

UNIVERSITY OF  
BIRMINGHAM

# THE POSTGRADUATE TIMES

December 2014



Photo Credit: James Courtney

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THE TIMES  
THE SUNDAY TIMES

University  
of the Year  
2013-14

# THE FIRST WORD



2013–2014 was a remarkable year for the University of Birmingham. The year began with the news that we had been named by *The Times* and *The Sunday Times* as the 'University of the Year.' It ended with the Installation of our new Chancellor, Lord Bilimoria of Chelsea.

Between these two notable events far more happened than can be captured in one short article. We said farewell to Sir Dominic Cadbury, and thanked him for his quite remarkable 11 years as our Chancellor. We acclaimed the election of Professor David Charlton to the Royal Society and Professor Richard Backhouse to the British Academy. This was welcome recognition by our National Academies of two remarkable colleagues. Professor Richard Williams was named by the Engineering and Physical Sciences Research Council in the first select group of its RISE Fellows. Academic colleagues across the University continued to be lauded for the quality of their research. I cannot remember a year where we have won more academic prizes.

Equally heartening were the colleagues whose contribution to teaching has been recognised externally, while colleagues in professional services carried off a *Times Higher Education* award, and colleagues in HAS have been garlanded with prizes and awards.

Indeed so successful has the University been this year that, at the suggestion of the Provost, we are looking at new ways to celebrate all that our colleagues have achieved.

It is on these and other successes that we are building the future of the University. Never has the University of Birmingham been more popular. Our undergraduate applications are up by 18 per cent and we have seen substantial increases in applications from international and postgraduate taught students. Our research awards run ahead of target, though there is still much further to go. We have broken ground with Rolls-Royce on the High Temperature Research Centre and, with colleagues at University Hospital Birmingham, work is well advanced on the Institute of Translational Medicine. Next year we will be taking time to develop the University's new Strategic Framework which will act as a compass guiding us through the second half of this decade. We can embark on this exercise with real confidence that we are shaping our own future, and will continue to do so. Indeed, as Professor Andy Schofield suggested to the University Leadership Forum, we might think about moving from a strategy where we are aspiring to succeed to a strategy where we expect to succeed. That, symbolically, would mark the distance that we have travelled.

The work on the Strategic Framework will involve conversations, focus groups, and open events right across the University. It is a process to which I hope many of you will feel that you can contribute.

As I have said before, it is a characteristic of great universities that they are constantly looking forward and reshaping themselves. The very best do that in ways which break new ground and remodel the idea of a university for generations to come. We can now, I believe, claim to be in that select group.

So next year, the next five years, and indeed the years beyond will be as exciting as the year that is now coming to a close. As we face the future with a sense of excitement and privilege to be working at the University at such an exhilarating moment, we can all reflect with satisfaction at having been part of a truly memorable year.

I would like to thank all of my colleagues for everything that they have contributed. Our new Chancellor said at his Installation that to be associated with this university at this time is an honour. We are equally honoured that he has agreed to become our Chancellor and shares our vision. **Our future will be what we choose to make it.**

**Vice-Chancellor**  
**Professor Sir David Eastwood**

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# A New Chapter

The University is delighted that Lord Karan Bilimoria, Crossbench Peer and founder of Cobra Beer, has been appointed as its seventh Chancellor.



Lord Bilimoria of Chelsea CBE follows in the footsteps of chancellors including the Right Honourable Joseph Chamberlain and the Right Honourable Anthony Eden, and succeeds Sir Dominic Cadbury, who stepped down last December after 11 years in the role.

**'I AM HONOURED AND HUMBLED TO HAVE BEEN ASKED TO BE CHANCELLOR OF THIS INTERNATIONALLY RENOWNED UNIVERSITY WITH ITS VIBRANT, GLOBAL COMMUNITY.'**

*LORD BILIMORIA*



The Chancellor acts as the University's ceremonial figurehead and helps to raise its profile on the global stage. The Chancellor is also a key figure at University events, and prior to his installation ceremony in July, Lord Bilimoria began his Chancellorship by meeting students from the Class of 2014 as he collected his own honorary degree from the University.

'Lord Bilimoria is a highly respected global businessman and Crossbench Peer with a clear passion for higher education and the value it brings to society and the economy,' said Vice-Chancellor Professor Sir David Eastwood. Lord Bilimoria has a long association with the University of Birmingham – his mother, uncle and maternal grandfather studied here, and he has been a member of the Business School Advisory Board since 2005. He has

also been acknowledged as an ambassador for Britain, India and the Parsi Community. Lord Bilimoria is also active in Parliament across a range of matters including commerce, entrepreneurship, education, diplomacy, minorities' contributions, and academia. Having received a Bachelor of Commerce degree from Osmania University in Hyderabad in 1981, Lord Bilimoria moved to London where he qualified as a chartered accountant. He went on to read Law at the University of Cambridge. In 2004 he was appointed Commander of the British Empire (CBE) for services to business and entrepreneurship, and in 2006 he was created Baron Bilimoria of Chelsea in the Royal Borough of Kensington and Chelsea, making him the first ever Zoroastrian Parsi to sit in the House of Lords. For full details visit: [www.birmingham.ac.uk/university/chancellor](http://www.birmingham.ac.uk/university/chancellor)



● Images: Lord Bilimoria receives his honorary degree



## BIRMINGHAM GLOBAL USA

### Building Bridges with the USA

The UK and the USA enjoy the most productive higher education relationship in the world. Enhancing dialogue between US and UK partners offers a major opportunity to build meaningful partnerships, promote knowledge exchange, educate new audiences, and support global engagement on both sides of the Atlantic. Here at the University we fully recognise the value of transatlantic partnerships and have invested significantly in growing academic engagement with the US as a key strategic international territory.

We are currently working with 30 institutions across 23 states to provide exciting transatlantic exchange opportunities. The US remains the most popular destination for our students and we're always looking for new partners. Partnerships based on academic relationships are always the most productive, so if you have academic connections that might facilitate an exchange relationship, please do get in touch.

We regularly participate in best-practice exchanges with US administrators. Last year we hosted the Fulbright Administrators programme and this summer we welcomed 34 North American Fellowship Advisers during their UK study tour. The event showcased the US graduate scholarships that we have established in collaboration with the Fulbright Commission, Marshall Commission, Banco Santander and our North American Alumni Foundation.

Our links with Fulbright have created new avenues for US researchers to engage with the University on a longer-term basis. We're proud to be one of only three UK universities to host the prestigious Fulbright Distinguished Chair award. This autumn we welcome Dr David Stoesz, Professor of Social Work, University of Illinois, as our inaugural Chair. In addition, we will be hosting two Fulbright Scholars: Dr Sharon Mastracci, Head of

College of Urban Planning and Public Affairs, University of Illinois and Dr Angela Eikenberry, Associate Professor, Business Administration, University of Nebraska.

Given the scale of the country and self-reliance of its elite institutions, building reputation in the US and developing genuinely productive linkages is particularly challenging. The need for a more strategic institutional approach towards managing transatlantic relationships is thus widely recognised.

As you would expect, Birmingham academics enjoy wide-ranging research relationships right across the US and there is a North America Travel Fund available to support them. Yet we have also sought strategically to focus academic engagement on Birmingham's sister city Chicago and the state of Illinois.

Over the last four years we have developed an innovative platform approach involving civic, academic and cultural engagement initiatives to enhance our profile in the region and facilitate signature partnerships with world-class institutions. Most recently we have formed a unique strategic alliance with the University of Illinois at Urbana Champaign (UIUC), one of the US's leading public research-intensive universities.

The BiRmtingham-Illinois Partnership for Discovery, EnGagement and Education (BRIDGE) aims to deepen wide-ranging connections that have flourished over the last four years and develop wider faculty networks to progress collaborative teaching, learning and research initiatives. A joint BRIDGE Seed Fund has just been launched that staff at the University are encouraged to apply to; there are two deadlines a year, the next being 15 October 2014 and 28 February 2015.



Our focused approach to building meaningful international partnerships places us in a strong position to leverage external funding, such as the British Council's US-UK Global Innovation Initiative (GII). The GII aims to strengthen Science, Technology, Engineering and Mathematics (STEM) research between the UK and US with universities in Brazil, China, India and Indonesia. Following success in 2013, we are hoping for a positive outcome this year.

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#### Further information:

For more information on the opportunities outlined above please contact:

Dr Erica Arthur, North America Development Manager at:  
[e.d.arthur@bham.ac.uk](mailto:e.d.arthur@bham.ac.uk)

or visit: [intranet.birmingham.ac.uk/external/international/relations/North-America/Collaboration-with-North-America.aspx](http://intranet.birmingham.ac.uk/external/international/relations/North-America/Collaboration-with-North-America.aspx).

# COMEDIAN CHRIS ADDISON CONTEMPLATES HAPPINESS

On 11 June Chris Addison, award-winning writer, stand-up comic, actor and director, took to the stage in the Great Hall to deliver the annual Baggs Memorial Lecture.



The Baggs Memorial Lecture began in 1976 and was named in honour of alumnus, Thomas Baggs. He left a legacy donation to stage an annual public lecture on the theme of 'Happiness – What it is and how it may be achieved by individuals as well as nations.' Past speakers have included David Attenborough, Benjamin Zephaniah and Alastair Campbell.

Prior to the lecture *Buzz* caught up with Chris to talk about his time at the University and what makes him happy.

Chris, who received an honorary doctorate last year, is an alumnus of the University (BA English, 1994) with fond memories of campus and the surrounding areas. Chris observed that the look of the University had '*changed massively*' but '*fundamentally it's the same place, because so much of what Birmingham is, is the feeling you get from Chancellor's Court which hasn't changed much.*'

Chris is well known for his career in comedy, yet comedy was not his first creative outlet. As a student he was Co-Chair of the Guild Theatre Group and worked behind the curtain as a director on several Guild productions. He considers Alan Ayckbourn's *Table Manners* his finest hour as director yet he also enjoyed his moment in the spotlight when he was convinced to take to the stage in the *Noises Off*, the Michael Frayn farce: '*the best work of comedy for the stage, an amazing piece of writing.*'

Staff at the University were a big influence on Chris and his career – in particular Dr Tom Davis, who lectured in the English department until his retirement. Dr Davis was clearly an inspiration to Chris: '*the things that Tom taught me about how to organise your brain and pieces of work, I still use that today when putting a show together. He told me a way of putting essays together that I still use as a way of constructing pretty much anything creative, it's really good.*'

Chris has gone on to carve out a successful career, making regular appearances on popular panel show *Mock the Week* and working on both sides of the Atlantic behind the television camera. '*I'm very grateful, I'm an incredibly fortunate person*' said Chris: '*I'm happy as I am one of the luckiest people I know.*'

However, there is one thing in his career that can make him unhappy: '*Like a lot of people in my line of work, I went into this when I was a young person with no notion of any kind of responsibility, beyond that month's rent. And what you don't realise is you are setting yourself up for a career where, if it works well, if you're doing ok, there will be large periods where you're taken away from your family.*'

Chris began his lecture saying he was '*terrified*' to take to the stage in the Great Hall as to him it remained '*the exam room.*' He also noted the little things in life that resonate and make us feel happy; for Chris they are '*the first chord of*



*A Hard Day's Night* and '*the tiny bit of yoghurt you discover on the foil lid.*' During the lecture Chris went on to share his tools for dealing with creative unhappiness and offered a unique insight into the creative process behind television programmes such as *The Thick of It* and *VEEP*.

The lecture, delivered to a capacity audience, was intelligent and entertaining, offering food for thought on where we find happiness. Chris Addison is currently working as a director and producer on the HBO series *VEEP* and was recently seen starring in the Sky sitcom *Trying Again*.

Follow him on Twitter [@mrchrissaddison](https://twitter.com/mrchrissaddison)

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# Engaging With SCIENCE

*Looking back at the British Science Festival*



In September the University hosted the British Science Festival – six days full of talks, demonstrations, research, entertainment and activities. The Festival, organised in conjunction with the British Science Association, welcomed top researchers, Nobel Prize winners and fantastic entertainers to communicate the value of science and its impact on culture, our society and economy.

Greg Clark, UK Minister for Universities, Science and Cities, visited the Festival and was greeted by the University's Provost and Vice-Principal, Adam Tickell. He also joined Alice Roberts, Professor of Public Engagement in Science, on stage to discuss the government's policy on science, technology and innovation.



Alumnus and Nobel Prize winner Professor Sir Paul Nurse, Rt Hon Greg Clark MP, British Science Association Chief Executive Imran Khan, Provost and Vice-Principal Adam Tickell

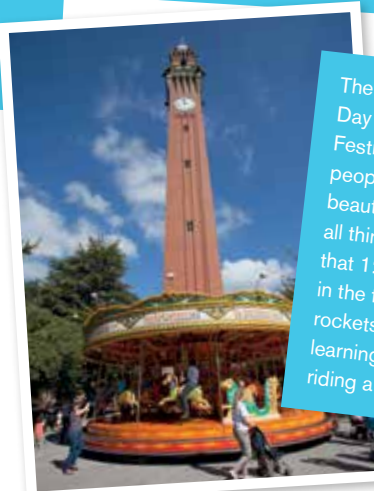


The University produces world-leading, distinctive and significant research that has an impact on the global society. As part of the Festival, academics from the University presented the findings from seven exciting research projects including new discoveries at Stonehenge, the identification of potential food sources, and insight into how different generations cope with loss.

The press coverage generated by these stories was worth more than £5.2 million. Birmingham's academics also led many of the talks and debates on campus covering robotics, astronomy, anatomy, palaeontology, evolution, drones, and ecology.



School and college students from the Birmingham area and beyond also benefited from attending the event as part of the Festival's Young People's Programme, which aimed to inspire and encourage participation in science subjects.



The University's annual Community Day also took place on the Festival's second day offering local people the chance to explore the beautiful campus and celebrate all things science. It is estimated that 12,500 came along to join in the fun – making robots, building rockets, using a microscope, learning aerial acrobatics and riding a traditional carousel.



# The British Science Festival 2014

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After the event we caught up with Maggie Lieu (Physics) and Howard Carlton (Modern History) – two current doctoral researchers at the University – to discuss their contribution and celebrate the success of the British Science Festival 2014.

*How did you get involved in the British Science Festival?*

**ML:** The Astrophysics group at the University run a monthly evening of talks, which I attend, and these were adapted and integrated into the wider BSF programme. And it's not the first time the BSF, one of the largest science festivals in Europe, has been held here. The University of Birmingham has been very successful in attracting some of the major science public engagement events in the past few years.

*Howard, how does a History student come to be involved in the British Science Festival?*

**HC:** I was actually attending a course on poster writing run by the Graduate School in preparation for the annual Poster Competition (where researchers attempt to explain their projects on a single A0 piece of paper) and Erika Hawkes (PG Research Development Officer) thought it might be a good idea to include someone like myself at the BSF to provide some historical context to the events.

*What was your main role?*

**HC:** My role was to put an extra layer of meaning around what people had seen at the inflatable planetarium that was displayed to the public in the 'pop-up shop' in the Palisades shopping centre. I explained some of the context in which astronomical discoveries had been made. For example, did people realise that Herschel had discovered the planet Uranus by mistake and that he had initially (and somewhat sycophantically) wanted to call it 'Georgium sidus' in honour of George III (who proceeded to award him an income for life so you could say it worked even though the name didn't stick!)?

*Did the planetarium attract a lot of interest?*

**HC:** The event ran for two days and those that attended, particularly the children, were very interested in what they saw and heard. And hopefully they have been inspired to go on and study science at school and beyond, though I'm not so sure I recruited any potential historians – but that wasn't the objective of the exercise.

**ML:** It was the same on campus where the events were also really well attended. And they are crucial to getting children more involved in science, especially girls, because science subjects at school are still all too often seen as 'geeky' and 'for boys'. In fact, I only developed my interest through an after-school club where we worked on exciting hands-on projects. It's only through interactive activities like those made available by the BSF that science will really capture the interest of children. That's why it's great that the University is so involved.

*How does the University of Birmingham's role in these type of events benefit your research?*

**HC:** I think these events show how astronomy is a very approachable topic. The University even runs 'Astronomy in the City' sessions on a monthly basis and such initiatives really do help show what kinds of problems and questions are being researched and maybe (implicitly rather than explicitly) that the funding provided by means of taxes etc. is being put to good use. It also demonstrates how easy it is for postgraduates to get involved.

**ML:** The University has many science areas running different activities not only on campus but all over the city. STEMNET (the Science, Technology, Engineering and Mathematics Network) is probably the easiest way to get involved in outreach and the contract holder for Birmingham and Solihull is located on campus. There's no excuse not to get involved!

**HC:** The Graduate School also run a lot of 'non-vocational' soft skills classes and initiatives which make it possible to get involved in lots of different areas – even those outside your main research area. For example, along with helping with the BSF, I am also helping put together an inter-disciplinary workshop on the topic of 'Narrative' with other College of Arts and Law postgraduate researchers.

*'I feel it is fantastic that the University of Birmingham pride itself in inspiring the scientists of tomorrow and encouraging communication between scientists and the public.'*

Maggie Lieu is in her third year of an Astrophysics PhD. Her work concentrates on cosmic giants (galaxy clusters), which are the largest bound structures and can be used as laboratories to study universal matter including dark matter, hot plasma, and baryonic matter. She hopes to understand how the gravity of cosmic giants is able to bend the light of distant galaxies and relate this to their mass content and x-ray properties.

Howard Carlton is a recently retired Technical Architect and is now in his second year of a part-time PhD in Modern History. His thesis will focus on a number of 19th-century controversies in astronomy and will show how these debates reflect other major issues of the period such as the apparent conflict between the discoveries of science and belief in religion.

# THROWING CAUTION TO THE WIND

From a holiday in the 'Axis of Evil', post-conflict resolution and artificial intelligence, to the possibility of robot overlords, the University's first TEDx conference tackled the theme 'Throwing Caution to the Wind.' Faye Jackson reports.



TED is a non-profit organisation that is devoted to spreading inspirational ideas in the form of 18-minute talks. TEDx is run independently to share ideas in communities around the world. The inaugural conference took place in May and saw a variety of academic and non-academic speakers. The event proved popular so we may see another meeting on campus in the future.

Dr Jeremy Pritchard, Senior Lecturer and Head of Education at the School of Biosciences, discussed the issues of human evolution, asking questions about how perfect evolution is as a process. Dr Nick Hawes, Senior Lecturer in Intelligent Robotics at the School of Computer Science, gave a talk about the potential robot overlord uprising, which certain mathematical systems predict, and the use of autonomous robots in everyday life.

Ben Goodwin, International Media Relations Manager, spoke about his recent trip to North Korea, discussing his experiences as a tourist in the 'Axis of Evil'. Ben said: *'I was thrilled to be asked to do a TEDx talk as a member of non-academic staff. I think it was a great initiative to be hosted by the University of Birmingham, and I hope we can do something similar in the future so that more people can enjoy the TEDx experience.'*

Tom Farrar, Digital Communications Officer and organiser of the TEDx conference said:

**'Organising TEDx was an exhilarating experience and I am proud to have given students, staff and the community an opportunity to gain an insight into a range of academic disciplines and inspirational talks they wouldn't normally be exposed to.'**

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You can watch all seven talks from the first Birmingham TEDx at: [www.birmingham.ac.uk/university/tedx/index.aspx](http://www.birmingham.ac.uk/university/tedx/index.aspx)

Discover more about the TED organisation [www.ted.com](http://www.ted.com)

Contact Tom Farrar for further information about TEDx at the University  
0121 414 8783  
[t.s.farrar@bham.ac.uk](mailto:t.s.farrar@bham.ac.uk)

# LEST WE FORGET

A century on from one of the deadliest conflicts in history, the University is reflecting on its role in the First World War, and embarking on a four-year programme of national and global events in commemoration.

## LEARNING FROM HISTORY

Linking with the BBC has helped Birmingham to create an academic first: the UK's first distance learning course on World War One. The Aviation Comes of Age MOOC (Massive Open Online Course), which is free, will look at the deployment of air power during the First World War and the evolution of airborne conflict.

Further opportunities to study the Great War through the University's renowned Centre for War Studies include a Masters in British First World War Studies, and a free, open-to-all series of lectures by leading First World War scholars running each Tuesday evening in spring for the next five years.

Learn more: [www.birmingham.ac.uk/research/activity/warstudies/](http://www.birmingham.ac.uk/research/activity/warstudies/)

## CONNECTING PEOPLE WITH THE PAST

Academics and community groups in Birmingham, led by the University, will collaborate as never before to mark the centenary.

The city's revitalised library is the focus for workshops, exhibitions and research looking at how the conflict has shaped the past 100 years.

This is one of only five centres across the country set up to commemorate the Great War and its legacy, in a £500,000 project funded by the Arts and Humanities Research Council. Birmingham's cultural diversity will help to make the centre distinctive, and the city's young population will enable researchers to look at what the commemorations mean to a new generation.

To find out more about how to get involved, visit [www.birmingham.gov.uk/WW1](http://www.birmingham.gov.uk/WW1)

## COMMEMORATIONS IN A DIGITAL AGE

As well as contributing to a British Library e-learning project on the First World War, the University is involved in a major international project to digitise precious archives relating to the War.

The Centre for War Studies is also one of the research bodies providing academic advice and support to the BBC's digital content for the centenary.

This will cover a range of material designed for audiences from children to those as old as the war itself, demonstrating the University's commitment to explaining the Great War to the widest possible audience.

Special Collections has a range of materials relating to the First World War accessible online. Learn more: [www.calmview.bham.ac.uk](http://www.calmview.bham.ac.uk)

## A GLOBAL VIEW

The First World War centenary is a worldwide event, and Emma Login, Research Fellow in the Department of Classics, Ancient History and Archaeology, is exploring how attitudes towards commemoration vary between countries around the globe. She explains: 'While we might like to see this as continuation of a long history of remembrance, memorialisation is far more complex than a single national perspective might suggest.'

'By taking a wider approach, I can chart changing attitudes towards commemoration, especially as World War One begins to pass from living memory.'

'The UK's centenary events should be seen as part of a continually evolving process of commemoration and memorialisation which will be approached differently by each participating nation.'



# 10 WAYS BIRMINGHAM HAS CHANGED THE WORLD



Thank you to everyone who nominated their Birmingham research heroes for the '10 ways' competition. For more than 100 years, the University has had a major impact on the world, from pioneering transplant surgery to creating artificial Vitamin C.

Hundreds of academic champions were suggested, and the names were whittled down to ten winners including Otto Frisch FRS and Sir Rudolf Peierls CBE (Hon DSc, 1967), who co-wrote the Frisch-Peierls Memorandum, which laid the foundations for the Manhattan Project.

This in turn produced the first atomic bombs of the Second World War, heralding the beginning of the end of the conflict. Revolutionising a very different field, Professor John Sinclair (formerly Professor of Modern English Language at the University) was Founding Editor-in-Chief for the first edition of the COBUILD Dictionary. COBUILD (Collins Birmingham University International Language Database) transformed the study of English across the globe, and led to revolutionary approaches to linguistic theory and practice.

For a full list of the winners visit: [www.birmingham.ac.uk/10ways](http://www.birmingham.ac.uk/10ways)

Originally published in *Old Joe*, Autumn 2014

# 'FEMALE TOMMIES' AND THE FIRST WORLD WAR



University of Birmingham graduate Elisabeth Shipton, who recently completed an MA in Heritage Management at the Ironbridge Institute, launched her first book *Female Tommies: The Frontline Women of the First World*

*War* this year. In conjunction with The History Press, *Female Tommies* looks at those who wanted to be in the thick of it on the frontline. It lays bare the previously unseen histories of those women who, despite great resistance, went overseas and established a role for them themselves in the war zone, ultimately laying the foundations of women's auxiliary services and their future in the military.

Ahead of the launch of The University's new Postgraduate Mentor Scheme, Elisabeth agreed to talk to the *Postgraduate Times* about her book and her time at Birmingham.

*The book talks about the militarisation of women during the First World War. What were some of the most interesting or unexpected stories you discovered?*

I think what struck me the most was how determined all the women were to play an active role, to face danger and to leave their comfortable lives behind. Unlike the men and the white feather campaign there was no moral obligation or expectation that women should go to war, in fact quite the opposite.

Mabel St Clair Stobart is just one of those who refused to give up. A married lady in her early fifties she set up a new organisation, the Women's International Service League, in 1914. She went immediately to establish a hospital in Brussels, only to be caught up in the German invasion. She was arrested as a spy but narrowly avoided prison. Then the moment she returned home she went straight back out again, this time to Antwerp. Once more

she escaped the German advance and then went on to work in both France and Serbia.

Another story which was unexpected was that of a French doctor, Nicole Girard Mangin. Mistaking her gender, the French Medical Services issued her with her call-up papers. Mangin's senior officer did not want a female doctor in his hospital so she was reassigned to Verdun, a fortress town the French thought would be relatively safe and far from the action. When the Germans bombarded the area in 1916, Mangin refused to leave her patients behind.

*What were some of the challenges you faced in uncovering these 'smaller' narratives?*

An easy trap that I was mindful to try and avoid was to sensationalise the stories of the individual women whose actions generated headlines and who stood apart from the rest of their gender. While I wanted to discuss these extraordinary happenings, such as the French aviator Marie Marvingt who piloted bombing raids or Flora Sandes who joined the Serbian Army, I also wanted to look at women in a wider context. I wanted to find out how the role of women changed during the conflict and what prompted the armed forces to finally accept women in the military. By the end of the war, nearly 200,000 British women had seen active service.

*What are your thoughts on the acts of remembrance and commemoration that are taking place this year, and which the University of Birmingham is championing in the city? Have you played a part in these?*

This year I have worked as researcher for the Royal British Legion's 'Every Man Remembered' campaign. The Legion has worked extremely hard to commemorate both the men and women who died during a conflict that is no longer in living memory by helping the public relate to WWI on a range of different levels. Whether through art installations such as the poppies at the Tower of London or through printed and social media they have tried to connect with an audience whose own

knowledge of the war ranges from expert to knowing absolutely nothing. At the same time they are bringing into focus the issues affecting today's veterans and their families who continue to need our support.

*Why did the book come about? Has it been your main project since leaving the University?*

History is my big passion, I am deeply interested in the past and how previous generations lived. After graduation I returned to work in the museum sector for the Royal Green Jackets Museum in Winchester. I was an archivist for about three years. At the same time I began working as a researcher for a series of documentaries on BBC Radio 4. It was a great way in which to showcase museum collections and bring history to life and I became interested in programme-making. In 2009 I moved to London and have been working for BBC Television since, as a Filming and Location Researcher.

*And finally, how do you remember your MA and what advice would you give to new students?*

Very fondly. I learned and enjoyed so much. One of the most important things that I learnt was to always remember your audience and your purpose. It sounds simple but factors such as office politics and budget constraints sometimes make it easy to forget what is actually important.

One of the other great things about the course is the number of speakers who come to Ironbridge to share their experiences. It's an excellent chance to network and find placements. As a student you are best placed to undertake a number of internships/voluntary work, to travel to different parts of the country and to gain valuable experience. My advice is be proactive, make connections with as many organisations and people as possible, not just those who you meet on the course. The Ironbridge Institute carries a lot of weight in the heritage sector and helps open doors but you need to create your own opportunities.



## POSTGRADUATE MENTOR SCHEME

If you have queries or concerns about any aspect of life as a postgraduate student at Birmingham, you can get first-hand information and advice from current students and alumni. Our postgraduate mentors will answer your questions based on their own experience of campus life, their University school or department, the city, the transition to postgraduate study and the support services offered by the University. They can also help you with registration and administration procedures once you arrive.

Here is a small selection of current students and alumni who can offer advice as postgraduate mentors:

### **David Kettle** **Course: MSc International Business**

Birmingham gave me the tools to really get a head start in my career. The guest lecturers that came in to present to us offered some unique insights into international business strategy, and the case studies that we worked on helped me to develop skills that are applicable in my career. After graduating from the International Business MSc, I did a series of internships overseas within the insurance sector. This made me an attractive candidate when I returned to the UK, securing a role at American Express, working as an analyst in the Business Strategy and Planning team. The role was initially UK only but quickly expanded to include the Nordics and eventually EMEA. After working at AMEX for two years, I moved to my current role at Barclays, working in a similar functional role across the Barclaycard Business Solutions division.

The best thing is I am still in touch with most of the students on our course and even some of the lecturers. This network and these friendships can be important for your future career.

### **Rosanna Thompson** **Course: MSc Toxicology**

The MSc Toxicology course has given me a broad yet detailed overview of a toxicologist's role in industry, not only in drug development but in the environmental and chemical industries too. The visits to industrial companies have given me an insight into how these companies work, and guest lecturers have been able to provide first-hand accounts of their experience. As well as the theoretical knowledge, my truly fascinating research project has provided me with a number of practical skills that were vital in securing my new job in a clinical research organisation.

### **Ayush Joshi** **Course: PhD Computer Science**

My MSc degree taught me in depth the basics about my field of study. That motivated and helped me a lot to continue onto a PhD here at Birmingham. It's a great feeling knowing you are contributing to your field and working alongside leading researchers in the field of Computer Science and, specifically, natural computation. The whole experience has been wonderful: the teachers, peers and environment; everything has been great. It is the reason that I decided to stay for a second degree at Birmingham.

### **Rosemary Worsley** **Course: MA Creative Writing**

I am a professional musician by trade and training and have owned my own music school for 25 years, but after attending a Life Writing Course at the University of Warwick in 2010 I realised that I would love a career in writing. However, I equally realised that I was ill-equipped to do so, so I decided to apply to the University of Birmingham in order to gain a formal qualification in this field. I am so glad that I did and have never regretted it once. I chose Birmingham because of its outstanding reputation as a seat of excellence and when I compared the course content with other universities offering similar courses, I realised the University of Birmingham was superior in all ways.

**IF YOU WOULD LIKE TO TALK TO ELISABETH ABOUT THE MA IN HERITAGE MANAGEMENT PLEASE LEAVE A QUESTION AT:**

**[www.pg.bham.ac.uk/mentor/elisabeth-shipton/](http://www.pg.bham.ac.uk/mentor/elisabeth-shipton/)**

**THE FULL UNIVERSITY POSTGRADUATE MENTOR SERVICE IS AVAILABLE AT:**

**[www.birmingham.ac.uk/pgmentors](http://www.birmingham.ac.uk/pgmentors)**

# transforming Our campus

**'We are so excited to see it taking shape before our eyes.'**



## Swim coach has a hole lot of love for the new sports centre

The head swimming coach at the University took his chances to get on site when he climbed into the hole dug for the 50-metre swimming pool this summer – despite there being quite a wait until the water goes in!

Gary Humpage has been desperate to be able to get into a 50-metre pool in his home city since he started training back in the early 1980s. When he began coaching at the University in 1996, he started to hear whispers that the longed-for pool might actually be built at his own venue.

When work finally began on the realisation of that dream earlier this year, with the construction of the University's new state-of-the-art sports centre, Gary was delighted. The sports centre, including the pool, will be open for action at the beginning of 2016.

Gary said: *'It was around the time of the 1984 LA Olympics when people started to talk about getting a 50-metre pool in Birmingham – and I'm so excited that now it's finally happening, it's here at the University of Birmingham.'*

Gary coaches the University's teams, including several elite swimmers, and is also involved in the Learn To Swim classes take place at the current sports centre. He said that the impact of a 50-metre pool on swimming could not be underestimated.

*'For our elite swimmers, to be able to train in a 50-metre pool, the difference cannot be stressed enough – they will effectively be able to swim ten per cent more because of not having to turn every 25 metres. And the pool will be wider, at the moment the lanes are narrow – we struggle to do butterfly training because of that. The new pool will enable much wider lanes.'*

The pool will have a moveable wall and floor so that the pool can split into two 25-metre pools and alter the depth for all swimmers of all abilities. Gary said the increased capacity for swimming as a result would make a huge difference to swimming in the city: *'It will change how people participate – everyone can benefit from the wider lanes and variable floor. We can also have lane swimming in one half of the pool throughout the week.'*

**'Having this 50 metre pool in Birmingham will make us so much more competitive – it really will boost the things we can achieve through swimming in this city.'**



Anyone interested in seeing what a 50-metre swimming pool looks like in its early phases or in the progress of the new library and surrounding roads can follow construction via webcams at: [www.birmingham.ac.uk/building](http://www.birmingham.ac.uk/building).

## Library Services Director digs in to aid construction

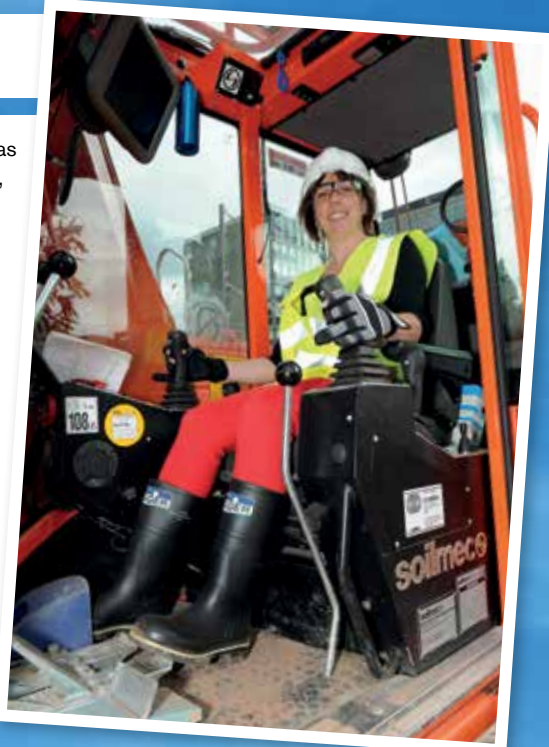
Library Services Director Diane Job donned her hard hat and high-vis jacket recently as she helped out with a spot of piling at the site of the new library.

If you have taken a glance at the webcam recently, you'll see that the new library construction is well underway, and the piling phase is now almost complete. And if you want to take a closer look, our contractors Carillion have now established a viewing platform that will be open on selected days throughout the coming months.

Carillion began work on the library in March after being appointed as the main contractor earlier this year. Due for completion in mid-2016, the library development will provide outstanding facilities for a new

generation of students and researchers, as well as a cultural space for the University, which will be open to the people of Birmingham, across 13,000sqms of floor space over six levels.

Diane said: *'The library we are building now on campus will be transformational. The opening of the building will be the culmination of a lot of hard work behind the scenes to organise our incredible resources allowing our students and staff to take advantage of the considerable amount of materials we hold in the most straightforward way. The new library will be the most fantastic space for students and researchers to be able to interact with these resources.'*



## Back to basics at the heart of Aston Webb

If you have ever wondered what the venerable Aston Webb building looks like inside when stripped back to basics – now is the chance to see. As work to convert C Block into a student hub ready for our 2015 intake of students continues, the contractors have been documenting progress on the 100-year-old building with a series of photographs showing the phases of construction. The intriguing images show what the Grade II-listed building contains when all of the fixtures and fittings are taken away, exposing Aston Webb's original ideas.

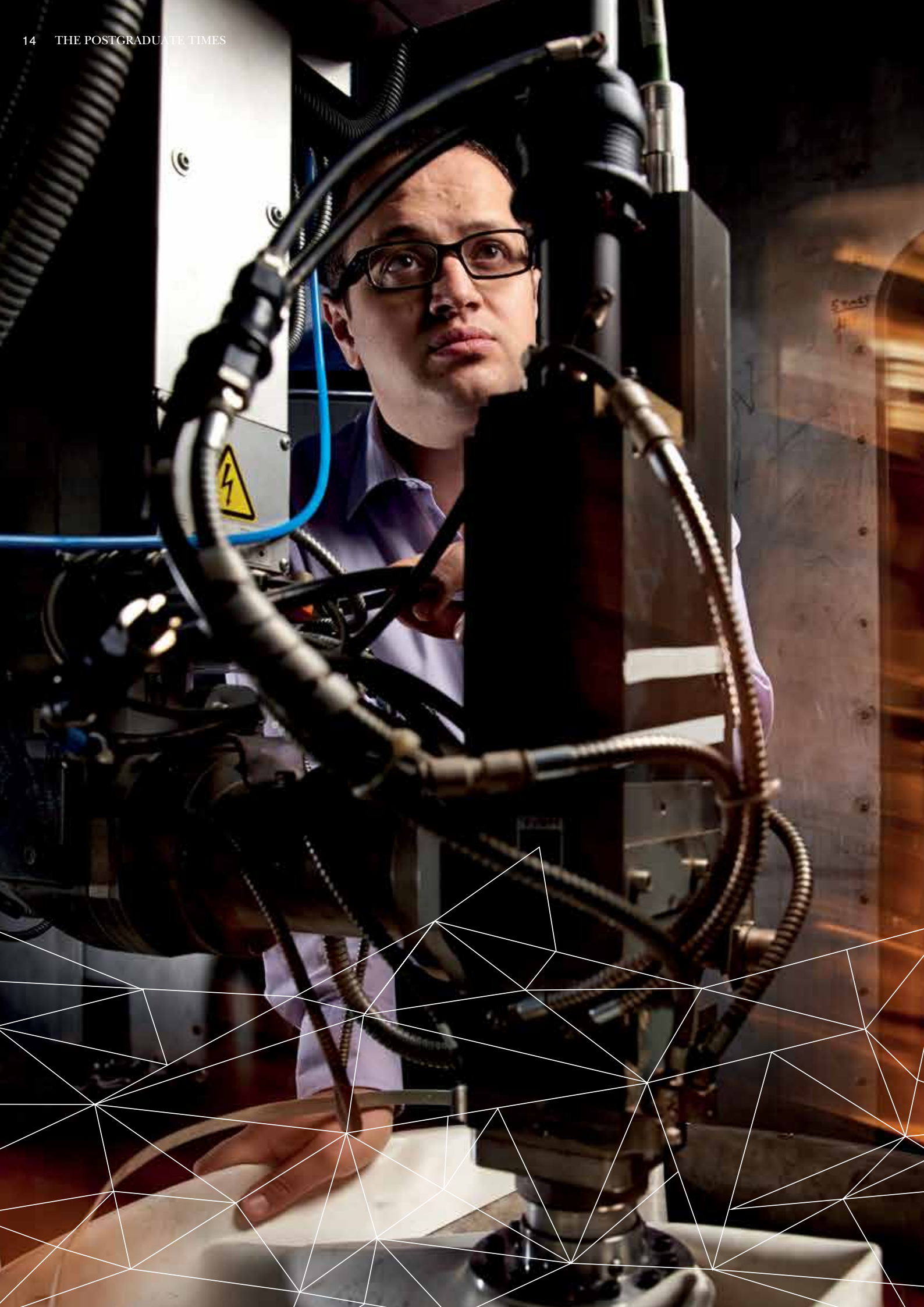
As busy campus life continues beyond the walls of C Block, the images show a building from another era. People hurrying about their business outside may not be able to visualise the work going on inside as the contractors turn the building into a truly modern, 21st-century student hub. Grand spaces are being opened up, and stunning original features exposed and renovated.

The conservation officer has given permission for windows to be taken away from the site to be repaired and restored by specialists. Elsewhere, structural steelwork has been installed to support the top floor dormer windows. The top floor has also been opened up along with a wall with an original chimney flue running inside. This flue will now be preserved and supported through the new design of the building.

The dramatic beams and archways will form a focal point of the hub when complete, providing an airy, pleasant space for students to ask for help with enquiries, access a variety of services and attend lectures in the new 250-seat lecture theatre. There will be facilities including Student Services, Registry and Careers Network, as well as a reception, information zone and a suite of one-to-one consultation rooms.



Originally published in *Buzz 152*, October 2014



# WELCOME TO THE REPRODUCTION REVOLUTION

Limbs, Lego, gears, guns and more – the world of 3D printing is as limitless as imagination. With 3D printers increasingly used in industry and homes alike, Birmingham is leading the way in the field.

From prehistoric Stonehenge to the world's tallest manmade structure, Dubai's gleaming Burj Khalifa, the human need to build and create is seemingly insatiable.

Now a new technology is allowing users to generate almost any item, even a miniature version of themselves, using equipment freely available on the high street.

Although probably familiar with the term, for many the world of 3D printing is little understood, with much press coverage polarised between fears that anyone can now 'print' their own working gun, and predictions that it will change life as we know it within decades.

So how exactly does it work? In the 1980s, it was known as rapid prototyping because the technique was used primarily to produce prototypes rather than a finished product. Now known as additive manufacturing or more commonly 3D printing, the method uses an industrial robot (the 'printer') to recreate an object by laying down layer after layer of material or compacting metallic powders. These layers build to become a three-dimensional replica, exactly to size or to scale depending on requirements.

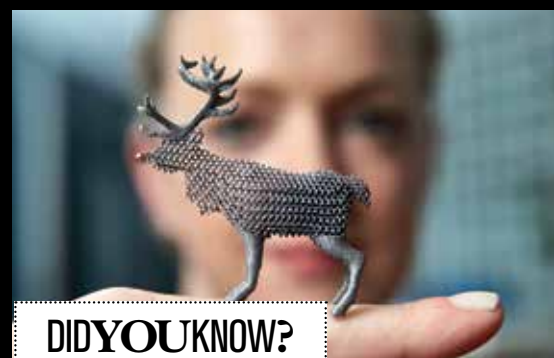
'This isn't just a future technology,' says Moataz Attallah (PhD Metallurgy and Materials, 2008), Professor in Advanced Materials Processing. 'It is readily available now and has made it possible to produce almost anything. We are already making some really high specification printed objects.'

But Professor Attallah also adds a note of caution. 'Just because one can make something, doesn't mean one should. In the past researchers would come up with

a design and then look at how it could be manufactured, whereas today we have the technology to make objects without having to think about their performance requirements.

'We are asking people to question the functionality of their designs, and this is where Birmingham is leading the way.'

Image: 3D printed reindeer produced by the University



## DID YOU KNOW?

3D printing is efficient and cost-effective. High-value materials such as nickel and titanium are becoming more expensive and scarcer, and designers have to think of smarter ways to use them. When making components using traditional machine methods there is a lot of waste in cutting away metal from parts, but 3D printing reduces waste by using metallic powder that can be recycled and reused several times.

## 3D PRINTING – THE BIRMINGHAM WAY

'We are currently working on approximately £5 million worth of projects, with funding from both industry and research bodies,' says Professor Attallah. A unique aspect of 3D printing at Birmingham is that, unlike other universities, Professor Attallah and his team are able to create items at a scale on par with large manufacturers. This is thanks not only to the size and sophistication of the University's additive manufacturing labs, but also to the skills of Birmingham's staff and students.

'We have a strong combination of capacity, imagination, and understanding of 3D printing processes that allows us to scale up technology very quickly from an idea to a finished object,' says Professor Attallah. 'We are also not afraid to assess the processes and seek to understand their limitations.' This has allowed Birmingham to create innovative 3D printing solutions and make scientific breakthroughs across a range of diverse sectors.

### 1 MEDICINE

Professor Attallah and Liam Grover (BMedSc Biomedical Materials Science, 2001), Professor of Biomaterials Science, are using 3D printing to investigate the future for medical implants. 'One of the problems with implants is the risk of infection,' explains Professor Attallah. 'We are developing a new generation of drug-delivering metallic implants using 3D printing. The implants will contain drugs within their structures. These drugs are released over time to combat risks of infection and inflammation, and increase the lifetime of an implant.'

### 2 DEFENCE

'The defence sector often cannot rely on conventional manufacturing technologies as they go out of date quickly and do not give the flexibility needed to react to sudden supply demands,' explains Professor Attallah. 3D printing allows researchers to react to needs and requirements much more quickly and liberates them from the design constraints of traditional manufacturing. One such innovation at Birmingham is a lattice mesh (so-called auxetic) structure that is cheaper to produce than solid objects but just as strong. 'Generally if you pull a structure, it becomes thinner and weaker,' says Professor Attallah, 'but the mesh we have produced using 3D printing actually becomes bigger when stretched while keeping its strength. This could have lifesaving applications for armours against projectiles such as bullets.'

### 3 AEROSPACE

'Due to safety concerns regarding any new technology this will be the last sector to fully accept 3D printing,' says Professor Attallah. However, it is being used for prototyping of aerospace parts, and Birmingham is at the heart of this process as a key partner in the largest additive manufacturing collaboration in Europe. The programme, AMAZE, brings together more than 30 European partners from universities and industry to investigate the development and application of 3D printing methods within aerospace technology.

### 4 ARTS

The idea of using cutting-edge manufacturing techniques in the artistic process may seem strange but it shows the diversity of 3D printing. 'We serve many different disciplines across the University and beyond,' says Professor Attallah. 'This includes working with artist in residence Myfanwy Jones, who created computer models of fossils, from the Palaeontology group, that we turned into 3D objects to be incorporated into her artwork.'

THROUGH OUR RESEARCH WE ARE LOOKING AT THE *WHY* AND *HOW* BEHIND 3D PRINTING, NOT JUST THE *WHAT* THAT CAN BE PRODUCED.

## BRINGING THE EXTINCT BACK TO LIFE

Professor Attallah and his team are working with researchers in the University's Lapworth Museum to bring life into fossils by x-raying and producing them as 3D objects. This virtual palaeontology is not only a powerful technique for recreating prehistoric objects for research, but also provides objects that can be used in the University's extensive

community engagement activities. Most recently the 3D fossils have been used in practical demonstrations at the University's Community Day, and in an exhibition at London's Science Museum.

### WHAT IS THE FUTURE FOR 3D PRINTING?

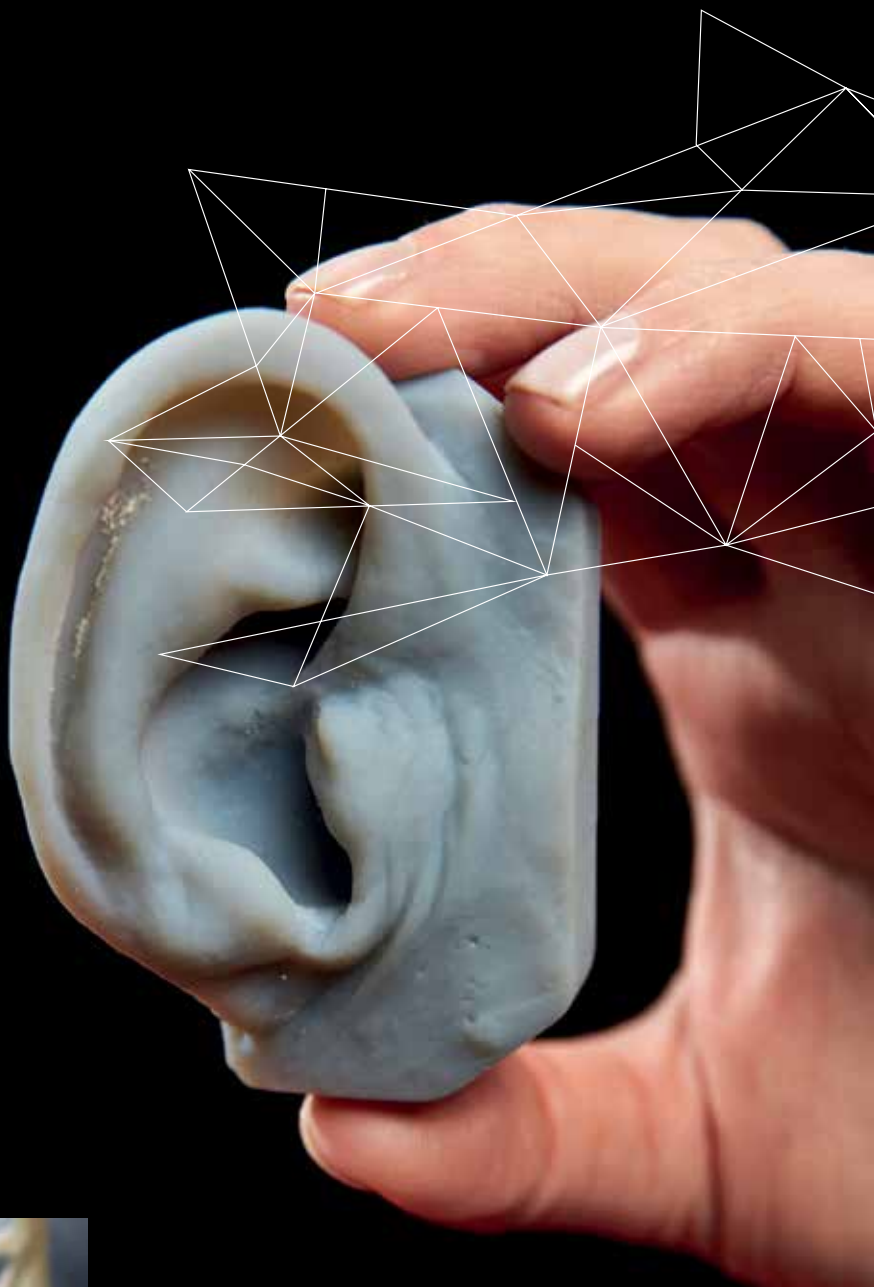
In the past few years the technology and interest in 3D printing have grown together and now almost anything you can imagine. There is even a free programme 'RepRap' that, if you have the time and materials, provides a printer that can print itself!

Professor Attallah says: 'Over the next ten years, 3D printing will evolve at the same pace we saw with mobile phones, and people will start buying plastics printers as household items. In the same way as photographs have moved from something that had to be developed at specialist stores to something we all have the ability to store and print at home, 3D printing will rapidly move from a specialist service to something we can all achieve.'

Although metal 3D printing such as that carried out at Birmingham requires more expensive and sophisticated equipment, Professor Attallah believes that there will be centres printing metal items for the home such as replacement pipes and parts, just as there were copying services when fax machines first launched.

Professor Attallah is confident that Birmingham will remain a key player in the development of 3D printing. 'We are already on the map across Europe for our skills and knowledge in additive manufacturing, and in the past year we have had visits from companies in almost all of the G8 countries who want to learn more about our expertise. There are so many things that we can do with 3D printing, from producing quirky items such as Valentine's roses and Christmas reindeer to exploring quantum sensors and extinct species.'

Originally published in *Old Joe*, Autumn 2014



● Images: (above) Artificial ear and (left) lattice structure produced in the 3D printing lab



3D PRINTING IS AN INDUSTRIAL REVOLUTION THAT WILL COMPLETELY CHANGE THE WAY WE LOOK AT MANUFACTURING.



# AFTER THE FLOODS

With climate change causing more extreme weather, flooding is an increasingly prevalent natural phenomenon that can devastate people's lives. Researchers at Birmingham are investigating the best ways to manage future crises.

During the 2013/14 floods in Britain, it seemed to never stop raining. Many rivers reached record levels, entire villages were cut off and even abandoned, and the military were called in to help.

Now, a multi-disciplinary research project at the University is examining the ways in which communities, businesses and policymakers are recovering from the recent floods, and preparing to reduce the impacts of future flood events. Funded by a £200,000 grant from the Economic and Social Research Council, the 18-month Summer After the Floods project aims to generate policy recommendations, and identify lessons from homeowners, businesses and communities.

David Hannah, Professor of Hydrology and Head of School for Geography, Earth and Environmental Sciences, says: 'At Birmingham we've got a broad range of expertise in water, the wider environmental area and how natural hazards affect people. That's hugely beneficial because many problems caused by flooding are not just about the physical phenomena, but how they affect communities.'

Professor Hannah describes his role as telling the story of water as it moves through a river basin. With Research Fellow Dr Megan Klaar (PhD Geography and Environmental Sciences, 2010), he is looking at what causes flooding in different environments and the hydrological characteristics of different types of flooding.

Modern flood management has focused on flood prevention measures in built-up areas, and allowing more rural areas to flood to ease the

pressure. But is this fair? Lecturer in Environment and Society Dr Steven Emery is examining social justice around the 2013/14 floods. 'Rural communities were overlooked somewhat in terms of their needs and protection. It was almost assumed that because rural flood plains were deemed natural, it was natural to allow them to flood and little attention was given to people living there.'

'There was uproar from those affected and the government suddenly needed to respond. So that guiding policy about natural flood management was sidelined as the government tried to address residents' anger.'

“AT BIRMINGHAM WE’VE GOT A BROAD RANGE OF EXPERTISE IN WATER, THE WIDER ENVIRONMENTAL AREA AND HOW NATURAL DISASTERS AFFECT PEOPLE.”

At Birmingham Business School, Professor Steve Brammer and Dr Layla Branicki are focusing on the recovery and future preparedness of businesses both directly and indirectly impacted by the flooding. Dr Branicki says: 'We want to understand how communities and government might work together more effectively, for example by better harnessing the capacity of volunteers and businesses to speed up recovery.'

Ultimately, the Summer After the Floods team hopes to highlight the role that local communities, businesses and government have to play in effective flood management.

'If you manage things at a local level, the solutions are more likely to be appropriate,' Dr Emery says. 'That doesn't mean you don't need some national oversight but that shouldn't come at the expense of allowing local people to contribute to the management of the environment in which they live.' Originally published in *Old Joe*, Autumn 2014



### DID YOU KNOW?

Professor Hannah works as part of UNESCO's International Hydrology Programme, sharing data from around the world to give research a valuable global context.

For more information on the River Managements and the Environment MSc please visit [www.birmingham.ac.uk/postgraduate/courses/taught/gees/river-enviro-mgt.aspx](http://www.birmingham.ac.uk/postgraduate/courses/taught/gees/river-enviro-mgt.aspx)

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