

Durham University

Title:

Developing Dynamic Digital Skills for Creative Economies

Main academic supervisor:

Professor Paul Langley
Department of Geography
Durham University
Lower Mountjoy
South Road, Durham
DH1 3LE, UK
Paul.langley@durham.ac.uk

Partner:

Tech for Life

Summary:

Projects within this field will respond to the digital skills shortage that has been identified in the UK in the joint DCMS and BIS report 'Digital skills for the UK economy' (2016). Specifically, the project will focus on the development of the dynamic digital skills that are necessary for creative economies to flourish and prosper. Typically, digital skills are understood in somewhat formal, narrow and individual terms, aligned with the scientific and technical qualifications and occupations of coders and data analysts, utilised for example in the IT services and digital marketing sectors. What is frequently overlooked is that the innovative use of digital technologies for production, distribution and consumption in creative economies mobilizes a somewhat different and dynamic skill-set. This combines scientific and technical know-how with open-ended improvisation, and often features collaborative activities such as 'hacking' and 'making'. Indeed, such dynamic digital skills are to the fore in the creative economies of software and videogame design. Accordingly, projects will address the following research questions:

1. How are digital skills narrated and understood by different stakeholders (e.g. commercial organisations, educational institutions, professional associations, community groups)?
2. Which different knowledges (e.g. technical, craft-based, scientific, artistic) are presently performed in digital skills training programs?
3. To what extent can training programs be tailored to develop the dynamic digital skills necessary for successful creative economies?

These questions will be addressed through different models of provision such as private courses (such as outsourced training for employees); tech community meet-ups; teacher training events; young peoples' coding clubs.

Durham University

Title:

Energy and heritage conservation

Main academic supervisor:

Dr Tom Yarrow
Department of Anthropology
Durham University
Dawson Building
South Road
Durham, DH1 3LE
t.g.yarrow@durham.ac.uk

Partner:

Historic England

Summary:

Historic conservation involves a commitment to existing fabric, form and aesthetic features, in ways that are not always easy to reconcile with infrastructural changes associated with energy-related retrofit. While improved energy efficiency can therefore compromise valued qualities of old buildings, commitments to 'authenticity' powerfully constrain the energy choices that are made. This project seeks to better understand how these imperatives are specified and negotiated in practice, focusing on the nexus of buildings professionals, heritage experts, owners and occupiers involved. It aims to contribute novel conceptual and ethnographic insights into these processes and to generate knowledge of practical use to heritage and energy stakeholders involved in these areas.

Design and creativity are essential elements in finding ways to reconcile energy improvements with historic conservation, and the project will focus on sites of significant conservation challenges that can also be used to promote new energy technologies and practices.

The project will be supported by Durham Energy Institute (<https://www.dur.ac.uk/dei/>), which has hosted earlier research on heritage retrofitting. The DEI is holistic in approach, addressing scientific, technological, economic, legal, and social aspects of energy. The Institute is thus ideally placed to facilitate the supervision of Arts and Humanities projects that are in dialogue with the social and physical sciences, specifically through the Energy and Society group within the DEI. Further supportive research capacity is available through the Centre for the Ethics of Cultural Heritage, which focuses upon the ethical debates surrounding cultural heritage and involves academics and practitioners from the Departments of Archaeology, Anthropology, Philosophy and Law.

Durham University

Title:

Ethical design for energy systems

Main academic supervisor:

Dr Simone Abram

Department of Anthropology
Durham University
Dawson Building
South Road
Durham, DH1 3LE
simone.abram@dur.ac.uk

Partner:

Ofgem

Summary:

The availability of accessible energy to all members of society is an important challenge which is often marginalised in the rush to develop optimised technical solutions. Full attention needs to be devoted to the ethical and social justice implications, and not merely to technical solutions, in the design of energy systems and their management. There is a pressing need to reframe the energy debate to include societal structures, equity, and ethical considerations as key elements, not merely at the policy level, but in the very design of energy systems themselves. There is the opportunity to develop a new energy paradigm with a clear focus on energy-justice and ethical approaches to meeting the needs of all members of society. This project will examine where normative assumptions are embedded in energy systems design, and how an ethical discourse can be developed to highlight ethical implications of energy systems. The central research question will address the place of ethical considerations in the interaction between system design and system regulation.

The project will benefit from access to the National Centre for Energy Systems Integration, in which Durham is a central partner, and dialogue with the industrial partner, Ofgem, who are responsible for the regulation of UK energy systems.

Durham leads an international network on Energy Ethics, and is well placed to support doctoral research in this area, with close collaboration between Anthropology, Philosophy and Engineering in particular, through the community of scholars associated with the Durham Energy Institute (where Dr Abram is Co-Director), and through the Centre for Humanities Engaging Science and Society (particularly Dr Wendy Parker as co-supervisor).

Title:

In what ways do The Empty Shop Think Tank (TESTT) and TESTT Space impact upon the cultural landscape of Durham and beyond?

Main academic supervisor:

Dr Hazel Donkin
School of Education
Durham University
Leazes Road
Durham
DH1 1TA
hazel.donkin@durham.ac.uk

Partner:

Empty Shop CIC

Summary:

Empty Shop CIC is an arts organisation with a focus on placemaking and creative collaboration founded in 2008. In January 2017 the founders, Carlo Viglianisi and Nick Malyan, launched The Empty Shop Think Tank (TESTT), a research and development venture supported by the regional arts sector. TESTT has ties to institutional, sector and community organisations including the Arts Council, Durham University, Durham County Council, Culture Durham, ARC Stockton, New Writing North and local practitioner networks. TESTT aims to explore the cultural ecology of Durham as a city and create 'natural hubs' for a variety of artistic enterprises including dedicated visual arts venues.

TESTT Space is a visual arts focused venue that includes 3 large open plan exhibition spaces, a community space, artist's studios to rent and studio space for the use of Durham University students. The project is limited in duration to 2 years by which time it is hoped that the case for a permanent visual arts hub in Durham will be clear. The research will engage with a partner in the creative sector who is looking to develop a commercially successful endeavour.

Research questions include:

- An evaluation of the impact of TESTT and TESTT Space will establish the economic viability of a permanent artist hub in Durham and the potential for exporting not only skills but also business models and practices beyond Durham.
- How significant is the impact of TESTT on the creative sector and creative economy in Durham?
- What is the impact, including civic impact and cultural gain, at a community level? How do ideas about civic impact shape the programming at TESTT alongside internal processes and organisational practices?
- What is the impact of thinking creatively on the wider Durham community and beyond? In what ways do TESTT's creative ideas grow outwards in the local communities and can they feed into local businesses, government, Durham University, Culture Durham and other places and spaces around the region and further afield?
- To what extent can TESTT function as a model, nationally and internationally, for stimulating the creative sector and embedding creativity in broad areas of civic, cultural and economic life?

Durham University

Title:

Marketising the Museum: the value collections bring to commodities

Main academic supervisor:

Professor Mike Crang
Department of Geography
Durham University
Lower Mountjoy
South Road, Durham
DH1 3LE, UK
m.a.crang@dur.ac.uk

Partner:

Beamish Museum

Summary:

Museums work to preserve and sacralise objects. They thus take them out of market exchange and bestow cultural value upon them. This is an especially notable process with the preservation of 'everyday life' or 'commercial culture' which thus create what Barbara Kirshenblatt-Gimblett calls a genre error.

However museums are increasingly eager to reconvert these values into market forms – one means being the development of replica, and their sale. The theme here then is the 'nostalgia market' or 'retrochic' in goods that have passed from fashionable to outmodes, to revalorised. The project seeks to examine the role of cultural institutions in those revalorisations. Museums themselves are increasingly interested in ways they can marketise their archives, parlay cultural value into market values, create 'added value' and capture that.

The project would examine the role of museum shops and nostalgic retailers in selling 'nostalgia goods'

It would look at the associations that enable such goods and objects to gain market and culture value? Are certain classes of artefacts more productive of these associations than others?

How does this relate beyond the museum to other retailers and the use of historic merchandise either directly for sale or the creation of ambience?

What is the effect of historic ambience on the valuing of other goods not directly linked to museum holdings?

Title:

Pathways to Productivity: How the British Council can support international partnerships and connections in the creative industries.

Main academic supervisor:

Professor Emma Murphy
School of Government and International Affairs
Al-Qasimi Building
Elvet Hill Road
Durham
DH1 3TU
emma.murphy@dur.ac.uk

Partner:

British Council

Summary:

Doctoral students will examine the role of the UK's single most important agency for promoting soft power and sector productivity through international partnerships and networks that support the creative industry sector. Projects might, for example, review one or more case studies from the British Council's global portfolio of creative economy programmes (such as a major UK cultural season, or the UK-India Re-Imagine Cultural Programme) and will:

a) examine the ways in which the development of international partnerships in the creative industries contribute to UK productivity, including, for example, their impact on skills development and innovation in the UK, increasing UK export opportunities, attracting inward investment, stimulating inbound tourism and/or inbound study applications.

b) assess the contribution made by the British Council to this process through support for international partnerships and networks in the creative industries, identifying those policies, processes and programmes which have proved most successful and the reasons for that success.

Projects could also develop wider recommendations and insights that could help to guide future strategy for the British Council and other organisations working to further the UK's creative partnerships overseas.

Newcastle University

Title:

Children, Heritage and Digital Technology

Main academic supervisor:

Matthew Grenby
Professor of Eighteenth-Century Studies
Director of the Newcastle University Humanities Research Institute
Newcastle University
m.o.grenby@ncl.ac.uk

Partner:

Splash & Ripple (<http://www.splashandripple.com/>)

Summary:

This studentship will explore how best to use digital technology to engage children and young people with heritage sites. In particular, the project will investigate how to:

- use digital technology to facilitate a kinetic kind of engagement (often in confined spaces) for young visitors, allowing them to gain a more embodied understanding of a site and its histories;
- involve children in co-design processes (practical/ethical issues).

A successful candidate for this studentship will work across a range of academic disciplines, including heritage studies, education, English, childhood studies, and computer science. The key external partner is Splash & Ripple, a Bristol-based creative-sector SME with an existing record of making immersive, non-screen based experiences for heritage sites. Splash & Ripple are keen to extend their business by developing work specifically for children and young people, and which stimulates dynamic and embodied engagements with space and stories. A successful candidate would not necessarily require high-level computer skills. Rather, we expect that the student would research current good practice in the sector, the constraints and concerns of stakeholders, and their aspirations for engaging young people in the making of new provision. We expect that the studentship will provide connective tissue between the creative sector and the heritage industry, helping to establish a research base for understanding how digital provision can successfully engage children and young people in heritage contexts without losing the kind of active, embodied and site-specific relationships that children, parents, teachers and heritage providers most value.

Title:

Critical Making and Innovation Heritage

Main academic supervisor:

Dr Andrea Dolfini
School of History, Classics and Archaeology
Director of the Cluster for Interdisciplinary Artefact Studies
Newcastle University
andrea.dolfini@ncl.ac.uk

Partners:

The main partner is Baawolf – Indie games from the North: <https://www.baawolf.com/>
Additional partners are Seaton Delaval Hall (National Trust), and Tyne & Wear Archives & Museums.

Summary:

This project explores critical making and the design of novel physical-digital interfaces to heritage collections. It will investigate how creative digital design practice can increase engagement with archives and collections, whilst also exploring how innovation history and heritage can enhance contemporary innovation practice and develop business value in the heritage sector. Working in partnership with a small games studio and a National Trust property, the project will address the following questions:

1. How can creative practice support innovation co-produced with communities and businesses in the North-East?
2. How can physical-digital interfaces enhance accessibility to, and the business value of, cultural resources?

The student would combine personal creative practice and collaborative critical making through community design workshops, facilitating multi-authored explorations of innovation heritage content. Core to this project would be exploration of how engagement with historic technological heritage and social theories of innovation can inspire current innovation practice. The *longue-durée* perspective afforded by the Humanities/Social Sciences will help situate the work in its academic context, whilst providing a critical backdrop for developing user-centered interfaces.

Project outputs would include community workshops and interviews at Seaton Delaval Hall, developing several innovative physical-digital interfaces, and a digital 'Research Space', for public engagement with historical archive content. Working with Baawolf, a small independent games studio, the student would also investigate business applications of the interfaces, examining how research support can help a creative company scale up. Further outputs would include designing platforms that enable novel approaches to historic collections for other such companies.

Title:

Independent recording studios: dynamics, sustainability and growth in the rural Northeast

Main academic supervisor:

Prof. Agustín Fernández
International Centre for Music Studies
School of Arts and Cultures
Newcastle University
agustin.fernandez@newcastle.ac.uk

Partners:

It is intrinsic to the project that the student should be placed with several small partners, including:

- Coquetdale Music Trust, Thropton
- Simpson Street Studios, Ryton
- Landermason Studio, Bellingham
- Dave Maughan Studio, Newcastle upon Tyne

Summary:

Due in no small part to sustained, innovative work done by ICMuS over the last 17 years, the Northeast is rapidly becoming a hub for new music, particularly folk and traditional. The region has become a viable destination for young folk professional musicians, and every year those who graduate from ICMuS add to their numbers. For these young musicians, recorded audio is a vital tool for dissemination, promotion, marketing and income generation. The prohibitive costs of producing recordings commercially have forced a mode of work where the musicians themselves establish a home-based studio to cater for their own needs and those of colleagues, thus diversifying their portfolio, boosting their income and facilitating dissemination of new work. Simultaneously, this increases the extent to which musicians themselves become 'micro-enterprises' and the concomitant ambiguity in means for assessing and supporting economic activity in the sector, also adding to the financial pressures on professional studios.

The proposed study will look at the dynamics of interpersonal interactions between fellow artists during this transaction, issues of technological and business skills acquisition by the artists, the effects of this work on their own creative output, and models for sustainability and growth in this nascent industry.

Title:

Living brick: Soft, programmable matter for organically 'smart' buildings

Main academic supervisor:

Rachel Armstrong
Professor of Experimental Architecture
School of Architecture, Planning & Landscape
Newcastle University
rachel.armstrong3@ncl.ac.uk

Partner:

Studio TAMassociati

Summary:

This studentship will be based on the first prototype of 'Living Architecture,' an existing H2020-funded project that interrogates the fundamental unit for design in the 21st century. This studentship will investigate design parameters that engage with space, flow and materiality, combining structural and spatial considerations with time-based processes and interactions. The project will explore, from an architectural standpoint, the implementation of organic metabolisms and living technologies (biofilms, microbial fuel cells, photo-bioreactors) into new modes for the design, construction and inhabitation of space. Aiming to transform our habitats from inert spaces into semi-living systems that foster increased resilience, ecological entanglement and solidarity, the project also looks at the programmability of metabolic materials as a way to produce valuable outputs such as electricity, clean water and biomass. Design-led experiments will be set up to guide decision-making, as well as to optimize the structural and infrastructural systems in which these metabolisms will be housed. Importantly, the studentship will also look at the imaginative, creative and cultural landscapes of 'living bricks,' interrogating how they can be designed, locally built/assembled, and taken up by different communities and within a diverse range of contexts. Ultimately, these units of design not only interrogate the nature of making practices, the concepts that underpin notions of sustainable development and the relationship between landscape and building, but they will also set the scene for a 21st-century architectural imagination that has the capacity to transform the cities and homes that we live in.

Title:

Oystertecture in the built environment: A study in living architecture

Main academic supervisor:

Rachel Armstrong
Professor of Experimental Architecture
School of Architecture, Planning & Landscape
Newcastle University
rachel.armstrong3@ncl.ac.uk

Partner:

FaulknerBrowns Architects

Summary:

The story of oysters predates human history, stretching back to the time when oyster reefs encircled the continents and may have been used by early peoples to navigate new shores. The cultural context and history of oysters in North East England will be explored through literature, song and art, to establish a context in which a 21st-century relationship with oysters may be applied to the built environment. For example, oyster cuisine has a long tradition in the North East that continues today such as the Oyster Festival [<http://www.theoysterfestival.co.uk/>]. Oystertecture – the application of structural frameworks that cultivate oysters, is widely used in estuaries to regulate and remediate water quality. While this technology has been used in coastal settings, it has not been used in buildings.

This research will be conducted in collaboration with Marine Applied Sciences to develop more resilient forms of architecture that deal with building infrastructure and water reclamation in the built environment. The position will develop a design proposal and prototype for the urban integration of oysters as an exploration of the architectural, cultural and aesthetic implications of oystertecture in our buildings and homes. The research aims to establish the validity of the incorporation of oyster ‘technology’ into a new, transferrable cultural relationships with our living spaces and cities, with the potential to be used in cities across the world with unique, local impacts.

Title:

Reimagining children's spaces with Seven Stories: The National Centre for Children's Books

Main academic supervisor:

Professor Adam Sharr
School of Architecture, Planning & Landscape
Newcastle University
adam.sharr@ncl.ac.uk

Partner:

Seven Stories: The National Centre for Children's Books

Summary:

Seven Stories is the national home of children's books. It is a ground-breaking museum, archive and visitor centre with a mission to preserve and celebrate Britain's rich heritage of children's literature.

Seven Stories forms the context for this studentship, the research dimension for which will involve an inquiry into the place of children in the city and / or the archive; investigating how spaces can help children learn and explore, exploring the appropriate balance of safety and innovation (in both architectural design, and materials / technologies employed), and testing how to design effective spaces for them.

It is envisaged that the studentship would take the form of a PhD via Creative Practice. Alongside the research dimension, the studentship will produce an original Creative Practice outcome, reimagining Seven Stories' spaces to meet their organisational needs, and the needs of the children and young people they engage with.

Seven Stories' vision for the organisation's future is to focus on strategies for relocating their Collection, to provide enhanced public access and greater integration with their visitor and outreach functions. What changes can be made to their physical spaces to ensure that the Collection supports Seven Stories' objectives to bring children's books to new audiences? How could changes to their buildings encourage children and young people to interact with Seven Stories' Collection? What changes can be made to both physical and digital spaces to bring the maximum benefit to the people of the North East, as well as national and international stakeholders?

Title:

The Good Soil Project

Main academic supervisor:

Rachel Armstrong
Professor of Experimental Architecture
School of Architecture, Planning & Landscape
Newcastle University
rachel.armstrong3@ncl.ac.uk

Partner:

Carbon Free Group

Summary:

The connection of soil (land, territory) to a sense of place, home and identity has a long history and is reflected through folk songs, poetry, stories, fine art, film, theatre and photography. Bringing together expertise in experimental architecture, creative writing and marine applied sciences, this project seeks to explore the potential of making land through innovative (and ancient) methods of producing soil. The ground in urban spaces is synthesised through human intervention, but in modern cities, this is typically an after event, rather than an orchestrated set of relationships. Consequently, the land in our cities – once settled for its fertility – is now poorly understood and often contaminated. Narratives that describe post-industrial landscapes tend to emphasise decay, despoilation, barrenness, and pollution.

This design-led, transdisciplinary research will create soil production systems through biofilms, ecology, soil-making creatures, RNA analysis, poetry, and story-telling. Mapping sites in and around Newcastle, the research will explore how such insights help us prototype low end systems of compost production and public engagement to generate new, nurturing narratives for Newcastle's waste streams and soils, facilitating the uptake of low to medium end recycling technologies. The creatures, ecology and biodiversity of lifeforms that live in our soil will be explored through the sciences, humanities and arts. The resulting transdisciplinary knowledge will enrich the land we live on in cities around the world, while the stories will be central to mapping and communicating the ethical and sustainable values of an emerging ecocene.

Title:

Understanding Participation: Digital Evaluation Toolkits for the Creative Industries

Main Academic Supervisor:

Dr Venda Louise Pollock
Director of Newcastle University Institute for Creative Arts Practice
Senior Lecturer in Art History
School of Arts and Cultures
venda.pollock@ncl.ac.uk

Partner:

Northern Stage (<http://www.northernstage.co.uk/>)

Summary:

The aim of this research is to investigate how digital technologies can be developed and used to meaningfully evaluate the experiences of those engaging in longitudinal arts processes. The research aims to bring together arts, digital and social science expertise to create a rigorous digital evaluation toolkit that will effect a step change in the cultural sector.

As well as speaking to the intrinsic value of the arts, the Arts and Humanities Research Council's *Cultural Value* report highlighted the importance of, and yet difficulties in, understanding the value of participating in the arts. The interlinked issues of evaluation and its methodologies are a constant challenge for arts organisations seeking to evidence the significance of their activities. Various digital interventions have been developed but many relate to audience rather than participant experience. Instead of research which describes the full range of effects produced through the complex nature of the art experience, the tendency is for economic and social impact studies whose methodologies have been questioned. Belfiore and Bennett (2008), for example, suggest that evidence is generated by arts consultants advocating for the continuation of projects against policy criteria and urge for a more in-depth, nuanced understanding of the impact of the arts on individuals. The studentship seeks to respond to this context.

The key partner for the studentship will be Northern Stage, particularly linking to their new *Young Company* initiative, but it is anticipated that further case studies will be undertaken with The Stove Network and Newcastle Gateshead Cultural Venues.

Title:

An Investigation into the Potential for Active Aerogel Structures to act as both Water Containers and Water Filters through the application of 3D product design and industrial design principles

Main Academic supervisor:

Prof. Raymond Oliver, School of Design, raymond.oliver@northumbria.ac.uk

Partner:

Unilever PLC. This is a publicly-quoted company with manufacturing and R&D facilities based in the UK. Unilever plc, Products and Services are created through a deep understanding and use of sustainable technologies for materials and packaging of consumer goods.

Summary:

Driver: Within desert, remote and island regions dwell some 1 billion people worldwide who have only limited access to a drinkable, clean or contamination-free water supply. Recent observations concluded in relation to Cellular Materials, principally organic aerogel structures, have shown interesting behaviour in terms of the ability to transport water in a container which has 4-5% by weight solid content and so is very lightweight. Observations have shown the propensity of the container to 'switch' its properties to allow filtration of the contained water, so creating the potential for water transport (lightweight) and water filtration.

Opportunity: The basis for these observations, made as part of a different study relating to sustainable packaging, must be made quantifiable, reproducible and robust. We have a source of cross-linked organic aerogel manufacture in the UK and we propose to investigate the conditions under which switchable filtration is viable as well as cost effective. The facilities within the Design:STEM Studio-Lab at Northumbria University will allow a detailed study of container design, surface & interface characteristics and optimal use of materials. This will allow verification of the phenomenon observed and the validation of such a flexible product development for use by those developing and remote communities.

Activity: The facilities available in the Design:STEM Studio-Lab will enable both advanced making of material structures with ultra low solids content. In addition, we will be able to quantify the wetting and filtration characteristics using different switch mechanisms. Finally, we will investigate the best way to create container geometries and handling characteristics through a design led approach.

Title:

An investigation of how living light and colour through bio-luminescent behaviour exhibited by deep ocean creatures can be made practical through design methodologies

Main Academic supervisor:

Professor Raymond Oliver, School of Design, raymond.oliver@northumbria.ac.uk

Partner:

Procter & Gamble Ltd. P & G will provide opportunities to explore applications of the research. These will consist of the adoption of responsive living light and colour for new product formats such as surfaces and interfaces in the home, hospitals and in cars, that can detect bacterial contamination and display the sources through living light and colour.

Summary:

Driver: The alluring myth of so called 'wearable technology' differs from the reality of commercially driven semi-conductor based wrist bangles and bracelets for physiological data collection. Wearable technology will only become fully viable and relevant when it works without recourse to copper wiring and lithium-ion batteries in order to function both technologically and, more importantly, aesthetically, while being sensitive to the needs and behaviour of the user. In addition, the concept of living light and colour that can detect bacteria and other forms of contamination would be an important new way to keep homes cleaner and more hygienic.

Opportunity: An exploration of the interactive light and colour production of deep ocean creatures that dwell more than a km below the ocean surface in an environment almost completely devoid of light and sound. Such creatures survive however by being able to defend themselves from predators by creating brilliant bursts of light and colour generated, it is believed, by a bio catalysed enzymatic reaction triggered by sensing movements or minute odours in close proximity to them. Can this set of biochemical/biophysical effects be synthesized as a bio-luminescing 'ink', and can it be practically used through patterning and structuring to create wearable, responsive, surface functionality that is not a burden to the active user?

Activities: Within the Design:STEM Studio-Lab research programme of Prof Raymond Oliver who is investigating bioresilient, responsive, soft matter systems and colleague Prof Gary Black (Health and Life Science Faculty at NU), the post graduate student will be able to explore both the enzyme chemistry that drives the possible synthesis of bio luminescent living 'inks' through the use of 2,3D additive manufacturing methods. These will allow construction and prototype development of wearable technology that is closely associated with textile, fabric and '2nd skin' construction rather than wrist bangles and bracelets. The range of possible responses can then be measured and evaluated in parallel with various ways to craft, pattern, fold and structure product formats using living light and colour.

Title:

Building Capacity in the (Multi)Cultural Arts Sector

Main Academic Supervisor:

Dr Susan Ashley,
Department of Arts
susan.ashley@northumbria.ac.uk

Partners:

Sangini CIC: Padma Rao
Kommunity CIC: Nikolas Barrera
GEMArts: Vikas Kumar

Summary:

New research into the cultural economy shows that while there is considerable public interest in access to creative jobs, there is a concern that these jobs are limited to organisations with privileged backgrounds (Oakley & O'Brien 2016; Taylor & O'Brien, 2016). Yet research that investigates the practices of arts and culture organisations that represent multicultural ethnic communities and employ minority performers and artists is lacking in the UK. This studentship will study capacity-building and resilience-enhancement in multicultural-led small creative and cultural enterprises, with emphasis on how networking processes and digital awareness impact on productivity and opportunities in the sector. Particular attention will be paid to the ways that enhancements to ethnic creative industry production might not only expand and improve the cultural economy, but also act as intellectual and social 'borderwork', 'contact zones' and/or 'engines of connectivity' (Cooper & Rumford, 2011).

Title:

Designing for behavior change in the context of person-centred healthcare

Main Academic supervisor:

Mr. Matthew Lievesley, School of Design, matthew.lievesley@northumbria.ac.uk

Partner:

Hitachi Design Centre Europe (HDCE)
7th Floor, Capital House, 25 Chapel Street,
London, NW1 5DH

<http://www.hitachi.eu/design/>

Private Sector Design and R&D Team based in London and part of Hitachi Group.

Summary:

We propose a study that explores the roles and methods of design-teams engaged in shaping increasingly personalized models of healthcare service provision.

Specific Healthcare Context: The study will focus on the self-management of chronic diseases such as Type II Diabetes, where the person with the condition is to be encouraged to adopt improved health behaviors through engagement with the healthcare service itself. It will consider the new service opportunities emerging from big-data and the voluntary sharing of patient-data (e.g. 'patientslikeme.com').

Research Approach: It is anticipated that this will involve an action-research approach, using and iterating design-for-service methods. The doctoral candidate will spend some time embedded within HDCE's Healthcare Service Design team.

The challenge for design in this context is to negotiate a balance between the individual's desire to co-produce the service (in terms of a 'tailored' user experience) with the capacity constraints of the healthcare service provider. The research question will centre on how design-methods can be used to enhance service provision, increasing the ownership/agency of patients by being responsive to their present state-of-mind and their readiness to change.

Title:

Designing future interactions with money

Main Academic Supervisors:

John Vines, School of Design, john.vines@northumbria.ac.uk and Lars Erik Holmquist, School of Design, lars.holmquist@northumbria.ac.uk

Partner:

Santander UK Ltd.

Summary:

Money is constantly evolving. Technologies such as ATMs, mobile and online banking and contactless payments have led to drastic shifts in how money is handled and accessed. Banks, retailers and service providers are trying to embrace a cashless society and futures where money is dematerialised, where authentication is seamless yet secure, and where customers are engaged across many platforms and channels. Simultaneously, distributed ledgers, crypto- and local-currencies are offering alternative visions of how monetary systems might work in the future.

This PhD will explore how digital technology might continue to radically change how we interact with money in the future. It will focus on a design-led enquiry into how emerging technologies (e.g. smart contracting, plug-and-play artificial intelligence, conversational interfaces) offer a new suite of materials that interaction designers can experiment with in fintech design. The PhD will be formed of three design case studies, open to be defined by the student. Case studies might present critical explorations of the implications these technologies might have on citizens' lives, or alternatively offer solutions that empower specific user groups in accessing and managing their finances. The definition and conduct of case studies will be aided by Santander, our project partner, who will offer problem contexts, engagement with participants and placements for the successful candidate.

It is expected the candidate will have a strong undergraduate degree and/or Master's degree in interaction design or a related field and have proficient design and technical skills.

Enquiries regarding this studentship should be made to John Vines – john.vines@northumbria.ac.uk

Title:

Evaluation of novel surface-attached gels for the cleaning of twentieth-century paintings

Main Academic supervisor:

Dr Charis Theodorakopoulos, conservation science and conservation of fine arts,
Department of Arts, charis.theodorakopoulos@northumbria.ac.uk

Partner:

Tyne and Wear Archives and Museums (TWAM, <https://twmuseums.org.uk>). The new techniques being pioneered in the project will potentially enhance the condition of paintings in the TWAM collections.

Summary:

Recently, our group introduced novel surface-attached gels, which are hydrogel systems covalently attached to flexible plastic backing films. Preliminary studies demonstrated the large potential of the developed systems for residue-free, liquid-minimizing cleaning applications for the conservation of works of art. This new, unexplored technology has attracted interest from cultural heritage (CH) organizations and we have received invitations to present preliminary findings in colloquia at the Netherlands Institute for Conservation, Art and Science in March 2017 and at an international conference 'Gels in Conservation' at the Tate in October 2017.

The proposed project is well-timed given that, over the last decade, research on the conservation of twentieth century paintings shows that modern paints, when treated with any of the established methods, discolour, effloresce, partially dissolve and permanently deteriorate visually and mechanically. The main issue is the excessive liquid diffusion in the bulk of the paint that is not readily controlled when effective cleaning materials are utilised. The new systems can eliminate surface wetting to nanodroplets per contact area, thereby enabling the onset activation of the cleaning procedure and the accurate control of contaminant removal rates. This studentship will test and evaluate the cleaning efficacy and limitations of this novel technology on modern paints. Specifically, the project will aim at the post-treatment evaluation of the painting surfaces and the comparison of the efficacy of this new method with state-of-the-art conservation treatments. We are well-placed to supervise this project that will utilise the advanced facilities of Northumbria University for the technical and scientific studies required to address the aforementioned issues.

Title:

Novel interactions: new forms of writing in the digital age

Main Academic Supervisor:

Professor Mark Blythe, School of Design, mark.blythe@northumbria.ac.uk

Partner:

HEDGEHOG LAB <https://hedgehoglab.com/>

Summary:

The ease with which digital files can be copied and shared and public reluctance to pay for content has disrupted models of income generation across the creative industries. There has been a well-documented crisis in the music industry for something like thirty years which is now extending to film and television. New novels are now copied and shared as easily as songs. File sharing has been approached as a legal problem with little success. This project will build on previous work exploring creative approaches to digital reproduction. The Digital Originals project took Fine Art as a case from which to learn, and worked with artists to develop design concepts and prototypes. This project will similarly begin with ethnographies of practising writers and use these to develop design fictions and prototypes to consider new and emerging forms for literary content.

Will Self recently produced a “digital essay” in response to a commission from the London Review of Books. The resulting piece “Kafka’s Wound” includes a literary essay, the Kafka texts discussed, as well as filmed documentary material, dance and music. Self himself self-deprecatingly refers to this digital essay as hypertext with “bells and whistles”, and yet it signposts an emerging form which extends old formats and genres. Bi-directional writing media such as watt pad may also indicate the emergence of new forms of cultural production. This study will consider what the digital novel might look like through collaboration with practising novelists and writers. The study will explore a range of possible approaches and novel designs through design fictions and a proof of concept prototype.

Hedgehog Labs will be a collaborating partner on the project. The lab is often involved with projects developing new and innovative technologies including but not limited to apps. The student will liaise with the lab to report findings from field work and share concept designs and fictions.

Research questions will include: what might new forms of digital writing look like? How can writers generate income in the digital age? How can design fiction be anchored in ethnography? How can fiction inform the development of prototypes?

Title:

The living museum: Investigating wellbeing through participatory making in immersive heritage sites with older people

Main Academic supervisor:

Dr Justin Marshall, School of Design, justin.marshall@northumbria.ac.uk

Partner:

Beamish Open Air Museum

Summary:

There is an increasing recognition of the issues surrounding an ageing population and particularly supporting those living with dementia. This project sits within a growing body of research that is interested in the role that participatory creative practices can play in improving health and wellbeing.

This PhD provides an exciting opportunity to work in and with [Beamish Open Air Museum](#). This internationally renowned Museum, based in the North East of England, is made up of a series of large scale themed environments (e.g. 1900's pit village, 1940's town, etc.). Beamish has a longstanding interest and practice in supporting older people through immersive heritage and already undertakes a range of participatory activities for older people, including making workshops.

Forefronting a practice-based methodology and craft orientated approach, this PhD will build on this work and further leverage the immersive environment afforded by the living museum to create unique, situated opportunities for older people to participate in creative practices. The research will review existing work in the sector, develop and iteratively test a series of new participatory making activities, and, through understanding in what ways these impact on health and wellbeing, produce evidence that can be used to leverage further support for developing innovative approaches in this area.

You will have a Masters level qualification in a design related field, have experience in a range of making practices and a strong inclination to work collaboratively using participatory methods. Supervision team: Dr Justin Marshall and Dr Jayne Wallace.

University of Sunderland

Title:

Creative Practice for Developing a Sense of Place – Siglion

Main academic supervisor:

Dr. Mike Collier
Professor of Visual Art
Faculty of Arts and Creative Industries, University of Sunderland
Sunderland, SR6 0DD, UK
mike.collier@sunderland.ac.uk

Partner:

[Siglion](#)

Summary:

[Siglion](#) development company partnership: research on “Digital art, design, creative practice or curating which can support ‘a sense of place’.” This research field concerns cross-sector partnerships where creative practice is informed by current issues such as participatory practice, architectural co-design, and Open Data. It is informed by the [Farrell Review Our Future in Place](#), and by art/place research such as [Urban Screens](#), and [YoHa](#). Sunderland Culture has recently been awarded a national [£1.25M Great Place Scheme](#) grant.

Siglion has a post particularly concerned with ‘placemaking’. It has a strong interest in Sunderland’s economic development, health and wellbeing, and sites for ongoing conversation such as ‘meanwhile uses’ and ‘urban rooms’ – challenging pre-conceptions about Sunderland in a global network.

Siglion has worked with University [Creative FUSE](#) staff on [Sunderland Cultural Partnership’s](#) 10x10 business/art collaboration project - Winner of the Best Arts and Business Partnership at [Journal Culture Awards](#). This included the selection of AHRC student graduate [Dr. Erin Dickson’s](#) project for a substantial ongoing commission with Siglion. In addition, Siglion commissioned the Launch Promontory as a collaboration between Arup, local designers [EDable Architecture](#) and artist Gareth Hudson, and are due to appoint an artist to the design team for their seafront development site in Seaburn.

The research is important because of several current business/productivity agenda: The joint venture between **Private and Public Sector** reflects the development of new economic systems. It also utilises **Creative FUSE** findings concerning the productivity boosts of the fusion between creative and technical skills.

University of Sunderland

Title:

Digital Culture Productivity: Critical Systems for Online and Offline Audiences – Sage Gateshead

Main academic supervisor:

Dr Beryl Graham
Professor of New Media Art Curating
Faculty of Arts and Creative Industries, University of Sunderland
The David Puttnam Media Centre, St Peter's Way, Sunderland, SR6 0DD, UK
beryl.graham@sunderland.ac.uk

Partner:

[Sage Gateshead](#)

Summary:

[Sage Gateshead](#): “How can curators/designers work across all areas of Sage Gateshead’s practice, from commissioning new media art, data and web site, to educational workshops and archives, to animate the potential productivity of Sage in terms of audiences, depth of participation, and critical systems?” Research fields of Digital Art Curating, and Design, are investigated.

Sage Gateshead has a long term interest in digital installations and music, and hosted the custom app *Play Sage Gateshead*, as part of the [BBC/ACE funded The Space](#) commissions. Sunderland University runs a Community Music BA with Sage Gateshead. Since 2014, AHRC student, then Creative FUSE post-doc [Suzy O’Hara](#) has curated [Thinking Digital Arts](#) for [Thinking Digital](#)/Sage Gateshead, including commissioning artist/designer [Dominic Wilcox](#) and creative technologist James Rutherford to make *Binaudios*, the symposium [Unusual Collaborations](#), and the panel [Performing Creative Innovation](#) with leading designer Yuri Suzuki. Panel member Imogen Heap, musician, has proposed systems of “Fair Trade Music”, and “Creative Passport” online databases facilitating crediting of even **Open Source** music.

The research is important because of several current business/productivity agenda:

Interdisciplinary innovation is key here, across all disciplines of music, art, design, curating and education. Systems which share knowledge across existing staff could be researched and developed. **FUSED Skills** across creative and technical staff would aim to develop digital programming solutions. Online and offline curating relates to systems of **Critical Making**, and **The Internet of Things**. **Distribution** is also important: Digital music is inherently distributable, and Imogen Heap’s proposed **Intellectual Property** systems are of particular interest.

University of Sunderland

Title:

Maker-Culture: bringing FabLabs together through enabling impactful communication and story-telling

Main academic supervisor:

Tony Eddison
Head of Design
Faculty of Arts and Creative Industries, University of Sunderland
Sunderland, SR6 0DD, UK
Antony.Eddison@sunderland.ac.uk

Partner:

Fab Foundation (UK members)

Summary:

Fab Foundation: “How can Fablabs provide access to the tools, the knowledge and the financial means to educate, innovate and invent using technology and digital, to improve lives and livelihoods both locally and around the world?” The global rise of the Maker Culture and Critical Making is closely associated with the rise of hacker-spaces, FabLabs and other "maker spaces". The Fab Foundation is a global foundation, and has a locally-based Board Member who also runs a UK Limited Company. The researcher could therefore research innovative ways of working, networking and sharing knowledge, for the benefit of a range UK Fablabs, in a global context.

The founder of the FabLab concept, Neil Gershenfeld at MIT in the US, set up the Fablab network to improve connections and collaboration between them and attract further funding. Main Supervisor Tony Eddison is working on a Web-based project to house a growing collection of Maker-Culture and FabLab projects and stories, including video interviews with the movers and shapers of this movement from around the world. The ‘proof of concept’ project was launched and very well received at the FAB12 conference in Shenzhen China in August 2016 and already houses over 1000 videos including unique material from the origins of the FabLab initiative at MIT in the US and their groundbreaking work in Africa and India. The project is ongoing and will be presented on its completed form at FAB14 in Toulouse, France in 2018.

University of Sunderland

Title:

New Collecting and Distribution Models for Contemporary Art – Northern Gallery for Contemporary Art

Main academic supervisor:

Dr Beryl Graham
Professor of New Media Art Curating
Faculty of Arts and Creative Industries, University of Sunderland
The David Puttnam Media Centre, St Peter's Way, Sunderland, SR6 0DD, UK
beryl.graham@sunderland.ac.uk

Partner:

[Northern Gallery of Contemporary Art \(NGCA\)](#)

Summary:

[Northern Gallery of Contemporary Art \(NGCA\)](#): “How can new media be used to develop international distribution networks, and new economic models, for a regional contemporary art organisation?” Investigates current models from the curating of Digital Art, Fine Art, and Design to inform economic policies for small regional art organisations.

The NGCA has an excellent record of being the first to identify and exhibit emerging national and international artists who later became highly collectible, including Cory Arcangel and Harun Farocki, both of whom showed work at the gallery, and are now in the national collection of art at [Tate Modern](#). The [CRUMB](#) research centre at The University of Sunderland has worked with NGCA over many years, including the exhibition *Use Nor Ornament* in 2000, symposia, and writing. Prof. Beryl Graham has consulted on how new media systems of distribution can afford global as well as local activity, and **new economic models for the collecting/editing/monetizing** of media art – see the book [New Collecting: Exhibiting and Audiences](#), Ashgate.

The research is important because of several current business/productivity agenda:

New economic models: In a time a great changes in arts funding, NGCA has experience of working with local authority funding, Arts Council funding, University administration funding, and is currently involved in discussion with the [Sunderland Culture](#) consortium (an independent charity). **Creative FUSE:** economic benefits of combining digital with creative art knowledge. **Distribution:** CRUMB research finds that using online new media and networks, small regional arts organisations can have global impact.

University of Sunderland

Title:

STEAM: invention-led collaboration between children and professional makers – Little Inventors Company

Main academic supervisor:

Dr Beryl Graham
Professor of New Media Art Curating
Faculty of Arts and Creative Industries, University of Sunderland
The David Puttnam Media Centre, St Peter's Way, Sunderland, SR6 0DD, UK
beryl.graham@sunderland.ac.uk

Partner:

[Little Inventors Worldwide Ltd](#)

Summary:

[Little Inventors Worldwide Ltd](#): “How can new media systems support STEAM-based creative learning and invention-led collaboration between children and professional makers / CDIT partners?” This research field concerns investigating how digital art and design can best facilitate cross-sector partnerships, and ensure effective global distribution whilst respecting the values and IP systems of both commercial and public sectors. This could involve developing new apps, online distribution, or new economic systems. It is informed by [Creative FUSE](#) research findings that have identified how digital businesses which ‘fuse’ creative and technical skills grow much faster than those who do not. This need for cross-disciplinary work is reflected in the campaign around need to integrate the A of Arts into STEM subjects to make [STEAM structures of education](#) necessary at all levels from primary schools to Post-Doctoral work.

Sunderland-born artist and designer (RCA) [Dominic Wilcox](#) is Chief Inventor. Sunderland AHRC student, **Suzy O’Hara**, Chief Curator, commissioned Dominic in 2015 to make a public artwork for [Thinking Digital](#)/Sage Gateshead, and was then employed by Cultural Spring to produce his [Inventors!](#) Project (nominated for a Journal Culture Award, covered by [CNN](#) news, [Wired Audi](#) award nomination, [V&A acquisition](#)). Dominic has addressed UNESCO and attended the House of Commons, concerning STEAM policy.

The research is important because of several current business/productivity agenda: **Innovation and invention. Critical Making, and The Internet of Things:** *Inventors!* Had [FabLab](#) making children’s inventions. **Distribution:** Starting in Sunderland, *Little Inventors* is now a globally-distributed network, with recent workshops in China and Canada.

University of Sunderland

Title:

Visualising astrophotography: science and creativity – Kielder Observatory

Main academic supervisor:

Dr. Carol McKay,
Faculty of Arts and Creative Industries, University of Sunderland
Sunderland, SR6 0DD, UK
carol.mckay@sunderland.ac.uk

Partner:

[Kielder Observatory](#)

Summary:

In recent years photography and astronomy have come together as ‘astrophotography,’ a practice that exists within both professional and citizen science frameworks. The environments and communities that constitute astrophotography, however, are comparatively under-researched; in particular, the health and wellbeing, creative and pedagogical aspects are not fully understood. This proposal is for a doctoral student to undertake practice-based research that enquires into and visualises the experiences of astrophotography. The studentship will also contribute to research in the field of photographic practice that investigates the relationship between art, science and creativity, while responding to the context and idea of publically accessible astronomy in one of Europe’s darkest sky environments (Kielder Observatory).

The research outputs from the studentship will provide the partner, Kielder Observatory Astronomical Society (KOAS), with new visual representations that help tell the story of the facility and the imaginary power of ‘dark skies.’ Astrophotography is a recent and growing aspect of the Observatory’s offer and is key to its plans to increase capacity, productivity and reach, with the development of a second observatory on site (The Gillian Dickinson Astrophotography Academy). The Northern Centre of Photography is a key partner in this exciting phase.

This knowledge exchange partnership will help KOAS advocate for the development of its Astrophotography Academy through one or more of the following:

- exhibition at cultivation events with sponsors and business partners;
- the sale of limited edition prints or artist’s publication through KOAS retail outlets
- visual material for future branding of the planned Astrophotography Academy.

Title:

Belfast Baths: Exploring and interpreting the historic spaces of the Victorian industrial city

Main academic supervisor:

Dr Olwen Purdue
School of History, Anthropology, Philosophy and Politics
Queen's University
Belfast BT7 1NN
o.purdue@qub.ac.uk

Partner:

Belfast City Council

Summary:

This project will explore the relationship between social history, heritage, and community in the industrial city. Working with Belfast City Council in the development of a major new project to redevelop Templemore Baths in inner-east Belfast, it will establish new and innovative methods by which historic urban spaces can be opened up to communities in ways that are stimulating and that encourage creativity in their use. It will examine the historic significance of these baths in their wider spatial and historic context, explore the challenges of developing and interpreting such spaces, and develop new ways to utilise such spaces in order to maintain their relevance in today's society while preserving their heritage and articulating their significance to a range of public audiences.

It will seek to understand the historic meaning of these spaces in the context of wider debates about the role of Victorian and Edwardian municipal authorities in social provision. It will also explore the complexities of delivering interpretive narratives in historic spaces whose prime purpose is not interpretation. What technologies might be utilised in engaging a diverse range of audiences? How can spaces be adapted to retain their heritage dimensions, interpret these, and engage local communities in meaningful ways with their pasts? This is particularly relevant in areas of contested identity where there are multiple lines of fracture not just along sectarian lines but along lines of age, gender, and race, and identity.

Title:

Designing inclusive music technologies: Transforming lives of disabled musicians through music improvisation and digital technologies

Main academic supervisor:

Dr Franziska Schroeder
Sonic Arts Research Centre
Queen's University
Belfast BT7 1NN
f.schroeder@qub.ac.uk

Partners:

Drake Music NI (www.drakemusicni.com); Farset Labs Belfast (www.farsetlabs.org.uk); and the Ulster Orchestra (www.ulsterorchestra.org.uk).

Summary:

This project will examine practices of inclusive music making and accessible design with digital musical instruments, used by disabled musicians. The aim is to undertake an interdisciplinary exploration combining music improvisation, and digital design of inclusive musical interfaces. The studentship allows for a music/interface design researcher to work in the areas between music improvisation, critical disability studies and digital design to highlight and implement innovative modes of inclusive musical interactions for disabled musicians. The research is industry facing as the researcher works between Queen's University (Sonic Arts Research Centre), Drake Music NI (a charity working with disabled musicians), the Ulster Orchestra (to test and implement designs, with view to creating a unique inclusive music orchestra in Northern Ireland that includes abled and disabled musicians), and digital design company Farset Labs Belfast (to develop and make inclusive musical instruments tailored to the needs of disabled musicians).

The researcher might investigate how music technology might be seen as a barrier or as a facilitator; to what extent the design of music technologies might enhance and facilitate participation in music making; the question of music improvisation and inclusivity; how improvisatory strategies might support inclusive music making in the context of working with digital musical instruments; how we challenge traditional musical ontology. And finally, the researcher might look into a wider understanding of disability, and address the extent to which inclusive approaches to music making can empower disabled people, and thereby challenge exclusionary practices and the marginalisation of disabled people in music making.

Title:

The art of caring: New opportunities for creative practitioners in the ageing economy

Main academic supervisor:

Dr Maruška Svašek
School of History, Anthropology, Philosophy and Politics
Queen's University
Belfast BT71NN
m.svasek@qub.ac.uk

Partner:

Age NI (<http://www.ageuk.org.uk/northern-ireland/>)

Summary:

As demonstrated at the recent conference 'The Art of Caring', creative activities aimed at ageing residents in care homes and day care centres can be highly beneficial, both to those in need of care and their care-givers. In numerous cases, professional artists have been involved in the organisation of these creative projects. In the light of recent funding cuts to the arts and the problem of rapidly increasing ageing societies, the new opportunities for creative practitioners need to be critically explored. The following questions are central to the research:

What opportunities does the care economy offer to creative carers and professional artists? What exactly are the benefits, challenges and potential risks of specific projects to the various people involved? How and why have concrete cases of creative activities in care-homes, day-care centres and home care arrangements increased (or failed to increase) the well-being of ageing clients? How, in specific projects have creative practitioners, engaged in these activities, been able to enrich their creative experiences, raise their artistic profiles, and develop their careers? What are the main challenges?

The project will employ ethnographic research methods, contributing to interdisciplinary research into processes of creative practice, care dynamics, and ageing societies. Age NI will facilitate access to research environments and opportunities for dissemination of project results. The project may include supervision from the Fine Art Department, Newcastle University, School of Art and Culture.