fine Art student. It is no wonder then that entries for the seventh annual competition were the highest yet, making the job of selecting just 10 shortlisted artists a difficult one for this year's judging panel.

Hosted by Northumbria University and BALTIC Centre for Contemporary Art, the prize is sponsored by Northumbria alumnus Wee Teng Woon and his three brothers, through the Woon Brothers Foundation.

The quality and variety of this year's shortlisted artists was more impressive than ever. But it was UCL Slade School of Fine Art graduate Chika Annen who pipped other contestants to the post to be awarded the £20,000 first prize, with her unique painting and installation entitled *Fluffy*. Chika will spend the next year based at Northumbria, working from her own studio with mentoring from Northumbria and BALTIC staff, before hosting a final exhibition within the University Gallery next summer.

Two runners-up prizes of £9,000 and £6,000 were also awarded. Second prize went to Lily Kemp from Wimbledon College of Arts for her paintings, *Vertigo* and *My Reflection* and the third prize was awarded to Irini Stamatiadis from Central Saint Martins, for her sculpture/photography hybrid, entitled *101 Porous Suns*.

Previous Woon Foundation Art and Sculpture Prize winners have gone on to forge highly successful careers – it was recently announced that work by Holly Hendry, winner of the first Woon Art Prize in 2013, has been acquired by the Arts Council Collection – a collection of modern British art which is made available to public institutions through loans and exhibitions.



WOON PRIZE WINNER CHIKA ANNEN PICTURED WITH (FROM L-R) VICE-CHANCELLOR PROFESSOR ANDREW WATHEY AND PROFESSOR DEAN HUGHES OF NORTHUMBRIA, BALTIC DIRECTOR SARAH MUNRO; AND MR WEE TENG WOON



Above: Woon Prize winners, from l-r Lily Kemp, Chika Annen and Irini Stamatiadis

FIRST PRIZE: *FLUFFY* BY CHIKA ANNEN



Chika said: "In this work, I focus on the physical actions tracing my senses through my experiences and the process of the translation from metaphysical materiality into visual languages by the action of creation. The process reminds me of the fundamental level of interactions towards the physical world and myself.

"The primitive language reminds me of the function of languages. Because of my international background, I consider languages and knowledge just as a tool to shape my thoughts into communicable formats. Therefore the simple practice to formulate metaphysic contents into visual representation draws the nature of the cognitive reality which is based on mutual relationships between objective and subjective understandings."

SECOND PRIZE: *MY REFLECTION* BY LILY KEMP



Lily said: "My paintings look at the representation of women in visual culture and within art history, in particular the representation of those from a Black, Asian and Minority Ethnic background.

"In this piece I am continuing to explore creating multiple visual layers using visual suggestions of drapery and holes to conceal and reveal new spaces within the painting.

"I am interested in the interaction between the women in my work and the space around them and want to build the notion of them being in control of the environment they are in; one woman is pulling back the edges of the painting to reveal another woman, the women at the back are painting the sky.

"In my work I am giving these women space and ownership of their environment, by doing so I hope to tell them that it is ok to be seen and to take up space."

THIRD PRIZE: *101 POROUS SUNS* BY IRINI STAMATIADIS:



Irini said: "A hybrid medium; a photograph alludes to painting, sculpture traced within a photograph. A crossover that redefines and regenerates the space between them.

"Choosing the camera of my phone for its accessibility and proximity to my body. The everyday is enhanced through a symbiosis with my phone camera developing a different understanding of what it means to create an image.

"Emphasizing on the cycle of the three dimensional becoming two dimensional and returning to a third dimension through printing. The practice is invested in a process of reproducing, redefining and representing.

"This oscillation of the media generates new relationships combining, selecting and subverting visual language."

Credits roll at annual film festival

More than 2,000 short films have been created by students at the London School of Public Relations (LSPR) in Jakarta over the last decade, as part of a long-standing partnership with Northumbria University.

In 2010, academics from Northumbria's School of Design began working with Mass Communication students from LSPR, sharing their many years of experience and expertise with the aspiring young film makers. As part of the partnership, experts from Northumbria's School of Design were also asked to judge the students' final year films. Over the years the end of year award ceremony has grown into an annual film festival, attended by industry experts from across Indonesia and beyond.

This year more than 30 awards were handed out by Dr Lee Barron, Director of International Recruitment and Development for Northumbria University's School of Design. Speaking after the event he said: "It has been great to see this partnership and



WINNERS AND ORGANISERS OF THE 2019 LSPR AND NORTHUMBRIA UNIVERSITY FILM FESTIVAL

the film festival develop over the years, going from a small event with three awards in 2010 to a major awards ceremony with 33 individual prizes this year. Northumbria University's School of Design is internationally recognised and we are very pleased to be able to share our experience and expertise in art and design with students from LSPR."

The films reviewed by Dr Barron this year covered a wide variety of genres, including comedy, horror, action, crime, and drama, with awards for the best cinematography, special effects, script writers, makeup and costume, supporting and leading

actors, best directors and best film handed out.

LSPR Jakarta's Founder and Director, Prita Kemal Gani, added: "We truly value our partnership with Northumbria University. Over the past nine years we have seen the talent and skills of our students at LSPR develop and the level of film production continues to rise every year."

To find out more about LSPR Jakarta and its links with Northumbria University visit lspri.edu

DISCOVER MORE



northumbria.ac.uk/design

NOTABLE LSPR ALUMNI:

Riana Rivani

Presenter & reporter at Bloomberg TV Indonesia

Tiara Maharani Kusuma

Editor at Venue Magazine

Eka Dewi Purnamasari

Host, producer & News Anchor at Smart FM Radio

Reva Sasistiya

Senior writer at Forbes Indonesia Magazine

Riana Rifani

Journalist at Bloomberg TV

Archicco Guilianno

Producer at Australian Broadcasting Corporation (ABC Australia)

Art and song commemorate WW2 anniversary

Academics from Northumbria University took part in a poignant commemoration event marking the 75th anniversary of the closure of the Łódź Ghetto.

Between 1940 and 1944 more than 200,000 Jews passed through the Łódź Ghetto in Poland, with around 43,800 estimated to have died there. It is 75 years since the ghetto was finally liquidated, and academics from Northumbria

played a key role in marking this important anniversary.

As part of the commemoration events, Associate Professor of Drama Jane Arnfield created and directed a live performance piece consisting of three original songs. Entitled *Ten to Ten*, the piece referred to a church clock within the ghetto boundary, the hands of which were stuck at ten minutes to ten during the four years the ghetto was under Nazi control.

The first of the three songs was written by patients at the MONAR drug and alcohol rehabilitation centre in Łódź, who Jane worked with as part of the project. The second song was based on

the poem *A Song on the End of the World* by Polish-American poet Czesław Miłosz, who survived the German occupation of Warsaw during the Second World War. The lyrics for the final song were taken from *The Tree of Life* trilogy, written by ghetto survivor Chava Rosenfarb.

Jane commissioned composer Katie Doherty to work with her to create *Ten to Ten* and the songs were performed by the CLIL Jewish Choir, conducted by Magdalena Szymańska.

Northumbria University printmaking expert Alfons Bytautas also collaborated with Jane on the project, jointly designing and producing a series



PHOTO CREDIT: MAREK EDELMAN CENTRE FOR DIALOGUE

of print banners which were displayed during each performance. Three of the banners were also displayed at the Vane contemporary art gallery in Newcastle.

The songs were performed at ten to ten in the morning and evening at several

locations throughout Łódź during August this year as part of the city's commemoration events.

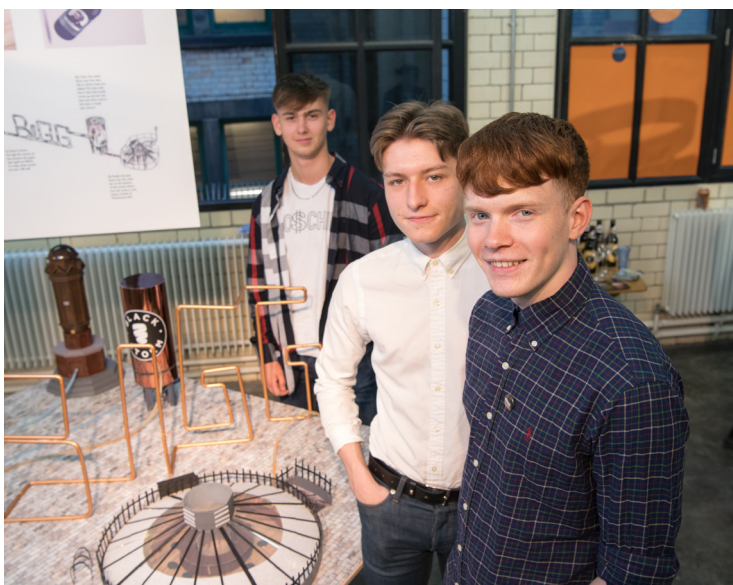
Find out more about the anniversary by visiting centrumdialogu.com



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STUDENTS PICTURED WITH THEIR WORK AT THE BIGG IDEAS EXHIBITION

Thinking Bigg

Students from Northumbria's School of Design have come up with creative concepts to help regenerate a historic area of Newcastle City Centre.

In recent years the Bigg Market area of Newcastle has become best known for its bars and nightclubs. However, a multi-million pound regeneration project is now underway which aims to celebrate the area's rich history, attract investment and bring back a daytime crowd. The scheme is being delivered by Business Improvement District company NE1 Ltd, with support from National Lottery Heritage.

Keen to generate creative ideas to achieve this transformation, NE1 approached students from Northumbria University's School of Design. In total, more than 200 students from Northumbria's Fashion Communication, Graphic Design, Interaction Design and MFA Fine Art courses have been involved in the experiential learning project. From designing new pieces of public art to creating branding for new businesses in the area, students drew on the skills they have developed at Northumbria, applying them to the real-life

brief provided by NE1.

Thirty of the best concepts were selected to be included in the 'Bigg Ideas' exhibition – a pop-up showcase of work displayed at Newcastle's Baltic 39 studios and art gallery.

Alex Slack, Bigg Market Project Manager at NE1, said involving the students had brought a fresh perspective to the project: He explained: "Working with the Northumbria University students has been an incredible experience, especially as an alumni. The talent and creativity that the students have demonstrated gives a real sense of encouragement for the future of the art and design sectors."

Northumbria's School of Design has an international reputation and includes courses in Industrial, Fashion, Communication and Innovation Design.

View some of the projects selected for the Bigg Ideas exhibition at ne1biggmarket.co.uk/events-gallery/

"THE TALENT AND CREATIVITY THAT THE STUDENTS HAVE DEMONSTRATED GIVES A REAL SENSE OF ENCOURAGEMENT FOR THE FUTURE OF THE ART AND DESIGN SECTORS."

ALEX SLACK

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northumbria.ac.uk/design

Art for all

Below:
Bethan Williams



"I WANT TO BREAK DOWN THE BARRIER IN ART WHICH SAYS, 'YOU CAN'T TOUCH THAT', OR DEMANDS YOU TO LOOK AT ART IN A CERTAIN WAY."

BETHAN WILLIAMS

Northumbria University Fine Art graduate Bethan Williams has been named the winner of the 2019 Gillian Dickinson North East Young Sculptor Award.

Childhood experiences can often shape the choices we make as adults, and that is certainly true of 21-year-old Bethan Williams. Her memories of discovering art through interactive exhibitions as a child led to her creating her own installation, designed to break down barriers and encourage the exploration of art by both children and adults.

Bethan's unique concept captured the imagination of this year's Gillian Dickinson North East Young Sculptor Award judging panel. As the winner of the 2019 prize, Bethan has been awarded £6,500 to develop her installation, which will be unveiled at the Cheesburn Sculpture Gardens in Northumberland in May next year. Her proposal, *Beatrix and Her Friends on Tour*, consists of a variety of brightly painted wheeled boxes. These will be moved between locations at Cheesburn, encouraging visitors to engage in a scavenger

hunt to find and interact with the installation.

It was this sense of adventure Bethan remembers from her own childhood, as she explains: "I want to break down the barrier in art which says, 'you can't touch that', or demands you to look at art in a certain way. The exhibitions I remember as a child are the ones I could interact with along with my family. I wanted to create an exhibition where I could give that to other people so families can have a moment of bonding through art."

The Gillian Dickinson North East Young Sculptor Award is supported by the Gillian Dickinson Trust, which was set up to support small charities in Northumberland, Tyne & Wear and County Durham and promote creativity in young people. Since 2015 the Trust has worked in partnership with Cheesburn Sculpture, and local universities, to offer art students

the opportunity to showcase their work.

Joanna Riddell, director of Cheesburn Sculpture, said: "To watch people's emotions and behaviour as they come across these sculptures will be fascinating. I foresee some will be protective about them, some eager to re-site them and play with them, there might be a sense of ownership and empowerment; in all cases, it will be a unique experience for each person. A constantly moving and changing installation, which I feel sure will be enormously popular."

Bethan's installation will go on show from May next year – find out more by visiting cheesburn.com

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Country music book hits the right note



FROM L-R: JAMES AKENSON, CHAIR OF THE INTERNATIONAL COUNTRY MUSIC CONFERENCE, PROFESSOR BRIAN WARD, AND DON CUSIC OF BELMONT UNIVERSITY

A book written by a Northumbria University Professor has won a prestigious international country music award.

Brian Ward, Professor in American Studies, teamed up with Patrick Huber of Missouri University of Science and Technology to publish *A&R Pioneers: Architects of American Roots Music on Record*. The book has now been awarded the highest accolade in country music literature after winning the Belmont Country Music Book Award, an annual prize announced each year at the International Country Music Conference in Nashville, Tennessee.

It has also been shortlisted as one of the best five blues books of the year by *Living Blues* magazine.

A&R Pioneers – the result of nine years of research – tells the story of the men, and a handful of previously overlooked women, who first developed artists-and-repertoire (A&R) work in the early US recording industry. These early pioneers were responsible for signing many of the singers and musicians who came to define American roots music between the first and second world wars. In the process they created a template for a job that would subsequently

become known as “the record producer.”

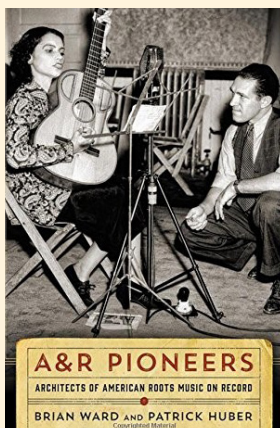
Reflecting on the award, Professor Ward said: “This is a tremendous honour, particularly for a book that isn’t exclusively about country music at all. The A&R pioneers we discuss worked across blues, jazz, gospel, Tejano, rhythm and blues, as well as country music. They shaped the sound of all those styles and helped to ensure their commercial success.

Without them, we wouldn’t have the recordings of Louis Armstrong or Bessie Smith, Jimmie Rodgers or Hank Williams, Robert Johnson or, for that matter, Elvis Presley.”

Northumbria has one of the largest and most active centres for American Studies in Europe – bringing together

academics with expertise in the history, literature and culture of the United States.

To find out more visit northumbria.ac.uk/USAresearch



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northumbria.ac.uk/americanstudies



“DECENTRALISING THE WRITING INDUSTRY HAS BEEN A HUGE BENEFICIAL MODEL. CULTURE IS AN ACTIVE COMPONENT OF REGENERATION IN MANY AREAS OUTSIDE LONDON.”

PROFESSOR KATY SHAW

PROFESSOR KATY SHAW

Championing Northern voices

A contemporary literature expert from Northumbria University has given evidence as part of a House of Commons inquiry into barriers faced by working-class writers.

The lack of working-class writers, performers and musicians in the UK has come under scrutiny in recent years, with a Parliamentary inquiry currently taking place into the issue. It is being coordinated by the Performers’ Alliance All-Party Parliamentary Group, with a variety of experts and witnesses giving evidence. Katy Shaw, Professor of Contemporary Writing at Northumbria, is among those who have been addressing MPs on the subject.

During a session held at the House of Commons, Professor Shaw spoke about her research into the importance of regional support for writers, and specifically how the London-centric nature of the creative industry can be a major barrier for emerging writers outside the capital. As she explained: “Decentralising the writing industry has been a hugely beneficial model. Culture is an

active component of regeneration in many areas outside London.”

Following her appearance before the inquiry, Professor Shaw chaired a debate at the Edinburgh International Book Festival, exploring new ways of increasing visibility, opportunity and promotion of publishing in the North of England and Scotland. The event included members of the Scottish parliament, as well as publishers and those involved in the publishing industry.

Professor Shaw is well known for her work exploring ways of championing Northern voices and underrepresented groups. Last year she published research into the value and impact of the Northern Writers’ Awards – the largest literary awards of their kind in the UK. She found the awards played a key role in the North East creative economy and as a talent pipeline for the UK publishing industry.

Her evidence will feed into the report currently being prepared by the Performers’ Alliance All-Party Parliamentary Group, which aims to identify and investigate the barriers faced by those from lower socioeconomic backgrounds from establishing and sustaining careers as musicians, writers and actors. The report will also review the effectiveness of current initiatives by organisations for improving social diversity and identify best practice across the industry.

Northumbria offers Undergraduate and Postgraduate courses in creative writing – find out more by visiting northumbria.ac.uk/study

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northumbria.ac.uk/humanities

Business advice leads to US expansion

Four Northumbria students have helped a British fashion brand owner to break into the US market with their professional business consultancy advice.

The Business Clinic at Northumbria University is an award winning service where students work in teams to provide free consultancy advice to businesses and organisations. Working hands-on with a business gives students the opportunity to develop both their skills and experience as they work on a real-life project, making them significantly more attractive to employers after graduation.

There was success recently for four final year students involved in the scheme. Taleh Nadirov, Lucy Watters, Andria Chatziannakou and Stella Schwaeble worked together as team Ascension Consultancy and were paired-up with client Tiska London, a British start-up fashion label. The students were given the brief of helping Tiska London expand its sustainable fashion brand into the US market. Tiska London describes itself as “Authentically British, Nordic Inspired”, potentially presenting difficulties adapting to a US market.



BUSINESS CLINIC STUDENTS WITH KIMBERLEY STACEY (CENTRE) OF TISKA LONDON

The students worked directly with the brand's owner, Kimberley Stacey, providing her with thorough advice and implementation and budgeting plans to help her break into the US market in the future. Their advice included making changes to the brand's website and using different types of software to raise brand awareness across the pond. Kimberley said she had “already implemented some of the recommendations across the website,” making noticeable improvements to the business.

The Business Clinic service is available to all types of businesses, from SMEs and multinationals to charities and third sector organisations. While students work under the close supervision of experienced Business School tutors, ultimately the decisions they make and proposals they offer are their own. The students are set the challenge of analysing the problem their client is experiencing and providing relevant research and recommendations to help the organisation to grow and develop.

“IT HAS MADE ME LOOK AT THE BUSINESS IN A DIFFERENT WAY, IN A WAY THAT I SHOULD BE LOOKING.”

KIMBERLEY STACEY

Find out how Northumbria can help prepare your organisation for the future by visiting northumbria.ac.uk/consultancyservices

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northumbria.ac.uk/businessclinic

First in cyber law

Northumbria graduate Thomas Brittain won a prestigious new award sponsored by transatlantic law firm Womble Bond Dickinson after demonstrating his cyber law skills during his course.

The inaugural Womble Bond Dickinson Law and Innovation Award was presented for the best performance by a student studying on Northumbria Law School's recently developed Cyber Law module. As well as picking up £200 in prize money, Thomas also won a week's valuable work experience with Womble Bond Dickinson in Newcastle.

The cyber law module has been designed to develop talent in the legal sector. Recognising the emerging talent and building on its existing partnership with Northumbria

Law School, Womble Bond Dickinson established the award to recognise student excellence at Northumbria. Students on the module develop their legal knowledge of new technologies, such as blockchain, cryptocurrencies, online gambling and artificial intelligence, among other principles of internet law.

Nigel Emmerson, head of the Womble Bond Dickinson Innovation Group, said they were delighted to sponsor the new award, explaining: “As the legal landscape and client expectations continue to change it is great to see Northumbria developing new modules and courses that will equip the lawyers of the future with the

skills they need to flourish.”

Thomas described his success as a fantastic and surprising personal achievement. He said: “The module enabled me to demonstrate the skills I have developed over the past four years of my undergraduate course. It has given me a strong perspective on how the development of online practices has influenced society as a whole, and specifically within the legal sector.”

Following the success of its Cyber Law module, Northumbria Law School has now launched an innovative Law (Cyber Law) LLM course. Find out more by visiting northumbria.ac.uk/cyberlaw



L-R NIGEL EMMERSON FROM WOMBLE BOND DICKINSON WITH THOMAS BRITTAIN

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Researchers spark debate in Westminster



HOUSE OF COMMONS

Northumbria academics have told MPs that continuing uncertainties over Brexit could hit the North East harder than the rest of the UK – and undermine the Northern Powerhouse initiative.

The academics gave the warning while leading a recent roundtable discussion at the House of Commons. The event was led by Professors Joyce Liddle, John Shutt and Ignazio Cabras from Northumbria's Newcastle Business School, and chaired by the Rt Hon Kevan Jones, MP for Durham North. During the session the academics answered questions from a number of Northern MPs and policy and economic advisors based at Westminster.

Focusing on Brexit, Professor Cabras advised that the North East of England's economy was significantly exposed, explaining: "In the case of a no deal exit from the EU, for example, the North East presents the highest risks in terms of declining GDP and increasing unemployment among all the English regions. Given the current scenario, any decision on future industrial strategy and investments for the region needs to be considered even more carefully than before."

The Northern Powerhouse initiative was launched by the Government in 2014, to boost economic growth in the north of England and to re-balance the UK economy away from London and the South East. Policies under the initiative include devolution of power to the North, combining the strengths of core cities including

Manchester, Leeds, Liverpool, Sheffield, Newcastle and Hull, attracting greater investment and a more integrated Northern transport network.

Addressing the MPs, Professor Liddle advised that complex and conflicting governance arrangements across England were frustrating the aims of the Northern Powerhouse, adding: "The devolutionary process linked to the Northern Powerhouse has created greater uncertainty, fragmentation, lack of co-ordination between the various agencies and blurred the lines of accountability for decision-making. Based on our research we would argue that there has been insufficient thinking on how different organisations will work together to improve the North's future."

The House of Commons roundtable discussion was the first in a series led by Northumbria researchers. Other sessions targeting the Brexit process and its impact on the regional economy are currently being organised and likely to be held in autumn 2019 and spring next year.

Experts from Northumbria and Newcastle Business School can also work closely with business partners looking to develop strategies around the Brexit process.

For more information please visit northumbria.ac.uk/business

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northumbria.ac.uk/nbs

"IN THE CASE OF A NO DEAL EXIT FROM THE EU, THE NORTH EAST PRESENTS THE HIGHEST RISKS IN TERMS OF DECLINING GDP AND INCREASING UNEMPLOYMENT AMONG ALL THE ENGLISH REGIONS."

PROFESSOR IGNAZIO CABRAS

Study in Qatar – graduate in Newcastle

The very first cohort of graduates from new degree programmes delivered by Northumbria in Qatar have visited Newcastle to celebrate their success with members of the University's Business School.



NORTHUMBRIA ACADEMICS WITH GRADUATES FROM QATAR

Northumbria began working with the Qatar Finance and Business Academy (QFBA) in 2016. The partnership offers a range of professional and academic programmes, supporting Qatar's strategic "Vision 2030" to become an international centre for finance. Earlier this year there were celebrations at the QFBA campus in the Middle East as the first cohort of more than 20 students graduated in International Banking and Finance. Now the group have cemented their ties with Northumbria by visiting the University's campus in Newcastle city centre. During their stay they met with fellow students and lecturers from Newcastle Business School. And along with almost 1,500 other graduates, they attended the Business and Law graduation ceremony on campus to receive their degrees from Northumbria's Chancellor, Baroness Tanni Grey-Thompson.

Professor John Wilson, Pro Vice-Chancellor for the Faculty of Business and Law at

Northumbria, was delighted to welcome the new graduates and their families to Newcastle, saying: "This is an exciting time for both Qatar and QFBA as the country establishes itself as a global financial hub. We are extremely proud to be working alongside them and with such talented graduates who are now ready to make their mark. While this is our first cohort of graduates, the programme continues to grow and we already have more than 150 applicants for next year."

As well as Qatar, Northumbria's global footprint includes operations in London, Malaysia, Singapore and Amsterdam.

Universities around the world looking to become a partner or collaborate on research with Northumbria can find out more by visiting northumbria.ac.uk/research

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northumbria.ac.uk/law

"THIS IS AN EXCITING TIME FOR BOTH QATAR AND QFBA AS THE COUNTRY ESTABLISHES ITSELF AS A GLOBAL FINANCIAL HUB. WE ARE EXTREMELY PROUD TO BE WORKING ALONGSIDE THEM AND WITH SUCH TALENTED GRADUATES WHO ARE NOW READY TO MAKE THEIR MARK."

PROFESSOR JOHN WILSON



ASSOCIATE PROFESSOR PAUL MCKEOWN

Legal honour

Northumbria Law School academic, Paul McKeown, has been appointed as President of the influential European Network for Clinical Legal Education (ENCLE).

With more than 150 members from over 30 countries, ENCLE brings together institutions and academics from different countries to increase the quality of law teaching through Clinical Legal Education (CLE). Associate Professor and Director of Northumbria's award-winning Student Law Office, Paul's appointment reflects the University's reputation as a leading provider of practice-based learning for law students. On the Board of ENCLE since its inception in 2013, his new role will see him help to set the direction of the organisation and promote CLE over the next two years.

As a European network committed to achieving justice through education, Paul says his appointment is a "real honour". He added: "It is also international recognition of the contribution Northumbria makes to the values and benefits of clinical legal education – both for our students and for the clients they help.

"THIS IS INTERNATIONAL RECOGNITION OF THE CONTRIBUTION NORTHUMBRIA MAKES TO THE VALUES AND BENEFITS OF CLINICAL LEGAL EDUCATION – BOTH FOR OUR STUDENTS AND FOR THE CLIENTS THEY HELP."

ASSOCIATE PROFESSOR
PAUL MCKEOWN

"We have one of the largest student law offices in the UK, enriching the learning experience and career prospects of our students and helping often vulnerable clients who would otherwise have little or no access to justice when they need it. I hope as President of ENCLE I can help encourage greater use of CLE, not only across Europe but more globally as well."

Paul also believes his appointment will help Northumbria and other UK universities retain strong links in Europe despite the ongoing uncertainties of Brexit. "ENCLE is a prestigious organisation, and to be part of such a strong network in Europe will help UK members maintain close relationships with international partners in the wake of Brexit," he said.

Northumbria's Student Law Office sees final year students undertake free legal work on behalf of real clients, with over £1.5 million recovered for around 2,500 people in the last 10 years alone.

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northumbria.ac.uk/law

Setting the bar high in law teaching

JILL ALEXANDER
COLLECTING HER AWARD

"WHETHER IT'S THROUGH PLACEMENTS, CAREERS FAIRS OR INITIATIVES TO PROMOTE FAIRNESS, MY AIM HAS BEEN TO HELP OUR STUDENTS UNDERSTAND WHAT IT IS LIKE TO WORK IN LAW AND TO USE THAT AWARENESS TO OVERCOME BARRIERS AND CHALLENGES."

PRINCIPAL LECTURER JILL ALEXANDER

Northumbria academic Jill Alexander has been named Law Teacher of the Year at the prestigious Northern Law Awards, in recognition of her work to support graduate employability.

A highlight of the region's legal calendar, the awards recognise the achievements of all those practicing and working in the legal industry in the North of England. Principal Lecturer at Northumbria Law School Jill, who joined the University in 1994 having previously worked in leading law firms as a commercial property specialist, was recognised for her significant contribution to law student employability.

Jill was up against stiff competition for the award, including shortlisted finalists from Newcastle and Teesside Universities. The judges praised her efforts to encourage and support students from less advantaged backgrounds. "From an outstanding list of candidates, the winner has drawn upon her 25 years of teaching experience to empower students to overcome

barriers to employment in the legal profession. She demonstrates total investment in her students to inspire and equip them for employability and to overcome disadvantage they may face."

Winning the award was a real honour for Jill, who explained: "I have focused on employability throughout my career. Whether it's through placements, careers fairs or initiatives to promote fairness, my aim has been to help our students understand what it is like to work in law and to use that awareness to overcome barriers and challenges."

Northumbria Law School is currently ranked first in the

sector for sustained employment one year after graduation. The University's employability record was further highlighted on the night with the Trainee of the Year winner, Jordon Downs from Mincoffs Solicitors, and all the other four finalists in this category joining the legal profession as Northumbria Law School graduates.

If you are looking for strong career prospects in law, details for studying at Northumbria can be found at northumbria.ac.uk/law

PRINCIPAL LECTURER
JILL ALEXANDER

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northumbria.ac.uk/lawresearch

Royal seal of approval for Northumbria entrepreneurs

Two Northumbria graduates have received royal recognition for their specialist tourism marketing start-up.

Graduates Rosie Willan and Charlotte Hall were presented with The Duke of York Young Entrepreneur of the Year Award 2019 following the launch of their business – Stay the Night.

The Duke of York Young Entrepreneur Awards are organised annually and seek to recognise excellence and raise the profile of start-up businesses established by students whilst at university.

Stay the Night, a creative digital marketing agency specialising in promoting hostels to travellers, was inspired by Rosie and Charlotte's own travels around South Africa, Kenya and Australia.

When booking and visiting hostels, they began to notice a consistent issue with many of the hostels. They found most did not have a marketing plan in place and as a result, weren't telling potential customers about the unique services or facilities on offer. Noticing the gap in the market, Rosie and Charlotte

established Stay the Night and took on their first client – a hostel owner in Johannesburg – in 2018.

Integral to helping their new business to thrive was support from Northumbria's Student and Graduate Enterprise team.

Discussing their experience Charlotte said: "Right from the beginning the enterprise team believed in us and our idea. They instilled in us the value of our work and expertise, and coached us on various aspects of setting up an official business."

Stay the Night now has 13 clients around the world, with plans to expand further in the near future. The company offers hostels a variety of services including digital marketing, social media management, email marketing and public relations.

When asked what advice they would give to other students and graduates thinking of setting up their own business, Rosie said: "Get in touch with Student and Graduate Enterprise, they



ROSIE WILLAN AND CHARLOTTE HALL IN SOUTH AFRICA

really help set the wheels in motion and keep you motivated. Everyone is learning every day, no one knows everything – even the entrepreneurs and business leaders you look up to are always learning so don't beat yourself up or quit because you feel like you don't know enough."

Northumbria is ranked number one in the UK for graduate start-ups based on estimated turnover. A new purpose-built incubator hub on campus will help more students and graduates like Rosie and Charlotte build successful start-ups. To find out more visit northumbria.ac.uk/incubator

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staythenight.net

Sole success for young entrepreneur

A Northumbria student has turned his passion for trainers into a successful business, counting the likes of England footballing legend John Terry among his customers.

Entrepreneurial Business Management student Ollie Simpson set up his business The Sole Scene in 2017, specialising in selling rare, sold-out sneakers. The business has already gathered a celebrity following, with footballers such as Newcastle United winger Matt Ritchie, Liverpool left back Andy Robertson and assistant Aston Villa manager John Terry all on Ollie's clientele list.

Ollie's entrepreneurial flare emerged at a young age after he began buying and selling his own collection of trainers at the age of 13. But it was studying on Northumbria's Entrepreneurial Business Management BA (Hons) degree that led to the successful launch of The Sole Scene. As Ollie explains: "The course has played a pivotal part in

the business' success so far. I've been learning the underpinning theories of business in the classroom then bringing these theories to life within my business."

Ollie plans to keep the business running over the next nine months until he graduates, then expand his customer base further into the Premier League and English Football League. Follow his progress on Instagram @thesolescene or visit solescene.com

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northumbria.ac.uk/ebm



OLLIE SIMPSON DELIVERING TRAINERS TO JOHN TERRY



FROM LEFT: I2I DIRECTOR KENT MAYALL, PRO VICE-CHANCELLOR OF BUSINESS AND LAW JOHN WILSON, HEAD OF SPORT AND EXERCISE KATY STORIE, I2I DIRECTOR JAMES GORE, I2I HEAD OF INTERNATIONAL ACADEMY ANDY MILNE, I2I DIRECTOR OF SPORT DANNY GORE.

International football partnership hits the back of the net

Talented US footballers with the potential to turn professional have started a full time degree at Northumbria University.

The promising athletes started their studies in September after the University and i2i Sports, a professional player management company, officially signed a deal earlier this year.

The partnership allows students to study for a BA Hons degree in Business Management at Northumbria's Newcastle Business School, while completing a pro-level football training programme. The programme includes training by experienced coaches who have played for, and coached at English Premier League clubs.

Recognising the importance of education, i2i Sports built the partnership with Northumbria to ensure every student can gain the qualifications needed to prepare them for a range of careers, both inside and outside the world of football.

Katy Storie, Head of Sport and Exercise at Northumbria, said the University's excellent reputation in student football, as

well as athlete support services, facilities and international development through sport made it an ideal partner for i2i. She explained: "We are very excited about working with i2i. The partnership supports our strategy to further embed sport within the international student experience at Northumbria and it's fantastic to see the first students on campus, and part of our sporting community."

Andy Milne, Head of the i2i International Soccer Academy, was delighted to announce the news, explaining: "We have been working with Northumbria University for some time now but this takes our partnership to the next level. This is an incredibly exciting time to be a part of the i2i International Soccer Academy, we really feel that this is the start of something special."

Andy's excitement was echoed by James Gore, i2i's Chief Operating Officer, who believes Northumbria will provide the

perfect environment for the student athletes to pursue their sporting and educational dreams.

Find out more about the i2i International Soccer Academy at i2isocceracademy.com

"THIS IS AN INCREDIBLY EXCITING TIME TO BE A PART OF THE I2I INTERNATIONAL SOCCER ACADEMY, WE REALLY FEEL THAT THIS IS JUST THE START OF SOMETHING SPECIAL."

ANDY MILNE

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northumbria.ac.uk/sport

Raising the game for women's football in the North East



LEFT TO RIGHT: GRACE DONNELLY, NORTHUMBRIA UNIVERSITY STUDENT SPORT PRESIDENT AND NEWCASTLE UNITED WOMEN GOALKEEPER; KATY STORIE, HEAD OF SPORT AND EXERCISE AT NORTHUMBRIA UNIVERSITY; BROOKE COCHRANE, CAPTAIN OF NEWCASTLE UNITED WOMEN; AND STEVE BEHARALL, ACTING HEAD OF NEWCASTLE UNITED FOUNDATION.

Newcastle United Foundation and Northumbria University have announced a partnership that will boost women's football in the city.

Already a designated FA Women's High Performance Football Centre, Northumbria University is now also a major partner of Newcastle United Women. The partnership will help the Newcastle United Foundation develop the support network around their women's team, including capitalising on Northumbria's skills and expertise in physiotherapy, strength and conditioning and performance analysis.

This exciting development follows the University's recent appointment of a new Head of Women's Football, Rebecca Langley, who will lead Northumbria's women's football programme and manage the Newcastle United Women's first team.

Katy Storie, Head of Sport and Exercise at Northumbria University, commented: "Northumbria's tremendous track record for student sport at all levels combined with well-established degree programmes in sport, exercise and rehabilitation and research excellence in this field positions us as one of the

top sport universities in the UK. We are very much looking forward to teaming up with the Newcastle United Foundation to develop a high performing Newcastle United Women's football team."

Following the record audiences supporting the Lionesses during the Women's World Cup, the profile of the women's game is at an all-time high. The new partnership will make the most of the increased enthusiasm and provide a vital boost to women's football in the region after Newcastle United Women relaunched as part of Newcastle United Foundation two seasons ago.

Steve Beharall, Acting Head of Newcastle United Foundation, explained: "Newcastle United Foundation has a brilliant football pathway for women and girls and this partnership supports our vision to give players access to the best facilities and support possible. We're very proud to be working with Northumbria University to establish a set-up that can maximise the potential of those players that are living their dream by representing Newcastle United."

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nufoundation.org.uk

Northumbria archers on target for Tokyo 2020



BRYONY PITMAN.
PHOTO CREDIT:
WORLD ARCHERY

Great Britain's men's and women's archery teams have secured their full three-person quotas for the 2020 Tokyo Olympics thanks, in part, to two Northumbria athletes.

"THE MATCH TO WIN THE OLYMPIC SPACES WAS SUCH AN INTENSE MOMENT - IT THAT WAS WHAT EVERYONE HAD WORKED FOR."

ALEX WISE

WORLD ARCHERY
.ORG

If being selected to compete for their country at the 2019 World Archery Championships wasn't impressive enough, Northumbria University students Bryony Pitman and Alex Wise starred in the triumphant line up that saw Team GB make the cut for Tokyo 2020. Held in the Netherlands earlier this year, the World Championships served as a direct qualifier for next summer's Olympic Games, with each men's and women's team that made it through to the quarter-finals claiming three quota places for their respective teams.

History student, Bryony Pitman, shot alongside teammates Sarah Bettles and Naomi Folkard to form the women's team, while Sport Development student Alex

Wise competed together with Patrick Huston and Tom Hall to complete the men's trio.

The men won straight sets in their second-round match, seeing them through to the all-important quarter-final. Conversely, the women had a challenging contest to begin with, but fought on to clinch a 6-2 victory against their Italian counterparts.

To top off a winning season, the women's team shot their way to further success beating China to claim the bronze medal in the semi-final, and just a week later they stole the gold at the European Games, defeating hosts Belarus. Pitman and Wise are also excelling off the field. Dr Carlos Conde Solares, Senior Lecturer in Hispanic Studies commented how Pitman is always resourceful when it comes to

her studies – including her work placement managing a specialist archery store as part of the module 'Your Graduate Future'. Dr Solares noted that the University has been supportive of students' dual careers: "When Bryony applied to study with us, we agreed that we would be flexible whenever her studies clashed with competition time and qualifiers. This happened last term, when an exam clashed with the European Championships – she achieved a first class mark overall in her replacement assignment whilst winning a gold medal for Team GB."

With the 2020 Olympics fast approaching and Great Britain's spot secured, the race is on for both Pitman and Wise to secure their places within the GB Archery teams of three. The final men's and women's line-up will be announced closer to the start of the games, with those selected also gaining a place to compete in the individual competition in Tokyo.

Pitman revealed she is more focussed than ever to continue



TEAM GB AT THE WORLD CHAMPIONSHIPS AFTER SECURING THEIR TEAM PLACES AT THE OLYMPICS

her impressive run of form: "To think I could be going to the Olympics next year is mad. I've worked so hard to get this far," she said. "After just missing out on going to Rio in 2016 I promised myself I wouldn't go through that disappointment again, so to be the leading woman this year I've put myself in a great place to make the team."

Wise commented that the Olympic place-winning match was an unforgettable experience: "The match to win

the Olympic spaces was such an intense moment – it was what everyone had worked for. I cannot wait to cement my place on Team GB for the 2020 games next year."

To keep up to date with our student athletes' progress, visit archerygb.org

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ALEX WISE (CENTRE)
WITH TEAMMATES TOM
HALL (LEFT) AND PATRICK
HUSTON (RIGHT)



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ONE STEP CLOSER TO OLYMPIC SUCCESS

Students Bryony Pitman and Alex Wise help secure Archery Team GB spot at Tokyo 2020.
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Georgia scores leadership role in women's football

As the Women's World Cup kicked off in France earlier this year, Northumbria University Football President Georgia Gibson received her own call up from the English Football Association (FA).

Georgia, a Sport Development student, is one of just 10 female students from across the British Universities and Colleges Sport (BUCS) institutions to be selected for the FA University Women's Leadership Programme.

The inaugural year will run as a pilot programme and is a partnership between BUCS and the Football Association (FA). The main aim of the initiative? To support female students in realising their aspirations to work in the women's game.

By exploring and understanding the diverse opportunities that exist to support the women's game – through both paid and

voluntary roles – the programme will help participants define their career goals and ambitions. It will also enable Georgia and the other nine successful candidates to get a head start and ensure they stand out from the crowd when entering the ever-competitive job market.

In addition to competing as a National Championship winner for Northumbria in BUCS Football and BUCS Futsal, Georgia has also been a committed Sunderland Ladies player for over four years. A keen volunteer too, Georgia is passionate about supporting the development of the women's



"I HAVE GREAT AMBITIONS TO BE PART OF THE WOMEN'S AND GIRLS' GAME IN THE FUTURE".

GEORGIA GIBSON

game as well as carving out her own path to a role in football in the future.

"I have great ambitions to be part of the women's and girls' game in the future," said Georgia.

"I'm already an assistant coach with the FA Wildcats programme delivered at [Northumbria's] Coach Lane and I want to complete my Level

2 and gain more experience to continue to develop the game at Northumbria and beyond".

"Being part of this programme will build on my experience and give me access to a professional network."

BUCS Women and Girls' Football Development Officer, Beth Garner, explains how Georgia stood out from other candidates:

"Georgia demonstrated a very clear and infectious passion, dedication and commitment to the development of the women's game; her attitude towards developing herself in order to benefit others struck a real cord with the selection panel."

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Sport volunteering: a woman's game too?

In September, a Principal Lecturer in Sport Management from Northumbria University was invited to an inaugural international motorsports event to share her expertise about the importance of encouraging women to volunteer in sport.

The International Motorcycling Federation (FIM) and International Automobile Federation (FIA) recently hosted their first ever joint conference on Women in Motorsports – traditionally a male-dominated field. It was at this event that Northumbria's Dr Lindsay Findlay-King took centre stage to speak about developing female volunteering in sport.

Held in Finland, the conference brought together almost 40 speakers and 100 participants from 26 countries representing all continents and was designed to celebrate those who have actively promoted the presence of women in motorsports. With



keynote speeches, empowering panel discussions and workshops, the event acted as a platform to address issues surrounding motorsports and to share inspiring stories.

In addition to exploring the experiences of successful motorsport women – including Spanish MotoE racer María Herrera and Alfa Romeo Formula 1 Test Driver Tatiana Calderon from Columbia – the conference involved a wide range of international experts. The aim was to provide tangible solutions to several topical issues,

including how the federations should support competitors with dual careers, athletes considering themselves as brands in the search for sponsors, sustainability in motorsport and developing volunteering.

Dr Lindsay Findlay King, who also chairs the UK Sports Volunteering Research Network, was invited to take part in a panel discussion addressing ways of

recruiting, retaining and rewarding volunteers and showcased how to reach an untapped pool of volunteers: women. Lindsay said: "People were keen to know what UK research evidence tells us about the way women behave and are motivated differently in relation to sports volunteering and the barriers they may face. There was a lively discussion about supporting organisations to engage female volunteers, as there is an evident gender gap and volunteers are more than twice as likely to be male within some sport roles, such as refereeing or officiating."

For more information about the Women in Motorsports Conference, please visit: fim-women.com

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WOMEN IN SPORT VOLUNTEERING IN NUMBERS:



60%
of adult (16+) volunteers are male

40%
are female



33%
of volunteer coaches or instructors are female



26%
of positions of influence in sport volunteering such as referees or umpires are female