

The Graduate School

*Presents*

# Images of Research 2014-15 Catalogue

1 image plus 150 words

Illustrating research diversity at the University of Northampton

## Guidelines for voting

Please vote for your top three favourites.

You can vote online at <http://wp.me/p2eVC1-1Rk> or in person at the exhibition, which will travel between campuses.

- 4th-27th February 2015 in Avenue Gallery corridor, Maidwell Ground Floor, Avenue Campus. (*Private Viewing 4<sup>th</sup> February 5-6:30pm, wine and refreshments served*).
- 9th-23rd March 2015 in Rockingham Library Ground Floor, Park Campus.
- 13th-27th April 2015 in Avenue Library entrance.

*Images of Research* is, essentially, about making research accessible. *The Images of Research* competition offers researchers a chance to illustrate or represent their research using a unique image, along with an abstract of (up to) 150 words describing how the image reflects their research. As a guide, a winning image would be that which:

1. Is visually appealing AND
2. Has an accompanying abstract which is well written, clearly connects with the image and ensures viewers, who know nothing about the research topic, will understand and find interest in the research presented.

So please vote taking both the image and the abstract into account.

## Impacts of ewaste

### **Professor Margaret Bates, School of Science and Technology**

The issue of ewaste (electrical and electronic waste) is important all over the world as a rising demand for technology means that more equipment reaches the end of its life. In most developed countries recycling is carried out to high health, safety and environmental standards but in many developing countries it is rudimentary and unsafe. The picture shows the most toxic place for human health on the planet, Chernobyl is number 2! The people are on Agbogbloshie in Ghana, burning plastic cables to get to the copper inside. We are working in a number of African countries to try and find better ways for the workers to recover the metals without exposing themselves, or the environment, to hazardous chemicals. In one of the markets in Nigeria we were told that they don't burn the plastics now, because of our work.





## Roundabouts and repetitions

**Carmel Capewell, Postgraduate Research Student, School of Education**

This qualitative research into the lived experience of mothers and their child with recurring Glue Ear combined Photovoice with Interpretative Phenomenological Analysis (IPA). Although usually perceived as a common childhood ailment, the participants described repeated experiences over a number of years with no way out of their situation – like being stuck in an ever revolving door. Neither healthcare nor educational professionals recognised the strength of the impact on mothers or young people. The young people, in particular, wanted their voice to be heard. As Daisy, aged 14 years, said, “He can’t tell what it is like to be me from looking in my ears.” Although it is 25 years since the passing of the UN Convention on the Rights of the Child, my research indicates there is still much more action needed if young people are to be properly consulted about their health and educational needs.





## Is this camera on? Measuring rabbit personality using CCTV

**Clare Ellis, Postgraduate Research Student, Moulton College, School of Science and Technology**

Can animals have personality? If so, how can we measure this objectively?

My research is investigating the existence of personality in domestic rabbits (*Oryctolagus cuniculus*) and the first assessment tool to be implemented is behavioural coding. Behavioural coding enables observers to identify behaviours that may be indicative of personality traits, and measures the frequency or duration of each behaviour in an

individual animal. For example, inquisitiveness may be measured by how quickly a rabbit approaches a novel item and how it interacts with it. If such behaviours vary across individuals, but are consistent within individuals over time and across contexts, then it can be suggested that the animal exhibits more or less of this particular personality trait. During summer 2014, non-invasive CCTV cameras were erected in rabbit enclosures at Moulton College and filmed the rabbit's activities 24/7. This footage will now be reviewed using behavioural coding techniques to ask the question, do domestic rabbits have personality?



Photo credit: Carl Kirk

## Masking the problem

### Sally Cook, Acting and Drama, School of the Arts

This image captures the essence of the performance research I am undertaking that will be used to inform the creation of an original piece of theatre. The aim of this new work is to promote responsible drinking to young adults in an entertaining and unusual way. I want the theatrical experience to be exciting and visually arresting so that the show (and thus its message) will have impact in the long term as well as the short term. I draw on my past experience as a mask maker / deviser / performance director with Trestle Theatre Company but instead of using a traditional narrative form, I am experimenting with blending a contemporary form (film, projection, technology, non-narrative, bricolage, fragments of text) with cartoon-style masks – something that has not been done before! I would like to help young people reflect on their drinking habits, and realise that they have control over their lifestyle choices.



## Do we care about your world?

**Maher Daboul, Postgraduate Research student,  
Northampton Business School**

I took this image on my way to the university. The image shows a power station of a well-known electric and gas company in the UK; it reflects the contradiction of being environmentally responsible, ethical, economical, socially contributing, and creating a brand image.

It also reflects the main question of my research: Can we create a Green Strategy to regain trust and fix damaged brand image? My research looks at Corporate Social Responsibility (CSR) and branding; the effectiveness of using CSR on damaged brand image due to brand crisis. Is it possible to regain positive customers' perception and trust via CSR? Or is it rather going to add more complications to the crisis, an "unethical" or "cheap" way to change opinion and regenerate sales? And if so, then what should be done to avoid this, and reassure that customers will not receive the wrong message?



WE CARE  
ABOUT YOUR  
WORLD



## **Alternative femininities: Embodiment, constructions and representations of tattooed women**

**Charlotte Dann, Postgraduate  
Research Student, School of Social  
Sciences**

Though there is a rise in the popularity of tattoos in the UK, the negative associations made about those with tattoos has not changed much, especially in relation to women. This research looks to explore the ways in which tattooed women see

themselves, how they feel others construct views of them, and the ways in which they embody – or reject – notions of femininity.

This picture of a tattooed Barbie doll is pertinent to this research, as within our Western society, Barbie is the epitome of everything it means to be feminine; slim, beautiful, fashionable, and likeable. Through the adornment of tattoos, this image changes, and the interest lies in how femininity and tattoos intersect to create an alternative construction of femininity.





## Croc, work in process

**Dr Ralph Darbyshire, School of the Arts**

This is an image of the inside of my studio and a piece that I am currently working on. It is a 25 foot long crocodile which rests 5 feet above the ground.

My work most generally aims to illustrate my own internal state of chaotic reflective thought, both political with a small 'p,' and emotional. All my recent work strives to legitimise the act of not knowing in an attempt to counter dogma in its most pervasive and destructive forms. Strands of inexplicable events link all my recent works, for example the multitudinous and uninterrupted beheading of women by Mexican terrorist cartels, and the well-documented 2009 killing of the

newspaper vendor Ian Tomlinson by the Metropolitan Police. I use 'spectacle' as an engagement device, making objects that retain presence, and the 'smell' of the specific, but which are complexly layered and which over-lap the mundane with the profound in order to illustrate our human inability to focus absolutely.



## Putting pieces together: Challenging dementia by conducting participatory research

**Diana Schack Thoft, Postgraduate  
Research Student, School of Health**

People with dementia have often been a silent and marginalized group in Western society. Little is known about how people with early stages of dementia experience their daily life and how it is possible to conduct research involving people with early dementia as active research partners.

This PhD project gives people with early stages of dementia a voice by training them in research skills so they can use their knowledge

and experiences in participatory research. They will formulate the research question and conduct the project in collaboration with the researcher focusing on their experiences. The participants are recruited from the Adult School VUK in Northern Denmark. The aim of the study is to develop a future participatory research model allowing people with early stages of dementia to become active research partners.





## The number one harvest mouse detection dog!

**Emily Howard-Williams, Postgraduate Research Student, Moulton College, School of Science and Technology**

Meet Tui, she is being trained to indicate the presence of harvest mice (*Micromys minutus*) using her expert nose. Although there is increasing evidence for the effectiveness of detection dog in conservation, using dogs for conservation is not a modern method. In New Zealand, detection dogs have been an essential tool for monitoring kiwi (*Apteryx* spp.) and have been used for over 100 years. The use of a harvest mouse detection dog could provide a rapid and relatively cost effective method of establishing their presence, particularly in areas where they have been overlooked. The primary indicator of presence has traditionally been their distinctive nests; a visual clue. However, olfactory indicators are present and to a sensitive nose, they could be a better and more reliable method of establishing presence.

It has been suggested that the use of dogs in conservation is only limited by the human imagination!



## USER\COULSON& FARMER\SUBJECT\ RESEARCHDATA FINDINGS

**Kate Coulson and Rob Farmer, Library  
and Learning Services**

Our image shows the quantitative data that was collected from students at the end of the Study Skills for Academic Success MOOC, which ran during August and September 2014. The students self-rated their academic skills against five criteria (critical thinking, research, referencing, note taking and academic writing) on a ten point scale (one being not confident, ten being very

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confident), rating their confidence in using and applying these skills both before and after the MOOC. As can be seen in the image, the data shows that regardless of how the average is measured, self-rating score averages after the MOOC are substantially higher than they were before the MOOC.



Original painting by Philip Garner

## A dog's life?

### **Professor Philip Garner, School of Education**

Lucifer was a constant companion on my many trips to the hills - to go rock-climbing. Those are distant days now. It seems that even my weekends have become inundated with research-related activity...to the point that my days in the mountains have become an occasional rather than routine event. Perhaps, I wonder, that's the reason I chose to sketch my dog in a grey wash, with an even darker cloud above him? Maybe I had a premonition, even as a young school-teacher, that a future life as an academic researcher would - most definitely - mean sacrifices?

## Katherine Mansfield, Wellington, cheese scones and a flat white

**Dr Gerri Kimber, School of the Arts**

Research for my forthcoming biography, Katherine Mansfield's Early Years, has meant several trips to New Zealand, where Mansfield was born and grew up, and where she is considered a national literary icon. The National Library of New Zealand, in Wellington, houses the world's most important collection of Mansfield manuscripts and ephemera, and is my research mecca. The main image here is taken from Mansfield's childhood birthday book and features her own youthful signature. On my first trip, I was bought a cheese scone one morning by a research



colleague. At the time, I had no idea that cheese scones were a New Zealand national culinary institution. I soon became addicted and now, no research day in that country is complete without a delicious cheese scone and a 'flat white' coffee – decorated with a fern leaf – another Kiwi speciality. To me, they have now become synonymous with my research life!





## On 'Finn' ice

### **Dr Naomi Holmes, School of Science and Technology**

Here we are heading back down a glacier in Arctic Finnmark after carrying a load of kit up to 'ice-camp'. Less than a week later we could not access the ice cap safely via this glacier as a result of exceptionally warm and sunny weather. 'Ice-camp' was abandoned and all the kit retrieved.

During this expedition the research focus was 'Environmental

change in the Arctic'. We saw first-hand how Arctic environments and ecosystems are changing. Plants, birds, lakes, streams and the ocean were studied during the expedition. Over the years glaciers in this area have retreated rapidly and they are a visible reminder that environments are altering as climate changes.

It is hoped that by introducing young people to such environments they will develop a greater environmental awareness and will be inspired to continue their scientific studies in the future.

**Everything is Socially Valuable !!  
So, What is Social Value ?**



**Know Social Value, Become Socially Valuable !!**

## **Socially valuable social value!**

**Payal Jain, Postgraduate Research Student, Northampton Business School**

There are many ways vulnerable, disadvantaged and socially secluded members of society can benefit from the government and other sections of society. With stakeholders such as charities, social enterprises, government, businesses and other organisations aiming to benefit vulnerable population through their work by maximising social value and social impact, this PhD seeks to define what social value is, how it is understood and practised in the real world. The beneficiaries from diverse

backgrounds benefit daily from social value created by stakeholders, allowing them a new hope to become socially included and becoming purposefully engaged in a society. This PhD therefore intends to increase the understanding of social value for use by stakeholders.





## Visitor management in the land of fire and ice

**Dr James Littlemore, Moulton College**

With a dramatic and heterogeneous landscape of chillingly cold glacial rivers and secretive waterfalls, imposing glaciers, striking lava fields and the odd volcanic eruption, the 'Tolkien-esque' south-western interior Highlands of Iceland appears to have it all. But there is something else that lurks within the rugged mountains that appears to be threatening the integrity of this unique landscape.....*can you guess what it is?* Well, at current levels of demand, the pressure of anthropogenically derived recreational activities including hiking appears to be threatening the ecological integrity of one of Europe's most

aesthetic wilderness areas. This panoramic view off the popular Laugavegur trail neatly illustrates the visual impact of hiker impacts in these pristine wilderness environs. New research with the University of Iceland, Brathay Exploration Trust, The University of Northampton, Moulton College and the Iceland Forest Service aims to provide pro-active management advice, thus ensuring a long-term sustainable future for the trail environ.





Photo credit: Anna Evans

## You can lead a horse to water ....

**Jessica York, Postgraduate  
Research Student, Moulton  
College, School of Science and  
Technology**

And then you measure how deep the water is as the horse starts to walk on a specially constructed treadmill belt in a galvanised steel tank, whilst also measuring the movement of specific anatomical landmarks along the horse's back! Equine Aqua-Treadmills have become increasingly popular as a tool for equine rehabilitation and exercise but little research has been conducted on how the horse actually moves while walking and trotting at

different water depths in the aqua-treadmill. My research is focussing on measuring the movement of the horse at increasing water depths by using sophisticated motion capture and inertial sensor technology to quantify the movement and identify patterns of symmetry. It is anticipated that an optimal water depth and exercise protocol may be determined to best promote rehabilitation and therapy methods in the individual equine athlete.

## The journey of 400 trees

**Julia Lock, Postgraduate Research Student, Moulton College, School of Health**

The image represents the treatment of a diseased Rowan (*Sorbus aucuparia*) with an antimicrobial green manure. The leaves float down into the soil and around the roots of the tree. This symbolises the addition of green matter that will be broken down by soil microorganisms, with the release of antimicrobial components thereafter. The tree is in good health due to beneficial soil conditions and can provide a plentiful source of berries for the wildlife in the

Original painting by Julia Lock

surrounding. Ultimately, it is about the hope that a green alternative to chemicals can positively influence the growth of this tree, so that it may function in an urban environment as an aesthetically pleasing ornamental, or as an ecological resource for the wider landscape.





## Determination!

**Lauren Samet, Postgraduate Research Student, Moulton College, School of Science and Technology**

This female rat is one of the friendliest in her group, she regularly climbs up the legs of my overalls to sit in my pockets or on my shoulder. I am nearly six foot tall, so this is really quite a venture for her! Whilst being fed Chamomile daily during my study, she began to exhibit this behaviour much less... I have been looking at the impact of calming herbs on the behaviour of domestic rats housed in large social enclosures within colleges. This type of rodent is used in multi-level

student handling and animal care classes, which although common in the UK, can potentially be stressful to rodents in captivity. My research is investigating the potential benefits of feeding calming herbs, such as Chamomile, to animals in stressful captive environments.





## Sand accumulation in complex terrain

**Professor Ian Livingstone,  
School of Science and  
Technology**

As part of a joint project with colleagues at the University of Leicester, we are investigating how sand is blown through complex, mountainous terrain in a desert and where it accumulates in that terrain. We are using the Cady Mountains in the Mojave Desert, California, as the field site for the work. This picture, taken in November 2014, shows sand against the hills in the middle-distance, in a plain between the two rows of hills and underfoot in the foreground. The project aims to

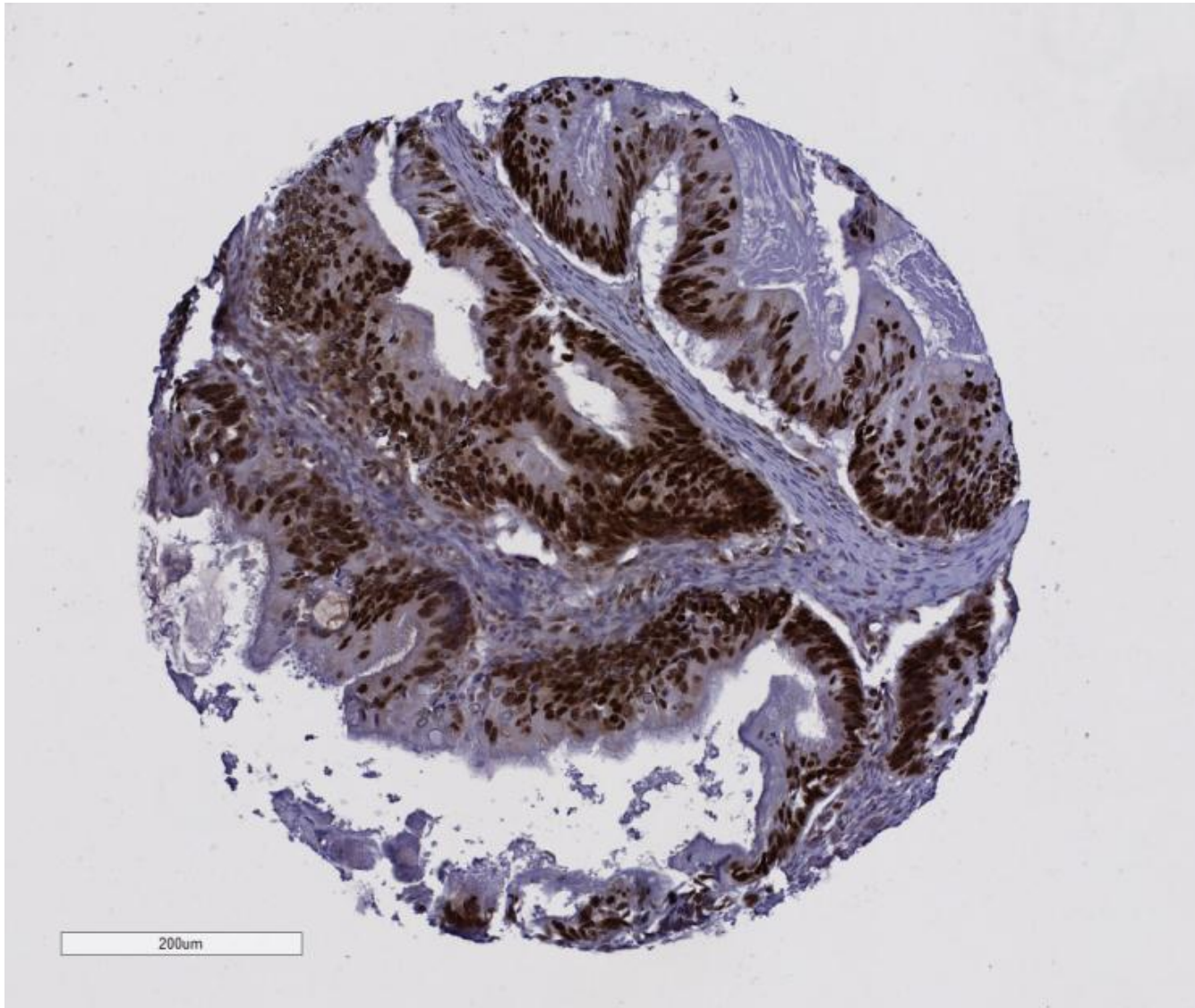
provide detailed information about the sources of the sand and the routes that it has taken so that we can identify sand transport pathways, but it also aims to use dating techniques (optically stimulated luminescence) to provide a chronology of sand movement and show how sand movement can be related to particular climatic events over the past 100,000 years.



## Putting a DAMPener on ovarian cancer

**Dr Lee Machado, School of Health**

Whilst survival rates from ovarian cancer have almost doubled over the last 30 years, the 5 year survival rate is still relatively poor at approximately 40-50%. The incidence and mortality rate in women over the age of 65 is notably higher with patients typically presenting with Stage III/IV metastatic disease. If detected at the earliest stages of development, 90% of patients will survive. Therefore, it is vital that novel independent prognostic markers are identified in order to improve our understanding of ovarian cancer biology and the management of these patients. This image represents our work with tumour tissue expressing a Damage Associated Molecular Pattern (or DAMP) that is expressed in ovarian cancer



(brown pigmented cells). Patients that express lots of this molecule tend to have a worse prognosis suggesting that DAMPs maybe useful biomarkers predicting survival and may provide a novel therapeutic target.



## An ecosystem in a cup

**Professor Jeff Ollerton,  
School of Science and  
Technology**

During November 2013 I undertook field work in south east Brazil with postgraduate students from the University of Campinas, surveying plant communities to add to our pollination mode database to understand how the relative importance of wind and animal pollination varies geographically (Ollerton et

al. 2011; Rodrigo Rech et al. in prep.) In the Atlantic Rainforest I photographed the flowers of a bromeliad (family Bromeliaceae) emerging from the water-filled cup formed by its over-lapping leaves. This water contains algae, insects (note the mosquito larvae bottom centre), and small frogs, breeding and feeding on one another to form an entire ecosystem in a cup.

### References:

Ollerton, J., Tarrant, S. & Winfree, R. (2011) How many flowering plants are pollinated by animals? *Oikos* 120: 321–326.

Rodrigo Rech, A., Ollerton, J., Dalsgaard, B., Sandel, B. & Svenning, J-C. (in prep.) The macroecology of animal versus wind pollination.





## Does the shoe have to fit...?

**Saneeya Qureshi, Postgraduate Research Student, School of Education.**

Each clog represents a distinct classroom in an English primary school. The plants depict 'children' within those classrooms. Some of these children have Special Educational Needs (SEN), and therefore need to be nurtured accordingly. My PhD is based on the premise that teachers' practices should be differentiated to 'fit' around the children in their classrooms; the plants within the clogs should be nurtured to flourish beyond their confines.

So who oversees this process? Who is the 'gardener' responsible for the blossoming clogs? Every school has a Special Educational Needs Coordinator (SENCO) who ensures that teachers impart optimal initiatives for children with SEN. My research investigates SENCOs' impact on teachers' classroom practices. Results indicate that SENCOs have a complex role, positively influencing teachers' inclusive skills, but these vary across diverse classroom contexts, as depicted by the assorted clog designs within the image and the varied attributes of the flora therein.





## I want to live until I die

### Kim Stuart, Postgraduate Research Student, School of Health

Let me introduce you to my Nana, 86 years young and full of life. A Londoner evacuated in WWII, later a Land Girl losing a flock of sheep between Thornby and Creaton! A mother, grandmother and great-grandmother to many, still seen helping the old dears in Cold Ashby; she lives her life to the full and so she should. As she walks towards an aged death slowly and defiantly I am by her side but is the NHS? I wonder when she needs care and compassion to be freely given, what is in store for her? To live in the face of death, or *"care which fails to recognise the humanity and individuality of the people."* So it is with this resonance that I embark on my research journey to uncover "what matters at the end of life and to whom?"

Reference: Care and Compassion? Report of the Health Service Ombudsman on ten investigations into NHS care of older people (2011 p7)





## The sound of colour

**Alison Ward, Postgraduate Research Student,  
School of Health**

This colourful creation was the result of a creative splurge at the end of a drama workshop I attended. We had been playing with scarves and movement and then discarded these for musical instruments. At the end we decided to bring the two sessions together in a sculpture, merging two creative forms of expression. This reflects my PhD, which is to develop drama and storytelling workshops with people with young onset dementia and to understand their experiences of participation in the workshops. The creative, in the moment, energy which brought about this sculpture is my aim for the PhD. Enabling creative flow, group unity, self-expression and communication are central to the work I am doing and this is embodied for me in the splashes of colour, the choice of instruments and the way the group worked to create something fun at the end of our day together.



## Love in the face of dementia

**Jane Youell, Postgraduate Research Student, School of Health**

My PhD project investigated the impact that a diagnosis of dementia can have on intimacy in long-term relationships. As the participant group are deemed 'vulnerable' and the topic of intimacy and sexuality is seen as sensitive, my research had to undergo considerable ethical consideration. My methodology was carefully thought out and designed to ensure that every eventuality had been considered before going out into the field.

In the end my participants were wonderfully candid and the data offers real and sensitive insight into home space,



sexuality and relational coping. This image is compiled from some of the faces of dementia I met along the way. The heart shape depicts the love and care that is the glue which holds these relationships together. I like how messy the image is. For me, this reflects what real life research and the complexity of living with dementia actually looks like.

# The student midwife's perceived impact of dyslexia and coping strategies in practice

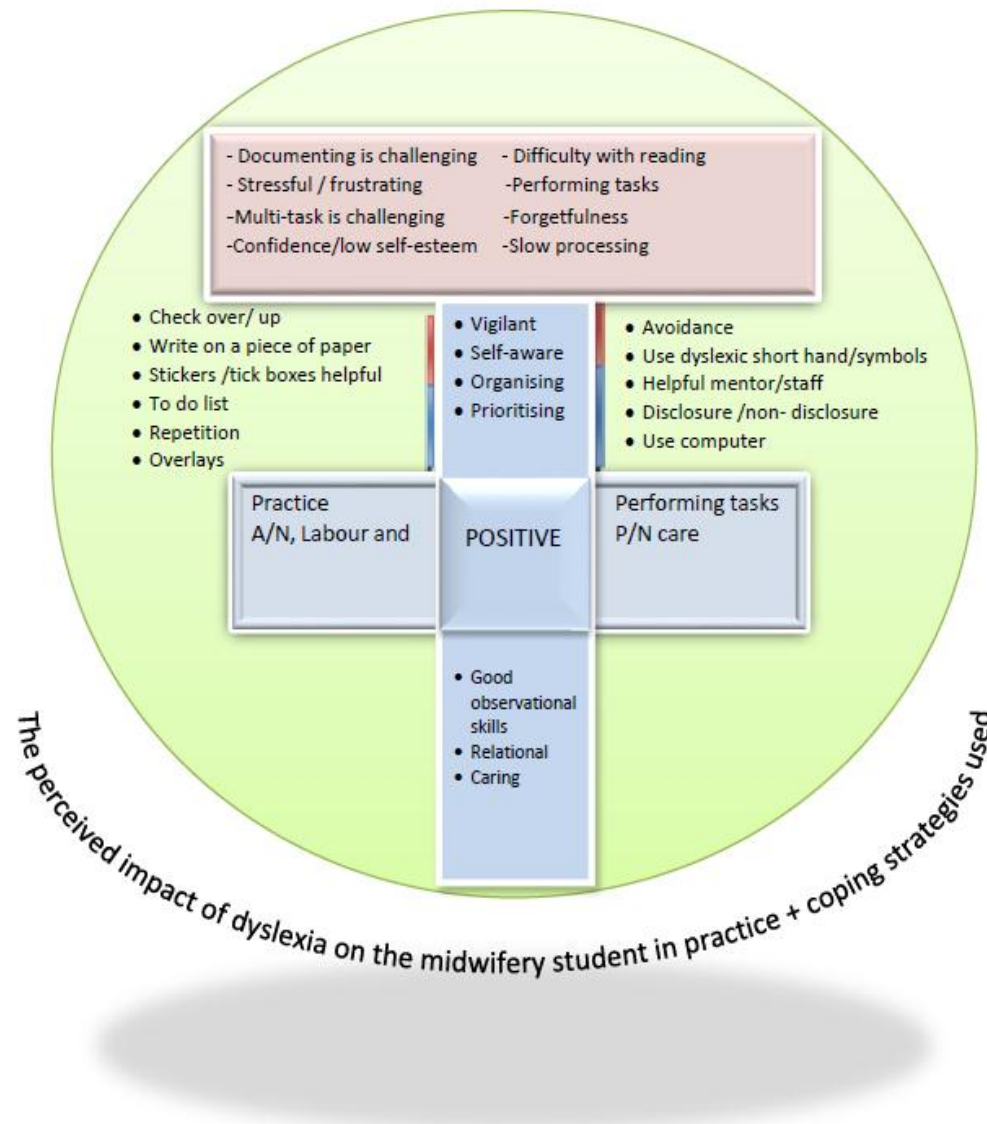
**Anna Crouch, Postgraduate Research Student,  
School of Health**

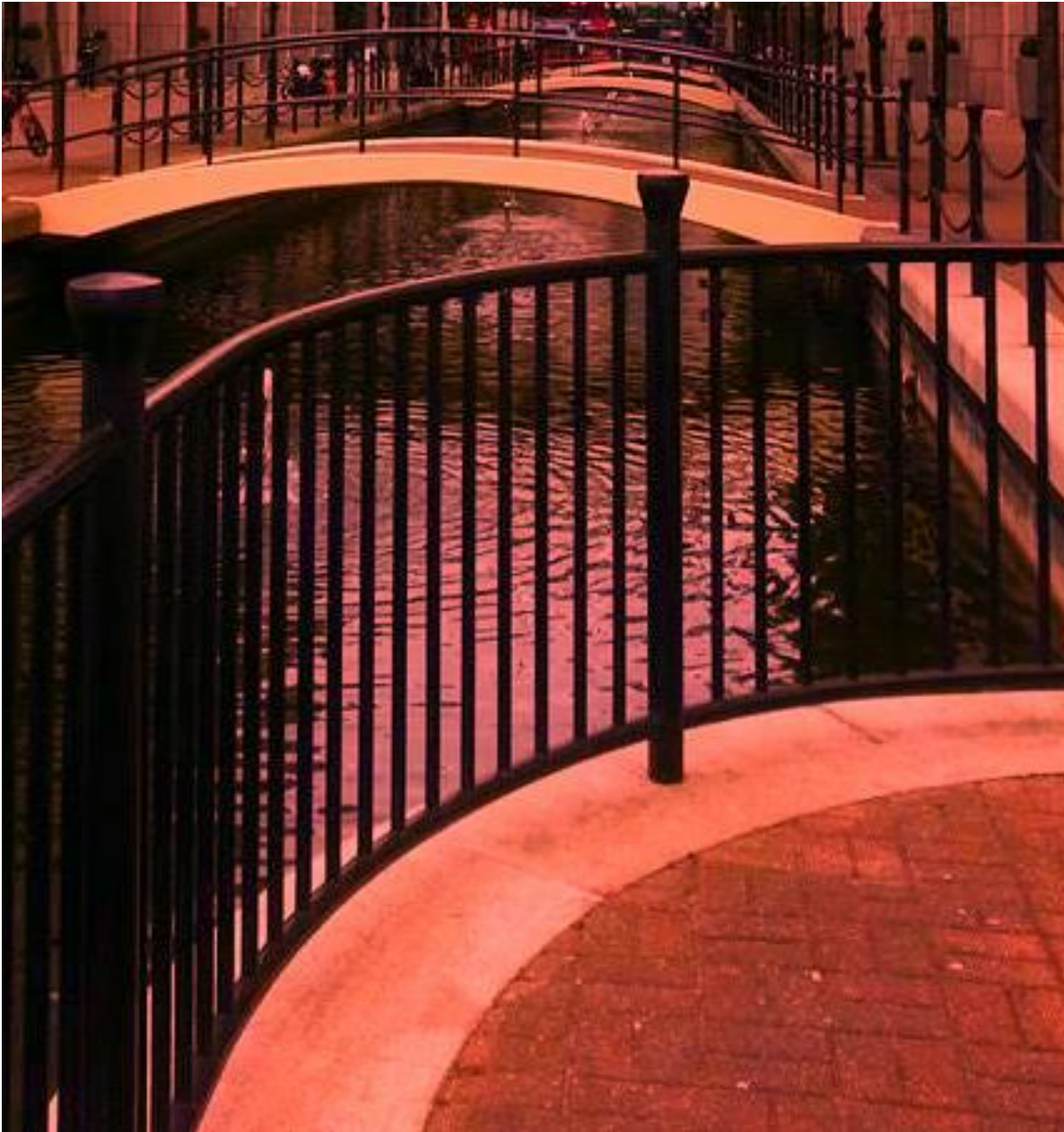
My research aims to explore the perceived impact of dyslexia on nursing and midwifery students in practice and the coping strategies they use to overcome difficulties encountered.

The image depicts the findings for the student midwife. Dyslexia seems to impact on the student midwife negatively (reflected by the use of the pink negative sign) as well as positively (reflected by the use of the blue positive sign), and the themes generated are noted in appropriate aspects of the image.

Like a magnet which pulls on things, the perceived negative impact seems to lead the student to develop heightened self-awareness, become over-vigilant, and develop problem solving skills, including the development of coping strategies, the themes of which have been

embedded within the green area of the image. Hence the magnetic red/blue rods in the image.



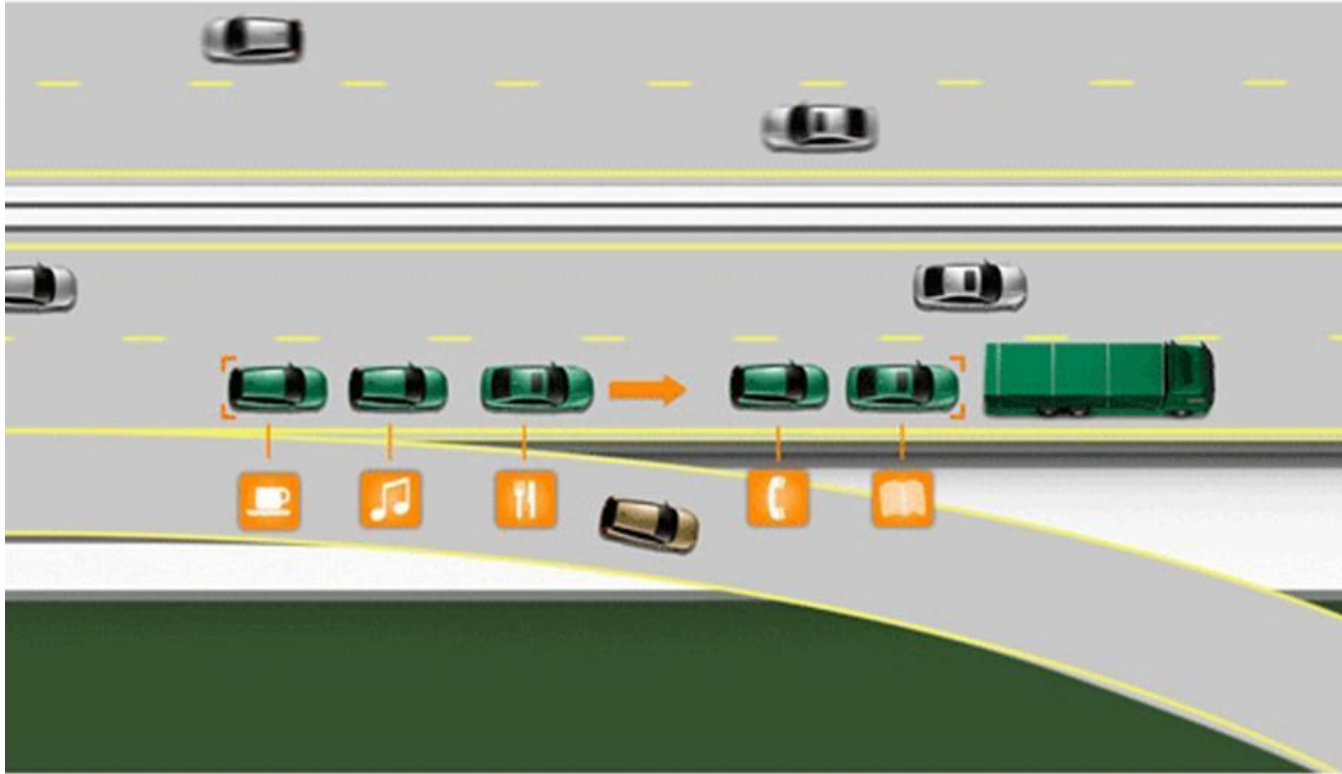


## A bridge too far?

**Angelina Bartoli, Professional Doctorate  
Student, School of Health**

These bridges are situated outside a building that I was about to enter to conduct an interview with a research participant. My research is about capturing and understanding the experiences of newly appointed social work managers and their emotional transition to this new role. The photograph symbolises the themes that are arising from the data so far, which relate to the new managers having to bridge their former knowledge, skills, motivation and identity to this new role. For some, the leap into the unknown is described as an experience impeded by obstacles, a sense of sinking as opposed to swimming and the ultimate goal being a bridge too far.





## Challenges of platooning in Automated Highway System (AHS)

**Marwan Aldabbagh, Postgraduate Research Student, Computing, School of Science and Technology**

Platooning consists of creating platoons or “linked” vehicles which will travel along the Automated Highway System (AHS) acting as one unit. These vehicles follow one another with very small headway-vehicle spacing, as little as a couple of meters, and are “linked” through headway control mechanism, such

as radar-based or magnetic-based systems. The first vehicle in the platoon, the leader, continuously provides the other vehicles, the followers, with information on the AHS conditions and what manoeuvres, if any, the platoon is going to execute. In vehicle platooning, a group or platoon of vehicles travel in close co-ordination under fully automated longitudinal and lateral control. The vehicles maintain a constant fixed spacing between themselves at all speeds up to highway speeds.

**The advantages of platooning:**

1. Reduce fuel consumption.	4. Driver life conservation.
2. Reduce CO2 emission.	5. Increase passenger comfort level.
3. Reduce accident rate.	6. Increase highway capacity.





# All images printed by the University of Northampton photography department

Special thanks to Steve Godfrey and Kartini Leet



Feedback on IoR to [simone.apel@northampton.ac.uk](mailto:simone.apel@northampton.ac.uk)

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