

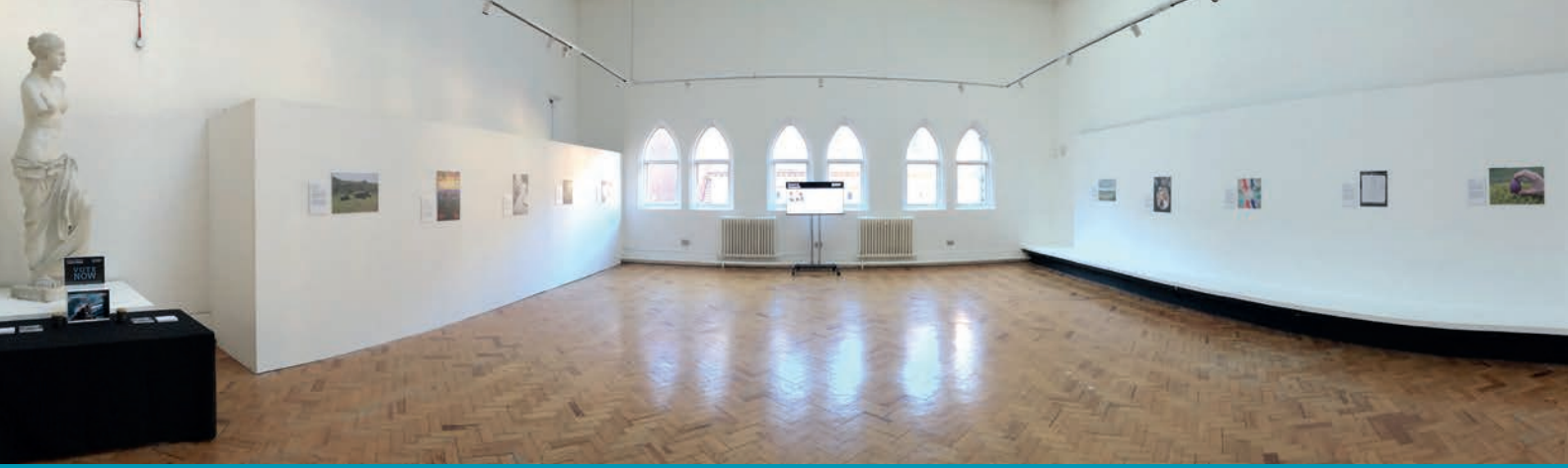
Images of Research Photography Competition 2019

Celebratory Brochure

A new way of looking at things



Research and
Knowledge Exchange



Images of Research

This year, the Research and Knowledge Exchange Directorate hosted its inaugural Images of Research competition. Early career and postgraduate researchers were challenged to tell a story about how their research has a beneficial impact on society, culture, the environment or the economy in a single photograph and accompanying abstract.

The competition aimed to support development of research communication skills and promote the diversity of topics covered by Manchester Met's emerging researchers. Forty-two submissions were received from across all faculties. The top ten entries were professionally printed and exhibited alongside their abstracts in the University's Grosvenor Gallery. Also on display was a video montage of nine highly commended submissions.

This brochure contains all the entries submitted for Images of Research 2019. The collection reflects the diversity of research taking place at Manchester Met and forms a record for posterity.

Award Ceremony

The Images of Research exhibition was brought to a close with an award ceremony during which the two available prizes were presented.

The winner of the Judges' award, worth £200, was selected by a panel of experts from around the University, including Professor Richard Greene, Pro-Vice-Chancellor for Research and Knowledge Exchange. Judges assessed the exhibits on how well they engaged the viewer and communicated the research and its impact to a non-specialist audience. Also available was the People's Choice award, worth £100, voted for by visitors to the exhibition.

This year, Sarah Scott, a third-year PhD student from the Faculty of Science and Engineering, won both awards for her entry 'Data Incoming!'. Sarah's research aims to understand the role of genetics in female white rhinoceros' reproductive success.



Judges' and People's Choice Awards Winner

Sarah Scott

Faculty of Science and Engineering

Data Incoming!

I spend hours on end tracking wild rhinoceros in Kenya to collect a sample of their dung. Now let me tell you why...

The southern white rhinoceros has recovered from less than 100 to around 20,000 individuals living in the wild today. Due to this 'population bottleneck', the genetic diversity of current populations is likely to be very poor. This may make individuals more vulnerable to certain diseases and genetic disorders. In particular, the reproductive output of the southern white rhinoceros is very variable.

My PhD research aims to understand the role of genetics in female white rhinoceros' reproductive success. To do this, I collect dung samples from rhinoceros in Kenya, to use as a source of DNA material. Each precious sample contributes data that will help to unravel the genetic structure of the population. This will provide important information that may improve the conservation management of this species.



Shortlisted Entries

Martin Bence

Faculty of Arts and Humanities

View of Trafford with Sewage Works (After Jacob van Ruisdael)

The landscape that exists in the transition between the urban and the rural has, over the past decade or so, gained traction as an area of interest and research. This interstitial space, or 'edgeland', is a seemingly unremarkable landscape which we often travel through to get somewhere else, it is not manicured, not pretty, and is mostly anonymous. It is, however, often the site of hugely important infrastructure that enables the technology, logistics, and utilities upon which we rely to function effectively.

The title alludes to the Dutch 17th century painting, *View of Haarlem with Bleaching Grounds*, an image which showed the development of early industrialisation and its demands upon the environment. My research looks to examine how photography might complicate our perception of such spaces and suggests that they offer opportunities to engage with wonder and enchantment in landscapes which characterise contemporary socioeconomic systems and the challenges they present.



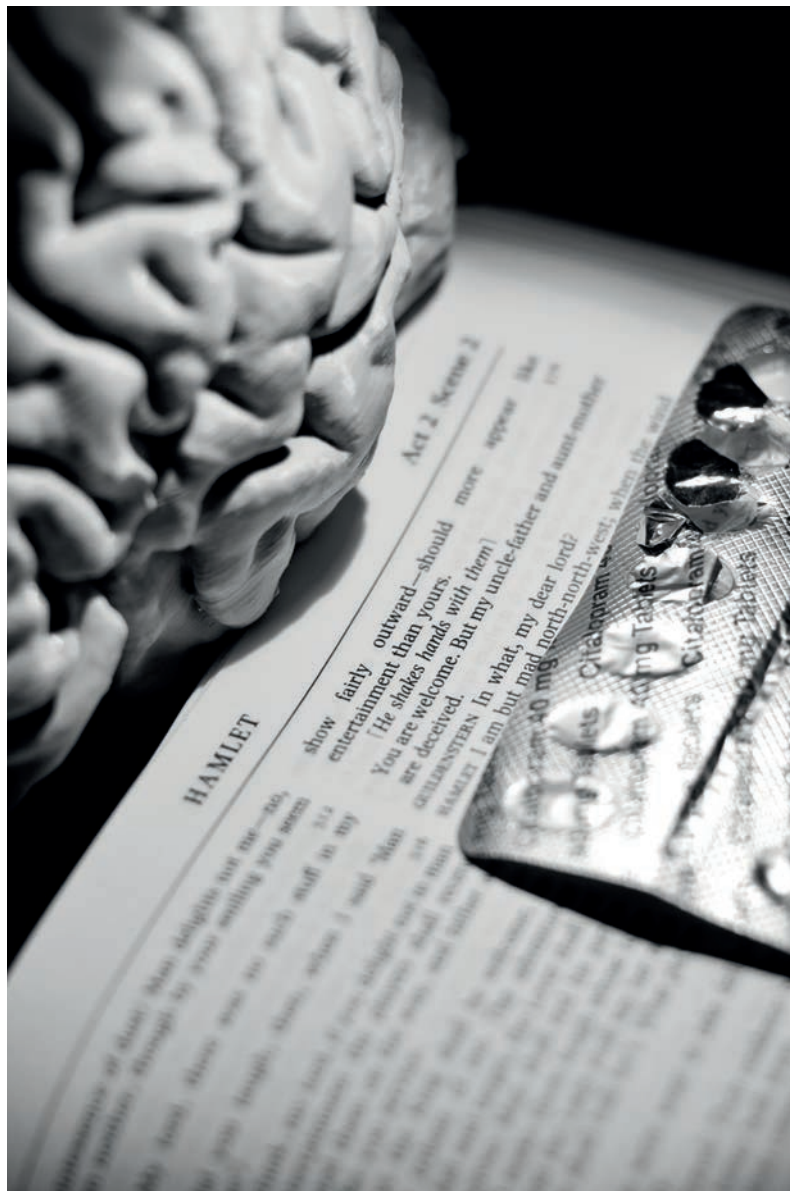
Alice Brockway

Faculty of Arts and Humanities

Of Thought and Words

Mental health in actors is a neglected field of research, despite the constant control and manipulation of emotions required in acting work. This image highlights the long history of actors exploring insanity, juxtaposing it with the current methods of managing mental illness: brain-imaging, talking therapies, chemical treatments etc. Antidepressants underline a quote from Hamlet, one which reminds us that perception is a key issue when discussing mental health. You may see madness, but it could be cunning, intellect or genius when seen from a different perspective.

The absence of colour highlights the stark contrasts between what actors are expected to do in their work and the realities of what that might mean. An actor may be expected to portray mental ill-health with little or no consideration of their own well-being. Additionally, this absence recognises that the full spectrum of implications is a long way from being understood.



Zoe Crompton

Faculty of Education

Researching Children's Interest in Science: Incubating a Thesis

The image shows me holding a marbled egg, which represents both my doctoral thesis and research focus. Writing a doctorate is like incubating a fragile egg that requires my protection. The gestation time is uncertain (even though everyone keeps asking, "When is it due?"), and there is a sense of development from embryo, with vestigial organs of outdated ideas, to foetus, almost formed but not quite ready for independent life.

The egg also symbolises children's emerging interest in science, a phenomenon essential to safeguarding the country's economic future. The marbled surface of the egg represents the different perspectives of my participants. During a two-year study, I have generated data with children to demonstrate that interest in science is complex and intertwined with their multiple identities and sociocultural context. My findings challenge linear models of interest development, which has implications for initiatives that aim to cultivate the next generation of scientists.



Lara Ferguson

Faculty of Health, Psychology and Social Care

Young People Leaving Local Authority Care: Pathways to Improved Outcomes

Young people in Local Authority care (foster care, residential children's homes) leave care aged 16 to 18. Whilst some care leavers do well, this group of young people continue to be over-represented in unemployment, homelessness, ill health and criminal justice figures. Improving outcomes benefits society, resulting in social, economic and health gains for young people and savings to public finances.

The research focuses on care leavers' experiences of the life journey and what impacts upon who they are and their future expectations. The aim is to discover pathways

to improved outcomes by valuing care leavers' perspectives and participation, contributing towards policy and professional practices with young people in and leaving care.

The photograph represents care leavers and the social structures of community, economics and networks. It depicts environments, relationships, culture and identities that interconnect with experiences of growing up and leaving care, acknowledging that multiple factors will influence outcomes.



Martha Lineham

Faculty of Arts and Humanities

The Amusement Arcades Project

Reflections illuminating and distorting polished surfaces. The metallic smell and cascading sounds of coins. Curious gatherings of ambiguous prizes. Gaffer tape plasters revealing the worn materiality of these fantasy realms. The real and the imaginary. The banal and the exotic.

My PhD focuses on the underexplored contemporary British seaside amusement arcade and its sensory contribution to the immediacy of the seaside. The project also considers the arcade as an affective site that stimulates imagining and remembering, and its temporality in relation to everyday routines.

Through auto-ethnographic and documentary approaches from Fine Art and Geography, including photography, sound, mapping and writing, this interdisciplinary project introduces new perspectives on the contemporary British seaside amusement arcade. Representations of amusement arcades as merely abject commercial spaces of low culture are problematised, showing how rethinking existing leisure environments can contribute to new understandings of British culture.



Ian McIntyre

Faculty of Arts and Humanities

Re-engineering the Brown Betty Teapot

This research set out to explore how the Brown Betty teapot became ubiquitous in Britain. The project evolved into a meticulous exploration of the design, production and place-based practices involved in its fabrication. The research revealed that the design evolved over centuries to become a highly functional, anonymous and rational object. The research also revealed that literature surrounding this object is limited and often conflicting. In recent years the design has lost a number of key features, practices surrounding its production have deteriorated and its viability for manufacture in the UK hangs by a thread.

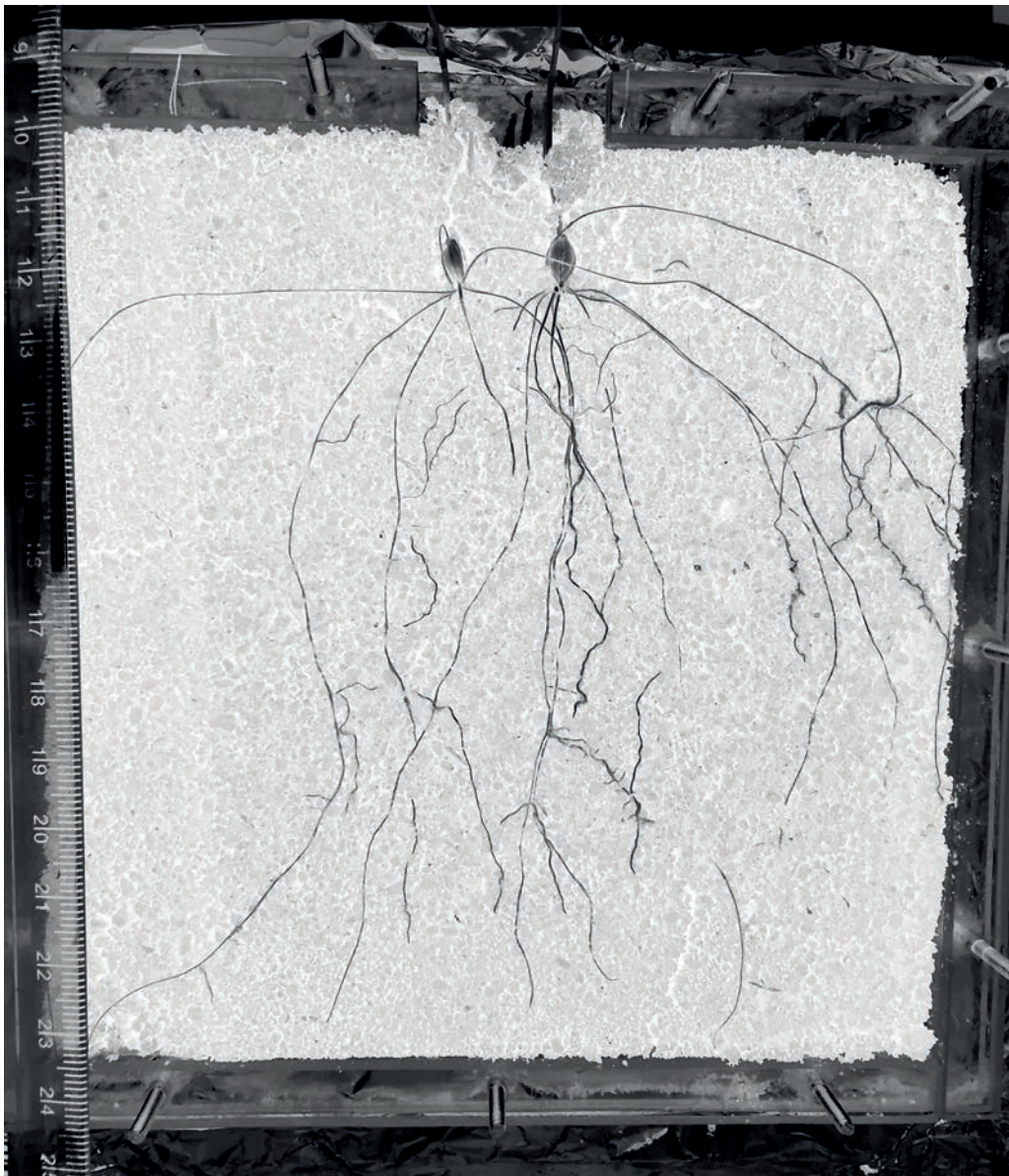
The research has since evolved into a collaboration with Cauldon Ceramics – the oldest surviving manufacturer in Stoke-on-Trent – to re-engineer the design, re-assert its cultural significance and revive its profitability. The resulting 'Re-engineered Brown Betty Teapot' reinstates features from the 1920s including a 'locking lid' and 'non-drip spout', whilst updating the design through the introduction of a stacking feature and a loose leaf tea basket in response to contemporary tea drinking habits. The project was nominated for the London Design Museum's prestigious Beazley Designs of the Year Award 2018.



Untangling Root Growth for More Sustainable Agriculture

Improving agricultural sustainability is important to maintain food security, whilst reducing inputs of fertiliser that damage the environment. One important crop in Europe is barley, which requires high amounts of fertiliser. When plants compete for nutrients it changes the pattern of root growth, with roots often growing deeper and with more branches to search out unexplored areas of soil.

Growing plants in see-through boxes with only a thin layer of soil allows us to take photos of roots as they are growing, to track root growth changes when in competition. These images are then analysed with software to track root growth over time, producing images like these. Using this technology, barley varieties can be selected that have complementary patterns of root growth and more efficiently take up available nutrients. By planting these varieties in the field, inputs of fertiliser can be reduced, contributing to developing more sustainable agriculture.



Rossella Sorte

Faculty of Health, Psychology and Social Care

Tablographies: New Practices for Place-making Through Foodwork

Food as an approach to research is still in its infancy. This research uses a novel food-based approach to understand how migrant women make sense of place, through developing Tablographies (stories of food and place). Through photography and interviews with women who come together around food, the research frames food as central to belonging and home.

The creation of Tablographies fuses food and meaning in memorable ways. The exploration of the senses and memories that food evokes,

the routes of food and the connections with the former country, the international and local communities, unveil hidden geographies of home and cosmopolitan experiences of the South-East Asian migrant women in the UK. Tablographies encourage diverse representations to voice marginalized and disadvantaged groups and promote social change by fostering connectivity. They reflect new narratives of movement and how colonial ideas of place are challenged in a moment in which nationalism is increasing.



Dominika Wielgopolan

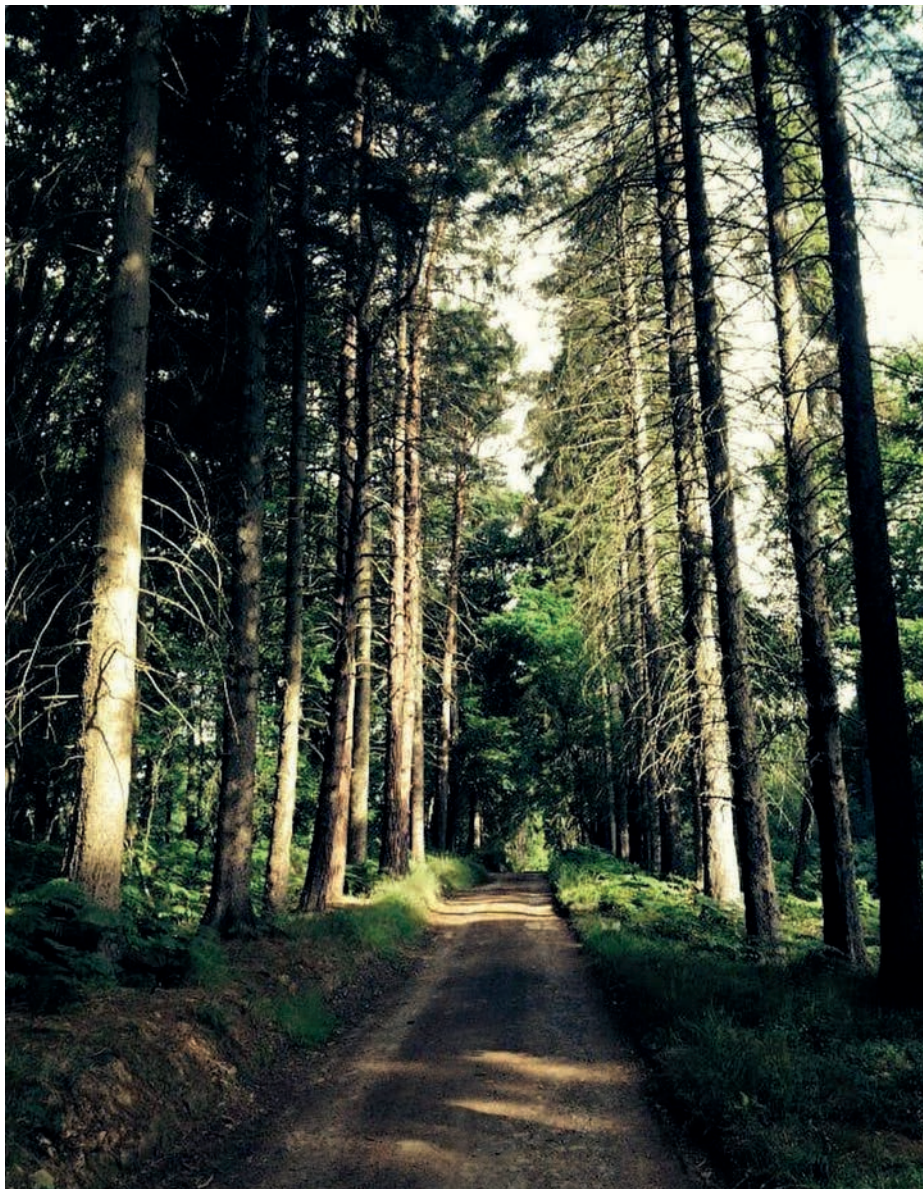
Cheshire Faculty

Into the Forest to Bring Humanity Out of the Woods

In an era of spreading environmental damage and raging consumerism, concerns about the future of our planet are increasingly common. My research concentrates on John Ruskin (1819-1900), whose pioneering writings about the deteriorating state of the environment and changing social and economic conditions so influenced individuals and groups that they put his utopian ideas into practice through agricultural, economic and social schemes.

I am investigating the present-day applicability of Ruskin's environmental thought and how it can inspire and inform communities to work together to make their surroundings 'beautiful, peaceful and fruitful' (Works, 1906:XXVII.96).

My case study is Ruskin Land in the Wyre Forest (Worcestershire) where this photograph was taken. This forest road through Ruskin Land embodies the connection between the 19th and 21st centuries. The image is a pictorial metaphor for my intellectual journey into the past in order to find solutions for the future.



Highly Commended Entries

Jennie Bailey

Cheshire Faculty



Everyday Storytelling and the Tangled Tales of Place

It is easy to use shorthand for places: 'the Cooperative movement' for Rochdale; 'Madchester' for Manchester; 'pies' for Wigan. My research concentrates on Rochdale, a borough in Greater Manchester. Using geographical concepts to explore literary and cartographic texts, my hybrid scholarly research and creative practice demonstrates how Rochdale is more complex than assumed.

Creating place through these texts builds imaginary geographies, offering themes and tropes which may not necessarily represent lived experiences of, and in, Rochdale. Concurrently, the language of current regeneration projects highlights convenience and consumerism, where any cultural considerations are concentrated on a handful of well-crafted narratives. Again, there is more to Rochdale than this. This image tells but one story of Rochdale: it represents a form of quotidian anarchy which could have occurred anywhere. Creatively responding to Rochdale is akin to writing about other places with similar mundane and unique aspects. Whether fragmented, or fantastical, everywhere has stories.

Saravjeet Bajwa

Faculty of Health, Psychology and Social Care



Fusion of Spices on Food Safety and Preservation

Food safety is a fundamental health concern for consumers and a major challenge for food producers due to the emergence of foodborne disease outbreaks caused by pathogenic microorganisms.

Plant-based natural antimicrobials have proved to be able to delay lipid oxidation, inhibit colour loss, prolong storage life and ensure food safety. Natural extracts obtained from plant materials such as herbs, spices, fruits and vegetables, have shown effectiveness as antimicrobials in food preservation. Spices and herbs contain secondary metabolites – bioactive components such as phenolic compounds, present in various parts of the plants (flowers, buds, seeds, leaves, twigs, bark, wood, fruits and roots), with antimicrobial and antioxidant properties. Cinnamon, cloves, ajwain, bay leaves and nutmeg extracts were evaluated for their effectiveness against selected foodborne pathogens and have shown strong antimicrobial activity. The essential oil extracted from these spices and herbs inhibited the growth of foodborne pathogens such as *Listeria monocytogenes*, *Salmonella typhi*, *E.coli* and *Bacillus cereus* in food.

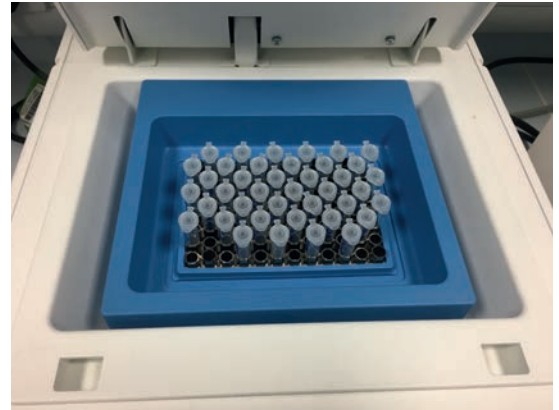
Jodie Bates

Faculty of Science and Engineering

Assessing the Zoonotic Risks Posed by Wildlife and Exotic Pets

Zoonotic diseases – those that can be passed between animals and humans – are continually increasing in frequency and global impact. Nearly three-quarters of emerging infectious diseases are zoonotic, the majority of which originate from wildlife. Regarding domesticated animals, exotic species have been gaining popularity as pets in recent years. Other than reptile-associated Salmonellosis, little is known concerning the health risks associated with these pets.

By using modern laboratory techniques, samples collected from exotic pets and their surroundings will be analysed to provide information on the presence and prevalence of important zoonotic pathogens. This information can be used to assess and quantify the human health risks associated with exotic pets, allowing owners and traders to make informed decisions for improved public health outcomes.



Louise Bowden

Faculty of Health, Psychology and Social Care

Nurse Education: Preparing for the Future, Learning from the Past

Historically there have been a number of well-documented changes to nurse education which have explored the effects of such changes upon nursing students and practitioners but less so upon the actual nurse educationalists themselves. The future direction of nurse education is unclear and, as a nurse educator, I am interested in how changes to nurse education in the past have affected the day-to-day working lives, personal experiences and professionalism of nurse educationalists and the culture of nurse education.

Using oral history as a method, retired nurse educationalists were interviewed in order to explore themes such as the experience of women being educated in the 1960s, nursing as a vocation, nurse education culture and hierarchal challenges. Being able to listen and learn from those with experience has provided an invaluable insight into what nurse education and the role of the nurse educationalist was like in the past and what we can learn now in order to influence the future.



Johnathan Djabarouti

Faculty of Arts and Humanities



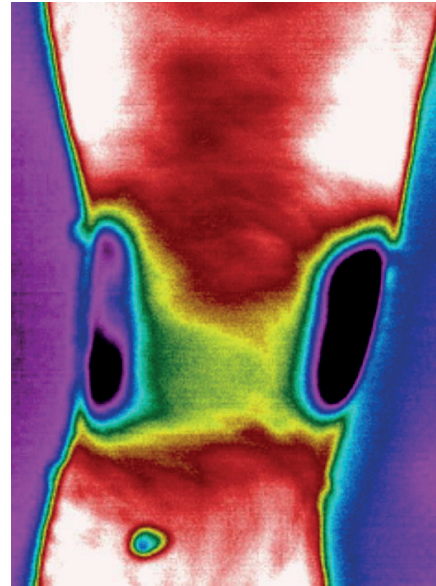
Material Clues: Deciding our Past to Understand our Present

Buildings are melting pots of stories and experiences. They are not just a manmade product but also a container of memory. The submitted image shows the side of a building lining a narrow street in Barcelona. It shows physical (material) evidence of a door once being within the stone wall. What was this door used for? What were the aspirations behind the removal of this door?

We can ask these questions and ponder their answers because clues have been left within the building materiality – a brick door infill, set within a stone wall; a timber lintel left in-situ, relieved of its only duty. When trying to answer the above questions, we realise that understanding buildings is not about architecture – it is about people. The more we understand these changes, the more we connect with those who came before us, clarifying who we are and what we are building upon.

Olivia Greenhalgh

Faculty of Health, Psychology and Social care



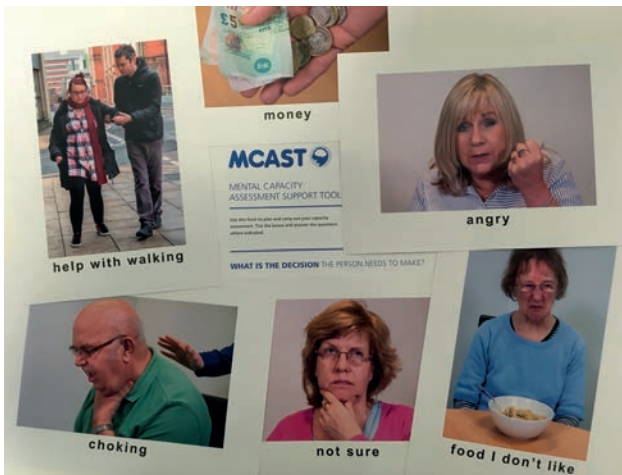
Exploring Targeted Cooling, Heating and Compression on the Knee Joint

This research project is part of a Knowledge Transfer Partnership (KTP) with Manchester Metropolitan University, the University of Central Lancashire and Swellaway Ltd, which aims to develop human use protocols based on a robust evidence base using a unique, controlled, cooling, compression and heating medical device.

There are no defined protocols for acute injury management provided in the current guidelines. Consequently, this could mean that significant time and cost is lost when a sports player is injured due to lack of knowledge of the most effective protocols to use for different soft tissue injuries. With the Swellaway technology offering full control on cooling, heating and compression protocols within safe parameters, it is possible to explore the dose response relationships between application time, target temperature, target level of compression and frequency of application. This could provide key information of the optimum recovery environment for different acute soft tissue injuries.

Mark Jayes

Faculty of Health, Psychology and Social Care



Using Photographs to Help People Make Decisions about their Lives

This research is developing a toolkit called the MCAST. The MCAST contains photograph cards like the ones shown in this image. Health and social care staff can use these cards to help people with communication disabilities to understand, talk about and make decisions. This might include important decisions about care arrangements, where to live, how to manage finances and how to remain healthy.

People may find it harder to demonstrate their mental capacity (decision-making ability) if they have communication difficulties due to health conditions such as stroke or dementia. Providing information about decision options in different ways, for example using simple language or photographs, can help people with communication disabilities to understand and express their feelings and opinions about decision options better. The people you can see in these photographs are people living with communication disabilities who kindly volunteered to help the researcher to develop the toolkit.

Tarek Khoury

Faculty of Arts and Humanities



Neo-Ebreeq: Invigorating Tradition within a Contemporary Context through Redesign

The ebreeq is a traditional Lebanese spouted water vessel with ties to Lebanese cultural heritage. Its production started as early as the Phoenician period in the Mediterranean area. While this object was once common to every household in Lebanon, today the ebreeq is rarely used as intended. It either is no longer present or serves merely as decoration.

The intent of this research is to invigorate the traditional ebreeq through motion design by seeing moments that are not visible to naked eye, trying to unfold them and utilize them toward designed elements. Such moments are extracted from filmed sequences of holding, filling and drinking the ebreeq. The research explores two divergent realms – digital post-industrial technologies and traditional crafts – in seeking new ways of thinking about these polarities.

Oliver Metcalf

Faculty of Science and Engineering



The Impending Storm

I had just emerged from the gloom of a small patch of rain forest in the Brazilian Amazon to be greeted by the black clouds of a tropical storm. I had been collecting audio data to monitor the impact of wildfire and logging on bird and frog communities. The scene struck me as prophetic – a legally protected Brazil nut tree standing in isolation, towering over a sea of rice which was once forest. Detached from its ecosystem, severed from its pollinators and seed dispersers – doomed to die without reproducing, symbolic of Brazil's ineffectual environmental legislation. Small strips of degraded rain forest frame the lifeless monoculture. The impending storm seemed to be a harbinger of the problems the Amazon would face under leading presidential candidate (at the time, now elected), Jair Bolsonaro – who promised further degradation and destruction for these precious forests.

Entries

Mazin Al-Saffar

Faculty of Arts and Humanities

Toward an Integrated Smart Sustainable Urbanism Framework in the Historic Centre of Baghdad (Old Rusafa as a Case Study)

The form of the city has been changing as the complexity of its systems has increased. Its varied aspects and methods have included ICT, IoTs, smart transport systems, and the Intelligent Community Forum (ICF) for example. In the pursuit of smart sustainable urban form in heritage cities such as Baghdad, the research will examine and analyse the concept of smart sustainable cities, taking into account urban conservation, use, and reuse of historic places, buildings and cultural environments.

In this research, various strategies at different levels of the study will be implemented, a mixed research method that endeavours to bring information from both qualitative and quantitative methods. The primary implications will be summarised in two outcomes, the implementation of smart and sustainable urban design in a historic environment and the degree of amenability of the historic centre (Old Rusafa) for smart and sustainable regeneration.



Joana Borges

Faculty of Science and Engineering

Eastern Black – *Diceros bicornis michaeli*

My research project focuses on feeding ecology and genetics of the Eastern black rhinos in East Africa. I will be travelling to the Ngorongoro Conservation Area (NCA) in Tanzania to track the rhinos, identify them and collect dung samples. These samples will give me information about what food plants they eat, and which are the preferred ones. Additionally, I will use those samples to study the genetic heritage and relatedness between the rhinos. My research will provide extremely valuable information to develop better management strategies in the NCA and the rest of Africa.

Chester Zoo provided samples to develop preliminary protocols in the laboratories at Manchester Met. This photo is of a female black rhino that is part of a black rhino breeding programme at Chester.



John Carney

Faculty of Arts and Humanities



Symbolic Retribution

The practice-led research project that I am currently engaged in seeks to investigate the similarities between contemporary art production and the production of sacred spaces or objects. This has led me, more specifically, to consider the fetishistic character of the work of art, by their capacity to invest solely in the perception or belief of the onlooker. This led me to carry out a number of public actions, whereby I created and left a number of flower memorials in public roadside locations, with the intention of designating the surrounding space as a sacred one through the public's shared perception or belief in a fictitious tragedy taking place there.

Abhiraj Chakraborty

Faculty of Science and Engineering



What Are You Looking At?

In recent times amphibian populations have suffered huge losses due to various factors. Due to this, there has been a global push towards ex-situ conservation and breeding to help recover the dwindling wild populations. However, most frogs in captivity turn out to be unhealthy due to lack of movement and surplus feeding. There is however no definite way to ascertain the healthiness of captive frogs.

My project looks at the relationship of morphological lengths and weights of healthy wild frog populations in Ecuador with the aim of finding a definitive body length to weight ratio that can be used to assess captive populations of the species studied.

In this picture a *Phyllomedusa tarsius* rests on a branch looking at the camera, quite upset to be disturbed after its measurements were taken.

Su Corcoran

Faculty of Education



From Street to Street Child World Cup: What Comes Next?

In 2018, 23 teams of street-connected young people from 19 countries travelled to Moscow for the Street Child World Cup. This study explores the impact of participating in the event on the players, the organisations who support them, and the communities they belong to. It aims to investigate the extent to which taking on the role of self-advocate positively impacts upon the continuation of a young person's reintegration journey away from the street and how young people figure their own identities as having been street-connected within the publicity of participation in a high-profile event.

Dr Corcoran is following some of the country teams using virtual platforms for data generation such as WhatsApp and Skype, as well as face-to-face interviews and focus groups during field visits to the organisations. In the image, Team Tanzania stand on a Moscow street waiting to be admitted to the home of the British Ambassador.

Colette Curry

Faculty of Science and Engineering



Betty, the Conversational Agent, a Great Friend Indeed

Betty, a computer program for reminiscence for older people who may sometimes feel isolated and alone. Chatting with Betty is like talking to a long-lost friend and has helped increase wellbeing and improved ageing memory loss through interactive conversation. Memories are saved by Betty and spoken about in future conversations. This helps people remember more details from their personal and general life in the past. People reported that Betty was like a real friend and they enjoyed talking with her. Sharing conversation with Betty and other friends helps decrease social isolation and provides much shared enjoyment. This photo was taken on the web camera as two older people shared conversation with Betty. The look of enjoyment at the conversation is apparent.

Kevin Dalton-Johnson

Faculty of Education



One Love

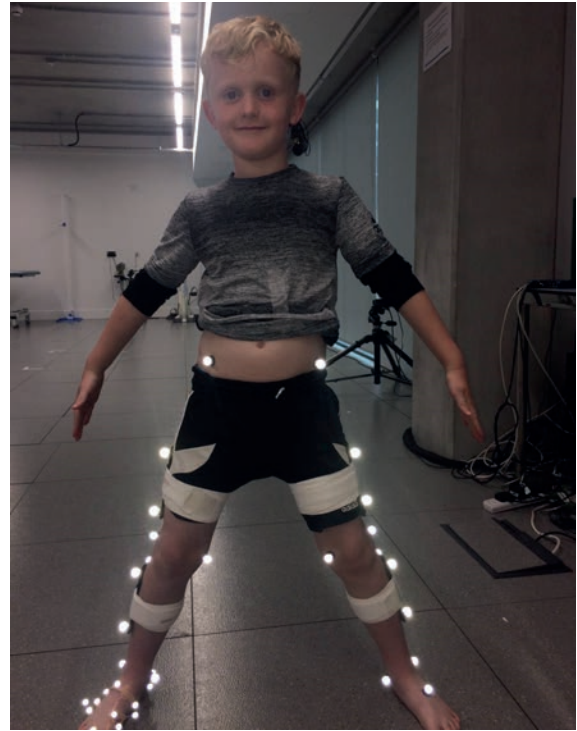
Education is in crisis as 'inclusion' is defunct. How can it be that inclusion is creating an invisible cohort of learners forced to travel from institution to institution with their needs unmet, giving rise to the impingent 'school to prison pipeline'? Why are black exclusions still three times higher than white exclusions and black incarcerations allowed to rise at an alarming rate? 'Diversity' has silenced the invisible saviours of the educational system, ground down by the weight of the 'glass ceiling'. It is time for a new approach, it is time for black professionals to rise up and celebrate our power to effect change.

In the words of James Baldwin, "If the word *integration* means anything, this is what it means: that we, with love, shall force our brothers to see themselves as they are, to cease fleeing from reality and begin to change it."

One love
Rastafari

Glenis Donaldson

Faculty of Health and Social Care



Lightening the Load

Congenital talipes equinovarus (clubfoot) is the most common orthopaedic anomaly in children and is one of the leading causes of disability (Abdullah, 2016). 200,000 babies are born with clubfoot worldwide each year, 80% of these births occurring in low to middle-income countries (Global Clubfoot Initiative, 2018). However, regardless of the type of initial corrective intervention clubfoot has an inherent and stubborn tendency to reoccur.

There is a paucity of research investigating the association between musculoskeletal factors and relapse in growing children with clubfoot. The aim of my research is threefold. First, to investigate the musculoskeletal characteristics defining talipes equinovarus (clubfoot). Second, to elucidate potential predictors predisposing relapse following corrective casting in children aged 5-12 years. Last, the modifiable nature of these potential musculoskeletal factors will be evaluated. The acquisition of normative kinematic lower limb data is essential. This is performed in the Movement Laboratory at Manchester Met. The children love the experience!

Jeremy Filet

Faculty of Arts and Humanities



Jacobites Whiskey-ing their way through Europe

Until recently, the Grand Tour was considered an erudite journey made by the elite of 18th Century England to the most prestigious court of Continental Europe, while the Jacobites were following James II of England into exile. The Stuart monarch had been tempest-tossed to France by the 1688 Revolution and then travelled to Italy, the favourite destination for Grand Tourists. One of the favourite activities of the Jacobites was to drink good health to their 'King over the Water', but certainly not by drinking water...

Contrary to what historians have previously argued, my research shows that being a Grand Tourist and being a drunken Jacobite was not mutually exclusive. I primarily work on the diaries of travellers to show what was behind the scenes of the Grand Tour: the aristocratic youth having politically ambiguous behaviours and/or sexually bizarre adventures on a drinking spree across the 'educational' institution of the 18th Century.

Julie Haslam

Faculty of Arts and Humanities



Trust, Security and Openness: The Old Orange Chair

I wonder where you're reading this now. Did you choose to read it in a particular place? How do you feel about that space, and how is that space impacting on your reading of this paper, your enjoyment or not, empathizing or not, boredom or not? (Sagan, 2008:173)

The quote above is an extract from Sagan's exploration of learning spaces and the role of emotions within creative education – something that Sagan claims are regarded "somewhat as 'baggage' from the rational, cognitive task of learning" (Sagan, 2008:175). Despite this, research suggests that creativity thrives in an environment where the individual feels psychologically and physically comfortable (Dineen and Collins, 2005:50). The old orange chair acts as a signifier placed within a creative learning space to evoke an atmosphere of trust, security and openness.

Would you care to take a seat?

Niall Hickey

Faculty of Science and Engineering

Inspiring Today's College Students to be the Scientists of Tomorrow

Taking on college students for work experience provides a hands-on experience into an area of study that they would not usually consider. Being able to see what scientists do on a day-to-day basis and engage in active research projects looking at human disease and its interactions, can inspire students of all genders and backgrounds to consider a degree in STEM. Such experiences help create a holistic teaching and research environment which enables self-development, passion and creativity to flourish. Everyone is capable of doing something great, no matter what background they have, we can all contribute to the greater good of society. We are able to mould scientists of the future, starting with today.



Mousa Jawasreh

Faculty of Health, Psychology and Social Care

They are Entities not Statistics or Numbers

Refugees' Voice

Working with the Syrian refugees made me hear their voices and learn more of their emotions and how they feel as individuals.

I have worked with the Syrian refugees for three-and-a-half years in NGOs. I was leading an outreach team and approached them in their camps, host communities and illegal camps. This experience has directed me to speak on behalf of them and show the rest of the world what refugee means, and not dealing with them as statistics and just offering basic aid.

From that point, I decided to do a PhD degree about the refugees' mental health, and to be inspired by their voices.

These are Syria's refugee children. This picture was taken on the 29th of June 2013, in an illegal Syrian refugee camp east of Jordan in the scorching heat.



Muhammad Khalil

Faculty of Business and Law

Peter Lindfield

Faculty of Arts and Humanities



Small Clicks, Big Changes

The digital revolution has not only changed the way people think about things, it has also changed the way people think. We are part of a revolution in communication technology, information storage and knowledge acquisition like never before.

Digital media has provided many tools like Facebook, Twitter etc. which have become essential parts of our lives. But these tools can be used to spread propaganda and stir negative emotions by apparently credible people. Here is a typical example of how a mainstream politician shared something from a source which has no credibility. Thousands of people shared and liked the post without checking the authenticity of the news. On investigation, issues were found regarding the authenticity of the news. This has become the new normal now and people are being misled with the help of digital networks, which will have a long-term negative impact on our society if left unchecked.



Making Fakes: Ram's Head and Stork's Foot

Sir Roger Newdigate gave a pair of candlestands—candelabra—to the University of Oxford in 1776, of which a detail of one is seen here. Purchased in Italy, Sir Roger considered them to be genuine Roman candelabra dug up from Hadrian's Villa. Or, that is the story that he was spun. The numerous breaks in the sculpture—on the ram's nose and to the left of the stork's foot—are part of a cunning ploy to suggest the candelabras' age. In reality, little of each candelabra dates to before 1770. Instead, they are forgeries: composites made from different stones intentionally broken and restored and cobbled together. This appearance of age was attractive to eighteenth-century gentlemen visiting Italy on the Grand Tour; the candelabra nevertheless demonstrate how gullible Tourists were, and the role that modern-day historians and scientists have in deciphering the production of fakes.

Thomas McGrath

Faculty of Arts and Humanities



If Those Walls Could Talk

In 1892, Woodstock House in Didsbury was the home of Mrs Ford-Smith, who it seems was rather particular about who she hired as her domestic staff. She wanted a “respectable woman as a good plain cook, references indispensable; English or Scotch.” Other former owners of this house included an accountant, an engineer and a gynaecologist. The building is now a pub and restaurant.

Woodstock is just one of the case-study properties to be used in my PhD thesis. The thesis looks at the homes of merchants and industrialists in Manchester and Liverpool in the eighteenth and nineteenth centuries. My research will attempt to find out who lived in these houses, why they were built and what was going on inside. This will highlight more about domesticity in this period, as well as examining changing material culture, consumerism and taste in the urban and suburban home.

Helen Morcillo-Docksey

Faculty of Arts and Humanities



Illustrating the Everyday

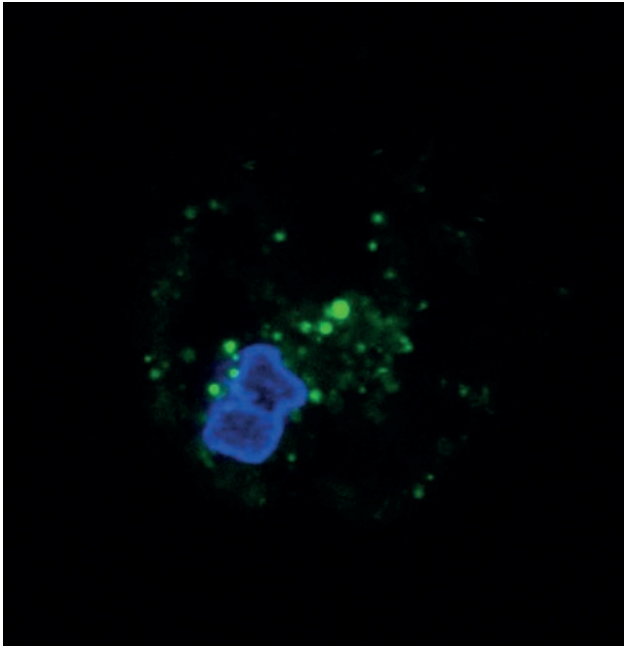
As migrants we leave our homelands and everyday lives seeking better living conditions. As we learn to integrate and adapt, do our surroundings change us? And is this reflected in our everyday life?

[...] everyday is what we are given, what presses us, even oppresses us, because there does exist an oppression of the present. Every morning what we take up again, on awakening, is the weight of life, the difficulty of living, or of living in a certain condition, with a particular weakness or desire [...] (Certeau, 2014)

My project examines notions of identity and change, seeking them in behaviours, rituals, and everyday life. It aims to contribute to current discourse on migration and to the understanding of the transformative potential in socially-engaged illustration. It is a subjective approach to remember, evidence and reflect on the idiosyncratic and the fluctuating, documenting emotions of displacement, non-belonging, and the liminal.

Claire-Marie Nuttegg

Faculty of Health, Psychology and Social Care



Hope Despite Annihilation – Cells Divide and Conquer

Politics, protests and wars generate uncertainty in this dying world of hate. Nevertheless, despite worldly degeneration, cells in the body still divide, generating hope to search for improvements in life.

In this image, a stem cell membrane, stained green, but the genes have begun to respond to messages that allow it to divide into two new bone cells (blue). This is important because sometimes, bone cells are destroyed faster than they can be renewed.

Stem cells have the ability of supporting renewed activity for failing tissues. Hydrogels provide a three-dimensional (3D) environment for stem cells to grow in all directions, supporting improved cell growth. This 3D environment is similar to the environment cells grow in in our bodies. It therefore allows us to learn more about stem cell behaviour, so that we manipulate stem cells to enhance healing of dying tissues and heal more people.

Cells provide hope!

Dawn O'Dowd

Cheshire Faculty



To Exercise or Not to Exercise with a Muscle Disease

Muscular dystrophy (MD) is an incurable genetic condition that results in progressive muscle weakness and disability. Strength training can increase strength in healthy muscles, but it was historically discouraged in MD, due to fears that it may damage the muscles. However, direct evidence to support this does not exist. Thus, strength training may be a missed opportunity in the management of MD and what's more, it may elicit other benefits besides strength, providing it is not harmful.

The current research demonstrated no adverse effects of a strength training programme in adults with MD, along with improved functional abilities and wellbeing, such as walking speed, ability to stand up or climb stairs and reduced depression. One participant felt 'steadier on her feet' and another (photographed) gained the momentum to complete his first disability triathlon.

Overall, it is dismaying that strength training was disregarded in MD, as the benefits stretch beyond muscle strength.

Heather Petrocelli

Faculty of Arts and Humanities



Queer for Fear: Drag Queens, Queer Audiences and Horror Cinema

In order to give visibility and voice to a vibrant queer fandom that exhibits a distinctive engagement with horror film, I am directly engaging the queer community with my research project, *Drag Me to Hell: Horror Film Meets Queer Spectatorship, Fandom and Performance*.

In cities across the globe, drag queens regularly present horror films to queer audiences, creating much-needed temporary queer spaces, queer visibility, and queer community. In these safe spaces, queers can gather together to laugh, shriek, gasp, and jump together at horror films and feel connection over 'otherness', monsters, and mayhem. For example, drag clown Carla Rossi, pictured here in 2018, hosts Queer Horror in Portland, Oregon (USA) to sell-out crowds. Each screening begins with a drag show that is both queerly political and politically queer. Carla creates shows that are as much of a draw as the night's film screening, uniting community through film and performance alike.

Ryann Sowden

Faculty of Health, Psychology and Social Care



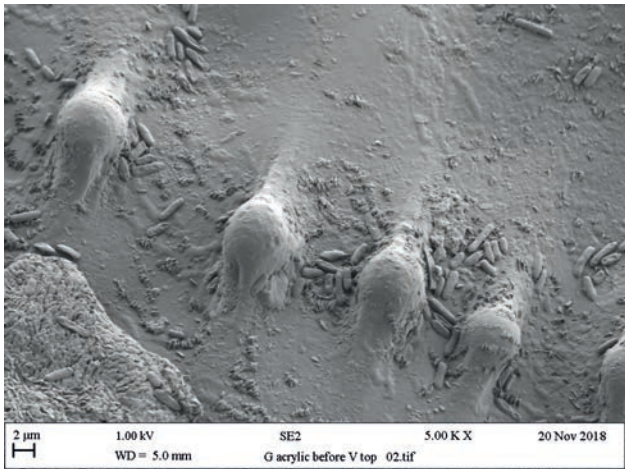
Profile Pictures and Dialogue: Supporting Speech and Language Therapy Internationally

Speech and Language Therapists (SLTs) provide services for people with communication disabilities. In Uganda, SLT is an emerging profession, and it is challenging for newly qualified Ugandan SLTs to access support and supervision. One way foreign SLTs have supported emerging SLT services for people with communication disabilities is by providing professional support to newly qualified Ugandan SLTs. In 2015 a WhatsApp group was created by five Ugandan and one British SLT to encourage international communication and support among SLTs. The group has grown to involve 27 SLTs across the world.

Due to our location, we are unable to meet in person to provide professional and personal support. Instead, we recognise each other through our WhatsApp profile pictures. Sharing challenges and potential solutions, this group has helped to give the best support to people with communication difficulties in Uganda and internationally.

Joshua Spall

Faculty of Science and Engineering



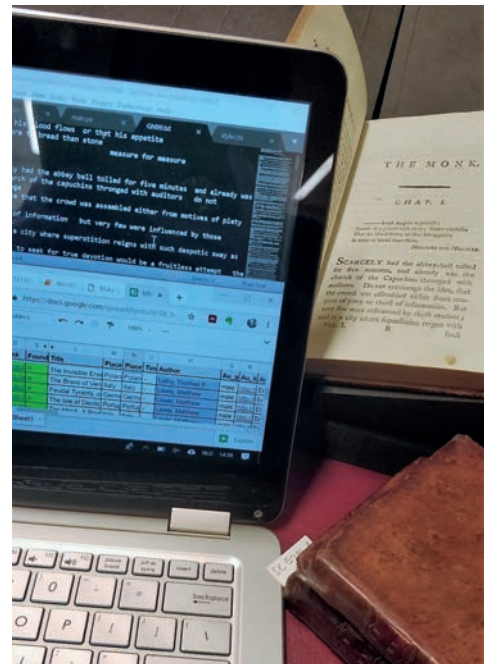
E.coli Cells Retained on Biomimetic Surface Emulating Gladioli (*Gladiolus*) Leaves

This image depicts the way *E.coli* cells adhere to a biomimetic surface composed of acrylic resin emulating Gladioli (*Gladiolus*) leaves.

This is part of a study to uncover the role topography has on bacterial adhesion. To obtain this image biomimetic surfaces were submersed in a bacterial cell suspension for one hour and then analysed with a scanning electron microscope. The image shown is at 5000x magnification. This research could have applications in the food industry, the medical industry and the shipping industry as an antibacterial coating.

Maartje Weenink

Faculty of Arts and Humanities



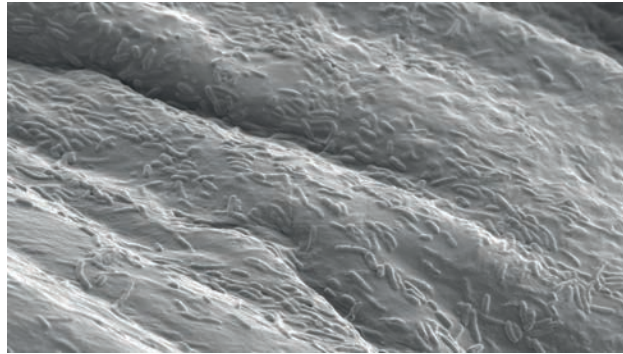
Reading a Thousand Novels a Day

Methods of the digital humanities have enabled researchers of disciplines such as literary studies to approach traditional questions with radically new methods. Research students can in this manner attempt to study questions about literary periods or genres by covering hundreds, or maybe even thousands of relevant texts.

My research project aims to uncover trends in British Gothic fiction of the 18th and 19th Century – and uses word embeddings to do so. A calculation of these word embeddings in Python's Word2Vec, for example, shows that the word 'King' minus 'man' results in 'Queen'. In some periods however, this might be 'Prince' or even something completely different, like 'Pope'. This makes a text part of a framework of historical or publication context, and is, to me, why texts should be analysed as being both a historical artefact and a digitized text that can be computationally 'distant read' without opening the cover.

Jane Wood

Faculty of Science and Engineering



Bacterial Cellulose – The Future of Garments?

Traditional textile sources are being scrutinised for their impact on the environment. Estimates suggest 20% of fabrics are waste before they leave the factory. There are 'clothing mountains' at landfill, and 537 billion kg of CO₂ (equivalent) pollution being produced through textile manufacture each year. There is a demand for change in industry practice and alternative sources of textiles.

Bacterial cellulose is produced by *Gluconacetobacter xylinum*, a bacterial strain often found in rotting fruit. In a suitable growth medium (black tea) and carbon source (sugar) the bacteria can spin bacterial cellulose 'nano fibres'. These fibres form a non-woven mat at the surface of the liquid medium which can be harvested, washed and dried. The dried mat has the texture of leather and can be used in garment applications. At the end of its useful life, the 'fabric' can be composted with no environmental impact.



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