



UNIVERSITY
of York

GRADUATE RESEARCH SCHOOL



YORKTALKS
RESEARCH IN THE SPOTLIGHT

MADELINE BODEN

History of Art

Biography: Madeline Boden is a third-year PhD candidate in the History of Art department. Her thesis focuses on the Victorian artist and President of the Royal Academy, Frederic Leighton, and his travels to the Middle East between 1858-1895. Her research reflects on the influence of travel on Leighton's work as well as the new avenues of artistic engagement Leighton and his contemporaries pursued while in the East.



Title: *An Aesthete in the East: Frederic Leighton in the Ottoman Empire*

Summary: *An Aesthete in the East: Frederic Leighton and the Ottoman Empire* stages a museum exhibition and asks two questions: how did Victorian artists engage with the culture of the Middle East? And, what must a curator do to tell that story? The exhibition focuses on the artist, Frederic Leighton and his travels to the Ottoman Empire across his career. At my stand, you will see models of what the exhibition will look like installed in a museum, revealing the behind-the-scenes of curatorial work. This display is drawn from my research around themes of Orientalism, cultural diplomacy in the age of Empire, and the Victorian conception of the Islamic world. Leighton's travels signify a type of Anglo-Arab relation, distinct from our world today, often filtered through military intervention and sensationalist media coverage. This exhibition will allow you to reflect on how art enables contact across cultures.

CAROLINE CASEY

Education

Biography: Caroline Casey is a third-year PhD student in the Department of Education. Her research concerns higher education and degree apprenticeships, with a particular interest in issues of inequality, access and choice, focusing on differential experiences based on class background in the legal profession. Caroline's research is largely qualitative and draws on theories from the sociology of education, the professions, and human development as prisms for her work.



Title: *University or Degree Apprenticeship – A Moral Choice?*

Summary: Access to role models, mentors, and paid work placements means professional careers are a real and achievable goal – for some. TV inspires many young people to choose a career in law. However, law is one of many professions recognised as needing to open up recruitment and close the gap in access between those from different backgrounds. To tackle this, a new degree apprenticeship was introduced to combine paid work with part-time study, funded by the employer, providing an alternative to university with a direct route from A levels through to professional qualification. My research looks at who chooses which route and why. The decision, I have found, requires individuals to assess the perceived risk of the route, balancing the costs, benefits and chances of success. The decisions made about which pathway to follow vary according to social background and individual moral position regarding risk. My research seeks to answer the question: can degree apprenticeships close the gap between people from different backgrounds in access to decent work?

ANNA DÉTÁRI

Music

Biography: Anna Détári is a professional flutist (MA, Liszt Academy, Budapest) and a performance science and music psychology researcher (MSc, Royal College of Music). She is primarily interested in Musician's Cramp - a serious neurological disorder affecting professional musicians. Based on personal experiences, she developed a successful CBT therapy. During her PhD, she intends to enhance said therapy with interdisciplinary tools. Anna is funded by White Rose College of Arts and Humanities and the Department of Music.



Title: **The Curse of Music: Curing the Mysterious Musician's Cramp**

Summary: Becoming an expert in playing a musical instrument takes a minimum of 10,000 hours of practice. This means 3 hours of practice, every day, for 10 years. However, this incredible expertise can be lost in a matter of days, alongside the income, and artistic outlet of the individual. 1-4% of professional musicians go through this experience. Musician's Cramp is a neurological condition which makes the brain send confusing signals to the hands or facial muscles, and as a result, makes it impossible to play. The problem also affects those who play considerable sport, meaning that some of society's best talent is being lost. The condition is very hard to cure. Re-learning the affected movements can be helpful, but it relies on the mindset of the musician. We know that the sufferers are prone to having psychological issues which can interfere with the re-learning. In my PhD I propose to enhance the rehabilitation with psychological tools to create a more reliable therapy.

NICOLE FROIO

Centre for Women's Studies

Biography: Nicole Froio is a Brazilian-Colombian PhD student at the Centre for Women's Studies. A recipient of the university's Overseas Continuation Scholarship, she is a journalist, writer, researcher and cultural theorist whose PhD project focuses on masculinity, sexual assault, and the media. Beyond academia, Nicole writes about feminism, books, politics, anti-fascism and gender equality.



Title: **Public Men and Sexual Assault: Where Are We After #MeToo?**

Summary: In October 2017, the #MeToo movement took social media by storm, exposing the pervasiveness of sexual violence in Hollywood and beyond. #MeToo and #TimesUp are the latest of many feminist campaigns to force institutions, companies and men to take sexual violence seriously and it certainly forced many people to be (or appear to be) accountable, but where does it leave us? What does it mean to be a public man in 2018? Are men really changing and listening to feminist demands? By collecting and analysing newspaper articles about Hollywood sexual assault allegations, reactions from the accused and tweets by the public, my research seeks to understand where the fight for gender equality and justice for sexual violence survivors stands contemporarily. What effect have decades of feminist resistance and campaigning had on men, and what does it mean for the fight for gender equality?

MARK DOWSETT

Chemistry

Biography: Mark completed his Masters degree at the University of York in 2016 which included a one-year placement at Johnson Matthey, a large chemicals company. Starting his PhD in 2016, Mark has won YUSU Demonstrator of the Year and is interested in further public engagement. He loves to take fundamental science and apply it to real world problems such as those presented by carbon dioxide.



Title: **Making Carbon Dioxide Work for Us with Electricity and Water**

Summary: Carbon dioxide (CO₂) is a problem for our planet and is an enormous factor in climate change. To stop further negative effects, we need to capture CO₂ within a solid material for storage, or convert CO₂ into something useful. A big issue with gaseous CO₂ is getting it to dissolve into a liquid to perform chemistry. Electric fields can help us pull CO₂ into water for two applications. Applying an electric field to a carbon-capture device that reacts CO₂ with sacrificial metals triples the amount of CO₂ captured. If all non-recycled steel and aluminium worldwide were used, we could capture 850 million tonnes of CO₂ annually, negating the effect of oil refineries worldwide! Secondly, we are attempting to combine CO₂ molecules with water using electricity and electric fields. This could one day produce molecules such as those in petrol!

MICHELLE HUNTER

Education - Applied Linguistics

Biography: Michelle is a teacher of English as a foreign language with 20 years experience, based in Germany. She has seen first hand how both students and teachers struggle to maintain quality learning / teaching when working in a foreign language. Now a first-year Applied Linguistics PhD student, her research aims to find out what learning / teaching strategies could help deal with emotional and self-confidence issues in university classrooms.



Title: **It's All Greek to Me! (Or Might As Well Be)**

Summary: Around the world, hundreds of thousands of people struggle because someone told them that to succeed in life, you need to speak English. Across Europe, universities increasingly offer degree courses taught in English. On one hand, students seek improved job chances and choices; universities compete for higher kudos and fee-paying students. On the other hand, it can be really hard for students and teachers who are not native English-speakers. What happens to the quality of learning, and to the wellbeing of individuals involved? Results from this research will offer support and guidance for teachers and students. By finding out how to overcome feelings of insecurity, embarrassment or loss of interest from struggling to understand, we can develop practical ways to help. When students and teachers know how to overcome language-based problems, their minds are freer to get on with learning: it's no longer all Greek to them.

DANIEL JOHNSTON

Electronic Engineering

***Note:** Daniel's exhibition is located in the 3Sixty room. Look out for signs to his booth.

Biography: Dan Johnston is a second-year PhD researcher in the Department of Electronics Audio Lab. He has a Bsc in Music and Sound Technology and an Msc in Audio and Music Technology. Dan is interested in combining innovative technology and sound to create interactive sensory experiences for people with special needs. Right now, his research focuses on how virtual reality sound can be used to help children with autism spectrum disorders.

Title: **Virtual 3D Audio: Treating a Fear Of Sound for Children with Autism.**

Summary: Children with autism experience problems in social-emotional interaction, communication and display repetitive behaviours. Additionally, they often have difficulties in processing everyday sensory information, with a particular issue being extreme hypersensitivity to sounds. Unfortunately, common environmental sounds (e.g. vacuum cleaners or toilet flushing) can trigger severe fear-related behaviours such as crying or hitting the ears. Presently, the most successful therapy to tackle this is systematic desensitisation. Based on the idea that the child is afraid of the sound, it involves gradually exposing them to the feared noise during positive activities such as play. This research looks to create realistic representations of these sounds using virtual 3D audio and incorporating them into computer games, creating fun and engaging environments for exposure therapy. By using this technology therapy could become more accessible, improving quality of life for the child and their family.



GRACIA PARAMITHA

Politics

Biography: Gracia Paramitha is a third-year PhD student in the Department of Politics. Her PhD thesis is about bilateral climate change governance in Indonesia. Her research interests are sustainable development goals (SDGs), youth, climate change, politics, and environmental policy. Her PhD scholarship is supported by the Indonesian Endowment Fund (LPDP). Beside PhD life, Gracia recently became the President of the Indonesian Society at the University of York and is teaching Indonesian language to international/British students.

Title: **People and Climate Governance: The Case Study of Central Borneo, Indonesia**

Summary: Indonesia is central to the world's efforts at reducing carbon emission, of which 70% come from forest fires, forest degradation, and other deforestation. As a result of this, Indonesia has been a strategic partner for International Institutions/donors to conduct bilateral climate change cooperation since 1997. My research spans the period 1997-2015 and explains why Norway, the UK, and Australia consistently gave funding on climate change restoration in Indonesia. Fieldwork is conducted in Central Borneo, where the Norwegian Government pledged to fund Indonesia up to US\$ 1 billion under the Reducing Emission from Deforestation and Forest Degradation programme in 2010. Through my data analysis, I have identified three main factors affecting the bilateral climate partnerships: 1. the donor-recipients power relations, 2. the absence of intermediary agencies, and 3. civil society engagement. This research challenges the lack of direct access of funding for civil society groups in Central Borneo and their environmental livelihood in the future.



CALLUM SILVER

Electronic Engineering

Biography: Callum is a second-year PhD student in the Department of Electronic Engineering. He is working as part of the Bio-inspired Technologies group to develop biosensors for antibiotic resistance. As he comes from an engineering background, the world of microbiology has been a new area for Callum, but he has found a passion for combining the two areas and has a new appreciation for the world of interdisciplinary research.

Title: **Smarter Prescriptions: Technology for Tackling the Antibiotic Problem**

Summary: Antibiotic resistance is a growing global issue. Drug-resistant infections claim an estimated 700,000 lives per year and rising. By 2050, it is predicted that antibiotic resistance will be as deadly as cancer is today, causing around 10 million deaths per year. The main cause of this rise is the inappropriate use of antibiotics. Current antibiotic resistance tests take up to 72 hours and need to be completed in a central laboratory, meaning many antibiotics are often prescribed before test results are available. This has led to second- and third-line antibiotics often being chosen when first-line would suffice. My research looks at developing a rapid diagnostic technology to detect resistance in bacteria to a first-line antibiotic. By enabling informed prescriptions, first-line antibiotics can be prescribed reliably, meaning second- and third-line drugs can be saved for patients who need them most.



JACK SMITH

Electronic Engineering

Biography: Jack is a second-year PhD student based in the department of Electronic Engineering. After completing his Masters degree in 2017, he began work on his current research, where he develops computer programmes for audio recognition. Jack's project will apply artificial intelligence techniques to the task of recognising UK species by the sounds they make, aiming to provide technologies for the automatic monitoring of biodiversity through sound.

Title: **Listening to Insects with iPhones**

Summary: Biodiversity decline is occurring at an ever-increasing rate. Human activities (deforestation, etc.) contribute to this loss immensely. In order to gauge the rate of biodiversity decline and assess the effectiveness of conservation attempts, scientists analyse monitoring data. Monitoring data is difficult to collect; trained professionals are required for accurate species identifications, and long-term continuous monitoring is almost impossible. Artificial intelligence can help. Machines such as Siri can recognise human noises, so why can't we programme machines to recognise noisy animals such as insects and birds? Such machines can form permanent monitoring stations, listen to the environment, and identify the presence of singing species. AI techniques can be added to mobile apps, allowing anyone to become a citizen scientist and contribute to monitoring databases. This approach can expand the amount of data collected, increase reliability of classifications, and heighten public awareness.



ANJALI VYAS-BRANNICK
English and Related Literature

Biography: As a first-year PhD student, Anjali is enjoying the early stages of her research. Having worked across a number of sectors since graduating – including the performing arts, education, marketing and sales – she is pleased to be channelling all of her experience to work on a project which is entirely her own. Her exhibition stand is dedicated to Squeaky (c.1990-c.2004), the best cat ever.



Title: **Boisterous Oysters, Playful Cats, and Medical Mules**

Summary: In the sixteenth and seventeenth centuries, science and literature began to separate, transforming into the disciplines with which we are now familiar. One result of this change was that animals came to be seen less as examples of divine handiwork or didactic tools to help mankind understand the world, and more as the biological creatures which inhabit our homes and our imaginations today. My research examines the rich literature of this period, exploring how these bookish animals help us ask the big questions of being human. Along the way, I am finding texts which have never received scholarly treatment, enabling a unique investigation of questions such as what does it mean to read about animals in this transformative period? How do these literary creatures communicate ideas? Ultimately, my research asks, why should we listen to animals?

TIM WINGARD
Centre for Medieval Studies

Biography: Tim Wingard is a third-year PhD student in the Centre for Medieval Studies. His research explores representations of animals and sex in medieval culture and science and how they informed sexual ethics. He is keen to get people interested in medieval animals: he has worked with Barley Hall on an exhibition on animals and magic and has given a talk on cynocephali for the 2018 York Festival of Ideas.



Title: **Primal Desire: Animals and Sex in Medieval Culture**

Summary: When we try to define what kinds of sex are moral or immoral, we often draw on arguments from nature and the animal kingdom: think of the famous gay penguins Roy and Silo. This was just as true in the Middle Ages as it is today, and so my thesis explores how late medieval people used animals to think about different kinds of sexual behaviour including homosexuality, rape, and bestiality. To do this, I work with a range of scientific, legal and literary sources, including documents held in the British Library, Cambridge University Library, National Library of France, Kent Archives and Borthwick Institute. My project demonstrates that our notion of 'natural' sex is constantly evolving as society's moral standards and scientific understanding changes and raises the question of whether 'nature' should be the basis for our sexual ethics at all.

PhD Spotlight 2019 Judging Panel

- **Lauren Marshall**
Hall Manager & Audience Development Officer,
Merchant Adventurers' Hall, York
- **Professor Doug Cleaver**
Director of the Doctoral School and Professor of Materials Modelling,
Sheffield Hallam University
- **Emma Brown**
Acting Head of Business Development,
University of York
- **Jennifer Gilmartin**
Acting Director Research and Enterprise Directorate,
University of York

PhD Spotlight Judging Criteria

Each exhibitor will receive a maximum score out of 5 against each of the four criterion:

- Visual appeal, presentation and coherence
- Clear message about originality of research
- Relevance outside a single field, and able to excite those working in other disciplines
- Appropriateness for non-specialist, academic audience

Prizes:

There will be prizes for the exhibition that scores most highly in each of the three Faculty categories (Arts and Humanities, Social Science and Science) plus an overall winner. These will be announced during the drinks reception.

