



UNIVERSITY
OF HULL

29th June – 2nd July

Conference Programme

Sound + Environment

Art | Science | Listening | Collaboration

Sound + Environment 2017

29th June – 2nd July 2017
University of Hull

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- ISE (International Society of Ecoacoustics)
- Hull UK City of Culture 2017
- PRS New Music Biennial
- CMMAS (Centro Mexicano para La Música et las Artes Sonoras)
- HEARO (Hull Electroacoustic Resonance Orchestra)

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KEYNOTE ADDRESSES

Thursday 29th June, 16.00-17.00 (Middleton Hall)

Trent Falls to Spurn Point

Chris Watson

Independent

At the confluence of the rivers Ouse and Trent and by the largest tidal reed bed in England the booming song of a bittern heralds the start of a journey down the Humber estuary.

Following the flow of an ebbing spring tide the piece traces a line of sound marks across an ancient no man's landscape of sand, mud and wildfowl; Whitton island, Pudding Pie sands and Stone Creek, distant voices from places where we fear to tread. From sounds that would have been familiar to the Anglo-Saxons to the rhythms of the City of Culture in 2017. The sonic arc of the Humber sweeps above and below the surface, past a mix of remote wilderness and 21st century technology to Spurn Point where the sounds of the estuary mix and merge with the voices of the North Sea.

Hosted in the Gulbenkian Centre at the University of Hull, *Trent Falls to Spurn Point* will transport the listener from the confluence of the rivers Trent and Ouse by Trent Falls on the ebbing tide to Spurn Point and out into the North Sea. This composition imagines a voyage out with the ebbing tide along the Humber estuary, a journey marked by the unique signature sounds from a series of spectacular locations.

Supported with public funding by Arts Council England. Supported by Hull UK City of Culture and Pro Audio.

Friday 30th June, 16.00-17.00 (Middleton Hall)

*The Transdisciplinary Possibilities of Acoustic Ecology in
Local and Global Communities*

Leah Barclay

Griffith University, Australia

Listening to the state of our changing environments can reconnect us at a deeply philosophical, empathetic and sensory level. This has inspired a movement of ecological sound artists and a wide spectrum of interdisciplinary projects exploring the artistic and scientific possibilities of acoustic ecology.

This research traces a series of interconnected large-scale projects that frame acoustic ecology as a socially engaged, accessible, transdisciplinary field that can inspire local and global communities to listen and take action in responding to climate change. The featured projects focus on a diversity of ecosystems including aquatic ecoacoustics in global rivers, immersions in the acoustic complexity of the Amazon Rainforest, sonic activism on the Great Barrier Reef and mapping the cultural and biological diversity of UNESCO biosphere reserves through sound. This presentation covers a decade of practice rethinking our relationship with the environment and draws on emerging sciences, digital technologies, activism, education and creativity to highlight the transdisciplinary possibilities of acoustic ecology.

These interconnected projects are designed with a sense of optimism and focus on bringing together art, science and technology to mobilise local and global communities to listen, connect and collaborate to ultimately shift the climate narrative to one of hope, resilience and sustainability.

PAPERS

Thursday 29th June, 11.00-12.00: Papers 1

Lecture Theatre D

The Overheard - an ecological approach to public sounding art

**Morten Breinbjerg¹, Marie Højlund¹,
Jonas R. Kirkegaard² & Morten Riis¹**

1) School of Culture and Communication,
Aarhus University, Denmark

2) Sonic College, University College Southern
Denmark, Denmark

In Danish, the word *overheard* has two contrasting meanings. It both refers to the situation where we do not pay attention to what we were supposed to hear, as well as the situation in which we vaguely hear something that was not intended for our ears. Our artistic research project *The Overheard*¹ reflects on this ambiguity by staging overhearing as an essential ecological mode of listening in which the field of the overheard as a “vibrant plenum reminds us of the profound physical interconnectedness that is our true environment” and thus as a “prime integrating factor in the understanding of our place” (Dunn, 1997). Based on our previous experiments^{2,3,4,5} we are currently developing *The Overheard* as apart of the official program for European Capital of Culture, Aarhus 2017. The project has a broad, public impact and will be encountered by guests visiting the capital of culture and/or the website during 2017. The main objective is to invite everybody to listen more carefully and rediscover our sounding surroundings. This is unfolded by offering several different listening experiences in the form of thematic live concerts, sound installations and the development of a dynamic soundscape webpage. During 2017 we will present sound sculptures at different locations around Denmark – and connect the locations and sculptures in real time through an online mixer. Practically this is done through the construction of a so called Audio Satellite which is a device comprising of a Raspberry Pi running Pure Data and Dark Ice, a stereo audio interface, and two microphones all collected in a weatherproof box, requiring only power and an internet connection to work. The captured sound is streamed to the project website where the audience can mix the six audio stream with a simple mixing interface.

Through *The Overheard* we wish to actively engage a broad public sphere to critically reflect on our sounding surroundings. In this way we aim to expand Brandon Labelle’s understanding of the overheard as a generative, political and messy field of possibilities (Labelle, 2012) into the area of sound art and design in public space. An expansion that allows for an ecological approach focused on the multisensory background, the atmosphere and the overheard, as well as raising issues around intimacy, surveillance and telepresence.

*Experiencing Yosemite National Park:
Sonic Identity, Place and Cultural*

Stuart Barker

University of Kent, UK

Yosemite National Park in California is one of the most famous natural spaces in the United States. Yosemite, granted protection in 1864, is considered one of the ‘crown jewels’ of the National Park system and is closely associated with the American conservation movement. It is the third most visited park in the United States, and its valleys, waterfalls and wildlife are well known to Americans and people throughout the world. Traditional approaches to understanding Yosemite Valley as a place have focused on a single sense, sight. Historians have documented tourism’s effect on the Valley, through the construction of hotels, roads and visitor centres, which have fixated on the visual aesthetic. These approaches, though valid, are limited in scope, as they have considered the place only through a singular sense. The importance of the sonic space in Yosemite, (and other National Parks), has consistently been overlooked. This paper will place sound at the centre of understanding the Yosemite experience and chart the development of the Valley from a largely natural soundscape to a

Euro-American cultural soundscape. Yosemite is a distinct sonic space, affected and created by its unique topography and wildlife. As sounds are interpreted in a culturally specific way, so each culture that experienced Yosemite has taken away their own unique understanding. Native-Americans named places in Yosemite Valley due to their sonic identity and Euro-Americans, during the formative years of tourism, interpreted the Yosemite soundscape as a religious space. Its soundscape resonated to them with the 'sounds of God' as much as the visual landscape represented 'God's natural cathedral'. As Euro-Americans began to colonise the physical space of the valley, the sonic space was also colonised. Mechanised human-made noise and the sounds of entertainment were brought into Yosemite Valley and altered how people interpreted the place. These sounds changed the experience of Yosemite. What had been heard previously as a largely natural space came to be heard as a Euro-American cultural place. Through documenting Yosemite through its soundscape, this paper will offer a new understanding of identity and place, and how natural spaces are experienced.

Lecture Theatre C

Acouscenic Listening- a Sonically Engaged Collaborative Art Practice

Sean Taylor¹ & Mikael Fernström²

1) Limerick Institute of Technology, Ireland

2) University of Limerick, Ireland

This paper discusses the emergence of a new creative approach for sound art and acoustic ecology, developed over a six-year timeframe of art/science collaborative practice. The artistic collaboration of Softday (Sean Taylor and Mikael Fernström) has evolved towards a more socially engaged and discursive sound art practice. Working with communities of interest we identify possible creative stakeholders and potential collaborators, utilizing field recordings, soundscape analysis, and more recently 'creative soundwalks', for further monitoring, evaluating and informing creative works.

We believe that our Acouscenic Listening approach to working with the public democratizes the relationship between the practitioners and a community of interest. The sound artist's role in this process is often both socially communicative and creatively pedagogic, working with participants to share 'expert' and 'lay' knowledge, and allowing participants to find their voice or form of expression that can co-exist with others in a communal discourse. Therefore the development of Acouscenic Listening as a 'sonically engaged' practice remains in a continual state of flux. As a mode of thought and an original practice of being, it does not exist outside of its connective dialogues, collaborative participations and creative happenings, but retains its capacity to be, incarnate, innovative and endlessly transformative.

The etymology of Acouscenic Listening is defined through the integration and application of key theoretical frameworks that demonstrate where and how this art practice may be positioned within the contemporary. It draws upon heterogeneous theories in relation to; Sound Art (Russolo, Schaeffer, Oliveros) Acoustic Ecology (Schafer, Westerkamp, Truax) Socially Engaged Art Practice (Gablik, Helguera, Bishop, Kester, Lacey), Philosophy (Ranciere), Psychology and the Everyday (Dewey, de Certeau, Debord,). The practice of Acouscenic Listening also draws upon empirical knowledge of tested methodologies from a range of non-art practices such as, Deep Listening, Creative Soundwalking, Mindfulness, sonic improvisation and Tai Chi/Qigong exercises, in order to articulate a position in this area of research through the realisation of creative art works.

Introduction

In this paper Softday expands upon the practical investigations into their sound based art practice that they define as Acouscenic Listening. We outline a rationale why we believe it is important to examine new methodologies and practices to investigate sound art and acoustic ecology as it is currently socially constructed and locate the results of these investigations within the practice of Acouscenic Listening. This framework both influences and shapes the current direction of our collaborative, socially engaged, sound art practice and its relation to a more inclusive discourse on art and society.

The title *Above 8* refers to the pH of the ocean in which life has evolved over the past 700 billion years. As a consequence of ocean acidification this is due to fall to 7.7 by the end of the century with potentially disastrous effects on the chemical signals that enable aquatic organisms to locate each other in the sea. *Above 8* explores the impact of ocean acidification within the context of the Humber Estuary, an environment shaped by the petrochemical industry that is fuelling its rise, and by the migratory of patterns of humans and other species. Taking a poetic and acoustic journey from Spurn Point to South Ferriby, *Above 8* maps the many confluences between human systems of communication and the thriving but threatened ecology of the Humber Estuary. John Wedgwood Clarke and Rob MacKay will be discussing the making of *Above 8*, commissioned by Invisible Dust for the *Offshore* exhibition at Ferens Art Gallery and Hull Maritime Museum, and their approach to collaborative working.

Binaural Environmental Performance – an Artist's Perspective

Dallas Simpson

Independent

The workshop involves taking a small group of people into Hull and creating an improvised performed soundscape using found / encountered objects, spaces, surfaces and locations. The collaborative environmental work will be a one-off intervention by facilitating the small group wandering through the city environs through the process of active listening, assessing, and sounding the environment interactively and intuitively through engagements of varying intensity according to the robustness or fragility of the surroundings.

This sonic environmental engagement will encourage decision making on a variety of levels employing elements of ethics, social behaviour, spiritual meditation, materiality, acoustics as well as some political considerations of behaviour, possession and responsibility of and for public spaces.

It will be recorded by three of the participants carrying binaural recorders in order to sample the perceptual acoustic soundscape arising from the collective intervention from different and continually moving perspectives throughout the intervention.

The installation after the workshop will offer a headphone listening station running from a laptop or similar device with the three workshop recordings running in time sync and the ability of the listener to select each recorded stream according to their own preference.

Lecture Theatre E

Vibrating the web: media infrastructures and the economy of noise

Matt Parker

CRiASP, University of the Arts, London, UK

In 2015 Apple Distribution International applied for planning permission in Ireland to build 8x 24,505m² single storey Data Centre Buildings, all associated facilities, external plant and a 220kV substation. In short, once built, this €850 million project will be one of the largest data centre complexes in the world. A series of compelling appeals from local and national residents was significant enough to controversially halt the Irish project whilst an identical 'sister project' has nearly reached completion in Foulum, a small town in central Jutland, Denmark.

This paper will explore the economy of noise through the Derrydonnell Forest in Athenry, Ireland; the site under investigation for Apple's development, and subject of a longitudinal sonospheric study into the affect of construction and operation of one of the largest data centres in the world and its impact on a small rural town in Ireland.

The immediate impact of our daily digital interactions on the so-called 'natural' world is rarely brought to the fore of our attention. Yet with the ubiquity of the Cloud, digital media and social networks, we have never been more connected to one another and never more connected to our environment than today: we are in the words of Mary Chayko 'superconnected'.

Frances Dyson states that the economy of noise embraces disciplines across the ecological, economic, environmental, and psychic. By using technologies that expand the human sensory apparatus, transducing the frequencies and vibrations of what Pauline Oliveros called the 'sonosphere' this paper describes a research methodology of 'sonospheric investigations' which aims to align the strands of the economy of noise to contemporary discourses of new materialism, and the Anthropocene.

In order to explore Dyson's economy of noise, I will introduce media infrastructures as a sonic locus of investigation for further understanding the relationship between nature-culture, human-nonhuman, organic-inorganic binaries. This paper is as much about soundscape studies, acoustic ecology and the environment as it is about resistance, affect and political capital.

Sites of Suffolk Songs

Gen Doy

Independent

My work is often site-responsive.... place-responsive isn't an art-term as yet, though perhaps a site-responsive work, helps transform a "site" into somewhere that is experienced as a place. "Site", its sound, suggests the senses by which we experience places...in the underwater ruins of Dunwich, for example, the largely invisible remains can only be felt by divers' hands. On the Suffolk Coast, place is mobile – sand and shingle shift with tides and weather. Coastal erosion gnaws at one part of the land, depositing it somewhere else.

In 2016 I spend time in Suffolk as a guest of the Britten Pears Foundation, visiting sites I had identified as possible places to make works. These were to be Six Suffolk Songs, focusing on notions of erosion and change...of the self, of history, of the land and sea, of buildings and settlements. I researched, visited natural and built environments and the museum of underwater Suffolk in Orford created by Stuart Bacon. I made field recordings, I wrote, and I composed songs, one of these in time to sing at its site. As I made these, I tried to get the feel of these places, some of which I knew already, some of which were a revelation. Each place was an accumulation, sometimes invisible, of layers of history and change, activities of nature, people, animals and birds. I'll play short extracts to elaborate on some further issues.

E.g.

<https://soundcloud.com/guineveredoy/orfordnesslighthouseoilstore29-7-16>

<https://soundcloud.com/guineveredoy/wenhastonsong28-7-16>

<https://soundcloud.com/guineveredoy/dunwichsong28-7-16>

What does the site contribute to the final work? Can I really claim that I am in dialogue with the site as I visit it, make field-recordings, and edit the material at home? I experience the site, informed by historical and other kinds of knowledge, sometimes personal. If I speak or sing during my time at the site, aspects of it pass through my breathing body: the air and its smells come inside me and then out again. The material presence of the site passes through me and is then offered to someone else to listen to, selected, rejected, worked on, edited. But what changes about the sense of place if the work is played back in a recorded form? Can we still speak about its sense of place? its site-specificity? There's a real difference if the site-responsive works belong in that place. They do no violence to it, nor feel alien. Works performed live in their site are supported by that place and the qualities of the place, always remembering that people will experience places differentlythe place enables me to make the work, though I hesitate to say that the place has agency. I translate the site in some way. While making the work I interrogate the site, and sometimes, often, I get a lot back, but it's like an oracle. Several visits may be needed. Improvising speech and singing alongside sounds of waves, wind, trees, and the acoustic properties of forgiving or difficult spaces is also a way of learning about a site, without ever completely knowing it.

Thursday 29th June, 14.30-15.30: Papers 2

Lecture Theatre D

Ecological Sound Art: Steps Toward a New Field

Jono Gilmurray

CRiSAP, University of the Arts, London, UK

Recent years have seen a growing number of sound artists placing ecological concerns at the heart of their creative practice, directly addressing issues such as biodiversity loss, pollution, sustainability, environmental justice and climate change through their sound works; while organisations such as *Ear to the Earth* bring such artists together, evidencing the existence of a tangible and coherent movement. In providing a cultural response to some of the most significant socio-political issues of modern times, this represents an important trend within sound art, and one which can only continue to grow as the issues it addresses increasingly affect the lives of people across the globe. However, it currently suffers from a dearth of academic research, and has yet to achieve the recognition enjoyed by comparable ecological practices in almost every other art form: seemingly neither 'visual' enough to be considered as part of the burgeoning eco-art movement, nor 'musical' enough for ecomusicology, and, most crucially, with no terminology with which to identify, define or describe it, it is in danger of disappearing silently through the cracks.

This paper traces the development of this important and growing area of sound arts practice, and proposes that it be termed 'ecological sound art', reflecting its equivalent in the visual arts. After establishing its current absence from both ecocritical and sound arts scholarship, it proceeds to outline some of the core approaches which characterise works of ecological sound art, as the first step toward its establishment as a coherent field of practice. The final section draws from key works of contemporary ecological theory, examining the fundamental accord that exists between the new modes of thought they propose and the ways in which we experience and relate to sound art, demonstrating that ecological sound art represents not only a significant new field of sound arts practice, but a uniquely powerful ecological art form.

Creating Communities of Sound: Engagement, Composition and Interaction in Public Space.

Marcus Leadley

DIVA Contemporary, UK

This paper considers the development of a public art practice that seeks to explore the primacy of sound in our engagement with environment. While taking the key principals of acoustic ecology and soundscape studies as starting points it aims to expand the potential for community engagement through the development of sound art installations, musical compositions, and live performances. I look at two recent projects: Central Bedfordshire Council's *Woodside Link* public art commission and the *Sonic Coast::Sounding Shore*, a performance event created for the 2016 Whitstable Biennale in Kent. The first, associated with the construction and opening of a new road and motorway junction, involved field recording, soundwalks and workshops to encourage local residents and college students to contribute sounds to an online archive. This led to the production of soundscape compositions for installation on the site and the writing of an *Anthem for the Road* (popular contemporary instrumental) to be broadcast at the site for motorists and distributed to residents on CD. Large-scale visual artworks based on the images of sound files were also installed on the retaining wall and acoustic barriers. *Sonic Coast::Sounding Shore* was a full day's programme of live sound art designed as a structured interaction with the foreshore. 14 artists using live environmental sound, found objects, underwater sound and instruments explored the sonics of place. The event was designed to be environmentally responsive rather than invasive; sound was broadcast using a low-power FM transmitter and the audience listened using wireless headphones. A curated programme of pre-recorded tracks was broadcast in parallel. *Sonic Coast::Sounding Shore* was entirely self-contained; all systems were battery powered – which facilitated a very flexible approach to deployment, allowing the event to function 'off the grid' in a very free-flowing relationship with the location.

In the final part of this paper I consider ways in which these diverse forms of content and presentation may be deployed tactically in relation to future projects and the practice's strategic objectives.

Lecture Theatre C

Composing with spaces on the edge of noise: 'Domestic Green' – a case study

Luca Nasciuti

University of Aberdeen, UK

The presentation will illustrate how field recordings can be used creatively to produce socially engaged works with our experience and knowledge of space through listening. In this occasion, I will discuss the production of two sound installations developed using field recordings taken over an eight-month residency programme with RSPB Glasgow and West of Scotland in Inversnaid.

The project 'Domestic Green' consists of two installations. The first was presented in Kelvingrove Museum, Glasgow, and featured 4.1 sound, headphone listening, stage lights, soil and grass exhibited in a contained room within the museum. The second was presented as a site-specific, outdoor sound installation with six portable speakers placed along an 800m stretch of the upland trail in Inversnaid. The site-specific installation devised for the upland trail uses processed field recordings collected on site. It reflects on the work being carried out by RSPB and the Forestry commission in which a designated moorland is being re-forested to bring back the environment that once used to feature the area. The abstract electronic soundscape I created for the site is a reflection on what the sonic intensity of the landscape may be in decades from now.

It encourages listening to the present while imagining the future and at the same time maintaining a distinction between what can be perceived in the 'here and now' and what is being manufactured for the place i.e. the design of urban environment and wildlife.

The installation in Kelvingrove Museum presents a space for listening and reflection of the many nuances of noise. The energy of the city and its disruptive unwanted sound sources are here put side by side to those of the woodland in Inversnaid. It offers two different listening environments and listening modes while opening up a dialogue on the way we perceive and engage with sound in place. The planning of a sustainable wildlife has been linked in this work to the design of green spaces in urban environments. A green city is a sustainable city. But how is urban design shaping and directing our perception of an extended living space outside our domestic walls?

The project resulted in fictional, staged environments that question our understanding of the spaces inhabit. It is about domesticity across spaces: indoors and outdoors. It connects the places we navigate through daily and challenges our perception of 'noise'.

EL CIELO: Music inspired by the fauna from the biosphere reserve of Tamaulipas, Mexico.

Evaristo Aguilar

Universidad Autonoma de Tamaulipas, Mexico

The ecological biosphere reserve of 'El Cielo' is a protected area located in the municipality of Gomez Farias, in the Mexican state of Tamaulipas, decreed by the UNESCO in 1987 as Cultural Heritage of Humanity. EL CIELO is a contemporary musical perspective of some natural inhabitants of this extraordinary Mexican site. It is an original musical work of Evaristo Aguilar, composed by six sonorous images for percussion: I. Colibries; II. Tecolote triste; III. Reptiles; IV. Felinos; V. Insectos; VI. Osos y Coyotes. EL CIELO is a work of artistic creation that is part of the line of generation and innovative knowledge application: "El Espacio Sonoro de la Huasteca" (The sonorous space of the Huasteca", of the academic research group of Department of Music and Arts of the Universidad Autonoma de Tamaulipas: "MusiCultura Huasteca: a multidisciplinary vision of the Huasteca as a cultural region", which is related to the traditional musical practices and contemporary outcome of cultural interaction between researchers and artistic creators from the soundscape and the cultural context of the urban and rural scenarios of the Huasteca region in Mexico. Since it is a multidisciplinary project, musical and creative practice is developed parallel to the scientific research and other arts, with the intention to build an interdisciplinary relationship to generate processes of artistic creation that can be translate in academic publications and vice versa. With this premise, Dr. Evaristo Aguilar has made an important number of collaborations with performers, composers, poets, anthropologists, researchers, photographers, bird watchers, dancers, choreographers, sculptors and

painters to produce works of multidisciplinary artistic creation to produce new music with improvisation elements from the soundscape of the Huasteca.

The paper presents a reference of the research work applied to the artistic creation. From the conceptual approach that gave origin to the composition, to the collaboration with experts and the creative processes of composition, recording, publication and broadcasting of the work. EL CIELO was composed and recorded in 2008, and published in format of phonogram in 2015 by the Autonomous University of Tamaulipas. In 2015 was presented in a concert format in the United Kingdom at the Symposium: "Zoomusicology and Bio-acoustics - the interplay between animal, insect and human musics" as part of the "Salford Sonic Fusion Festival" in Manchester. The same year it was presented in the same format at the "VI Tampico International Forum of Music Education" in a collaboration with the UAT Brass & Percussion Ensemble and the British tuba player Les Neish. In 2016 it was presented at the Symposium: "Ethnomusicology, Soundscape and Acoustic Ecology as elements for Ethnobiological approaches" as part of the "X Mexican Congress of Ethnobiology" in Yucatan, Mexico.

Lecture Theatre E

*Soundscape auralisation and perception
for environmental sound modelling*

**Francis Stevens, Damian T. Murphy
& Stephen L. Smith**

University of York

The term *soundscape*, as defined by R. Murray Schafer in his seminal 1977 work *The Tuning of the World*, refers to any sonic environment, and is a way of formalising the variety of different sounds that make up a given aural setting. Over time the soundscapes we experience have grown in complexity, and noise pollution has become increasingly problematic.

The consequences of this are far reaching and have a significant impact on our health and wellbeing including hearing loss, sleep disturbance, and stress related illnesses. Typical methods for dealing with noise are limited to control and abatement, which can be of only partial effectiveness as these initiatives represent the imposition of controls and the application of objective measures, rather than tackling the problem at its source. Existing noise control legislation goes no way towards considering how soundscape analysis techniques might be used to design a more positive sonic environment.

In order to understand better an individual's experience of a soundscape, a technique known as *auralisation* can be used. Auralisation is a method by which a recorded or simulated soundfield can be recreated in a controlled environment using an array of loudspeakers. This allows for a listener to be virtually placed in an environment without having to be there. Hence *auralisation* can be considered as the audio equivalent to *visualisation*.

This paper presents an investigation on the use of objective physiological measurements alongside more traditional subjective assessment tools in order to quantify aspects of our experience of auralised soundfields.

The project work so far has shown the Self-Assessment-Manikin (SAM), a method for measuring subjective response to a given stimulus, to be a valid method for measuring the experience of a soundscape, as well as representing an improvement over the use of more established semantic differential pairs. This result was found using a range of soundscapes recorded across multiple environments ranging from a quiet forest to a busy city centre, and auralised over a multi-loudspeaker playback system.

Further experimentation has confirmed the validity of these results when presenting the soundscapes in a stereo-UHJ 2-channel compressed surround format as part of an online listening test. The next stage of the project will investigate correlations between results from the SAM and biometric heart rate and skin conductance measurements.

To date this research has considered the presentation of aural environments only, but future work will integrate visual features in order to investigate how the presence of visual stimuli may affect aural

perception. In real environments, the perception of sonic qualities will clearly be affected to a varied extent by the associated visual context.

The results of this research are relevant to many commercial applications, including archaeological acoustics for digital heritage, environmental noise mapping, and use in the design and planning of new infrastructure and related developments. In this context the methodology developed could be used in the evaluation of a rendering of a planned environment, results from which could go on to inform design choices, and ultimately be used to design more positive sonic environments.

Sounding Soil: Exploring an almost unknown soundscape

Marcus Maeder

Zurich University of the Arts, Switzerland

Soil mostly presents itself to us as a diverse surface, the interior of which remains hidden from us. We can't see the manifold lifeforms and processes present in soils, but we maybe could hear them if we listen more closely. How do different kinds of soils sound like, what organisms make noises or even make use of the soil as an acoustic communication medium? Can one hear how water penetrates the soil or gases evaporate? How can the "soil soundscape" be scientifically and artistically revealed? Can we investigate the biodiversity of a soil acoustically?

Healthy soils are of key importance for the future of mankind. Sustainably managed soils enhance the resilience of agricultural systems, are better able to adapt to changing climatic conditions, while also contributing to the reduction of greenhouse gases in the atmosphere by storing carbon. As soils are one of the foundations of all life in the world, it is therefore absolutely vital that they remain intact – this is also our motivation with this scientific-artistic research project to make it possible to experience and perceive a soil ecosystem in order to raise social awareness of soils.

With the Sounding Soil project, we would like to coax the acoustic secrets out of the soil. We use highly sensitive acoustic sensors in an attempt to register and investigate the noises of soil organisms or processes taking place in the soil-plant-atmosphere system. In this context, we are also interested in finding out whether degraded soil differs acoustically from fertile soil. The results will be implemented in a sound art installation. In this paper we present some of our research methods as well as surprising soil recordings from Valais/Switzerland carried out in summer 2016, and give an outlook on planned research activities.

Friday 30th June, 9.00-10.30: Papers 3

Lecture Theatre D

The Wild in Silence

Usue Ruiz Arana

Newcastle University, UK

This paper reflects on a quest to find silence within the tranquility areas of Northumberland National Park. Over a period of four months I walked the mapped tranquility areas of the park with a view to investigate concepts of silence in the landscape and our role within it; and in the process, test the validity of the tranquility mapping within the Park. Through accounts of these walks, this paper will present and engage with concepts of silence in different disciplines; amongst others acoustic ecology, sound art theory and current legislation. Northumberland National Park, known for its tranquility and dark skies is one of fifteen National Parks across the UK. Tranquility in National Parks has been mapped first qualitatively (assessing people's experience through participatory appraisal) to account for the subjectivity in people's judgements on tranquility, and then quantitatively (through linking the participatory appraisal to GISdata). Through this mapping, tranquility can be understood as both a visual an acoustic quality, and both as the absence of the human but defined by human experience. At the start of this quest I approached the idea of silence acoustically, looking for the quiet in the landscape, and the absence of human sound. These tranquility maps pointed me to the most isolated parts of the park. They lead me to the still and echoing close conifer plantations where I could hear myself breathe but I could also

sense the shaping of the land by humans. They revealed endless valleys with murmuring rivers and screaming waterfalls. And they led me up hills and ridges where the soothing sound of the undulating heather could be deafened by the strong winds in an instant. Soon, I realized that the silence that I was looking for was inevitably multisensorial and that it was within me; an inner silence achieved in my engagement with the landscape. The role of the tranquility maps became one of exposing a variety of landscapes where that engagement could take place; and the journey transformed from a quest to find silence externally, to a pursuit to silence my mind, and in the process, find the wild within me.

Shaping Spaces in Sound: Exploring the Language and Practice of Aural Architecture **Alexandra Brown¹, . Vanessa Tomlinson², Bruce Wolfe³ & Jocelyn Wolfe²**

1) University of Sydney, Australia

2) Queensland Conservatorium, Griffith University, Australia

3) University of Queensland, Conrad Gargett Architecture, Australia

In the 2007 publication *Spaces speak, are you listening?*, Blesser and Salter note that aural attributes of space, the properties that can be experienced by listening, can be manipulated according to desired cultural frameworks. Based on this, an aural architect, acting as both an artist and a social engineer can design spaces to induce such feelings as exhilaration, tranquility, heightened arousal and so forth. In the 2014 publication *Shape of Sound*, architect Victoria Meyers argues for framing aural experiences as a key aspect of contemporary architecture and urban design. She proposes that artists and scientists in collaboration can lend architects insight into the properties of sound as a medium for the exploration of space. In both cases, the premise must be underpinned by an understanding of the relationship between the senses, the social function of a space and the complex sonic environment that constitutes the space, whether in a house, an urban street or a jungle. The audible attributes of physical space have always contributed to the fabric of human culture, but we are so accustomed to sounds in our familiar environment that we pay little attention to how profoundly they shape what we do and how we do it (Blesser & Salter, 2007). The way sound is used to inform the design of the built environment reveals much about a culture's attitude toward hearing and place, yet thinking about sound in the built environment has mainly been the concern of acousticians, acoustic ecologists, and soundscape artists, both in theory and practice. The consideration of sound in the built environment and urban design is often limited to the technical knowledge associated with acoustics and acoustic performance, or even to the design-based translation of sound into visual terms. This fails to take into account that we engage with a place in a multitude of ways, through all the senses. Through sound, we are all an extension of a place where meanings and feelings are ecologically derived and socially and ritually embedded (cf. Leavitt, 1996). This paper instead interrogates some possibilities for an understanding of the creative sonic properties of materials, volumes and structures in the design of spaces to inform and expand our knowledge of the built environment and our relationship to the world around us. More specifically, the paper discusses the aural architectural approaches employed as part of a recent transdisciplinary public program and undergraduate architectural design studio incorporating improvised sonic investigation of materials and spaces. Architectural and sonic investigation outcomes were informed by the exploration of sound as it relates to material and spatial interventions, as well as the analysis and representation of existing sounds within the urban environment. The project examples demonstrate some of the ways in which a more nuanced understanding of the relationship between the senses, the social function of a space and the complexity of both urban and landscape-driven sonic environments, might be used to underpin thinking about spatial interventions.

Acoustic Ecology 2.0

Garth Paine

Arizona State University, USA

In the 1970s the World Forum of Acoustic Ecology called for an effort to balance the world's soundscape and thus propelled the notion of balanced and imbalanced sonic environments based on sets of assumed preferential sounds and disagreeable or even unhealthy sounds. This was a noble cause, and has been resonating through the acoustic ecology community for several decades. Indeed much of the early discussions in acoustic ecology were around the challenge of 'noise pollution' and the need to reduce anthropocentric sound and to develop more sonic refuges. R. Murray Schaffer has written at length about the need for refuge - places of quiet and contemplation.

This notion of working towards a balanced sound environment suggests an ideal state, a condition that once met would support wellness and a preferential livability metric. It also suggests stasis, a state that once met should be maintained and the idea that the sources are largely known and will remain unchanging. This idea of a managed stasis seems problematic for several reasons.

- a) The sonic environment is permanently changing. The morphology so evident in the doppler effect is true of the entire soundfield. Micro-scale variation is always at play, and as Barry Truax illustrated in the World Soundscape project analysis, the patterns of daily change repeat stochastically, displaying external macro similarities whilst constantly producing micro-scale, relational variations largely unknown and possibly unknowable.
- b) This morphology and the multi-scale, relational nature of the soundfield as a whole represent an ecology of sound. As understood in ecology and life sciences, environments are dynamic and their management centers around observing relational balance rather than measuring individual parameters against a defined target.
- c) Aircraft and road noise often cited in the above discussions are part of the modern urban environment's acoustic ecology and here to stay.

When making field recordings in national parks of the American Southwest, I am aware that a predominant sound originates from aircraft flyovers which are perceived as negatively impacting human and non-human life. The proposed solution is to re-route flights around parks – a proposal that will never happen. Aircraft noise is here to stay.

Acoustic ecology might act as a positive change maker in motivating the redesign of the aircraft engine design to ameliorate the flyover noise.

A partnership between, ASU's Acoustic Ecology Lab and a habitat mapping program examines the viability of mapping the critical vocalization frequencies for animals across the globe to form a dynamic critical frequency band map for species communication. Minimizing aircraft engine noise output in those frequency ranges would reduce the aircraft noise impact on these habitats, thereby making flyovers less of a noise issue and more of a consciously designed sonic entity considering principles of acoustic ecology.

My Acoustic Ecology 2.0 approach positions acoustic ecology as a design framework for social impact, proposing a nuanced collaborative acoustic design of anthropocentric sounds to minimize impact on non-human and human species, thereby increasing livability and wellbeing metrics across the globe.

Lecture Theatre C

The Sonic Melting: Sound and the material spatiality and temporality of glaciers in the Anthropocene

Gustavo Valdivia

John Hopkins University, USA

To what extent is the natural world susceptible to human understanding, explanation or control? Is it possible to access the primordial chaos in which the vibrational forces of nature precede a fixed organization of our sense experience? What would it mean to experience sound as a continuum of history, instead of an ephemeral and recent event that may only perdure in our memory or any other recording device? These recordings present a sonic narration of our encounter with the Quelccaya, the largest tropical glacier on the planet, and tries to answer to these questions by presenting an alternative approach to the complexity of climate change: namely, one which is not limited by visibility. The crunches of massive ice blocks, minute ice crystals breaking, the splashes of water running from the glacier's base –which vary from a few drops to several cubic meters- winding their way through gaps between rocks and frozen soil, and their reverberations within different sections of the Quelccaya; contest the images of a passive, fluid and malleable nature. They remark, instead, its excess, indifference, and destructive power. By reminding us of the infinite cascade of events to which our present time belongs, these adjacent and overlapping sonic forms are, without a doubt, narrating the histories of the Anthropocene.

The recordings can be listened at:

<https://soundcloud.com/sonicmelting/sets/01-on-the-way-to-quelccaya-1>

*Creating healthy places through open space music-making:
using street music, urban field-recording, sound-mapping and
remixing as technologies of local place-making and civic health.*

Barnaby Spiegel
SOAS, University of
London, UK

This paper makes the case that street music, urban field-recording, sound-mapping and remixing are accessible and sustainable creative practices through which citizens can participate in local place-making and improving civic health, and should be integrated more into mainstream education, community activism and the arts.

Requiring relatively simple and affordable technologies, these practices each offer various psychosocial benefits for citizens and communities. Street music is a social technology that visually, sonically and emotionally shapes public open spaces into temporary places of shared listening, entertainment, interaction and togetherness; enabling emotive and sustained sociality otherwise lacking in transitory urban spaces. Urban field-recording and soundmapping offer citizens a mode of creative and communicative engagement with the people and culture of a particular place, and allow citizens to participate in the production of local community media by documenting street culture, capturing local voices, and developing sonic maps of their city. Soundscape composition and remix offer a set of musical techniques with which citizens can transform urban field-recordings into various forms of sonic media – soundscapes, sound art, popular music, podcasts etc - and help build an engaging and diverse grassroots sonic commons for the city.

Brought together as the core practical components of an open-space and place-based model of music production - an alternative to mainstream popular music production - these practices can be capitalised on by educators, cultural programmers and community organisers to offer the public an accessible framework of engaging creative opportunities through which to participate in local place-making and improving civic health.

Living Symphonies

James Bulley

Goldsmiths, University
of London, UK

This paper explores the conception and realisation of the forest artwork *Living Symphonies*, a site-specific sound installation whose composition grows in mimicry of the activity of the forest ecosystem it is situated within. Originally commissioned in 2013 by Forestry Commission England and Sound and Music, the author, in collaboration with systems artist Daniel Jones, spent over two years working with ecologists and wildlife experts to develop a series of highly detailed temporally-linked digitally simulated 3D mappings of the flora and fauna inhabiting four forest locations. These simulations then acted as both conductor and spatialiser for a unique custom sound score that contained thousands of fragments of interrelated process-based music, composed and recorded in the years leading up to a tour of the piece in Summer 2014, where they were heard back within four forest sites across the United Kingdom.

At each *Living Symphonies* installation an organism is depicted by a unique set of sound motifs that characterise its changing behaviour over the day and night; moving, developing and interacting just as the organism it represents. Dozens of these motifs can be heard at any moment, mapped across the real space of the forest and heard back through a 24-channelspeaker system invisibly embedded across the site. For the 2014 tour, the work was publicly accessible over two week durations at each location, with audiences able to freely explore on their own terms.

This paper investigates the collaborative ecosystemic concerns that inspired the creation of the work, detailing its roots in the *Deep Ecology* movement of Arne Naess, and recent shifts in the Nature - Art relationship caused by changes in public art commissioning, novel technologies and theorisation of site-specific art practices. The composition of the sound score is explored with reference to research into bioacoustics, acoustic ecology, Deep Listening and the spatial behaviours of organisms.

Sound-based artworks have a unique potential to provide platforms for us to explore the natural world, creating spatial, locative potential that draws audiences closer to the materials of nature, rather than

virtualising, occluding or masking them. In this paper, it is proposed that explorations into the relationship between sound and our material environment might provide a crucial avenue for a renewed focus on the ecosystems and natural environments that underpin our everyday existence

Lecture Theatre E

*Echoes underwater:
understanding geophysical flows
using sound*

**Stuart J. McLelland, Daniel R. Parsons &
Stephen M. Simmons**

University of Hull, UK

The movement of sediment by natural flows shapes the landscapes made by rivers, lakes, and seas. Measuring how water moves and how it erodes, transports and deposits sediments is essential to understand the evolution of river beds, estuary mudflats and coastal beaches. In turn these modern day processes enables us to understand the formation of the ancient rock record and to predict the future responses of natural systems to anthropogenic changes.

Accurate and unbiased measurement of fluid velocities and sediment movement requires non-intrusive measurements with high spatial and temporal resolution. An impeller to measure flow velocity does not respond to turbulent flow whilst a bottle sample of sediment will be slow and time consuming. Sound gives scientists a window into the dynamics of water and sediment movement. Pulses of high frequency sound emitted into a flow will be reflected and these echoes reveal the character of the flow and sediment from the environment they pass through. The simple time taken for a pulse to be transmitted and its echo received tells us the distance to the reflecting object. That distance could be the location of the bed of a river or estuary, but it could also be the distance to a moving object suspended in the flow. If the object is moving the frequency of the echo will be shifted compared to the pulse that was emitted. This shift in frequency, known as the Doppler effect, can tell us the velocity of the moving object. The magnitude of the echo can reveal the concentration of sediment in the fluid and, if we use multiple frequencies, each will respond differently to different sizes of sediment so we can determine the size of sediment in the fluid. Multiple probes used simultaneously also enable us to build three-dimensional pictures of velocities and surfaces to help understand complex flows and environments. These measurements provide essential information to develop and validate numerical models that describe the sedimentary processes involved.

In this paper, we present different types of acoustic instruments used by researchers at the University of Hull's School of Environmental Sciences. These instruments are used across a range of scales from the small-scale measurement of turbulent flow in experimental laboratory flumes to the measurement of flows in some of the largest river systems on Earth and the highly energetic flows of sediment-laden fluids that cascade down ocean canyons, transporting sediment from the continental shelf to the abyssal plain below. We will show how sound penetrates the environment and enables us to visualise patterns of fluid motion and the dynamics of sediment erosion and deposition.

*Using Soundscapes to Assess the Success of
River Restoration*

**Louise Wilson, Jennifer Dodd &
Anna Nousek-McGregor**

University of Glasgow

Following the industrialization of countries in the U.S and Europe in the last century, the vast majority of river channels have been straightened and homogenised, with little regard for their role in water retention or significance as a habitat for wildlife. Acknowledging this, the EU established the Water Framework Directive in the year 2000, requiring previously straightened rivers to be returned to a more natural state. Numerous river restoration projects have since been carried out, but monitoring the success of these projects has proven difficult, given the wealth of variables influencing river health and quality. Soundscape Ecology is an expanding field which employs passive acoustics to monitor the acoustic spectra of a particular habitat. This project will quantitatively and qualitatively analyse the acoustic diversity of specific habitat types within restored and unrestored river channels, to test if channel type can be used to explain the variation in riverine soundscapes. The influence of ambient noise on the behaviour of resident freshwater invertebrates will also be explored using underwater

playback experiments. We hypothesise that: 1) the geophony of riffle and run habitats will differ significantly between restored and unrestored channels; 2(a) sound recorded in pool habitats will display signs of biophony; 2(b) river channel type influences the degree of biophony recorded in pool habitats; and 3) playback of river recorded geophony will have a significant effect on the feeding behaviour of *Gammarus pulex* individuals in the lab. The aim of this project is to determine whether or not passive acoustics can be used as a reliable and encompassing monitoring tool for habitat health and quality in restored and unrestored river channels, and to inform further research in the youthful field of soundscape ecology in freshwater habitats.

Friday 30th June, 11.00-12.00: Papers 4

Lecture Theatre D

The Soundscapes of Nature Reserves – do they Impart a Sense of Nature?

David Chesmore

University of York

Nature reserves are considered to be havens for wildlife which is becoming increasingly important as the countryside becomes more urbanised due to expansion of towns and cities, and the development of large scale projects such as quarrying. In a highly populated country such as the UK nature reserves may be considered as oases for wildlife and places for people to relax, and potentially restore their sense of the natural world; this is despite the majority of nature reserves being man-made, maintained and often close to urban areas. It is becoming almost impossible to find places that have little or no man-made (anthropophonic) sounds which can range from agricultural vehicles to aircraft, potentially reducing the quality of experience of visitors. The questions posed by this paper are (i) do the soundscapes of nature reserves give visitors a sense of nature?; (ii) can the soundscape of a nature reserve be characterised? and (iii) can soundscape analysis be employed to monitor long term changes to a reserve and thus aid in management?

The characteristic soundscape of any nature reserve will depend on many factors including location, time of day, time of year, geography, geology, vegetation types, habitat type(s) and wildlife present. For example, bird reserves will often have characteristic acoustic features depending on where they are situated; coastal reserves will sound very different from fenland. In addition, there will be many soundscape components that change over timescales varying from minutes to years which can be difficult to capture unless long term recording campaigns are carried out.

The paper will investigate the questions posed above by considering the soundscapes of a variety of nature reserves in Yorkshire and Humber region through the use of formal concept analysis (FCA) and analysis of regular audio recordings. FCA is a computational technique for generating and generalising relationships in many applications. It had not been applied to soundscapes until Michael Fowler's work on soundscapes of Japanese gardens which showed that FCA can successfully generate concepts relating physical attributes to soundscape. Here, I am applying the techniques to nature reserves to ascertain whether they exhibit unique characteristics that are embodied in their soundscape. In addition to FCA analysis, I am carrying out long term regular recording at several nature reserves; one example that will be given is Three Hagges Wood Meadow near York, a recently planted wood meadow with more than 10,000 trees. The long term monitoring campaign will be used to determine whether soundscape analysis can be used to monitor habitat improvement/deterioration, and anthropogenic noise reduction (reserve is adjacent to a major road) over multiple years. The paper will also discuss the need for "objective soundscape" analysis, i.e. using computational bioacoustics for automatically identifying sounds within a soundscape, in order to be able to efficiently carry out extensive and cost effective monitoring.

“What is your favourite sound of London, Beijing, Berlin, or... and Why?” With this seemingly simple question at its heart, the Favourite Sounds Project has set out to discover what we find positive about the soundscapes of the cities, towns and neighbourhoods where we live and how we interact with the ever-present sounds of urban life. The project began in 1998 in London as a broadcast for the artists’ run radio station Resonance FM and continues today. In the years between it has explored cities as diverse as Beijing, Prague, Birmingham, Manchester, Southend-on-Sea, Taranto and Berlin. Independent researchers have also created versions of their own in Chicago and Brussels.

The response to the project has been wonderful and the many replies make fascinating reading. They reveal the cities of the ear in surprising detail – it is a perspective quite different to that of the eye – and illuminate the complex roles of sound in our lives. People’s choices of favourite sounds clearly reflect the physical and cultural geography of the places where they live and the similarities and differences that emerge between cities add further to the project’s interest. Many of the sounds have been recorded taking care to be as faithful to the original suggestions as possible and are available on CDs or online. They have also been used in radio shows, exhibitions, presentations and for further creative work. Although originally an arts project it has also attracted interest from disciplines such as anthropology, geography and environmental planning as well as from the media and public.

The Favourite Sounds Project is almost two decades old. During this time, global and local soundscapes have been especially dynamic, driven by rapidly evolving technologies, social, economic and cultural changes and by world defining events such as 9/11. In London, the city under longer-term study, such changes have shown up in the choice of favourite sounds. Equally the project has undergone developments of its own. In Birmingham it was modified to ask recent immigrants about sounds remembered and loved from places of previous residence and in Berlin it became one of the methodologies used to investigate the soundscapes of areas scheduled for re-development. The project is also online. Thefavouritesounds.org website now allows sound recordings to be heard linked to maps or satellite images of their original locations.

Currently, at the invitation of Hull 2017 UK Culture Capital, the project is taking place in Hull. Further information and the form to suggested your own sounds can be found at <https://www.hull2017.co.uk/discover/article/favourite-sounds-hull/>. Recording has also started and sounds can be heard at <http://favouritesounds.org/>.

This talk will give an overview of the project’s findings so far and play some of the Hull sounds.

Lecture Theatre C

Composing the Plastic City: a reflection on methods, motivations and meanings

**Adam Stanović & Amanda
Crawley Jackson**

University of Sheffield

In 2015, *plastiCities* – a network of artists, writers, researchers and academics with an interest in space and spatialities in art – commissioned a series of musical compositions based on a small patch of land on the edge of Sheffield. The patch of land, still home to one of the world’s oldest cementation furnaces, was once situated at the heart of the industrial city centre where it was engaged in the production of blister steel. Following the national decline of this industry, the land lay forgotten and derelict until a recent rediscovery, or re-imagination, of the space produced *Furnace Park* – a community park that invites reflection upon the changing nature of the city through the act of artistic engagement and activity.

plastiCities launched the commissions as part of their wider artistic agenda: “We believe that voices from the arts have a critical role to play in the ways in which our cities are designed, produced,

distributed and lived. We do not treat the city as an object to be represented, but as a more-than-representational plastic object, in the sculpting of which we all have a democratic right to intervene.” (*plastiCities* 2015 p.5). In this context, sound appears to be a perfect medium, particularly when plasticity may be enacted through the combined processes of recording, transforming and composing, as are often found in forms of sound art and electronic music. Despite this, the result of these processes were not intended to embellish the city with yet more public art, and nor were they intended to illuminate ways in which the city’s soundscape might be redressed. Instead, through the process of reflection, creation and engagement, the act of ‘doing’ was intended to encourage individuals to think of the city as artwork in and of itself.

This paper considers the various commissions in light of this project. It starts by elaborating the commission objectives, setting these alongside the aims of *plastiCities*. It goes on to address the act of composing in this context, paying particular attention to the one of the author’s works *Foundry Flux* (2015), particularly in terms of the compositional methods and the resulting form of the piece. It finishes by assessing the whole project alongside the stated aims; whilst the process of artistic engagement did (at least in some cases) necessitate (re)engagement with the city, this was often highly personalised and frequently opaque. The aims of the project, however, remain substantive and this paper concludes with a call for a great engagement with the city as a plastic work of art.

Rainwire

David Burraston (Artist in Residence)

The Wired Lab

Rainwire is an art/science project investigating the environmental sonification of rainfall. Rainwire is an experimental approach, a technological appropriation of agricultural based objects for art and science, with particular emphasis on climate change issues and agriculture. The system is made from spans of fencing wire suspended across the open landscape. Rainwire developed from using contact mic recordings of rainfall ‘playing’ the long wire instruments for music compositions. This enabled a proof of concept study to the extent that the audio recordings demonstrate a wide variety of temporal & spatial rain event complexity.

Ebb and Flow: A PRS Commission

Jason Singh

Independent

Ebb and Flow explores people’s memories of Hull through a unique 3D fully immersive sound experience. It connects to Hull’s links with water, transformation, regrowth and change. The installation will include stories, songs, fond memories, vague and vivid accounts of the past, seasons and descriptions of spaces that once existed.

The installation also contains sounds of spaces, buildings and places around Hull. Re-interpreted and manipulated to create musical textures which in turn provokes a dialogue about perception of a place and space. The content of the installation has been derived from various workshops working with people of different ages, cultures and communities in Hull, with contributions from local artists Jez Riley French, Wai Wan and the Hull Freedom Chorus Choir.

Ebb and Flow is a 23-speaker, fully immersive Ambisonic sound installation. It will be constructed using a Higher Order Ambisonics sound-field, almost like a dome-shaped structure, which will be programmed and installed in the History Centre by Liverpool based 3D/Ambisonic’s company, Kinicho.

Lecture Theatre E

U.S.-Mexican Border Chords and Discords: Glenn Weyant’s Anta Project

Sabine Feisst

Arizona State University,
USA

In the United States, concerns over security along the US-Mexican border have received much attention for over a decade. Conservative American politicians have blamed illegal immigrants and drug traffickers for economic and safety problems and portrayed them as potential terrorists. In the early 2000s the George W. Bush administration initiated the replacement of small and spaced out concrete markers and barbed wire fences with steel columns and other tall fortified and militarized

structures. On 25 January 2017 the Trump administration ordered the immediate construction of an extension and further fortification of the border wall with Mexico (1,600 km) and increase its militarization exponentially. The backers of this project are not concerned about its dramatic consequences for the borderland's human and non-human inhabitants, least about its effect on the land's delicate sonic ecologies marked by the sounds of hundreds of migratory animals and endangered species.

Sound artists including Richard Lerman, Glenn Weyant, Garth Paine, and Jon Rose among others have listened to the desert borderlands and created site-specific and other works from these experiences. Weyant, Lerman, and Rose have transformed these fences, "symbols of fear and loathing" (according to Weyant) into sound sources and musical instruments and given onsite performances, if only for a few physically present border patrol agents, non-human nature and infrared cameras, and recorded and processed these barriers' internal and external sounds.

These artists have sought to offer critical musical commentary on places that have become forbidden territory where everybody and everything is under observation. Fences on these lands have become witnesses of dramatic change spanning human rights abuses and environmental destruction. Lerman and Weyant both intend to challenge these barriers' inhumanity and capture sounds informed by the eerie events that happened on these lands. Lerman often amplifies fences via piezo disks to record them for use in audio-visual installations displayed at galleries (see for instance, *Border Fences* 1998 and 2000). Weyant

regularly performs on border walls by bowing steel columns with a cello bow, striking fence materials with found objects and electronically amplifying them. Weyant's goal is to transform these walls into sonic bridges and thus unite the divided land and its inhabitants on each side of the border. Although it is illegal to paint on and traverse fences, there is no law that prevents musicians from drawing sounds from these structures.

This paper centers on experimental composer and improviser Glenn Weyant's documentation of the changing acoustic ecologies of the US-Mexican borderlands. Beginning in 2006 he has performed music on walls that divide the Sonoran Desert more often and consistently than other musical anti-fence activists. I will examine and contextualize his *Anta Project* which started in 2006 and show how it evolved into other endeavors such as *Mauerkrankheit* (2015). Building on research by such scholars as Andreas, Fox, Price, Rivera Servera/Young, Smith and personal interviews I conducted with Lerman and Weyant, I will illuminate these artists' philosophies, their thoughts on the commodification and institutionalization of art activism and their planned responses to Trumpian border politics.

The Harmonic Oscillator : Navigating the Sound Space of our Healing Environments

Vic McEwan & Clive Parkinson

Manchester Metropolitan University, UK

In classical mechanics, a Harmonic Oscillator is a system that when displaced from its equilibrium position, experiences a restoring force proportional to displacement. This paper explores the process and outcomes of the Arts and Health collaboration: The Harmonic Oscillator which is being conducted between the UK and Australia (2014-2017).

The basis for this project has been the wealth of research that talks about the adverse effect caused from the sound environment within healing spaces. All of this research points to issues of increase in medication, stress levels, length of stay, issues relating to the cardio vascular system and decrease in undisturbed sleep.

The Harmonic Oscillator places a contemporary artist inside a working hospital environment at Alder Hey, Liverpool UK to explore the sonic environment and consider research, patient and staff perspective and to create new work in response to and with the aim of both being an education resource and potentially modifying the negative effects of noise within our hospital environments.

Evidence tells us that virtually no hospital in the world satisfies the World Health Organisations recommendations for maximum sound levels in functioning wards. The Harmonic Oscillator project shows startling information such as, within Intensive care, a ward that has been designed with sound levels in mind, sound levels rarely fall below twice the recommended levels.

This paper will share a review of all existing research in relation to sound levels in hospital environments, new research that has been extrapolated from data gathered in Alder Hey Hospital as well as sharing the artistic outcomes created during the project. These outcomes include a publication written by Arts and Health Specialist Clive Parkinson as he followed and engaged in the process of artist Vic McEwan's journey navigating not only the sound environment with the hospital but also the emotional and personal landscapes that exist within these spaces.

This paper will also share details about other outcomes such as a radio documentary, an exhibition of 8 interactive and media works that explore the sound issue, a series of compositions created entirely from the hospital environment and different medical procedures, as well as a mobile app that allows patients, families and staff to explore their sonic environment within the hospital. This resource is being created as a cost free resource for roll out in hospitals throughout The UK and Australia.

The Harmonic Oscillator also tells the story of sound related collaboration between the lived experience of hospital life and the ecology of outside sound experiences.

A current overview of The Harmonic Oscillator can be found here:

https://issuu.com/vicmcewan/docs/the_harmonic_oscillator_draft

Friday 30th June, 14.00-15.30: Papers 5

Lecture Theatre D

What does Essex sound like? Capturing the changing sounds of an English county

**Sarah-Joy Maddeaux¹
& Stuart Bowditch²**

1) Essex Record Office, UK

2) Independent

In 2014, the Essex Sound and Video Archive at the Essex Record Office was given a Heritage Lottery Fund grant to run a three-year project, called *You Are Hear: sound and a sense of place*. For the project, we are digitising and cataloguing a large number of historic recordings from the Archive, then making them available under a Creative Commons licence. The aim is to help people develop their sense of place and attachment to the county by engaging with the recordings.

One way of presenting the recordings is through our Essex Sounds online audio map. Each sound is pinned to a map interface on the homepage, in the location where it was recorded. By pairing historic recordings of locations and events from the Archive with newly commissioned recordings of similar places, users can compare what the county used to sound like with how it sounds now. Members of the public can also contribute their own recordings, to share their unique perspectives of their present-day communities.

Before making any new recordings, we conducted face-to-face and online public surveys, asking people across the county what their Essex sounds like: what sounds they hear in their daily lives; which sounds are distinctive to or evocative of the county; which sounds they no longer hear; which sounds might disappear in future. These suggestions informed our selection of soundscapes to capture, combined with our own agendas. Some recordings were in response to archival recordings: recording in the same location, or capturing a similar activity elsewhere. We also wanted to represent the county's diversity: rural areas, natural wonders, townscapes, transport infrastructures, and the range of accents of its people. While working in the field, the Sound Recordist connected further with the county's inhabitants, explaining the project and encouraging engagement.

As well as uploading clips to the online map, the new recordings will be deposited with the Archive. By collecting recordings now, we are creating a resource for future generations, as we muse about how the county's soundscapes might continue to evolve.

Analytics reveal user interaction with the website in numbers. But how do we get more qualitative feedback on the public impact of the map? And how do we maintain engagement now that the main recording phase is completed?

This paper, presented jointly by the Archivist / Project Officer and the commissioned Sound Recordist, will describe the processes behind the development of the audio map, covering the design of the website, engagement with the public, the digitisation and presentation of historic recordings, and the creation and presentation of present-day recordings. The paper will reveal that, by recording at specific places and times, the project gave added significance to everyday local activities of people who generally had not considered their 'noises' as being indicative of a time or place. Finally, the paper will question what the map reveals about the soundscapes of a diverse, twenty-first-century British county; and what function the map can serve in developing a sense of place for the county's inhabitants.

Acoustic communities in Inner Asia: Sound, ecological knowledge and economic stability of mobile pastoralists

Jennifer C. Post

University of Arizona, USA

Engaging with acoustic communities that structure daily life is a multifaceted experience for mobile pastoralists whose movement takes them from site to site as they seek prime grazing land for their livestock. The sound signals they hear, and their everyday relationships to their biophonic and geophonic environments, shifts in each season, at each location where they settle temporarily, and in connection with the changing climate as well. Supporting livelihood and lifestyle, the acoustic communities herders experience encompasses sounds, images and actions related to herding livestock, and supporting family and community activities in connection with social and cultural events. Sounds that pastoralists value have a practical ecological and economic role in rural locations where they tune in acoustically at specific times of day and in particular places to hear wild and domesticated animals, note seasonal sound signals identified with resident and migrating birds and other creatures, and recognize the meaningful sounds created by landforms and weather events. Their relationships to these sounds may warn of dangers, alert them of coming changes, and it also drives and draws on emotion and memory as herders relate their contemporary life patterns to past practice, social history, and experiences in the natural world they especially value. The ability of herders to communicate directly to entities in the environment through sound is evidence also of a sometimes seamless relationship among actors in human and nonhuman worlds still widely recognized in pastoralist communities. In fact my study also challenges the widely expressed argument that anthropogenic sound is invariably detrimental to soundscapes. I embrace instead the belief that immensely beneficial relationships do occur among biogenic, geogenic and anthropogenic entities that together contribute to each acoustic community. This paper focuses on the importance of the acoustic environment and its communities to Inner Asian mobile pastoralists who have traditionally relied on the land for their livelihood. Their primary work involves adaptive management of their ecological environment, and when successful yields economic stability. Using ethnographic data from researchers studying sound among pastoralists (Fijn, Yoon, Levin, and others) in Tibet, Mongolia, and Siberia especially, data on soundscapes linked to the new soundscape ecology movement in sustainability science, as well as my own interviews with herders in Mongolia, I discuss the character and meaning of sounds and acoustic communities in the lives of herders and the relationships of the sounds they experience and create to their well-being. What are the ideal acoustic communities for the ever-changing sound worlds of mobile pastoralists who must find ways to maintain ecological and economic stability in order to continue to thrive?

Subjectivity and Soundscape Ecology; Can Soundscapes Be Seen As Music?

Teddy Hunter (a.k.a. Jessica Myers)

Independent

What is a soundscape and can it be seen as music? This is a discussion of evidence that looks into soundscapes and music and whether it may or may not be music. Could it be that a soundscape is only music when it is appropriated into a musical composition or artwork, or is it binary – being that it is either music or not. What can we learn from listening to our environment and can that then turn it into a scientific method of tracking environmental changes?

The layers of a soundscape are stripped back to different environmental sounds, and by listening to these, just as we do music, we can pick out the different section. For example the science of speech, language and song, and the connections and relationships that each have with each other.

The concept of a soundscape is looked into further by referring to works by the bioacoustician Bernie Krause, and then examining the world of sound art where the exploration of artists using natural sounds and frequencies within their work is uncovered. These thoughts are explored within a historical context of the term 'soundscape' with Murray Schaefer's famous words 'The soundscape is any acoustic field of study.'

Can we alter the idea of the sound that surrounds us, a soundscape, from being just our everyday noises to being categorized as music in its own right, or is it simply personal choice and subjectivity that determines what is music and what is not.

Lecture Theatre C

Mapping urban spaces through listening exploration

Jamie Lawson

University of Aberdeen, UK

Mobile headphone listening devices such as MP3 players and smartphones provide for personalized day-to-day listening experiences. Wearing headphones, designing playlists and having the power to skip and pause sound all entail processes of selection that enable users to turn attention towards and away from what interests them. Users can selectively deny engagement with everyday sound environments, exchanging the urban soundscape for a more personalized listening experience. These selective listening habits are also evident when employing headphones as part of portable sound recording technologies. By including a microphone in the mobile headphone listening paradigm users maintain the internalised selectivity afforded by headphones and hand-held controls, however are able to include exterior sonic space into the internal space of the listener's mind. Selectively, users compose impressions of urban soundscapes through the act of listening. Through reflection upon my sonic intervention piece, *Tape Jam*, this paper aims to highlight the way impressions of space are inscribed through listening. Aimed as a means to foreground the listening experiences of participants, *Tape Jam* invited users to navigate their immediate sonic environment using portable recording and listening technologies.

Through movement and employing 'play', 'stop', 'record' and 'fast forward/rewind' functions, participants were at once listeners, recordists and composers who over the course of their experience contributed to the interweaving and overlapping of spaces, places and events in time. Constructing personalized impressions of everyday spaces through listener experiences, the tape recorder is repurposed toward a generator of sound and experience which facilitates re-engagement and reflection upon everyday urban soundscapes.

if we do nothing, towards the creative sonification of climate change data

James A. Wyness

Independent

Anthropogenically driven changes in the environment take place daily and have done so for centuries. The approaching dangers of recent acceleration in such changes are comprehensively documented, predicting that the effects of such changes, if we do nothing to modify our collective behaviour, will be to cause widespread and irreversible damage to physical, biological and human managed systems. These effects will be felt differently by populations in different climatic zones.

This paper sets out the research, development and concepts underpinning an innovative long-term and large-scale project, *if we do nothing*, which investigates the sonification of climate change data. I discuss the reasoning behind my selection (and rejection) of various sonification models.

In investigating the causes and effects of climate change, I propose a creative sonification of climate change data, in particular tipping elements, creating accessible immersive sound installations which sonify meaningful data-sets. The project, a team effort, calls upon partners from the data networking, scientific and curatorial communities. Preliminary outcomes (sound installations) will respond to static

data sets whilst simultaneously laying foundations for an eventual fixed permanent installation responding to real-time data.

My idea is conceptually simple. Listeners are invited to feel the results of climate change by apprehending accessible sonic representations, which nonetheless offer second-order complexity and tension in the sonic rendition of 'tipping elements' - global warming, rising CO2 levels or ice sheet diminution. I seek to exploit sound's advantages, as a phenomenological reality in itself, sound-over-sign, felt somatically, over certain forms of visual media. For example, selected tipping elements (temperature, ice levels) mapped from a given date up to the predicted tipping point (if we do nothing), are scaled appropriately. Shifting frequencies, perceived as pitches, would indicate rising temperature or diminishing ice cover. As tipping points approach, the frequencies reach inaudibility at higher and lower thresholds, descending/ascending beyond perception, though sound might still be *felt* (as vibration) and differently so for individuals, mirroring how climate change will be experienced differently by populations around the planet. In this model the listener engages with two complex sounds (ie not sine waves) having a strong fundamental frequency, recognisable as shifting pitches. The interaction of such sonic shifts produces artifacts and perturbations, eliciting further interest in the sonic medium, offering analogies with chaotic systems. A more 'horizontal' signification might interpret species loss or biodiversity reduction by mapping to the density of sonic events over given time-scales.

My research into sonification modelling has led me to question some of the assumptions of acoustic ecology: to what degree can field recordings of natural environments offer assessments of ecosystem change; can musically configured field recordings hold scientific value as indicators of change in physical, biological and human managed systems (acknowledging nonetheless that they might afford artistic value)? My paper thus offers a critique of the double articulation of field recordings - the ambivalence (semiotic instability) of how they represent their source (qualitative) and the validity of what they purport to tell us about a given environment (quantitative).

Urban sound; recording, seeing and hearing the city
Architectural Mapping Leith, Edinburgh through city sound
and EEG headwear

Roxana Bakhshayesh
Karam & Katerina
Talianni

University of Edinburgh, UK

This research aims to reflect on sound exploration and affect through movement practice by engaging with the EEG interface. We represent exploratory walks through the walking path from the centre of Edinburgh to the Leith area through recording environmental sounds and brain waves. This research fits within the phenomenology of body experience in urban context and sound scape ambient. The notion of 'surrounding' is often neglected or hidden for city walkers. There are hidden footprints regarding one's perception and experience of the space. Through thick mapping these footprints along with city's links, nodes and buildings, designers, artists and architects can be effectively evaluating, rethinking and designing spaces and events, which involve, engages and is inhabited by people in a more meaningful way. The EEG (Electro Encephalograph) device is a method to collectively record perceptual involvements through reading brain waves. The results of the EEG recording will be mapped in four layers (engagement, frustration, meditation and excitement) along with the sound-recording frequencies. Each participant in the research closed group of equal, male and female (17-29), will be equipped with the EEG emotive headset, a digital sound level meter and an android phone which records the geolocations through an app called Strava. The experimentation is hoped to be happening in two stages; one as a real-time recording of participants as they walk the path chose, and the second one in a closed laboratory simulated environment with no visionary display and through replaying the recorded sound for each participant while reading their EEG data. By mapping these two stages, one with in-the-place visionary and sound and one without the visionary, we can detect the changes in sound experience by the participants in both environments. Each output, will also be compared with the sound noise (within the range of auditory and extra-auditory) patterns, and the results will all be visualized as an infographic map display in relation to the urban spatial configurations and physical infrastructure (nodes, paths and buildings). Through mapping frequencies of collected data, the city-scape can render intangible information through a tangible 3D display. This survey tried to address questions as: can architects and designers benefit from individual live experiences through the city by having access to map displays of such information as well as conventional resources, i.e. traffic pattern or weather data? How can we

identify, recognize and 'see' (not only visually but perceptually) environmental noises in relation to the dynamics of the body in the urban environment? How can we promote design strategies by understanding, analysing and visualizing data from the users?

Lecture Theatre E

Ecospectralism: Experiments with methods for rapid, close, long-form listening

Alice Eldridge

University of Sussex, UK

Ecospectralism is a project which aims to develop analysis and resynthesis methods that facilitate engagement with datasets of environmental recordings that are otherwise too time-consuming to listen to directly; the project is motivated by the challenges of trying to organize, assimilate and interpret terabytes of acoustic survey recordings in ecoacoustics research. Within the emerging field of ecoacoustics, the sonic environment is seen as both an ecological resource, and source of information. Current research, including our own, attempts to develop computational indices in order to provide terse numerical descriptions of the acoustic environment that reflect ecologically meaningful characteristics, such as biodiversity, degree of anthropogenic noise pollution etc. One issue is that in order to achieve statistical power, volumes of acoustic data exceed listenable compass. Analysis is necessarily automated, and what we study, interpret and publish is an abstract plot summarizing some multivariate statistics calculated on audio features derived from a digital recording of the soundscape—a visual representation of a statistical summary of a computational derivation of a digital representation of the acoustic environment. In order to unpick the epistemological implications of statistical results, we need to return to the data, but we can't re-engage with and explore the dataset as *sound* because the repository is simply too vast. We need new methods for rapid yet close, meaningful, long-form listening.

This paper outlines experiments in extracting and interactively resynthesizing spectral impressions of environmental recording databases. The approach is deeply informed by personal experiences of listening, coding and improvising in a range of contexts including performance, field recording, algorithmic composition and computational ecoacoustics research, and draws upon machine listening, computer music and spectralist composition techniques. Methods described here include a modified form of phase-vocoding and mean spectrum analyses. Once extracted, spectral information can then be stored and resynthesis parameters controlled via an accelerometer, using TouchOSC and an iPhone. In this way, it is hoped that listeners will be able to rapidly and interactively engage with large audio databases in a way which affords a deeper, broader appreciation of pertinent acoustic behaviours than possible through either the sensory experience of direct listening, or by analytic inspection of the numerical outputs of machine listening algorithms. Could we, for example, grasp the temporal variation across days or weeks of recordings, or switch between different sampling points in a given data set to explore the spatial heterogeneity of an acoustic landscape? The project explores ways of re-composing acoustic databases to create a listening experience that preserves the rich, situated, listening experience of the field recordist, whilst achieving the oversight, perspective and power of machine listening.

Participation and creation: approaches towards an eco-systemic understanding of artistic practice

Stefan Östersjö¹ & Halla Steinunn Stefánsdóttir²

1) Malmö Academy of Music, Sweden

2) Lund University, Malmö Academy of Music, Sweden

This paper draws on artistic explorations of space, through analysis of projects set in the natural landscape, in a specific indoor site or at the threshold between the two. Specific attention is given to the artistic processes at play in the transformation of materials created/collected in the natural environment when shaped for presentation in an indoor location. What is the difference in the relation between being and becoming in this liminal space? According to Erwin Straus, the impetus to this process is the pathic moment of sensation, a moment which evolves in two dimensions: as an unfolding of the world and of the self (Straus 1965). Louis Schreel argues that in Deleuze and Guattari, artistic practice, activates a process in which "the work 'captures' forces at work in the world and renders these sensible. Its effects are above all real and not merely imaginary: the image is not a

mental given but a concrete, existing reality” (Schreel, 2014, p 100). Here, Deleuze distinguishes between the percept - landscape in the absence of man -and affect, the non-human becomings contained in the artwork. This paper wishes to unpack these processes through a study of two concrete instances of artistic practice in which either of the two authors took part.

The first example is ‘I play Northern Lights’, a piece created by Halla Steinunn Stefánsdóttir for ensemble Nordic Affect’s concert in the Northern Lights Hall in Harpa, Reykjavík. As an activation of space ‘I play Northern Lights’ was instigated from a curatorial point of view as a piece that would challenge the audience’s perception of the concert hall environment. It represents a performer’s active engagement with space: a method to break away from tradition and in so doing, exploring whether new aspects of the environment’s structure can be revealed.

The second example is taken from the work of the Landscape Quartet, a group of sound artists dedicated to the creation of ecological sound art which takes participation as point of departure, with the wish to align with “a broader set of cultural practices in which the imperial power of “the human” over the rest of the world is shifting in favour of what we might call a more eco-systemic engagement” (Hogg, 2013, p 1). But how can one understand the artistic processes at play in such participative forms of artistic practices? Can ecological sound art prompt different understandings of the relation between artist and artwork as well as between human and the natural environment?

*Sounding out Smart Cities: Soundscape
Design, Auralisation and Evaluation for our
Urban Environment*

**Damian T. Murphy¹, Alex
Southern² & Francis Stevens¹**

1) University of York, UK

2) AECOM

The soundscape of our environment helps us to better understand the world we live in, and has a direct affect on our health and wellbeing. Human society has battled with the concept of excessive noise since hitting one rock against another produced some of the first tools, and yet the complete absence of sound in our environment can prove to be equally unsettling. If the presence of sound, both wanted and unwanted, is something that cannot be avoided, how might we design our environment to deliver a more optimal or pleasing aural experience?

Auralisation – the audio equivalent of visualisation -is key in developing a better understanding of how significant changes or infrastructure planning in our urban environment can have an impact on our related environmental soundscape. It allows consultants, planners and other stakeholders to hear the potential acoustic changes that might result, so that designs might be better optimized; it is also a valuable dissemination tool for informing the public as to the nature of such changes. Auralisation also facilitates subjective soundscape assessment of proposed developments at the design stage and once construction is complete, smart sensor networks enable soundscape monitoring and objective evaluation on an ongoing basis.

This paper presents an overview of how auralisation has been used in the context of recent soundscape case studies at the University of York Audio Lab. The complete auralisation chain is presented, from source measurement to soundscape monitoring, through sound propagation modelling using numerical simulation, soundfield rendering and the potential for immersive multimodal presentation.

The virtual sound walk project focused on a busy urban park in Leeds and explored how subjects responded to a traditional sound walk experience when compared to the same aural stimuli presented under controlled lab conditions using auralisation techniques and a multi-loudspeaker immersive sound system. Cochlea Unwound has used auralisation to help optimise the design of a proposed sonic crystal based sound sculpture for a site next to a noisy weir on the River Severn in Worcester. As part of the York City Environment Observatory project, a series of environmental sensors have been deployed to help evaluate the impact of green space, and this deployment has been supported through a process of soundscape capture, evaluation and auralisation to explore the data being generated and how it might be used effectively to help influence public use of city space. Finally, sound emitted from transportation is of particular interest in soundscape design, as it is generally considered as being unwanted and hence defined as noise. Traffic, aircraft and railway noise are all aspects of common annoyance as part of our daily soundscape. Research in this area has explored

both the synthesis of vehicle road-tire noise for a data driven auralisation model of traffic flow, and how quiet technologies might have an impact on our perception of vehicle noise in urban centres.

Saturday 1st July, 9.30-10.30: Papers 6

Lecture Theatre D

Soundings: Making Sound in Place

Vanessa Tomlinson

Queensland Conservatorium, Griffith University,
Australia

Since 2008, Erik Griswold and Vanessa Tomlinson have been involved in making site-specific creative interventions, or Soundings, in a variety of Australian settings. Starting with *Sounding Wivenhoe* (referencing the act of measuring the depth of water) which reflected depleting water supplies in extreme drought through data sonification, *Sounding the Condamine* which examined the pioneering history of sounding the landscape through the cowbells worn by bullock trains, *The Listening Museum* which combined factory workers, musicians and installation artists in a reimagining of place, and most recently *Sounding Harrigans Lane*, a sonic exploration of rejuvenating bushland, these temporal performative events aim to enhance our ability to listen in our environment.

This presentation will locate these site-specific *Soundings* within the traditions of composers R. Murray Schafer and Pauline Oliveros, as well as the sonic mapping works of Annea Lockwood and acoustic interrogations of Alvin Lucier.

The presentation will use the four aforementioned case studies to examine how site specific performance can bring about new understandings of place, taking note of how these events engage with community, and how the projects transform our connection to land, sense of place, and multi-sensorial awareness. This work draws upon collective memory, historical account, inter-disciplinary performance practice, and ethnography, all situated in the field of acoustic ecology.

The proposed case studies share the centrality of an inclusive notion of listening; complete with all its component parts of intentional sound, unintentional sound, functional sound, sound produced for aesthetic reasons, alongside merging value systems, hierarchies and even responsibilities as the audience themselves become sound-making participants. Tomlinson and Griswold are primarily interested in making site-specific compositions that examine the particularities of site, inclusive of resonance, ambience, climate, and historical narratives. The work draws upon work in Oliveros' *Deep Listening* (2005), Westercamp (1974) and Magen's (2011) notion of the Soundwalk, Harris' *Scorescapes* (2013) and R. Murray Schafer's (1977) proposition of soundscape, to understand how music is transformed by space, and how listening can be heightened through environmental performance.

All projects provide pathways for new community connections to land, and explore performative potentials on the land, using topographical specificity for sonically unique outcomes. Drawing on the properties of water (the river, the dam) rock formations (granite), valleys, hills, enclosed forest, sparse bushland as well as histories of the intersections of people and place – pre and post colonization – a setting for musical composition and community interaction is activated into performance outcomes.

This presentation will provide an overview of the aforementioned projects, revealing underlying commonalities from the perspective of the composers, performer and listener in reconnecting with place through site-specific performance.

Binaural Recording System Validation and Sound Map of Malaga

Carmen Rosas

Universidad de Malaga, Spain

Every city sound has a great impact on its inhabitants' everyday life. Streets, squares, parks, buildings and businesses, present a sonic footprint which characterises every city at a certain period. Despite this, in the field of acoustics these sounds are usually analysed as noises to be measured and

reduced, and the sonic characterisation of a city is usually limited to the production of a map depicting the levels of the main acoustic pollution agents. This fact may have caused the study of city sounds to be deemed secondary and may also have led to prioritising the resolution of conflicts brought about by unwanted noises. As it happens with the natural environment, however, taking proper care of an acoustic environment stems from its knowledge and appreciation.

This sound map aims at creating a tool that collects all the most distinctive soundscapes of Malaga, an important touristic city with multiple and different soundscapes and also noise conflicts, so that they can be listened to by their inhabitants and people from all over the world, become part of the city's cultural heritage and be archived and catalogued for their conservation, since there is not any sound archive created by any official institution yet. It has also the intention of promoting the awareness of preserving a good quality sound environment by showing the diversity and richness of the soundscapes of the city.

Besides, its contrast with the noise map of the city, this sound map allows for the characterisation of the territory from a different perspective, in which the identity of the depicted area is defined by all its sounds, not just by sources such as traffic, industry, railways or ports. Moreover, the representation of the impact of the sound pressure level originated by these sources on noise maps is simulated through predictive software in order to avoid eventual irregularities, but the convenience of including actual measurements to this methodology is a highly discussed issue that presents a series of considerations. Some changes that affects soundscapes, like the increase of outdoor leisure activities or the evolution of environmental factors, cannot be delimited and analysed by strategic noise mapping. As an example, by observing the prominent presence of parrots in multiple soundscapes registered for this project and their localisation, it can be concluded that this exotic species has dramatically risen its number in recent years not only because they find perfect environmental conditions, but also because they more likely to survive in city streets and parks, which have an atypical high noise level in Malaga, than others autochthonous birds with lower level calls, that are considerably decreasing their population.

All the recordings are being made with binaural microphones, so the sounds produce a more immersive experience when using headphones. These microphones were built for this project, and a series of HRTF measurements was obtained and applied to different audio signals for the realization of a psychoacoustic test, in order to assess the spatiality provided by the system. Another series of audio samples was generated from the MIT's HRTFs, and both results have been compared.

Lecture Theatre C

TUYUC: RETHINKING TUYUC

**Jessica Rodríguez &
Rolando Rodríguez**

Independent

If we take what Didi Huberman says about that producing Art is equal to generate cognitive processes and, we take as true what Universal History of Art says about that it has prevailed since the beginning of humankind, we'll be in front of a unique Western mindset of thinking. We have a tendency of thinking History is a straight line in time, full of dates and important events nailed as true. Which is false. History runs parallel in time and space. We can't deny that part of History that emplaces dates and events in time and space. Now we know that this one isn't a straight line, but a complex web where we can't find a center. There are many events happening at this moment that are beyond what History can consider as History itself. When we tell our personal stories, we also have the traditional tendency to tell them following a line in time and space. So, when we produced TUYUC, we were thinking about how we had built that idea. We had an idea, no a concept. History is like an elephant, everybody is touching a part of this one, but nobody can have the totality. TUYUC became into an audio visual essay about how, from a subjective construction, everyone rethought their own stories. TUYUC tries to build sound, images and text in parallel lines in time and space that sometimes, they get to touch each other. We generated the text having a big respect for its own time and space, as well as, we generated the sound and images. The point where these three lines crash is not the reality by itself, but in our personal experience where this collision happens, and we call TUYUC.

go your gait!

Katrin Emler

artistic research about walking and listening

Independent

The liveliness of a city is reflected in the activities of its inhabitants: how, when and where they move around in it. Most big modern cities are perfectly designed for motorized traffic but not for pedestrians. Walking is the most individual form of locomotion in terms of its direction and speed. Sidewalks, pedestrian areas, traffic-free roads and squares are the public spaces most preferred by those navigating a city on foot, marking its pavement and paths with the pulses of their steps.

A gait is a person's most distinctly individual pattern of movement. Audible in the sound of footsteps, our rhythm emerges from the regularity with which we place one foot after the other. An individuality which we reproduce almost exclusively in public, where one person's step rhythm joins in polyrhythm with that of another.

The interesting thing about getting to know a city on foot is that you never leave the large, perceptible urban setting and the slow pace of movement enables a high level of attention for sensory impressions – ideal conditions for exploring a city from an aural point of view.

Our cities are full of machines, infrastructure systems and motorized traffic sounds. Wherever they start to dominate the urban soundscape, people can't hear their own footsteps or start to communicate to each other in a loud voice. High level background noises steal the depth of auditory space and space loses its audible richness. This changes human behavior.

For over 12 years, I'm investigating the walkability of cities and its associated spatial perception, through my work series *go your gait!* I am particularly interested in the extent to which we are able to find spaces for walking in our urban surroundings, why and how we use them and how conscious we are of the environmental influences.

Two aspects of my artistic research are here emphasized: Observing a site (*Platzstudien – Place Studies*), and personally experiencing space while walking (*my gait!*, *SchuhzuGehör_path of awareness*).

In the audio-visual works *Place Studies* walking movements are sonified according to a compositional principle to the pavement pattern of the square. The "players" go their ways, creating audible traces that begin to mix with and against each other. The sine tones used to sonify footsteps distinguish themselves from the familiar stepping sound and direct concentration onto the rhythmic element through their abstract technical simplicity. For example *Gendarmenmarkt* (<https://vimeo.com/55447227>) was the first of 24 audiovisual works and compositions.

The format *SchuhzuGehör_path of awareness* explores an individual's personal experience of space through walking, particularly the interplay between sound event (footstep) and surrounding architecture, influenced by the permanently changing interactions. For example the audiovisual composition of the *path* around La Friche in Marseille <https://vimeo.com/160306600> or in Tehran <https://vimeo.com/184479324> or in Berlin <https://vimeo.com/189225717>.

In working, exchanging and cooperating with other artists and scientists I seek to expand, reassess and refine my own approach to the topic of walking and listening in urban spaces.

*Sounding Out Spaces: Site-Responsive Participatory
Sonic Art*

Lauren Hayes

Arizona State University,
USA

This paper concerns context-based live electronic music, specifically performances which occur in response to a particular location or space. I describe a set of practices which can be more accurately described as site-responsive, rather than site-specific. I develop a methodological framework for site-responsive live electronic music in three stages. First, I discuss the ambiguity of the term site-specific by drawing on its origins within the visual arts and providing examples of how it has been used within sound art. I then suggest that site-responsive performance might be a more helpful way of describing this type of activity. I argue that it affords an opportunity for music to mediate the social, drawing on Small's idea of music as sets of third-order relationships, and Bourriaud's relational aesthetics. Third, I suggest that with the current renewed trend for performances occurring outside of cultural institutions, it is important to be mindful of the identity of a particular site, and those who have a cultural connection to it. I make reference to a series of works within my own creative practice which have explored these ideas. *Sounding Out Spaces* explores the relationships between people, sounds, and space by using new technologies to afford participation and collective musicking in response to a particular environment.

Lecture Theatre E

*Radio Art for the Environment, Radio Art Outside:
Dissolving the technological footprint of mixed media
sound installations.*

Magz Hall

Canterbury Christ Church
University, UK

This paper will consider the ecological and technological implications of making sound based works outside. Considering how the artist can produce multimedia radio and sound works that not only reflect the environment but actively work off grid.

Taking as a starting point 'Tree Radio' (2015) which revealed the hidden facets of organic tree life using simple FM wireless technology. This work addresses issues surrounding how we use radio technology and what are the new uses for 100 year old wireless technology. This work took forward my research on the future of radio and how to present radio art to a wider public. Working at the intersection between art and technology, it encouraged visitors to think about trees early radio military history and that radio spectrum is the root of all wireless technology and how simple cost effective and green radio it is to use.

Nam June Paik predicted a radical and exciting future for artists and technology, "Someday artists will work with capacitors, resistors and semi-conductors as they work today with brushes, violins and junk." (1965), something I have been embraced in my sound installations.

'Tree Radio' was completed during an Art for the Environment residency awarded by UAL at the Yorkshire Sculpture Park¹ and took forward my PhD research.² 'Tree Radio'³ transformed an oak tree into a micro radio station.

A transmitter was embedded into the tree relaying the fluctuating sound of the tree's reactions to light and water, via sensors and probes in the tree, electronic tones. Visitors could pick up the tree's transmissions on their personal FM devices if they are in the vicinity of the tree. General George Owen Squire, the U.S. Army's Chief Signal Officer and inventor of Muzak, back in 1919, described how trees "re nature's own wireless towers and antenna combined." New digital wireless communication are often disguised as trees and this is an engaging way of getting the public to think about trees as transmitters and radios early military history and to connect people with radio technology and simple electronics and consider the environment.

1) <https://www.ysp.co.uk/exhibition-details.aspx?id=magz-hall>

2) <https://canterbury.academia.edu/MagzHall/PhD-Thesis>

3) https://magzhall.files.wordpress.com/2016/01/reflections_on_process4_2015-mh1.pdf

Saturday 1st July, 11.00-12.00: Papers 7

Lecture Theatre D

*Live streaming remote locations: towards a real-
time audio network across the UNESCO Biosphere
Reserves*

**Maria Papadomanolaki,
Dawn Scarfe & Grant Smith**

SoundCamp, UK

We introduce the Cumbria Open Microphone Network (COMN), a live audio streaming project from the Furness Peninsula on the NW coast of England with Octopus Collective and the Cumbria Wildlife Trust. COMN is informed by site based work at an inner city ecology park in London's docklands. These projects form the basis of a multi partner project with Biosphere Soundscapes and others to set up a network of open microphones in the UNESCO biosphere reserves, as a resource for artists, researchers, activists and other listeners.

A new online audio stream from an exposed shingle beach on South Walney Island brings live sounds of seals and migrating birds in to a stall in the covered market at Barrow in Furness, and the internet.

We discuss how such an intervention might disturb our senses of space, time and value, in ways that both coincide with and differ from experiences with live video (a seal cam at the same site) and recorded sounds.

Does the audio stream change, for instance, a sense of the extent of the place? Does it bring the coastal regions into the city in some ways. Does it even bring (certain) non humans into collective processes located in the city? Does it open the city, making its boundaries more porous?

The fact that Barrow reportedly has the highest proportion of nature reserves per capita in the UK is not widely recognised by local residents or seasonal visitors, who are more likely aware of the region's key status in the UK's atomic weapons and energy programmes, with Sizewell power station along the coast, and giant fabrication sheds for nuclear submarines on the edge of town.

Rather than seeking to displace notions of a Toxic Coast with more reassuring images of Nature, COMN assumes they are profoundly entangled at different spatial and temporal scales. Can live audio streams give ways of confronting, thinking, even celebrating the complexities of this compelling /horrifying hyperobject (Timothy Morton) - and gaining a conceptual and experiential purchase on it?

Our thinking about COMN is strongly informed by experiences at Stave Hill Ecological Park, the direct successor to (perhaps) the world's first urban ecology park, formed in the ruins of London's docklands economy, where we have been working and reflecting from the inside about acoustic and ecological invention (Gilles Clément), in the context of the ends of worlds (Timothy Morton, Anna Tsing).

These projects provide the technical and conceptual basis for a new collaboration with Biosphere Soundscapes and local communities to set up a network of live audio streams in and between the UNESCO Biosphere reserves. We describe the scope of the project, starting from a pilot with the North Devon Biosphere Reserve at Braunton Burrows, within the remit of the Man and the Biosphere programme.

The Chimp Does Acoustic Ecology: Frontiers on Which Art and Science Stand

Martha Otis

University of Miami, USA

This paper poses the question: what does the creative process of a novelist have to offer more scholarly investigations of sound and environment? It chronicles, from conception to research and writing, the development of the novel *Apollonia in Estrus*, whose protagonist is a Congolese chimpanzee and virtuoso classical violinist. While the product of a conceit—impossible in the real world—that an animal might master a complex human instrument, it nonetheless caused the author to grapple with some very real areas of science. The drafting of the book drew the writer slowly but surely into readings in acoustic ecology, into philosophy of sound and music (by for example Arvo Part and John Luther Adams) which eventually led to a reconceptualization of music and, finally, sound itself. Taking a step back, the writer sees that she now considers music wilder, less cultural, than she would have ever imagined before writing the book. Artists' processes include analysis, but proceed, on the whole, by intuition—perhaps better expressed as an inner sense of pattern. While the writer did not set out to make any such statement, the novel, now complete, seems to conclude that music is, in fact, a biological necessity there at the beginnings of human language itself. Depending on the turns of evolution, one might even imagine music connecting human beings to other species. And who knows? Their knowledge—if we figure out how to listen—might save us. The paper will touch on the works of philosopher David Abram, composers John Luther Adams and Arvo Part, neurologist Oliver Sacks, ecologist Aldo Leopold, architect Juhani Pallasmaa, and linguists Dan and Keren Everett. Evolutionary musicology goes as far back as Darwin, but this particular artist got there the long way. In the end, what the artist has to offer the scholar, the scientist, might well be what writer Wilson Harris calls the "...visionary capacity to cleave the prison house of natural bias;" Harris contends that some works of art might stand at the "threshold of capacity to which [the artists themselves might] never attain." He posits the emergence, as a consequence, of "frontier" works of art when and only when the intuitive self manages to "breach the historical ego." This is, he claims,

“the life-giving and terrifying objectivity of imaginative art that makes a painting or a poem or a piece of sculpture or a fiction endure long beyond the artist’s short lifetime and gives it the strangest beauty or coherence in depth.” Art is far more than adornment; like all scholarship, it is a seed of knowledge, and we artists stand with scientists there on the frontier, asking questions, intuiting far more than we may understand in our lifetimes.

Lecture Theatre C

Temporal Soundscape Dynamics in a Magellanic Penguin Colony in Tierra del Fuego

**Dante Francomano, Ben Gottesman, Taylor
Broadhead & Bryan Pijanowski**

Center for Global Soundscapes and Department of Forestry
and Natural Resources, Purdue University, USA

On Isla Martillo in Tierra del Fuego, we continuously recorded in a colony of Magellanic penguins (*Spheniscus magellanicus*) in the beginning of the 2016 molting season. Here we describe the daily soundscape dynamics within this colony using existing soundscape metrics, which were originally developed to facilitate acoustic-based ecological inferences from multi-source soundscapes. While these indices have exhibited great successes, little research has explored the utility of soundscape metrics for characterizing ecological patterns and processes when a single soniferous species dominates the soundscape. Bioacoustics offers tools for such applications, but soundscape metrics may be favorable in situations where sounds of chorusing animals temporally overlap or when sounds are non-stereotypical. Some of the diel behavior patterns of this species have been previously documented by studies focusing on foraging behavior, but these studies relied on human observation and dive trackers mounted on individual birds. Instead, we consider the potential utility of terrestrial acoustic recording to monitor populations and behavior of this near-threatened species. We interpret our acoustic data in the context of known Magellanic penguin behavior and the few non-penguin sounds in this habitat, and through this interpretation we evaluate how soundscape metrics can be used to assess nearly monospecific assemblages.

locale | the height of the reeds

Jez riley French

Independent

In collaboration with Opera North and musicians from Norway, for 2017 Jez spent several months listening intensely to the iconic structure and spaces of the Humber Bridge & its surroundings. Using conventional and extended field recording techniques his recordings then formed a key part of the compositional process and a separate 'returning' piece using only the located sounds. In this talk Jez will discuss some of the techniques used and how their use can inform our understanding of sound and our own personal responses.

Notes on the Yorkshire Soundscape Project

Tariq Emam

University of Hull

The Yorkshire Soundscape Project was conceived to retrace footsteps from 40 years ago, within the Yorkshire Dales and focus on specific artistic practices to cope with the search for change in an evidently and relatively unthreatened environment. Within the framework of soundscape ecology and composition, supported theoretically by other fields, this is a case study in a sound artist's experience of landscape through archive, composition, and geopolitics of the 'natural' environment.

The madness (or, arts practice) inspired by revisiting and retracing within the eerie English landscape has allowed new perspectives on the practice of composition inspired by archived sounds. This given rise to certain questions on the meaning of archive, memories, truth and the imagination, as the state of environmental politics in a relatively unthreatened and prosaic landscape.

Lecture Theatre E

Developing a Hydrofeminist Art Practice – bodies, spaces, practices.

Laura Denning

Bath Spa University, UK

Hydrofeminism is a term coined by Astrida Neimanis which asks 'what might becoming a body of water – ebbing, fluvial, dripping, coursing, traversing time and space, pooling as both matter and meaning – give to feminism, its theories and its practices?' (2012:86). I seek to answer this, through a sonic art practice, asking in what ways does and could hydrofeminism impact upon environmental thinking, particularly through the lenses of ecofeminism and the act of deep listening.

I believe that Hydrofeminism is apposite and urgent, given that aspects of the current environmental crisis are water based in their manifestations; for example climate change, drought, flooding, water borne pollution, contestation over water rights and access; transnational river and catchment management and contestation; water and gender issues. Water connects the individual body and local communities into the hydrosphere cycles in and through which these water issues are manifested.

The fusion of art practice and scholarly investigation will draw on a range of approaches but key references at this point are expected to be Doreen Massey and Rosi Braidotti. Massey, for example in her book *For Space* (2005) argues that what makes a particular view of social relations specifically spatial is their simultaneity. In another view of spatiality, Rosi Braidotti (1994) insists that we provide more adequate accounts of our location. These two views impact upon my creative focus which foregrounds on embodied and located practice as imperative to an understanding of identity and community.

Primal Soup - site, data, sensation

Having worked at Cleveland Pools (Bath) in 2016, I am now developing new work in response to the site which considers how humans and other species relate to water, and to each other through water. The semi-circular lido is believed to be the oldest public outdoor swimming pool in England (1815). The pools were built next to the river on the site of old marl pits, between the railway and the canal. The pool closed in 1984 and was used for a short time as a trout farm before falling into disrepair. It was originally filled with water from the river. Some believe that the Ladies Pool was originally used as a Mikveh by the Jewish women of Bath in the 1800s. More recently, the upper pool was used for immersion baptism by Jehovah's Witnesses. There are still random trout in the water, which is overgrown with thriving aquatic flora. Water itself has no intrinsic DNA. I have access to the DNA data of the water through recent surveys, and am working with this as a starting point for developing new sonic works as creative outcomes. This paper will explore the development of this new body of work, and the contextualisation of this work with recourse to Hydrofeminism.

The Phenomenology of SoundHide

Dr. Mike Challis & Pamela Harling-Challis

Independent

SoundHide provides a space in which people can listen to the wildlife sounds of a specific environment in an immersing, safe place. The experience of SoundHide in site-specific settings touches people in a way that is greater than the sum of its parts, invoking memories and feeling of calm, security and wellbeing.

What started as a sound deadening exercise now addresses the human need for a den, a secure space, enclosing and relaxing; a place of quiet and stillness. The impact of SoundHide has a lot to do with the relative silence produced by the materials of construction but also to do with touch, smell, the framed view and, in some cases at least, the connection to childhood-den building and the need for a small space.

The first SoundHide was built in the summer of 2015 at the River Waveney Study Centre (old Otter Trust) at Earsham, Bungay on the Norfolk-Suffolk border for the Waveney and Blyth Arts Sculpture trail. It was built of straw bales with a straw lined plywood roof to isolate the audience from the sound of a busy road nearby. The audience were invited to sit and listen to an audio mix of the sounds of the wildlife at the centre recorded by Mike over the Spring and

Summer that year. SoundHide became a bit of a sound time machine, taking the listener back to spring and the mating of the Barnacle Geese or the dawn chorus on an early May morning.

The second SoundHide was commissioned for the SPILL festival 2016, Ipswich and featured sounds recorded in the green spaces of Ipswich and aimed to connect people with the sounds of their town. It was housed in an existing wattle and daub thatched hut (built as a outdoor classroom) which Mike also lined with straw bales. The second SoundHide touched people in similar ways as the first.

SoundHide is really about giving each individual an excuse to sit still and listen and to feel safe and secure in a space that it is enjoyable to pause in, and take the time to meditate on the sounds of the natural world around us. People tell me that it makes them feel good and, for some, it reminds them of and takes them back to their childhood.

“A brilliant site-specific installation, so much life in the wonderful sounds”

Brian Eno

“Your sound hide at the Waveney and Blyth River Waveney Sculpture is a joy within a joy. Perfect and womb-like. I now want one”

Mark Cocker

Sunday 2nd July, 10:00 – 11:00 (Middleton Hall)

Plenary Session

**Panel: Chris Watson; Leah Barclay;
Alice Eldridge; Dave Burraston**

Chair: Jez Riley French

INSTALLATIONS

Thursday 29th June, 11.00-19.00: Installations 1

Duality Control Room – Listening Room

WARIDI- A conversation between the environment and technology

Esther Kiburi

University of Kent, UK

'Waridi', a Swahili word- meaning flower, is an electroacoustic soundscape composition for either tape and grand piano or fixed tape that combines elements of acousmatic music and soundscape composition and uses the broad spectral map of the grand piano, to further link the two.

Just like a flower, the composition blossoms and unfolds revealing a journey through the lush and tropical environmental soundscape of my hometown Nairobi Kenya coupled with sweeps of gestural and electronically generated and manipulated sounds. A reverse odyssey of a typical day in my life when I went back for my December Holiday, the composition takes you on a somewhat sound walk of my experiences supported by other environmental sounds and generated technological sounds that further amplify this and give the listener a sense of my reactions and perspective of that particular day.

This project is an electro-acoustic soundscape composition for either tape and live grand piano or just fixed tape. It combines elements of electro-acoustic music and soundscape composition and uses the broad spectral map of the grand piano, to further link the two. The composition is in three movements with each movement representing a different time of day and different emotional experience; a fluid structural development from evening to day to morning in reverse order of a normal day. Evening represented a grateful ending to an otherwise busy and at times dark day and the morning represents a calm and fresh emotion. Some of the environment sounds have also been reversed which adds to the whole concept of the composition and also surprisingly enough the intended sound world. Each movement gradually developed into the other creating a continuous flow from beginning to end. For the piano, my main concern was not on the musicality of the piano but on the large spectral map of the sounds that the piano can make. Its purpose was to enhance and in some instances link both the electro-acoustic and soundscape parts of the composition.

The work is inspired firstly by Hildegard Westerkamp's 1979 composition *Fantasie for Horns II* whose main concept was to use sounds that were 'modulated and shaped by their surrounding landscape which resulted in them acquiring a unique sound from the landscape it inhabits' (album linear notes 1996). Secondly, her 1989 composition *Kits Beach Sound Walk*, that explored 'the tiny acoustic realm of barnacles at the Kitsilano Beach in Vancouver Canada, the world of high frequencies, inner space and dreams.' (album linear notes 1996) And thirdly, Francis Dhomont's third movement of *Cycle Du Son*, "Novars", that uses a moving and fixed perspective as its main structural concept.

A Mermaid Seen Off Scarborough

Sarah Dew

University of Hull, UK

My poem, *A Mermaid Seen Off Scarborough* was inspired by frequent walks around the Scarborough coastline, particularly the North Bay area, although it could be any beach along the UK coastline.

It is one part of an audio trilogy of magical and fantastical story poems that were inspired by the coastline where I live and walk almost daily.

I used a Zoom H6 recorder to record the vocal, also sounds of the beach and sea. I composed and recorded ambient music to enhance the poem, then edited all the recordings together using Pro Tools.

I have aimed to create a believable yet fantasy audio creation which aims to paint a visual and sensory image in the mind of the listener, as well as instilling a strong sense of place and possibility.

The listener is taken on a journey of apparent loss (a drowning woman) which then morphs into positive transformation (the woman becomes a joyous mermaid).

Along with music written specifically for the poetry, I enjoy using the sounds of (for me) special places and people, which I believe gives the work a sense of depth and reality.

Duality Live Floor

If We Do Nothing

**James Alexander
Wyness**

Independent

See *If We Do Nothing* in **Papers** section.

Ensemble Room 2

Rainwire [Processed]

David Burraston

Independent

Rainwire is an art/science project investigating the environmental sonification of rainfall, a technological appropriation of agricultural based objects, with particular emphasis on climate change issues and agriculture. The system is made from spans of fencing wire suspended across the open landscape. This installation features processed Rainwire recordings to give a very different experience of the work from previous incarnations. Both live and pre-recorded processing is presented using a number of different techniques. The listener is encouraged to contemplate the many and varied ways the recordings could be processed to inform scientific analysis.

The majority of the material was processed at EMS in Stockholm, during two residencies in 2017 using: Buchla and Serge modular synthesizers, composer Roberta Settels' diode/transformer Ring Modulator, hardware DSP, and a number of custom diode/transformer Ring Modulator's I have built from scratch. During my 2017 Mentorship with Richard D James/Aphex Twin I had access to a Fairlight Series 1 sound sampler, and a batch of Rainwire samples were recorded, analysed and reprocessed on this instrument. Realtime processing is being performed by a vintage EMS VCS3 synthesizer and some of my custom programs in the Tiptop Z-DSP Eurorack module. *Rainwire [Processed]* is experienced as a multi-channel sound installation, using several guitar/bass/keyboard stage amplifiers as a playback/processing medium.

Middleton Hall Foyer

Lightscape: Masquerade

**Mengtai Zhang & Po-
Hao Chi**

Independent

"Masquerade" is a generative composition in Lightscape project, focuses on the relationship between sensory experience and external structures within the city. Shoot in the Times Square, recorded visual impacts from massive numbers of screens, lights, advertisements. The bustling lights with activities, signified the motive that desire for profit to business efforts, also masking and emphasizing to illusory of time, place and social characters. The generative music system transformed the flow of light points in panoramic video into corresponding resonances. The changes of the lights in the video triggered sine wave oscillators and produced the ambient sound in different dynamics and frequencies according to its trends and patterns. This work will bring together elements of light and sound from different routes within the city, each masking the other, and serving as the basis for visual and aural interaction as manifest in video and installation.

My Way Home

**Angeliki Diakrousi &
Ivana Pinna**

Independent

My Way Home is a collaborative- participatory project based on sound-walks. Since June 2016, we have been collecting 'returning back home' audio routes from invited participants (*Supporters*) in their home town. Our main intention is to invite *Performers* to 'perform' these routes in other locations than the places, where the audios had been created. Routes from 'another place', are shifted to 'here' in the form of auditory instructions, resembling the experience of a GPS aural guidance. Just as the title "My way home" implies, the walking route cultivates a feeling of trust while the person walks on the road. The one who follows a 'back home' route reaches to an unknown place, by following external auditory information. As a result unpredictable wanderings and random encounters are emerged.

Middleton Hall Mixing Studio

Hull – Sonication Mediation Intervention Invitation

Dallas Simpson

Independent

The project requires taking a small group of people into Hull and creating an improvised performed soundscape using found / encountered objects, spaces, surfaces and locations. The collaborative environmental work would be a one-off intervention by facilitating the small group wandering through the city environs through the process of listening, assessing, and sounding the environment interactively and intuitively through engagements of varying intensity according to the robustness or fragility of the surroundings.

This sonic environmental engagement will encourage decision making on a variety of levels employing elements of ethics, social behaviour, spiritual meditation, materiality, acoustics as well as some political considerations of possession and responsibility of and for public spaces.

It would be recorded by three of the participants carrying stereo / binaural recorders in order to sample the acoustic soundscape arising from the collective intervention from different and continually moving perspectives throughout the intervention.

The playback installation has three recordings running in sync and the ability of the listener to select each recorded stream according to their own preference.

Donald Roy Theatre, Gulbenkian Centre

17.15 – 19.40 (bookable 25 min slots)

Trent Falls to Spurn Point

Chris Watson

Independent

The piece is a sound installation which imagines an evening voyage on the ebbing tide down the Humber estuary from the confluence of the rivers Trent & Ouse at Trent Falls and down to Spurn Point.

Recorded entirely on location over the past 18 months and presented in a spatial sound format called Ambisonics, the composition aims to put the listener in the same place as the microphone was for the recording.

The voyage passes through special signature sounds along the estuary; industrial, urban and wild. Starting at Goole docks where the lock gates open for a ship to start its journey before gliding past the reeds at Faxfleet and hearing the strange booming songs of bitterns, the rail crossing at Oxmadyke

and the massive music of pulsing concrete and steel created by the road traffic passing on the Humber Bridge overhead.

The City has its own voices at the Fair and the terrace choirs of Hull FC and Hull KR which are kept apart by the bells of Trinity and the solo voice of a blackbird by the river Hull.

The piece then sails out by the mudflats as the tide recedes revealing thousands of wading birds feeding in the rich estuarine mud to a backdrop of orchestral tones from Saltend Chemical Park.

Finally Spurn Point where the voices of oystercatchers, shipping and grey seals mix and merge with the waves into the North Sea.

Friday 30th June, 11.00 – 19.00: Installations 2

Duality Live Floor

THIS TOO SHALL PAS(T)

Teresa Barrozo

Independent

"An entire history and culture can be found in a single sound" - Brandon Labelle

Sound is passing. Sound is fleeting. Yet it is an effective vessel of memory, history and culture.

THIS TOO SHALL PAS(T) is a contemplation on the concept of ephemerality experienced through framed sounds in a performance structure.

A collection of field recordings, archived materials, news, interviews, conversations, musical samples, soundscapes and live sound, all arranged and presented in various listening situations, this work intends to create echoes of another space and time through the multi-sensory form of listening.

"How you listen determines what you hear."

Ensemble Room 2

H e (a) r

Halla Steinunn Stefánsdóttir

Lund University, Malmö Academy of Music, Sweden

Soundscape connected to ecology, acoustics and embodiment; drawing on encounters and what happens in the connection.

A fluctuation between hear-here-hér*-her.

H e (a) r (2016), a work in four movements, turns the spotlight toward the multi modal knowledge production of music and its links to the socio-political sphere. The work also affirms that there is no 'neutral stand point' in this world (Denzin et al. 2006).

Performers are Carina Ehrenholm, Angela Rawlings, Halla Steinunn Stefánsdóttir and Liv Kaastrup Vesterskov. Text score extracted from writings and digital works by Angela Rawlings (*In Memory: Jökull***, *Jöklar****) as well as by Pauline Oliveros, R. Murray Schafer, David Suzuki, Halla Steinunn Stefánsdóttir, Jez riley French, Pheobe riley Law, Bernhard Leitner, Heidi Fast, Robert Macfarlane and Roni Horn. *H e (a) r* was directed and composed by Halla Steinunn Stefánsdóttir and mixed by Kent Olofsson at Inter Arts Center in Malmö, Sweden.

*hér is the Iceland word for here.

**jökull is the Icelandic word for glacier.

***the piece *Jöklar* houses fifteen names of Icelandic glaciers, and the word play transforms each glacial name in such a way that mimics the ecosystem shift due to climate change.

Ensemble Room 1

TUYUC

Andamio - Jessica Rodríguez, Rolando Rodríguez, Tonalli R. Nakamura, Alejandro Brianza, Guzmán Ziráte & Edison Vaca

Independent

TUYUC is an experiential document of records that were made from a failed project that had a look of conquering a geography jungle: Yasuní. So now TUYUC may be the description of that experience from a blending of image, sound and text, a game of Chinese shadows, trees eating your guts, articulated animals in the gravitation of branches, noises night in the mornings, mornings rolling like marbles, marbles pursuing flooded roads of surprises, surprises never end or not end in the thin edge that separates a leaf, a ground sheet with sand resting on the prescription of a book, a book of maps not described and where the pen was about to draw an indiscreet and geographical vague line, a line that is not an edge, but the track at the carnival of ants, ants all huddle to be suspended in the water, water bearing the heaviness of the earth, the earth spinning like a coin in the air, the air that lies between the moist hollows of the treetops, wet hollows nesting the unknown, the unknown where the mystic egg hatches a ferocious animal, a ferocious animal that robs girls and girls who are ordered back by a shaman.

Middleton Hall Foyer

Thrumming Halls

Danny Bright

University of Sussex

Thrumming Halls is a site- and presence-responsive sound installation created with warped, fractured and manipulated field recordings made in the Barnsley Nation Union of Mineworkers Hall, surrounding building, peripheral spaces and streets, combined with elements of electroacoustic composition. It incorporates additional live processing driven by sound and movement in the environment of the installation, re-tuning the composition to the spaces, places and communities where it is heard. By creating simultaneous overlapping sonic temporalities/spaces, the work seeks to interrogate the relationships between space/place/memory and sound/music/noise by fracturing the soundscape of the present with the echoes, phantoms and potentialities of the soundscapes of the past/future. The resulting sounds, perhaps, suggest how we might listen out for the multiple layers of sonic histories - pasts, presents, futures - that are heard and un-heard in the environments we occupy.

Thrumming Halls is one of two sound works by Danny Bright commissioned for the AHRC funded Connected Communities project *Working with Social Haunting: past- and present-making in two "communities of value"*. Based in Manchester Metropolitan University's Education and Social Research Institute, the project sought to explore the concept of 'Social Haunting' as outlined by Avery Gordon, in relation to past and present making, community, place, and work.

Chapel

Can you see a forest? Can you hear a moon?

Kira Belin

Independent

Referencing pareidolia, a psychological phenomenon that causes some people to see or hear a vague or random image or sound as something significant, the subject matter in the wooden sculptures is open to interpretation to each viewer. Some see mountains, others

see faces, letters or kids toys. The sound score provides a possible rendition to depicted elements. Can you decipher human speech, a reverberating bridge, a forest, or maybe winds from a surface of Mars? The abstract tapestry of sounds lasts for an hour, and could be looped for a duration of the festival. The project is akin to rorschach test, harmonizing myriads of perspectives and connotations, along with providing a unique platform for incorporating both physical senses and imagination in an observer.

Duality Control Room – Listening Room

Path of Awareness

Katrinem

Independent

The liveliness of a city is reflected in the activities of its inhabitants: how, when and where they move around in it. Walking is the most individual form of locomotion in terms of its direction and speed. Sidewalks, pedestrian areas, traffic-free roads and squares are the public spaces most preferred by those navigating a city on foot, marking its pavement and paths with the pulses of their steps. A gait is a person's most distinctly individual pattern of movement. Audible in the sound of footsteps, our rhythm emerges from the regularity with which we place one foot after the other. An individuality which we reproduce almost exclusively in public, where one person's step rhythm joins in polyrhythm with that of another amidst the complexly interwoven tonality of a dynamic urban space.

Saturday 1st July: Installations 3

9.00-19.00

Duality Control Room – Listening Room

Recording Nature

Cheryl Tipp

British Library Sound
Archive

Recording Nature is an audio documentary that looks at the people who record natural history sounds and what this very intimate and solitary process means to them. How does this activity enrich their, and in turn, our knowledge and appreciation of the natural world? In what ways does wildlife sound recording influence our relationship with nature and impact on our memory? Drawing inspiration from seminal pieces such as the radio ballads of MacColl, Seeger and Parker, as well as more contemporary works such as *The Hebrides Suite* by Cathy Lane, *Recording Nature* will use field recordings and oral history interviews to paint a picture of this diverse community, past and present.

Fall Walk

Huw McGregor

Independent

The Award-winning Trees for Life is one of Scotland's leading conservation charities and is restoring the Caledonian Forest in the Highlands to one of the UK's wildest landscapes. See www.treesforlife.org.uk.

Dundreggan is Trees for Life's flagship forest regeneration site and is gaining an international reputation for its biodiversity. It has been described as a Highlands 'lost world', where more than 3,000 species have been discovered, including 10 found nowhere else in the UK and others that are extremely rare.

This work delves into the hidden depths of the Falls at the priority site in Dundreggan, these falls are a small tributary of the River Moriston which finally leads into Loch Ness. In addition to this, some of the recordings have been very subtly changed to bring out the hidden depths of such a complex sound. The second half of the work crossfades between the differing sounds of neighboring rapids, and the fades are conducted manually by moving the microphone in a careful and controlled manner.

Abstracting rhythm, pace and frequency from this turbulent landscape to guide my judgments in production.

Dark Path #6

Anna Terzaroli

Conservatorio Santa
Cecilia, Italy

This piece is a part of the “Dark Path” series. This electroacoustic music focuses on sound marks of a sonic landscape. It embodies a sense of history beyond itself. Beyond the analysis of the used recordings, there is a history that is personal. The piece aims to examine and explore the transformative possibilities of the computer music.

Outer Hebrides

James Bagshaw

University of Hull, UK

‘The Outer Hebrides, Scotland - A Soundscopic Composition’ is an 8 channel fixed media piece composed from a primary library of recorded natural found sounds from locations across the Scottish Outer Hebrides. Originally presented in Central Library, Manchester in May 2015, as part of the ‘Manchester Wakes Week’ events - an event co-organised by students at NOVARS Research Centre at the University of Manchester - the piece was presented in octophonic surround sound in the libraries domed shaped reading room to a public audience.

Following the journey of water through the landscape, the piece shifts focal point between a variety of natural water features, as the soundscape envelopes the audience. Evocative of scenic mountainous terrain, sound environments blend to build the listeners imaginative journey through desolate and harsh locations, as the sheer force of falls and rivers crash around the ears.

The piece has now been reworked and enhanced for the Sound and Environment Festival, where it hopes to showcase the practices of field recording, electroacoustic composition, and acoustic ecology.

XdsX/Chang ng

Iain Findlay-Walsh

Independent

Two short companion pieces, which present the recordist's journeys through high street retail spaces. In each, unusual miking techniques are used to capture and present consumer experiences which are at times disorientating and abject. These include wearing in-ear microphones beneath headphones during a supermarket visit at 1am (XsdX), and swallowing and regurgitating microphones in the changing room of a men's clothing store (chang ng). Both pieces are part of a forthcoming collection of work mixed specifically for headphone listening.

Fleeting Strands

Ambrose Seddon

Bournemouth University, UK

The strands in this work are both literal and metaphorical. The sound recordings consist of a variety of moments, materials and perspectives, and were made whilst visiting the coasts of Norfolk and Devon. The sources are sometimes clearly apparent (the sea, rocks, cave ambiances, boatyards, bells), but the music is also concerned with the different spaces or settings encountered on a journey of transformed realities and shifting perspectives.

My thanks go to the bell-ringers of St Nectan's Church, Welcombe, Devon, U.K., who welcomed me and kindly agreed to the recording their activities.

12:00-16:30

Creative Learning Space

Sounding...

Marcus Leadley & David Rogers

DIVA Contemporary

An evening of site specific performances, interventions and installations designed to explore the sonics of place. This is an environmentally responsive 'silent' event; audience members will be given wireless headphones as all performance sound is broadcast using an FM transmitter. All our systems are battery powered, allowing events to function 'off the grid' and explore a unique, free-flowing relationship to place.

11:00-19:00

Duality Live Floor

Soundhide

Mike Challis

Independent

The SoundHide concept provides a space in which people can listen to the wildlife sounds of a specific environment in an immersing, safe place,

"A brilliant site-specific installation, so much life in the wonderful sounds"

Brian Eno

The experience of SoundHide in site specific settings seems to touch people in a way that is greater than the sum of its parts, invoking memories and feeling of calm, security and wellbeing.

"Your sound hide at the Waveney and Blyth River Waveney Sculpture is a joy within a joy. Perfect and womb-like. I now want one"

Mark Cocker

What started as a sound deadening exercise now touches that human need for a den, a secure space, enclosing and relaxing. This has a lot to do with the relative silence but also to do with the touch, the smell, the framed view and, in some cases at least, the connection to childhood; den building, the need for a small space.

The installation here, though not the same as being in the site specific installations, gives an idea of the experience. It will alternately play the two versions of SoundHide.

Ensemble Room 2

4 Island Reefs

Martin P. Eccles

Newcastle University, UK

Using the methods behind John Cage's *49 Waltzes for the Five Boroughs* this work reflects movement, time and distance in the landscape of the remote Scottish island of Fair Isle. In performance as a 4-channel sound piece the Reels are heard sequentially with the four steps within a single Reel being heard simultaneously.

Chapel

Despite the effort all I can see is lines

Emanuele Constantini

Independent

In December 2012 I travelled for few weeks in the central area of Japan where I was visiting some friends and recording. Mindblown by the experience I then gathered the results in this soundscape which follows an ideal sonic path chasing the confusion, the speed, the slowness and the quietness, making that country a very controversial place.

The 6 channels version fully immerse the audience in this nipponic odyssey.

Middleton Hall Foyer

Tape Jam

Jamie Lawson

University of Aberdeen, UK

As a sonic intervention, *Tape Jam* aims to foreground the listening experiences of participants by inviting them to navigate the immediate sonic environment using portable recording and listening technologies. In an attempt to make explicit the distinction between passively *hearing* and a more active *listening*, *Tape Jam* employs a tape recorder and headphones as a tactile means to cue beginnings and ends of listening focus. Through holding the tape recorder, placing on headphones and pressing play the listening experience becomes more attentive. Participants are invited to leave behind traces of their personal impressions of the *space* by employing the 'record' function a random intervals of the tape.

Over the course of each user's participation these impressions will be continuously added and overwritten to produce audible sutures that trace and map past and present listening perspectives. *Tape Jams* re-tools the portable tape recorder from a documentary device toward a generator of sound and experience which provokes reflection upon listening practices.

Creative Learning Space

Favourite Sounds of Hull

Peter Cusack

CRiSAP, University of the Arts, London, UK

See *The Favourite Sounds Project. After 19 Years* in **Papers** section.

11:00-19:00

Hull City Centre – History Centre

Ebb and Flow

Jason Singh

Independent

See *Ebb and Flow: A PRS Commission* in **Papers** section.

Hull City Centre – Zebedee’s Yard

16:00

Ring Out

Ray Lee

Independent

Sound artist and composer Ray Lee, renowned for creating music for public places, will create an outdoor musical and visual spectacle composed of electronically generated bell sounds, each swinging from a giant metal tower. The composition builds a series of tonal pitches into a constantly evolving texture of pulsed tones created by the swinging of the bell-speakers by a team of local bell-ringers. The audience are able to walk around the space and experience the series of micro-melodies shifting and changing as the piece progresses.

Ring out will be performed several times over the weekend – but the best time to see this will be a performance at 4pm on Saturday 1st July.

Hull City Centre – Maritime Museum & Ferens Art Gallery

Offshore: Artists Explore the Sea

**Multiple Artists, including
Rob Mackay & John W. Clarke**

Artists John Akomfrah, Tacita Dean, China Miéville, Martin Parr and Mariele Neudecker feature in a new exhibition of internationally renowned artists, writers, scientists and filmmakers curated by Invisible Dust. This exhibition takes place at both the Ferens Art Gallery and Maritime Museum. Exploring sea-related themes, including monster myths, local fishing communities, Hull's role as a maritime city and the implications of climate change, Offshore includes ambitious new art commissions that relate to the museums' collections.

Hull City Centre – Banks of the River Hull by *The Deep*

River Listening Sound Walk on the Echoes.xyz app

Leah Barclay

Griffith University

A Hull-specific version of Leah Barclay's River Listening. Download the app from the app store (Android and iOS).

River Listening is an augmented reality sound installation reimagining the world beneath the global rivers in sound. The installation can be experienced by walking along the river with a mobile device and triggering geo-located soundscapes. These geo-located sounds are layered with hydrophone (underwater) recordings and creative responses to the river that connect to the soundscapes of river systems across the world.

This installation is part of an interdisciplinary project exploring the art and science of listening to rivers and the creative possibilities of aquatic ecoacoustics. River Listening explores rivers as the lifeblood of communities and the potential for new approaches in the conservation of global river systems. To experience River Listening, download the free app and your phone will act as a sonic compass guiding you along the river bank (available from the end of June 2017).

Supported with public funding by Arts Council England.

Sunday 2nd July, 10:00-15:00: Installations 4

Duality Control Room – Listening Room

Coalescence

Aya Shimano-Bardai

Paris-Sorbonne University, France

Coalescence (2016) is a seven minutes and thirty seconds long acousmatic piece. The compositional structure delves into the transitions between contrasted sonic spaces – open and clustered, distant and close, sharp and mild, etc – by underlining its varied acoustic elements. Mainly based on recordings of hands crunching, rubbing and decomposing charcoal pieces, this composition is a study of the organic quality of the sound material ‘spreading’ into smaller bits before they meld, pull apart and meet again. The gestural action is metaphorically transposed over a defragmentation of the sound material by means of exploring its diverse characteristics while unifying them into an abstract form.

The title refers to the process of the different sound particles colliding and merging throughout the piece. It is also a nod to the raw and organic material that precedes the composition which now exists independently of it.

Hi Torque

Jo Langton

Independent

Torque is a twisting force that tends to cause rotation.

During a pre-dawn recording of the elusive Bitterns in the spring breeding season on the Somerset Levels near Glastonbury, my attention was diverted by the distant mechanical clunking of a wind-powered water pump.

I dropped my mics down inside its water chamber as far as possible, to capture the rotation of the pump shaft, with the distant sound of wind sails crescendoing and de-crescendoing in the breeze, speeding up and slowing down the pump.

This sound piece of field recordings invites listeners to consider the synergy between mechanics and nature, in sound and technology. The constantly-working pump and the environment it serves is both ancient and modern technology - delicate in design and robust in construction that maintains and controls the fragile balance between humanity, wildlife and the elements.

Thalassa

Dimitrios Savva

University of Sheffield, UK

Program Notes: *Thalassa* (Θάλασσα), Sea. The word was chosen to be presented in Greek language because of the sounds that the specific word involves in it (‘th’ ‘Θ’ and ss); a strong reminiscent of the real – world sounds produced from the sea. *Thalassa* is a soundscape composition that uses sounds produced from the sea and sound that have a metaphoric connection with it. It explores the flow and the inner pulse of the sea and attempts to create the impression of a viewer and listener who moves from a realistic prospect to an abstract experience of a mythical and atmospheric sea world.

Middleton Hall Foyer

Audio Postcard from Zakopane, Poland

Phillip Mill

Independent

An arrangement of soundfiles made in Poland, December 2016. This track focuses mainly on Zakopane, within the Tatry Mountain Region, on the border of Poland and Slovakia. It includes some festive sounds of Horse and Cart, complete with bells. A tram way that ascends and descends the Gubałówka Hillside, a small river (Bystra) that runs through Zakopane, originating from the neighbouring town called Kuźnice.

There is also, from the town itself a church tower that played a regional folk song at 21:00. The piece has been mixed and collaged using some binaural mixing. Recommended listening with headphones.

Walking with Crickets

Lisa Hall

Independent

A sound walk with crickets to explore the city.

This work takes as its starting point a sonic trend which began in China over 1000 years ago, in the Tang Dynasty. Live crickets were kept as singing pets, carried around in small gourds, concealed in clothes - worn like a portable music player. The practice was a very popular pastime, practiced widely in society. *Walking with Crickets* is a digital re-enactment of this trend. Participants are invited to experience carrying this sound on a walk through the city - exploring an alternative to our present day mobile music players, which are popular in cities today. Through this public form of sounding and listening we can experience not only the cricket song as a mobile music, but also how we relate to the spaces around us. How do we hear the city, ourselves within in and how are we ourselves heard? Can this technique make us think differently about our position and relationship to the spaces we move through and the people we pass? This sound walk uses cricket song as both a measure and lens through which to explore our environments – to sound out our surroundings, hear ourselves appear and disappear in the sea of noise, exploring our cities in new ways.

WORKSHOPS

Saturday 1st July, 14.45-17.30: Workshops

Campus & Hull City Centre, Starting from Middleton Hall Foyer

14:45 – 15:30

out-of doors suite

Stephen Chase

Independent

Since 2012 I have been writing a book of pieces (see link above) concerned with the perception and exploration of acoustic surroundings, and the act of walking and listening, written with outdoor performance in mind. For this workshop I would work through one or two of the following pieces with the attending participants: *39 steps*, *Fred & Ginger Piece*, *BEAMING*, *phoning it in*.

Examples:

phoning it in

Should you have a mobile phone and encounter a public telephone box, take note of the number. /Start walking away from the box stopping occasionally to call the number. /See how far from the box

you can walk before the ringing of the phone becomes inaudible. /Observe, listen. /If the phone is answered you may engage in a conversation.

39 steps

Go for a walk /after 39 steps stop. /pause /describe one thing you have seen, heard, encountered over the preceding steps – take notes /pause /proceed for 39 more steps – stop. /pause /describe one thing you have seen, heard, encountered over the preceding steps plus the preceding thing – take notes /And so on... about 39 times or until memory fails /Then start again /Or sit down for a rest.

Lecture Theatre D

14:45 – 15:45

A Certain Geography

Maria Papadomanolaki

SoundCamp, UK

A certain geography is a listening workshop in the form of a remote soundwalk. A roamer sends a live audio stream from a remote location to an audience listening in a different space. The transmitter and the receivers listen in collaboration, communicating their experiences via twitter. The experience is further supported by a projected text-based video score. The workshop exposes listening to and poses questions about in situ and remote soundscapes; how do we listen solitarily and in collaboration; what is the role of the body (or the absence of it), memory, conversation, text/writing and play in enacting critical forms of listening to the environment?

Hull City Centre, Leaving from Middleton Hall Foyer

14.45 – 17.30

Pause and Listen

Katrinem (Katrin Emler)

Independent

In this workshop we will practice keeping the space of auditory perception as wide and open as possible – counter to our habit of ignoring and tuning out things we do not „prefer“ to hear.

We have acquired this attitude of selective listening for all our living spaces, whether at home, elsewhere or on the go. At home, the noises we learn to tune out are mostly sounds like the refrigerator, traffic outside the window etc. while at the office or at school it is the ever present sonic backdrop, including sounds of other people's voices, telephones and devices.

Most of our daily paths are connective routes between locations where we have something to do. The location left behind continues to resonate, often while our thoughts have already arrived at our intended destination or we are linked, en route, into a virtual space via mobile communication systems like Smartphones or mobile audio players. Thus, our path becomes a tunnel through public space.

Pause and Listen is a practice which aims specifically at producing a connection between the individual and their space. Through this the auditory atmospheric quality of places and locations in public space will be tested and the audible examined.

In lingering (time) at a place (space) the complexity of its auditory space is accessible and an orientation (localization) in space made possible.

CONCERTS

Thursday 29th June, 13.00-14.00: Concert 1 (Middleton Hall)

Domestic Dawn Chorus

Heather Ross

Independent

'A harsh chatter; A noisy churr; A sharp tit, tit; A sharp tic, tic; A liquid trill; Did he do it, did he do it, Judy did, Judy did; A chattering cry; Jack; An excited tak' - Bird Notes, extracted from The Observer's Book of Birds.

Domestic Dawn Chorus is a moving image work, exploring the potential for twenty- one domestic objects, to be employed as mnemonic devices. The work addresses the difficulty in being able to remember and hence, identify bird notes- interrogating the discrepancies in how sound is transcribed- within language, and how it is experienced and situated in memory. The work documents a process of finding equivalent sounds, within something more familiar, tangible or concrete, generating an experience with these sounds, through improvisation and play. The objects are employed as visual and sonic triggers; capturing the transient sounds and acting as placeholders, to be re-visited and sonically analysed, whilst remaining present.

The work explores each sound separately, gradually presenting an alternative 'dawn chorus'; the memory of a dawn chorus, deconstructed through association and reconstructed through play.

The Home Planet

Samuel Pellman¹ & Lauren Koss²

1) Hamilton College, USA

2) The Tides Institute & Museum of Art, USA

The Home Planet consists almost exclusively of environmental sounds that were recorded within a short distance of my home. As with many of the classic *concrète* works of the 1950's, the listener can often identify familiar sounds (for instance, of birds singing at dawn, the bells of a nearby church, telephone touch-tones, lambs and chickens on a friend's farm, an auctioneer, a toy train whistle, a passing truck, children's voices, a brook in a nearby woods, etc.). These familiar sounds are, in effect, "themes" and are subjected to an enormous range of transformation by such classical techniques as speed transposition, reversal, multiple-delay, and filtering, as well as more recent techniques, such as granulation, time stretching, and vocoding. Perhaps this digital *musique concrète* can provide a sense of the musicality that can be heard in the sounds of a summer day in upstate New York.

The video, shot over two years, spans the East coast of the United States, from Florida to Maine. These beautiful images, along with the sounds, remind us of the possibility that our home planet may be uniquely congenial to life in the universe and remind us of our imperative to take better care with it.

SUN: An exploration of our nearest Star in music, poetry and film

Peter Zinovieff¹, Katrina Porteous¹, Chris Hudson² & Jonathan Sanderson³

1) Independent

2) Life Science Centre Planetarium, Newcastle, UK

3) Northumbria University, UK

Our Sun vibrates like a bell. Without it, life on Earth would not exist. Space telescopes such as NASA's SDO and SOHO allow us to 'hear' its sounds, and to use them to 'look' inside it. *Sun* is an astonishing immersive 25-minute audio-visual performance, exploring these aspects of solar science through the interaction of surround-sound music, live poetry and stunning photographic images.

Sun examines the structure and physical processes of our nearest star, revealed in wavelengths beyond human perception: how its magnetic fields are generated, how 'Sunquakes' occur, and how sound helps us investigate the origins of sunspots and dramatic solar flares, which directly affect Earth's environment and climate.

Peter Zinovieff's electronic music for six loudspeakers is entirely derived from solar oscillation data from SOHO's Michelson Doppler Imager. Together with Katrina Porteous' live vocals, and Hudson and Sanderson's breathtaking film, *Sun* strips our star's layers, allowing us travel where the body cannot, to experience realities otherwise inaccessible to sight or hearing.

Sun was written in collaboration with Northumbria University's Solar Physics Research Group, as part of 'Think Physics' *Imagining the Sun* project supported by STFC. It premiered in Life Science Centre planetarium, Newcastle, November 2016. Seen here in flat-screen format.

Thursday 29th June, 20.00-21.30: Concert 2 (Middleton Hall)

A Jar Full of Eindhoven

Emma Margetson

University of Birmingham

A Jar Full of Eindhoven (2015) consists of a collection of sound recordings taken around the city of Eindhoven, Netherlands in March 2015 whilst attending the STRP BIENNALE 2015. The varied collection of sounds are dispersed as the sounds within the jar are shaken and poured.

Urbs Culturae

Joseph Young

Independent

'Urbs Culturae' is a sonic exploration of cultural locations in Hull, performed live using a specially designed performance instrument, the Sonic Baton. The sounds will be recorded binaurally during the period of the Sound + Environment conference at iconic locations that relate to the theme of 'a city of culture'. The locations will range from the obvious flagship cultural venues to more localized artist and community-led initiatives that best exemplify the artistic life of Hull.

The Baton is a unique controller for *conducting* field recordings, its essential technology being an accelerometer that monitors gestural movement and maps this data onto the relative volumes of sounds stored in Ableton Live. The visual language of the performance is slow and fluid (as opposed to the dramatic gestural movements of the orchestral conductor) and serves as an acute focus that intensifies the listening process, which is the heart of the performance.

The Sonic Baton was designed and built by Dr. Mike Blow (University of Plymouth) from an original idea by Joseph Young in 2012.

Land of Kings

Tyler Lewis

University of Aberdeen, UK

Land of Kings is a soundscape composition built from sounds recorded in Rajasthan, India. Composer Tyler Lewis was struck by the nearly constant barrage of sound in every type of sonic environment in India. The traffic, the conversations, the music, the radios and the wildlife were perhaps afraid of silence. Within this density of sounds, *Land of Kings* manages to create moments where the individual is revealed and the molecular structure of such a vast soundscape can be better understood.

The Vanishing Brain of Ecosystems (from *Fragments of Extinction*)

David Monacchi

Conservatorio "G. Rossini" of Pesaro, Italy

Grounded on sophisticated 3D field recordings in target undisturbed primary equatorial forests, the interdisciplinary project *Fragments of Extinction* brings together ecoacoustics, sound engineering and environmental sound art to produce immersive installations, concerts and public events on the vanishing acoustic biodiversity of the remaining intact ecosystems.

Already in 2005, UN's Millenium Ecosystem Assessment indicated that the current global extinction rate is between 100 and 1,000 times higher than it would naturally be, this without including climate change. Of all known species, one in four mammals, one in eight birds, and 41% of amphibians now appear on the IUCN Red List of threatened species. The ongoing ecocide is silencing the 'paleo-choirs' of the natural world, 'eco-symphonies' not even known or recorded yet.

Fragments of Extinction is urgently collecting 24-hour sound portraits from the most remote and biologically valuable primary forests where diversity and extinction are higher.

Since its launch in 2001 with the first extensive field recording campaign in Amazon's remote areas of lowland forest, the long-term project has developed new space-inclusive and space-preservative microphone methodologies in extreme humid environments.

This contribution for Sound+Environment presents a listening experience of the complexity and fragile equilibrium of these endangered habitats.

Teleferica

Jez Riley French

Independent

i've been spending time in Northern Italy for several years documenting teleferica - long cable structures used for transporting building materials and firewood across valleys and down from hill tops into villages. Most are now disused and no longer resonate but there are a few that still, in the right circumstances, offer up captivating sonic experiences. I listen & record them over the course of weeks, full days at a time, hearing how they react to changes in air pressure & the approach of storms. for this performance i'll present a short extract featuring sections of recordings of two different teleferica along with an infrasound recording of the world turning below the dolomites.

Friday 30th June 18.30-19.30: Concert 3 (Middleton Hall)

WSP

Tariq Emam

University of Hull

Over 40 years ago, a group of composers from the World Soundscape Project in Canada ventured across Europe researching their idea of the 'traditional European village.' Within an extensive archive of recordings and field notes, was the Yorkshire Dales. 'WSP' unapologetically reimagines their sonic research data, re-contextualising their impressions of Wensleydale, rebirthing forlorn moments.

Aeolian

Annie Mahtani

University of Birmingham

Aeolian

adjective

1. pertaining to [Aeolus](#), or to the winds in general.
2. of or caused by the wind; wind-blown.

This work is composed from recordings made in College Valley, North Northumberland on a field recording expedition in May 2015. Situated on the northern edge of the Cheviot Hills, College Valley is a haven for wildlife and vegetation and the perfect location for wildlife sound recording. On this particular weekend, the weather was not conducive to dawn choruses but instead displayed spectacular winds which were ever present and consequently a feature of all recordings.

Aeolian celebrates the remoteness of the valley: still but never quiet. The burn rushes along the valley, penetrating the aural landscape with its monotony. The driving wind rarely eases, speeding through the desolate expanse. Small birds, a cuckoo, emptiness. Fences reveal their internal harmonies singing louder as the wind picks up.

Aeolian was composed at EMS Stockholm and the EMS at UOB.

Wocke (with apologies to Ruttmann and Brock) (except)

Matt Barnard

University of Hull

"~~Ruttmann's film~~ Barnard's piece could scarcely be used to guide a stranger arriving in ~~Berlin~~ London for the first time. It summarises far more the memories and residual moods of a traveller leaving that city. If nevertheless the ~~film~~ piece contains a characterisation of the city, it is not in the ~~shots~~ sounds themselves, but through their montage and rhythm."

Anonymous

Equanimity (fixed media version)

Rob Mackay

University of Hull

Taking a moonlit night on a beach in Majorca as its inspiration, Equanimity is an attempt to convey a sense of delicate balance between different environmental and sonic factors. I have tried to exploit the different elements that make up the sound of the clarinet, at the same time relating these to the natural sounds on the recording. Through the use of live electronic processing, the sound of the clarinet is subtly extended to aid this blending of instrument and nature. The through-composed nature of the piece reflects a gradual unveiling of the natural scene, shifting from the different harmonics contained in the clarinet to the sounds of insects and birds communicating on their own narrow bands of frequencies.

Equanimity was composed for clarinettist F. Gerrard Errante in Scarborough and Las Vegas (with support from the University of Hull and the great hospitality of D. Gause and Gerry Errante). A recording is available on the CD *Delicate Balance* published by Aucourant Records.

Friday 30th June, 20.00-21.30: Concert 4 (Middleton Hall)

Foundry Flux

Adam Stanović

University of Sheffield, UK

The small patch of land bordering Doncaster Street, Sheffield, has witnessed a remarkable period of transformation. Once home to an eighteenth-century foundry, it was located in the industrial heart of the city, nestling alongside some 250 cementation furnaces for the production of blister steel. At that time, the furnace was a characteristic feature of the industrial landscape; an emblem of Sheffield's manufacturing prowess. Operations ceased in 1951, and it now stands alone in the Sheffield skyline, a symbol of industrial decline. For a time, the land lay abandoned and forgotten, becoming little more than a post-industrial wasteland at the edge of the city. The decline has since been overturned; the overgrown patch of land has been transformed into a community space, which invites artistic activities to reconnect the land with Sheffield. The newly named *Furnace Park* connects the land of the past with that of the present and, hopefully, future. This piece, *Foundry Flux*, attempts to capture the flowing, changing state of the land itself. Traffic, which circles the land, was recorded and used to generate the entire work, with transformations used to imagine the blistering heat of the furnace, before transforming the space into hub of creative practice.

Inside and out ... again

Adrian Moore

Independent

Inside and out...again is a concert work stemming from the 'How Many Sounds' project. This project set about investigating the use of multi-channel audio to manage musical complexity through the creation of plausible environments. As I began to create more intricate sonic environments I noticed that increased complexity often led to the sensation of one environment, one that could be 'explored' - a polyphony of sources coalescing to form a monophony of environment. *Inside and out...again* draws heavily upon Bernard Parmegiani's 'Dedans Dehors' and the metaphor of inside / outside, within / without, unreal (unknown, interior), real (known, exterior). I began with environmental sounds; typical

recordings that have we have heard before (Cars, birds, bees, water - most recorded inside and outside). And we have transformations: The buzz of bees becomes a drone; their angular flight becomes exaggerated spatialisation. The birds in flight become an exaggerated sweep that drives momentum; a single flutter gets mechanised. Real and virtual environments with reverberation become anecdotes or reminiscences. The bees grow to a swarm that literally shakes the room. Pitch is used to bind sections together. Repetition of material is used to solidify structure. By taking us from real to unreal within a virtual environment, both are allowed to exist at the same time.

Topophilia

Dr. Nikos Stavropoulos

Leeds Beckett University, UK

Attraction or affinity to place. The work is an attempt to construct a meaningful intimate aural space, where texture and spatially defined figures have a broader capacity for action due to their multichannel nature. The recordings of source materials form the beginning of an investigation into capturing and working with spatiality in micro space using bespoke hardware.

Gōngàn

Guillaume Dujat

Independent

Gōngàn is an eight channel piece exploring musical gestures found in field recordings over four different sonic places. Contrasting two rural (green) spaces against two urban (grey) spaces, Gōngàn extracts sounds and their spatial movement from our environment informing an electroacoustic soundscape composition. With heavy focus on the multichannel spatial image, this piece places the listener within a constantly changing and evolving space.

Intrinsic Connections

Leah Barclay

Griffith University

Intrinsic Connections explores the diversity and fragility of the Great Barrier Reef, one of the greatest natural wonders of the world. Composed of 3000 individual reefs and 600 tropical islands, the Great Barrier Reef is the largest coral ecosystem on the planet. The location is home to an incredible diversity of marine life ranging from billions of micro-organisms to some of the largest marine mammals on earth. The dire realities of climate change mean the ecological health of the reef is in rapid decline. This piece draws on environmental field recordings to reflect on the past, present and possible futures of this interconnected ecosystem.

Intrinsic Connections draws on source materials from *Sonic Reef*, an interdisciplinary research project designed as a call to action to protect the reef. The project draws on large databases of scientific recordings and showcases the value of sound in understanding ecosystem health. *Sonic Reef* launched at the 2017 World Science Festival in collaboration with the Queensland Conservatorium Research Centre, Australian Marine Conservation Society, JASCO Applied Sciences and a team of passionate artists, scientists and conservationists.

Saturday 1st July, 20.00-21.30: Concert 5 (Middleton Hall)

The Frequent Listener

Eric Leonardson

The School of the Art Institute of Chicago, USA

The Frequent Listener is performance collaboration with two local players using handheld transducers, piano, and fixed media audio. One of its aims is to engage audience in an experience of the HEARO loudspeaker orchestra as a particular sound making and listening process. The ability to amplify materials with contact microphones and coils are key to mapping the haptic and motoric of each player's body into acoustic space, while producing a diverse range of unusual sounds through the physical gestures and manipulations of its player. Projecting the typically inaudible vibrations of solid objects into space, as well as reversing this outward flow of vibration back into the transducers drives the resonating materials — the piano's tensioned strings and soundboard — in a way similar to

David Tudor's "Rain Forest." In this projections, bodies acoustically couple with the concert space while suggesting that music becomes environmental, i.e., present in an ecological relationship made both tactile and audible: a matter of cooperation and control between improvising players and their recycling sounds. However, the slippage in this tidy binary occurs through the presence and potential interference of pre-recorded audio behaving as a third player who may or may not listen.

Quelccaya

Daniel Llermaly

Medialambx, Mexico

Quelccaya is a sound performance in which field recordings and DIY synthesizers are combined to create a real-time composition. These recordings were obtained under the Sonic Melting project between 2014 and 2016 on the Quelccaya tropical glacier, the largest of its kind in the world, located in Cuzco, Peru. The recordings were made using conventional recording techniques and more experimental ones such as digital recorders, hydrophones and cassettes.

Sound devices used are oscillators, synthesizers, filters and other audio processors that have been part of the workshops held by the Medialabmx.

From the processing of these sources, atmospheres and sound landscapes are created that invite to the reflection on the effects of the climatic change in the communities that live in the Andean zone.

Meditations on a Landscape

Tom Williams

Coventry University, UK

Meditations on a Landscape is a song cycle for soprano, with live Max processing of the voice and a stereo fixed media. From the inception of the composition this has been a close collaborative project with the American soprano Juliana Yaffé who is based currently at Coventry.

The texts of these songs are from the poetry of PennyAnne Windsor. PennyAnne Windsor's volume *On the Edges of my Skirt* explore the poet's return to the land of her childhood, the Somerset Levels (South West England) reflecting on the land, waterscapes and the change of seasons. This is reclaimed land from the sea that has a natural tendency to flood.

These songs explore musically some of the images and qualities embedded in the poetry. The composition is a personal musical reflection upon the land and the singer's (poet's) relationship to it. The fixed media includes sounds recorded from the landscape electroacoustically transformed.

The titles of the three songs are as follows:

1. Bleak
2. Helter Skelter
3. Invitation

Sunday 2nd July, 20.00-21.30: Concert 6 (Middleton Hall)

Higgs Boson Confirmation

Ian Clothier

Independent

Higgs boson confirmation uses the Cambridge University image based on Large Hadron Collider data, confirming the Higgs Boson decaying into four muons. The central imagery of the video is the Cambridge data visualisation. The core sound track is an algorithmic audio analysis of the data image, using software by Nicolas Fournel.

The context of cosmology in an understanding of space and time, is shared by cultures globally. It is a context that is part of our daily existence and forms a layer of understanding of life in Hull. Cosmology in several cultures asks important questions about where we have come from, where we are now and

where we are going. We need science, the humanities, local and global culture to understand these questions.

The video is a collaboration across disciplines and cultures, that represents a determination to align creative production and scientific research. Along with the data analysis of the Cambridge image to produce sound, incorporated into the soundtrack are: Fast Radio Bursts from FRB 121102, sourced from Harvard's Dataverse (original publication Chatterjee et al); and the sound of background radiation from the Big Bang provided by John G Cramer. This is the world premier of the video/audio work.

Orford Ness

Nikki Sheth

University of Birmingham, UK

Orford Ness has been composed using recordings from a field recording trip to Orford Ness Nature Reserve in July 2016.

The site is of Special Scientific Interest with limited public access due to its history as an atomic weaponry testing site. During the trip we were given access to areas that would not normally be open to the public and spent three days recording in different locations around the Ness. Isolated by water, reachable only by boat, Europe's largest shingle spit is a place divided by the residual danger of the site's former use by the military and a fragile ecosystem.

The piece has been created using four recordings taken during my time exploring the hidden sounds on the Ness. Sounds have been transformed in the studio to create a multichannel immersive sound experience that sculpts sound through space whilst capturing the sonic identity of the place.

NameQuake

Simon Le Boggit

Independent

NameQuake expands upon work done by artist Ai Weiwei after he and thousands of bloggers collected the names of 5,196 children and young people who lost their lives during the Sichuan earthquake in 2008 - crushed inside collapsing school buildings of questionable construction quality. The intention was to pressure the Chinese government into acknowledging the possibility that the deaths may have been a product of corruption. In response, Ai Weiwei was incarcerated and discussion stifled.

Since his release, Ai Weiwei has created many artworks relating to the Sichuan earthquake and its aftermath - one incarnation involved him emphatically reading aloud the names of the 5,196 young victims. He later made this recording available for other artists to interpret.

Simon Le Boggit created NameQuake in order to demonstrate the magnitude of loss of life during the two minute duration of the Sichuan earthquake. By chopping Ai Weiwei's recording into sections of approximately two minutes length and then playing them all simultaneously, a cacophony of human voice cries out, with each utterance signalling yet another death. All of this is contextualised by a deep rumbling noise from a seismic recording of an earthquake - rarely have two minutes felt so long.

The Sichuan earthquake offers a stark warning: if necessary steps are not taken to minimise the impact of cataclysmic global events, then the general population of our planet will undoubtedly suffer dire consequences.

Beyond the Lakes

Brona Martin

Independent

Beyond the Lakes explores the inner sonic qualities and hidden sounds masked beneath the industrial soundscape of Workington, Cumbria. A new environment brings sounds that invade our listening space because they are new and unfamiliar such as the echoing screech of seagulls in Portland Square, a small cobbled square surrounded by concrete dwellings. The mourning call of the seagull and other birds also presents interesting sonic characteristics, almost a human-like cry.

This piece reflects a past soundscape that may have once witnessed historic events that occurred around Workington Hall, such as the arrival of Mary Queen of Scots as she fled from Scotland in 1568. This virtual soundworld weaves amongst present day soundscape recordings; the song of the blackbird, a family of ducks amongst the reeds and a dog frolicking in the river that flows around the hall.

While often some soundscape compositions highlight environmental concerns, for this work I chose to focus on the masked sonic worlds that exist in Workington. This piece was commissioned by The Octopus Collective as part of the Full of Noises Festival, 2015 with funding from the Women Make Music, PRS for Music Foundation.

SOUNDkitchen HEARplay

Annie Mahtani¹ & Iain Armstrong²

1) University of Birmingham, UK

2) Independent

SOUNDkitchen duo Armstrong and Mahtani perform a structured improvisation bringing the techniques and aesthetics of acousmatic music into a live performance situation. This performance has been developed specifically for the immersive HEARO system, which the duo will play, incorporating live spatialisation processes and techniques.

Flags 3

Tim Howle¹ & Nick Cope²

1) University of Kent, UK

2) Independent

The video consists of shots of Tibetan Buddhist prayer flags, strung across the path ('kora') on the mountain of Ganden Monastery. The flags form an image, that is not fixed yet has a predictable behaviour. A rope on which the flags are connected acts as a timeless fundamental. The musical elements are inspired by Cornelius Cardew's *Autumn '60 for orchestra*; where the sections of music have limited indeterminate relationships. The approach is free within prescribed limits. The exploitation of the inherent musicality of the images emphasises timelessness and continuity and location. The limited indeterminate musical material allows for phasing of patterns, resulting in harmonious and gestural relationships regardless of juxtaposition. The two musical lines suggested a range of subtle points of contact with the three lines of video. There is a limited aleatoric relationship between the lines producing elements of consonance and dissonance.

This piece of audio-visual art also utilises the two media in an equitable way. The principles of acousmatic music are extended to incorporate parallel ideas found in video art. The research seeks to establish an approach typified by the 'audio-visual contract' suggested by Chion (1994).

PAPER SCHEDULE

Thursday 29th June

Papers 1: 11.00 – 12.00

Larkin Lecture Theatre C (Chair: Moss Freed)

11.00 Sean Taylor & Michael Fernström - *Acouscenic Listening- a Sonically Engaged Collaborative Art Practice*

11.30 Rob Mackay & John Wedgwood Clarke – *Artists' talk: Above 8* (15 mins)

11.45 Dallas Simpson - *Binaural Environmental Performance – an Artist's Perspective* (15 mins)

Larkin Lecture Theatre D (Chair: Jez Riley French)

11.00 Morten Breinbjerg, Marie Højlund, Jonas R. Kirkegaard, Morten Riis - *The Overheard - an ecological approach to public sounding art*

11.30 Stuart Barker - *Experiencing Yosemite National Park: Sonic Identity, Place and Cultural Soundscapes*

Larkin Lecture Theatre E (Chair: Tony Boorer)

11.00 Matt Parker - *Vibrating the web: media infrastructures and the economy of noise*

11.30 Gen Doy - *Sites of Suffolk Songs*

Papers 2: 14.30 – 15.30

Larkin Lecture Theatre C (Chair: Tony Boorer)

14.30 Nasciuti - *Composing with spaces on the edge of noise: 'Domestic Green' – a case study*

15.00 Aguilar - *EL CIELO: Music inspired by the fauna from the biosphere reserve of Tamaulipas, Mexico.*

Larkin Lecture Theatre D (Chair: Tariq Emam)

14.30 Jono Gilmurray - *Ecological Sound Art: Steps Toward a New Field*

15.00 Marcus Leadley – *Creating Communities of Sound: Engagement, Composition and Interaction in Public Space.*

Larkin Lecture Theatre E (Chair: David Burraston)

14.30 Francis Stevens, Damian T. Murphy, Stephen L. Smith - *Soundscape auralisation and perception for environmental sound modelling*

15.00 Marcus Maeder - *Sounding Soil: Exploring an almost unknown soundscape.*

Keynote Presentation: 4.00 – 5.00

Middleton Hall

4.00 – 5.00 Chris Watson

Friday 30th June

Papers 3: 9.00 – 10.30

Larkin Lecture Theatre C (Chair: Jez Riley French)

9.00 Barnaby Spigel – *Creating healthy places through open space music-making: using street music, urban field-recording, sound-mapping and remixing as technologies of local place-making and civic health*

9.30 James Bulley – *Living Symphonies*

Larkin Lecture Theatre D (Chair: David Burraston)

9.00 Usue Ruiz Arana - *The Wild in Silence*

9.30 Alexandra Brown, Vanessa Tomlinson, Bruce Wolfe & Jocelyn Wolfe - *Shaping Spaces in Sound: Exploring the Language and Practice of Aural Architecture*

10.00 Garth Paine - *Acoustic Ecology 2.0*

Larkin Lecture Theatre E (Chair: Lee Tsang)

9.00 Stuart J. McLelland, Daniel R. Parsons & Stephen M. Simmons - *Echoes underwater: understanding geophysical flows using sound*

9.30 Louise Wilson, Jennifer Dodd, Anna Nousek-McGregor - *Using Soundscapes to Assess the Success of River Restoration*

Papers 4: 11.00 – 12.00

Larkin Lecture Theatre C (Chair: Lee Tsang)

11.00 Adam Stanović & Amanda Crawley Jackson - *Composing the Plastic City: a reflection on methods, motivations and meanings*

11.30 David Burraston – *Rainwire Processed* (15 mins)

11.45 Jason Singh – *Ebb and Flow: A PRS Commission* (15 mins)

Larkin Lecture Theatre D (Chair: Tariq Emam)

11.00 David Chesmore - *The Soundscapes of Nature Reserves – do they Impart a Sense of Nature?*

11.30 Peter Cusack - *The Favourite Sounds Project. After 19 Years*

Larkin Lecture Theatre E (Tony Boorer)

11.00 Sabine Feisst - *U.S.-Mexican Border Chords and Discords: Glenn Weyant's Anta Project*

Papers 5: 14.00 – 15.30

Larkin Lecture Theatre C (Chair: David Burraston)

14.00 Jamie Lawson - *Mapping urban spaces through listening exploration*

14.30 James A. Wyness - *if we do nothing, towards the creative sonification of climate change data*

15.00 Roxana Bakhshayesh Karam & Katerina Talianni - *Urban sound: recording, seeing and listening to the city using EEG headset*

Larkin Lecture Theatre D (Chair: Tony Boorer)

14.00 Sarah-Joy Maddeux & Stuart Bowditch - *What does Essex sound like? Capturing the changing sounds of an English county*

14.30 Jennifer C. Post - *Acoustic communities in Inner Asia: Sound, ecological knowledge and economic stability of mobile pastoralists*

15.00 Teddy Hunter (a.k.a. Jessica Myers) - *Can Soundscapes Be Seen As Music?*

Larkin Lecture Theatre E (Chair: Lee Tsang)

14.00 Alice Eldridge - *Ecospectralism: Experiments with methods for rapid, close, long-form listening*

14.30 Stefan Östersjö & Steinunn Stefánsdóttir - *Participation and creation: approaches towards an eco-systemic understanding of artistic practice*

15.00 Damian T. Murphy, Alex Southern, Francis Stevens - *Sounding out Smart Cities: Soundscape Design, Auralisation and Evaluation for our Urban Environment*

Keynote Presentation: 4.00 – 5.00

Middleton Hall

4.00 – 5.00 Leah Barclay

Saturday 1st July

Papers 6: 9.30 – 10.30

Larkin Lecture Theatre C (Chair: Rob Mackay)

9.30 Jessica Rodríguez & Rolando Rodríguez - *TUYUC: RETHINKING TUYUC* (15 mins)

9.45 Katrinem - *go your gait! artistic research about walking and listening* (15 mins)

10.00 Lauren Hayes - *Sounding Out Spaces: Site-Responsive Participatory Sonic Art*

Larkin Lecture Theatre D (Chair: Jez Riley French)

9.00 Vanessa Tomlinson - *Soundings: Making Sound in Place*

9.30 Carmen Rosas - *Binaural Recording System Validation and Sound Map of Malaga*

Larkin Lecture Theatre E (Chair: David Burraston)

9.00 Magz Hall - *Radio Art for the Environment, Radio Art Outside: Dissolving the technological footprint of mixed media sound installations*

Papers 7: 11.00 – 12.00

Larkin Lecture Theatre C (Chair: Rob Mackay)

11.00 Dante Francomano, Ben Gottesman, Taylor Broadhead, Bryan Pijanaowski - *Temporal Soundscape Dynamics in a Magellanic Penguin Colony in Tierra del Fuego*

11.30 Jez Riley French – Artist's talk: *The Height of the Reeds* (15 mins)

11.45 Tariq Emam – *Notes on the Yorkshire Soundscape Project* (15 mins)

Larkin Lecture Theatre D (Chair: Leah Barclay)

11.00 Maria Papadomanolaki, Dawn Scarfe, Grant Smith - *Live streaming remote locations: towards a real-time audio network across the UNESCO Biosphere Reserves*

11.30 Martha Otis - *The Chimp Does Acoustic Ecology: Frontiers on Which Art and Science Stand*

Larkin Lecture Theatre E (Chair: Alice Eldridge)

11.00 Laura Denning - *Developing a Hydrofeminist Art Practice – bodies, spaces, practices*

11.30 Mike Challis & Pamela Harling-Challis - *The Phenomenology of SoundHide*

Sunday 2nd July

Plenary Session: 10.00 – 11.00

Middleton Hall

Panel: Chris Watson, Leah Barclay, Alice Eldridge, Dave Burraston

Chair: Jez Riley French

INSTALLATION + WORKSHOP SCHEDULE

Thursday 29th June

Listening Room – Duality Studio (11.00 – 19.30)

- Esther Kiburi - *Waridi*
- Dr. Mark Pilkington – *Lamaload*
- Sarah Dew - *A Mermaid Off Scarborough*

Duality Live Floor (11.00 – 19.30)

James Wyness – *If We Do Nothing*

Ensemble Room 2 (11.00 – 19.30)

Dave Burraston – *Rainwire [Processed]*

Middleton Hall Foyer (11.00 – 19.30)

Mengtai Zhang, Pohao Chi – *Lightscape Project*

Middleton Hall Mixing Studio (11.00 – 19.30)

Dallas Simpson - *Sonication Mediation Intervention Invitation Recordings*

Middleton Hall Foyer (11.00 – 19.30)

Angeliki Diakrousi, Ivana Pinna - *My Way Home*

Friday 30th June

Listening Room – Duality Studio (11.00 – 18.30)

Katrinem – *Path Of Awareness*

Duality Live Floor (13.00 – 18.00)

Teresa Barrozo -
THIS TOO SHALL PAS(T)

Ensemble Room 2 (11.00 – 18.30)

Halla Steinunn Stefánsdóttir – *He (a) r*

Ensemble Room 1 (11.00 – 18.30)

andamio [Jessica Rodríguez, Rolando Rodríguez, Tonalli R. Nakamura, Alejandro Brianza, Guzmán Ziráte, Edison Vaca] - *TUYUC*

Middleton Hall Foyer (11.00 – 18.30)

Danny Bright - *Thrumming Halls*

Chapel (11.00 – 18.30)

Kira Belin - *Can you see a forest? Can you hear a moon?*

L215 (2nd floor Larkin Building) (13.40 – 16.00)

Harriet Wybor – PRS Drop-in Sessions

Saturday 1st July

Listening Room – Duality Studio (09.00 – 19.00)

- Cheryl Tipp - *Recording Nature*
- Huw McGregor - *Fall Walk*
- Anna Terzaroli - *Dark Path #6*
- James Bagshaw – *Outer Hebrides*
- Dr. Iain Findlay-Walsh - *XsdX/Chang ng*
- Ambrose Seddon - *Fleeting Strands*

Larkin Creative Learning Space (12.00 – 16.30)

Marcus Leadley & David Rogers – *Sounding...*
[Sign-up to perform on Eventbrite]

Duality Live Floor (11.00 – 19.00)

Mike Challis - *Soundhide*

Ensemble Room 2 (11.00 – 19.00)

Martin P Eccles - *4 Island Reels*

Chapel (11.00 – 19.00)

Emanuele Costantini - *Despite the effort all I can see is lines*

Middleton Hall Foyer (11.00 – 19.0)

Jamie Lawson - *Tape Jam*

Larkin Creative Learning Space (11.00 – 19.00)

Peter Cusack – *Favourite Sounds of Hull*

Hull City Centre [History Centre](11.00 – 19.00)

Jason Singh - *Ebb and Flow*

Hull City Centre [Zebedee's Yard](16.00 – 16.30)

Ray Lee – *Ring Out*

Hull City Centre [Maritime Museum & Ferens Gallery](10.00 – 16.30)

Mutiple artists including Rob Mackay & John Wedgwood Clarke – *Offshore: Artists Explore the Sea*

Hull City Centre [On the banks of the River Hull by *The Deep*](9.00 – ongoing)

Leah Barclay - *River Listening Sound Walk on the Echoes.xyz app*

Workshops:

Campus & Hull City Centre [Starting from Middleton Hall Foyer](14.45 – 15.30)

Stephen Chase – *Out-of-doors-suite*

Larkin Lecture Theatre D (14.45 – 15.45)

Maria Papadomanolaki – *A Certain Geography*

Hull City Centre [Starting from Middleton Hall Foyer] (14.45 – 17.30)

Katrinem – *Pause and Listen*

Sunday 2nd July

Listening Room – Duality Studio (10.00 – 15.00)

- Jo Langton - *High Torque*
- Dimitrios Savva – *Thalassa*

Middleton Hall Foyer (10.00 – 15.00)

- Philip Mill - *Audio Postcard from Zakopane, Poland*
- Lisa Hall – *Walking With Crickets*

CONCERT SCHEDULE

Thursday 29th June

Concert 1: 13.00 – 14.00 (Middleton Hall)

- Heather Ross - *Domestic Dawn Chorus*
- Samuel Pellman, Lauren Koss - *The Home Planet*
- Dr Peter Zinovieff, Katrina Porteous, Chris Hudson, Jonathan Sanderson – *SUN*

Concert 2: 20.00 – 21.30 (Middleton Hall)

- Emma Margetson - *A Jar Full of Eindhoven*
- Joseph Young - *Urbs Culturae*
- Tyler Lewis - *Land of Kings*
- David Monacchi - *The Vanishing Brain of Ecosystems (from Fragments of Extinction)*
- Jez Riley French – *Teleferica*

Friday 30th June

Concert 3: 18.30 – 19.30 (Middleton Hall)

- Tariq Emam - *WSP Archive*
- Annie Mahtani – *Aeolian*
- Matt Barnard – *Wocke (excerpt)*
- Rob Mackay – *Equanimity (fixed media version)*

Concert 4: 20.00 – 21.30 (Middleton Hall)

- Adam Stanovic - *Foundry Flux*
- Adrian Moore - *Inside and out...again*
- Nikos Stavropoulos - *Topophilia*
- Guillaume Dujat – *Gōngàn*
- Leah Barclay – *Intrinsic Connections*

Saturday 1st July

Concert 5: 13.15 – 14.15 (Middleton Hall)

- Eric Leonardson - *The Frequent Listener*
- Daniel Llermaly - *Quelccaya*
- Tom Williams with Soprano Juliana Janes Yaffé - *Meditations on a Landscape*

Sunday 2nd July

Concert 6: 13.00 – 14.00 (Middleton Hall)

- Ian Clothier – *Higgs Boson Confirmation*
- Nikki Sheth - *Orford Ness*
- Simon Le Boggit - *NameQuake*
- Brona Martin - *Beyond the Lakes*
- Annie Mahtani, Iain Armstrong - *SOUNDkitchen HEARplay*
- Tim Howle & Nick Cope – *Flags 3*

BIOGRAPHIES

Evaristo Aguilar

Autonomous University of Tamaulipas, Mexico

Dr. Evaristo Aguilar has developed musical works based on a contemporary perspective of the soundscape from the urban and rural areas of the Huasteca region in Mexico, collaborating with performers, composers, musicologists, poets, photographers, sculptors, dancers and visual artists from all over the world. He has taught and performed in China, Australia, Switzerland, Germany, France, Sweden, Austria, Poland, Italy, Spain, Croatia, Slovenia, England, Canada, United States, Peru, Argentina, Brazil, Chile, Uruguay, Cuba and Puerto Rico. He has published his work through the phonograms: *Sonidos de Tampico*, *Ritmos de la Huasteca*, *Voces de la Huasteca*, *Jazzteco*, *4 Miniaturas Huastecas*, *Xilitla: Stairway to the Sky*, *Tropico de Cancer*, *Mythological Creatures*, *El Cielo*, *Los Caballitos*, *Agua de varios rios*, *Improvis @ Stockholm*, *Semantico*, *Cuentos Huastecos*, *Swexican Music for Flute & Percussion*, *-37°*, *Sotano de las Golondrinas* and *Curanderos*. Evaristo obtained the degree of Doctor of Musical at the University of Salford in Manchester, UK. He is Director of Percussion Studies at the Universidad Autonoma de Tamaulipas in Tampico, Mexico.

Andamio

Andamio

Andamio is an ensemble where different artistic formations are found, with different formations, but where the line that integrates all the collaborations that are realized is the music, understood like experimental, electronic, codified, paisajista, by the fact that it is the rhythm who operates the entire assembly. The sound image has a rhythm that assembles with the non-narrative of the live or recorded reading of the image manipulated in vivo or pre-produced, of the textures that are added to each project as the smell, taste, movement, etc. On the other hand, part of the work that has been done during this last year has had as a base to try to systematically produce projects that have a cultural impact in the community, built on the realities and concerns that arise from a specific space, but that find an echo in the affinity of the common experience and the social symptomatology that is universal to all through workshops, facilities for children, talks, and research.

Usue Ruiz Arana

Newcastle University, UK

I am a landscape architect and PhD researcher at Newcastle University, UK. My PhD, realized through creative practice, explores the entangled nature_culture boundary through the senses. At a time when landscape architects' concerns extend beyond the realms of form, our design and presentation tools remain heavily visual. This PhD argues the need for a multisensorial approach to design to feel the landscape that we are trying to save and intervene on, question our relation with it and propose and accept a different aesthetic within the public realm.

Iain Armstrong

Independent

Iain Armstrong is a composer and sound designer based in Birmingham, UK. He is particularly interested in exploring the creative potential of recordings of the sound environment and encouraging people to engage in, and enjoy, the act of listening. His work is presented internationally and spans sound design for theatre and dance, electronic music, multi-channel sound installation, soundwalks and live electroacoustic performance. Recent sound design includes: 'Stories To Tell In The Middle Of The Night' by Francesca Millican-Slater, Birmingham Repertory Theatre (2017), 'Looking For John' by Tony Timberlake, Birmingham Repertory Theatre (2016); Humanhood's contemporary dance 'ZERO', mac birmingham (2016), REND Productions Howard Barker double bill of 'The Twelfth Battle of Isonzo' and 'Judith: A Parting From The Body', Arcola Theatre, London (2015). Iain's music is regularly selected for concerts, broadcasts and festivals in the UK and abroad including recent performances at Radiophrenia, Glasgow; BEAST, Birmingham; MUSLAB, Tamaulipas; New Adventures In Sound Art, Toronto; Klang! Electroacoustique, Montpellier and Sonorities Festival, Belfast. Iain is a co-director of SOUNDkitchen.

James Bagshaw

University of Hull, UK

I'm a Composer and Music Producer from Manchester, UK, currently studying PhD Music at the University of Hull. My areas of Composition and Production include Electroacoustic, Sound Design, and Contemporary Pop and Rock music. In 2014, I graduated from the University of Central Lancashire with an Undergraduate Degree in BA (Hons) Music Production. In 2015, I graduated from The University of Manchester with a Masters Degree in MusM Electroacoustic Composition.

Leah Barclay*Griffith University, Australia*

Dr Leah Barclay is an Australian sound artist, composer and researcher working at the intersection of art, science and technology. She specialises in electroacoustic music, acoustic ecology and emerging fields of biology exploring environmental patterns and changes through sound. Her work has been commissioned, performed and exhibited to wide acclaim across Australia, New Zealand, Canada, USA, Peru, Colombia, Europe, India, South Africa, China and Korea by organisations including UNESCO, Ear to the Earth, Streaming Museum, Al Gore's Climate Reality and the IUCN. She has been the recipient of numerous awards and has directed and curated interdisciplinary projects across the Asia-Pacific and USA. Leah composes complex sonic environments that draw attention to changing climates and fragile ecosystems. These works are realised through live performances, interactive installations and site-specific interventions drawing on environmental field recordings, data sonification, live streams and immersive sound diffusion. Recent examples include augmented reality sound walks exploring the cultural and biological diversity of river systems and Rainforest Listening, a virtual canopy that transforms iconic urban locations into the Amazon Rainforest. Rainforest Listening launched in Times Square for Climate Week NYC 2015 and was a featured cultural event for COP21 in Paris where each observatory platform of the Eiffel Tower was transformed into the four distinct layers of tropical rainforest vegetation through immersive soundscapes accessed through mobile phones. Leah's work is multi-platform in nature and involves long-term engagement with communities across the globe ranging from remote river systems in South India to pacific island communities in Vanuatu. She leads several large-scale research projects including Biosphere Soundscapes, an interdisciplinary venture exploring the changing soundscapes of UNESCO Biosphere Reserves across the world and River Listening, which examines the creative possibilities of aquatic bioacoustics in collaboration with the Australian Rivers Institute. Leah's diverse creative practice has resulted in a career where she works as a researcher, artist, consultant and educator with various organisations and institutions. These include designing immersive education programs for UNESCO, directing large-scale interdisciplinary research projects for major universities across Australia and the USA and facilitating partnerships between communities, NGOs and government to explore creative approaches to climate action. She regularly guest lectures for international universities including NYU, Brown University and The Art Institute of Chicago. Leah is the president of the Australian Forum for Acoustic Ecology, the vice-president of the World Forum of Acoustic Ecology and serves on the board of a range of arts and environmental organisations. She is currently a postdoctoral research fellow at the Queensland Conservatorium Research Centre where she is leading a portfolio of research exploring the value of acoustic ecology as a socially engaged, accessible, interdisciplinary field that can inspire communities across the world to listen to the environment.

Matt Barnard*University of Hull, UK*

Matthew Barnard is a lecturer and researcher primarily investigating the spatial parameter in recording, production and composition. Compositional interests include electronic, acousmatic and soundscape idioms.

Stuart Barker*University of Kent, UK*

Stuart is a third year Ph.D. candidate at the University of Kent. He has a BA and MA in American Studies from Kent. His Ph.D., *From Birdsong to Rotor Slap: Natural Soundscapes in the United States. Appreciation, Threats and Activism*, investigates interpretations of the evolving American soundscape in natural areas, specifically focusing on Grand Canyon, Yosemite and Rocky Mountain National Parks. Stuart teaches American history, the American West and American Studies at the University of Kent. He is a recipient of the University of Kent 50th Anniversary Scholarship in American Studies, the Christine and Ian Bolt Scholarship and the 2013 University of Kent American Studies Award for Best Degree Performance. His article, 'The Lost Sounds of Nature: The Growing Scarcity of Natural Sounds in the United States' will be published in the Spring edition of the *European Journal of American Culture*.

Teresa Barrozo*Independent*

Teresa Barrozo (b.1982, Manila) is a sound artist, composer and curious listener with a wide range of work for film, theatre and dance. Her compositions have been featured in the Asian Composers League Festivals in Japan and Thailand, and in the Asia-Pacific Weeks in Germany. Her film music works has been part of major international film festivals in Cannes, Venice, Toronto, Locarno and Berlin, to name a few. She was a recipient of the Ani ng Dangal Award from the National Commission

for Culture and the Arts (Philippines) and a fellow of the Asian Cultural Council (2014) in New York. Her fellowship focused on new music, sound art and design, performance, and contemporary sonic practices in listening, field recording, acoustic ecology, neuromusic, and electronic and computer music composition. Influenced by new practices in contemporary art, tradition in aural orchestration and storytelling in cinema and theatre, Barrozo's current sound work expands to various disciplines, often exploring and exposing new perspectives in listening culture. She is interested in the dialogue between sound and man while investigating man's relationship to itself and the environment.

Stuart Bowditch*Independent*

Stuart Bowditch's work is inspired by location and the people, experiences and artefacts he encounters there. He is particularly interested in sounds that are associated with place, overlooked and overheard noises of the everyday and highlighting the auditory as a defining factor in how we experience a particular environment. His recordings of people, their activities, experiences and environs have contributed to art installations, phone apps, archival records, musical compositions, a computer game, a eulogy and sound tracks to short films.

Morten Breinbjerg*Aarhus University, Denmark*

Morten Breinbjerg (1965) is Associate Professor at the School of Communication & Culture at Aarhus University and currently Head of Department at Digital Design & Information Studies. His research is in the field of audio design, software studies and interface aesthetics, carried out at the Centre for Participatory IT (<http://www.pit.au.dk>) and CAVI (<http://www.cavi.dk>). Morten Breinbjerg is the founder of the Audio Design program at Aarhus University.

Danny Bright*University of Sussex, UK*

Danny Bright is a composer, sound designer, recordist, and sonic manipulator working across the fields of music, performance, installation, theatre and media. His practice explores the boundaries between sound/music/noise and space/place/memory; he is currently developing multi-modal compositional, performance, critical and installation work investigating sonic temporalities and auditory 'ghostings'. Danny performs on guitar, samplescapes, tape, text/voice, and electronics as an ensemble member/leader, solo artist and improviser. Danny's work has appeared on Channel 4, at the Hatton Gallery, Brighton Digital Festival, V&A, Prague Quadrennial, Semaine des Arts at Paris 8, ICLI (International Conference on Live Interfaces), NYCEMF (New York City Electroacoustic Music Festival), The Global Composition, British Science Festival, and throughout the UK, Europe, Australia and the USA. Commissions and supporting organisations include: Catalyst Arts, Arts Council England, Heritage Lottery Fund, Dept. for Culture, Media and Sport, Brighton Digital Festival, Octopus Collective, MAGNA Trust, and the Arts and Humanities Research Council.

Taylor Broadhead*Purdue University, USA*

Taylor Broadhead is a first year Ph.D. student working under Dr. Bryan Pijanowski at the Purdue University Center for Global Soundscapes (CGS). She embraced her inherent curiosity of sound through music, which had always been intrinsic in her life and scientific career goals. After switching undergraduate majors from percussion and piano performance to biology, Taylor was an active participant of the University of Kansas (KU) McNair Scholar's Program, Initiative for Maximizing Student Diversity, and a researcher in the KU herpetology division of the Natural History Museum and Biodiversity Institute. She extended her research in frog bioacoustics to using sound as a component for community outreach targeting low-income, minority, and first-generation college students. At Purdue, Taylor is focused on using soundscapes to examine predator-prey dynamics, speciation, and evolution of acoustic signalling in caves.

Alexandra Brown*University of Sydney, Australia*

Dr. Alexandra Brown is an architect and a Postdoctoral Research Associate at The University of Sydney. She holds a PhD in architectural history and theory from The University of Queensland and her research concerns art-architecture relationships, architecture exhibitions and alternative architectural practices.

Gavin Bryars*Independent*

Gavin Bryars was born in Yorkshire in 1943. His first major work as a composer was *The Sinking of the Titanic* (1969) originally released on Brian Eno's Obscure label in 1975 and *Jesus' Blood Never Failed Me Yet* (1971), both famously released in new versions in the 1990s on Point Music label,

selling over a quarter of a million copies. He has composed prolifically for the theatre and dance as well as for the concert hall and has written four full-length operas. He is now working on a chamber opera based on Michael Ondaatje's *The Collected Works of Billy the Kid*, with director Jean Lacormerie in Lyon for the Theatre de la Croix-Rousse and the Theatre de la Renaissance. Among Gavin Bryars' other works are three string quartets and a great deal of chamber music, much of it for his own ensemble. He wrote a series of vocal works for The Hilliard Ensemble including *Glorious Hill* (1988), *Incipit Vita Nova* (1989), *Cadman Requiem* (1989, revised 1998) and *The First Book of Madrigals* (1998-2000) and since that time vocal music has been a major preoccupation. Since 2006 he has collaborated with Opera North Projects, initially with the Royal Shakespeare Company (RSC) on Shakespeare sonnets *Nothing like the Sun* (2007) and subsequently on *Mercy and Grand* (2007-8) – a project on the songs of Tom Waits and Kathleen Brennan. In 2017 he is working with Opera North Projects on *Winestead*, related to the small church in East Yorkshire where Andrew Marvell's father was vicar. Among the visual artists who have worked with Gavin Bryars' music are: Tim Head (on a live performance of *Jesus' Blood Never Failed Me Yet*), Bruce MacLean (collaboration on *Invention of Tradition*), James Hugonin (*The North Shore, From Mina Harker's Journal* and *The Island Chapel* were written for his exhibitions). Bill Culbert did an installation for a live performance of *The Sinking of the Titanic*. Among Gavin Bryars' numerous recordings are "Three Viennese Dancers", "After The Requiem", *The Black River* and "Vita Nova" on ECM New Series, "The Last Days" on Argo (1995), and "Jesus' Blood Never Failed Me Yet" (1993), "The Sinking of the Titanic" (1994), "Farewell to Philosophy" (1996), "A Man in a Room Gambling" (1997) and "Cadman Requiem" (1998) on Point Music. In 2000 he started his own label GB Records with an initial release of *Biped*. Gavin Bryars has lectured widely and was Associate Research Fellow at Dartington College of Arts from 2004-2008. He has an honorary doctorate from the University of Plymouth, he was awarded a Fellowship of Bath Spa University., and was awarded an honorary fellowship by Birmingham Conservatoire. He is a Regent of the Collège de 'Pataphysique, was awarded the Ordre de la Grande Gidouille, and has been made a Transcendent Satrap, the most elevated position in the Collège.

James Bulley

Goldsmiths, University of London, UK

James Bulley (b.1984) is an artist, researcher and composer whose work focuses upon exploring sound composition through installation, sculpture and spatial composition. Bulley is currently co-editing a forthcoming edition of *Leonardo Electronic Almanac* on Sound Art, and recently co-directed the 2014 conference *Sound Art Curating* at Goldsmiths, University of London where he is also a final year doctoral researcher and archivist at the Daphne Oram Archive. His artistic work has been shown and performed at venues including the Royal Festival Hall, Barbican Gallery, the Natural History Museum

and the Mykolas Žilinskas Art Gallery, and featured by the BBC, ITV, Nature, and the Guardian. In both 2013 and 2015 (with the artist Daniel Jones as artist duo Jones/Bulley) he was nominated for British Composer of the Year, and in 2014 toured the acclaimed forest-based sound installation *Living Symphonies* with Jones, commissioned by Sound and Music and Forestry Commission England.

David Burraston (Artist in Residence)

The Wired Lab

David Burraston is an award-winning artist/scientist working in the areas of technology and electronic music since the late 1970s. His experimental arts practice encompasses field recording, landscape-scale sound art, chaos/complexity, sound synthesis and electronic music. He performs, lectures, conducts workshops and creates art installations in Regional NSW and around the world. David also designs and builds sound synthesizers based on his theories of chaos/complexity. In 2014 he independently published the legendary SYROBONKERS!, the most technical and in-depth interview ever given by Aphex Twin.

Mike Challis

Independent

Dr. Mike Challis is a sound artist, maker and educator who utilises technology to enable sound composition in installations. His work increasingly includes the sounds of nature. Mike is a member of the Curiosity Collective. He also enjoys making work by walking, creating pieces from the resulting sound material collected.

Stephen Chase

Independent

Stephen Chase composes, improvises, and walks quite a lot. Most of his work explores aspects of interaction between people, between action and sound, between sound and space, between space and time. These overlapping obsessions are explored through scores, performance, installation,

improvisation and walking. He has collaborated variously with Exaudi, Quatuor Bozzini, Philip Thomas, Apartment House, Brevis Choir, Ensemble Zwischentöne, Music We'd Like to Hear, BBC Singers, Mick Beck, Ross Parfitt, edges, Damo Suzuki, murmuration, piggie and Freaking Glamorous Teapot. He has co-edited a book on the music of Christian Wolff, and runs the series 'mon se taire truc'.

David Chesmore*University of York, UK*

Dave Chesmore is a Senior Lecturer in the Department of Electronic Engineering at the University of York specialising in computational bioacoustics and automated species identification. He is also an entomologist and much of his research involves automated acoustic identification of insects for pest detection and management in horticulture and agriculture. His research extends to objective analysis of soundscapes for long term habitat monitoring. Dave is currently one of the Vice Presidents of the Institution of Agricultural Engineers.

Chi Po-Hao*Independent*

Chi Po-Hao (1989-) is a musician and sound artist from Taipei, Taiwan. He had worked in the mainstream label for several years as songwriter and producer. In 2015, he finished his master degree at Goldsmiths College, the University of London in Studio Composition. His primary medium is sound, principally involving but not limited to live electronic, electroacoustic composition and installation. In live performances, he usually applied self-made tools, m4l devices, and found objects that based on electronics, recycled items, and junk. He has been granted residencies at V2_Institute of Unstable Media, Rotterdam and Cité Internationale des Arts, Paris, and has toured around Taipei, London, Bangor, Manchester, Rotterdam, Paris, Beijing, Yinchuan, Lanzhou, Shenzhen, Hong Kong and Gijon.

John Wedgwood Clarke*University of Hull, UK*

Dr. John Wedgwood Clarke regularly collaborates on interdisciplinary projects and commissions with artists, curators and scientists. These have included a Leverhulme Trust Artist's Residency at the University of Hull, various Arts Council awards, and most recently a Calouste Gulbenkenian commission for Trinity Buoy Wharf. In 2016 he presented BBC4 documentary 'Books That Made Britain' and will be presenting a new documentary on Larkin and Photography for BBC4 in September 2017. His latest collection of poems, *Landfill* is published September 2017. His poems have appeared in *The Guardian*, *The New Statesman*, *Poetry Review*, *PN Review*, *Poetry Wales*, *Poetry Ireland*, *Oxford Poetry*, *Best British Poetry* and many other leading journals. In September he takes up the post of Lecturer in Creative Writing at the University of Exeter.

Ian Clothier*Independent*

Ian M Clothier is an artist, curator, Research Director at Intercreate Research Centre (intercreate.org); a part time Senior Academic at Western Institute of Technology Aotearoa New Zealand; founding Director of *Water, Peace Power*; co-founding Director of SCANZ (Solar Circuit Aotearoa New Zealand) with Trudy Lane, Adam Hyde and Nina Czegledy; and a former board member of ISEA International.

Emanuele Costantini*Independent*

I am a Sound Designer and Location Recordist involved in a wide areas of the media industry. I was born in Florence (Italy) in 1975 and lived there for a couple of decades. I was following my parents path becoming an electronic engineer. I was shocked at the age of 8 by listening to the album "very 'eavy... very 'umble" by Huriah Heep. Since then music became a strong part of my life and I became quite obsessed by the sound and how to reproduce it the better way possible. I was involved for a while in designing and building Speakers and Power Amplifiers, testing them at home shaking down neighbourhood walls and doors, while in the meantime I started playing and singing in several rock bands in the area. During that period I started the deep search of the inner myself: music, poetry and writing in general became my self expression. I ended up working, as expected, in my parents factory during the day, while the night was dedicated to work in recording studios and writing. I've been around Europe recording top level independent rock bands and editing literature magazines back home, and I ended up credited is several music albums and published my first book "Caccia Primaria". When I moved to Rome in 2000, I joined the film industry, worked on gazillions of TV shows and films, using my technical skills and tested abilities to record sound at top quality. At that point I started putting my creative mind towards building up soundscapes for moving images. It has a

been a long period of research, tests and finding the quiet side of my inner self, moving from loud recording studios to quiet spaces and locations. In 2007 I found myself in London where I discovered that Soundscaping is an active and blooming art and I ended up working on few art projects and many films and TV stuff as Sound Recordist and Designer. Very active in the Sound Art area, film and TV industry and whenever sound is needed. I am still working hard on broadcast TV shows, films and documentaries; still keeping my researches and tests going; still soundscaping but no more music playing; still writing but no more magazines to edit; still in touch with my parents but no more working with them; still travelling, for work and pleasure. My backpack is full of recorders, microphones and a nice still camera.

Nick Cope*Independent*

Nick Cope posts have included Associate Professor at the Dept of English, Culture and Communication at Xi'an Jiaotong_Liverpool University, Suzhou and Senior Lecturer in Video and New Media Production, University of Sunderland where he also completed a PhD. He Graduated in 1986 from Sheffield Hallam University and worked in film and video production with a particular emphasis on music and moving image work, collaborating with Cabaret Voltaire, the Butthole Surfers, O yuki Conjugate and Electribe 101 amongst others. More recent work has included projection work for public arts projects and installation collaborations.

Peter Cusack*CRiSAP, University of the Arts, London, UK*

Peter Cusack is a field recordist, musician and sound artist with a long interest in the sound environment and is based in Berlin and London. He is a research fellow in Sound Arts& Design and a member of CRiSAP (Creative Research into Sound Arts Practice) at the University of the Arts, London. In 1998 he started the Favourite Sounds Project that explores what people find positive about the soundscapes of the cities - London, Beijing, Chicago, Prague, Manchester and Berlin - where they live. His project Sounds From Dangerous Places (described as sonic journalism) investigates soundscapes at sites of major environmental damage including the Chernobyl exclusion zone, the Caspian Oil Fields, and, currently, the Aral Sea. During 2011/12 he was a DAAD artist-in-residence in Berlin and initiated the Berlin Sonic Places project to consider the relationship between soundscape and urban development.

Laura Denning*Bath Spa University, UK*

I trained as a painter and now use moving image, working with it as a painterly medium. I also work with sound, using aquatic field recordings to produce constructed sound pieces which I provisionally call sonic drawings. I am also working with augmented reality as a platform for multi-media interactions and geo narratives. Water is always present in my work, as a visual or sonic motif, as a point of reference or as raw material. I am particularly interested in site, data and sensation, and these three things drive the outcomes. I am currently nearing completion of a split screen short film with accompanying bilingual spoken word soundtrack which presents an exchange between the mainland, an island, and the ocean. I aim to be experimental in my use of media and this year will be exploring the creative potential of liquid circuitry, basic coding, beacons and VR (without seeking outcomes). Fringe Arts Bath: I have been selected as guest curator and am presenting at Cleveland Pools – the oldest lido in England. May 17. I am currently working as a commissioned artist on Daisy's Art Machina project to develop young people's digital arts practice using innovative digital media, enabling young people across Devon and Torbay to use contemporary digital creative techniques within their visual arts making. (10 days over 5 months). From January 2017 I start a 3 month residency in the town of Burry Port, Carmarthenshire. Working with teachers and students at Ysgol Glan Y Mor to develop digital creativity within the school, I will also produce a substantial new body of work relating to the tidal environment of the town. (20 days over 4 months). Recipient of the BSU Research Centre for Environmental Humanities inaugural PhD Studentship (2016-2019). My practice-led research asks - what are the parameters of an arts practice which seeks to articulate located subjectivities that can disrupt dominant discourses surrounding climate change? I produced work for Art, Language, Location (Cambridge October 2016). One was an installation at the Reisner Lab at Cambridge University. The other was an app-based expanded narrative, using locative media to tell the story of the city's water systems – natural and man-made. April 2016 I was commissioned by the Media Wall at Bath Spa University to produce a moving image piece entitled Submersive Testimonies, which explored the disconnect between policymakers and those on the sharp end of the effects of climate change (May 2016). I made contributions to Balance-Unbalance International Conference (May 2016), and Language Landscape and the Sublime at Schumacher College (June

2016) (all these explore sonic/bioacoustic relationships with space and subjectivity), Place Ecology & the Digital (University of Brighton Sept 16). From December 2015 to July 2016 I was Artist in Residence at Plymouth School of Creative Art. I undertook a month long residency at Arts Quarter Budapest (Nov 15) to harvest material for a new piece focussing on recreation at the various thermal baths in Budapest. (Hot Water) The Fringe Arts Bath screening of Hot Water formed part of an exhibition I guest-curated bringing UK and Hungarian artists together on the theme of **Liquid**. (All 2016). **Liquid** will be shown in Budapest in Feb 2017. This work was screened at Fringe Arts Bath, Language, Landscape and Sublime (Schumacher College), Journeys and Transmission at University of Plymouth, Place Ecology & the Digital (University of Brighton) and the Korean Biennale. I contributed to Plymouth Art Weekender 2016. Aquatic Traffic is a moving image piece which is also a live art performance. Wild Swimmers interacted with PLUTO, an underwater webcam in the Plymouth Sound. It was relayed live to the Big Screen in the city centre, plus the Big Screen on the side of Plymouth University. I also produced a sound piece for relay on the popular ferry crossing from Plymouth to Cornwall called Cremyll Ferry. A showcase of my sonic work was broadcast on Radio Revolten as part of the International Radio Art Festival, Germany, October 2016.

Sarah Dew

University of Hull, UK

From 1999: primary school teacher. I am now a freelance primary school music teacher: I teach class music as well as running school choirs and music clubs. Since 2012: in Scarborough I run the Stephen Joseph Theatre's Outreach Global Voices Choir (for adults). From 2014-2016 I lectured primary school teacher trainees in teaching music, at Hull University, Scarborough Campus. In 2016 I performed my poetry and original music as part of Poetry On Fire in Scarborough and Hull. I have a very long history of performing music in bands, particularly my band Raven (from 2005), for which I write/compose. We are currently working on our seventh CD. Presently I am also a student studying for Mmus at Hull University.

Angeliki Diakrousi

Independent

Angeliki Diakrousi finished her studies in Patras School of Architecture in 2015 (Greece) and she is interested in exploring and combining different tools and fields of art. She has realized participatory projects within the public realm with a variety of media and currently she is investigating the possibilities of sound to her work.

Gen Doy

Independent

Gen Doy is now Professor Emerita, formerly of De Montfort University. After a long career of teaching, research, and writing, she took early retirement from her job in 2010 and studied Fine Art full-time, gaining a Pg.Dip. and an M.A. (both with distinction). She was born in Scotland, of a Scottish mother from Campbeltown, Argyll, and a father from Lowestoft, Suffolk. She works across several media but is especially fond of field-recording and composing texts and songs for her own, and others', voices. She likes to respond to specific sites of cultural, social, and political interest, and to bring the past into the present. Her work has been exhibited in galleries, broadcast on radio, installed in historic sites, and performed live. She has two adult sons and she lives in London.

Guillaume Dujat

Independent

Guillaume Dujat (b.1993) is a sound artist & electroacoustic composer currently living in the UK (Manchester). His interests are in field recording, sound design & multichannel audio. A French national raised in Beijing, Guillaume is currently doing his phd at the University of Manchester.

Martin P. Eccles

Newcastle University, UK

My practice reflects the experience of my presence in and movement through natural environments. I use a range of methods (predominantly sound and text) to respond to the time, distance, place and space of the landscape. I graduated in Fine Art from Newcastle University in June 2016. Previous works include a suite of three works presented at Newcastle Mining Institute in October 2014 and a suite of four works presented at Berwick Watchtower Gallery in March 2016.

Alice Eldridge

University of Sussex, UK

Alice Eldridge is a cellist and research fellow in digital technologies at the University of Sussex. Her backgrounds in music, psychology, evolutionary and adaptive systems and computer science inspires and informs systemic sound-based research across ecology, technology and music. Current projects include ecoacoustics for biodiversity assessment, networked notation systems for ensemble music-

making and hybrid instrument building for improvisation. As a cellist and composer she has performed internationally, sharing stages, studios and other acoustic spaces with some of the Europe's most inventive musicians at the intersections of contemporary classical, folk, free improv, minimal pop and algorithmic musics.

Tariq Emam

University of Hull, UK

In his early work, Tariq's practice derived from artists' film and video, experimental music, and an angst-driven relationship with bureaucracy in higher education; the lifespan of his work didn't last long nor did it repeat itself. Tariq is now researching towards a PhD in Music by Composition; alongside academia he works as an A/V technician, collaborating with varieties of artists and organisations and performs in a variety of ways.

Katrin Emler (katrinem)

Independent

katrinem, born 1969 in Augsburg, lives and works in Linz (A) and Berlin (D). The examination of sound and space has long been an integral part of katrinem's artistic work. Comprehensive training in classical music (violin/viola) with constant performance practice (orchestra, ensemble) formed the broad early foundation that led to a specialization in spatial performances and new performance practices. For over 12 years, katrinem has been investigating the walkability of cities and its associated spatial perception. Gaits, walking rhythms and their imprints on public space were subject areas already being explored in her master's degree in composition. Two aspects of her current artistic research and process are emphasized: Observing a site (Platzstudien) and personally experiencing space while walking (SchuhzuGehör_path of awareness). For the project GANGARTEN (go your gait! part_6), katrinem received a grant from Linz Export and with gaits in albufeira (go your gait! part_13) was prizewinner of the competition, Europe – a sound panorama. katrinem is continually broadening, challenging and refining her individual approaches to the subject of sound and space through exchange and collaborations with artists and researchers. Of particular mention are: Dr. Peter Arlt, Sam Auinger, Prof. Dr. Gernot Böhme, Annea Lockwood, Bruce Odland, Prof. Dr. Holger Schulz, Penelope Wehrli.

Sabine Feisst

Arizona State University, USA

Sabine Feisst is Professor of Musicology and Senior Sustainability Scholar at Arizona State University's School of Music and Global Institute of Sustainability. Focusing on twentieth and twenty-first century music studies, she published the monographs *The Idea of 'Improvisation' in New Music* (Studio 1997) and *Schoenberg's New World: The American Years* (Oxford 2011 and 2017) which won the Lowens Award for the most outstanding book on American music in 2011. With Ethan Haimo she authored *Schoenberg's Early Correspondence* (Oxford 2016). Author of over 80 articles in anthologies, journals and reference works and US editor of *Contemporary Music Review*, she is currently writing a monograph on music inspired by the American Southwest, deserts, editing the *Oxford Handbook of Ecomusicology*, and is general editor with Denise Von Glahn for the *Music, Nature, Place* book series from Indiana University Press. With Garth Paine, she co-directs ASU's Acoustic Ecology Lab which includes such research streams as the Listen(n) Project and EcoRift.

Mikael Fernström

University of Limerick, Ireland

See Sean Taylor.

Iain Findlay-Walsh

Independent

Iain Findlay-Walsh is a sound artist and music producer who uses recording and production practices to research relationships between listening and environment. His pieces are developed as reflexive self-narratives, which range from multichannel soundscape works to idiosyncratic record releases, from public and online installations to audio-visual compositions. He has recently completed a practice-led PhD in composition at the University of Glasgow, titled *Sonic autoethnographies: six records of the listening self*, and has presented research across the UK and Europe and in the USA. His article on soundscape composition, *Sonic autoethnography: personal listening as compositional context*, will be published in a forthcoming edition of *Organised Sound* in 2018.

Dante Francomano

Purdue University, USA

Dante Francomano is a Ph.D. student advised by Dr. Bryan Pijanowski at Purdue University's Center for Global Soundscapes (CGS). His interest in soundscape ecology stems from a lifelong fascination with nature and ecological interactions as well as an academic interest in music. In his studies at

Middlebury College, Dante wrote his thesis was on African music performance in American colleges and universities, and he composed two extensive musical works. *Cetacean Citations*, one of his soundscape-inspired pieces, was premiered in 2015 aboard the world's oldest wooden whaling ship, the *Charles W. Morgan*. While he has worked in conjunction with the CGS on educational projects since 2014, his graduate studies at Purdue began in the fall of 2015. Since then, Dante has worked on strengthening his knowledge of ecology and his technical audio analysis skills. He has also been studying the art and science of long-term ecological field recording, and he has conducted fieldwork in various Indiana habitats, forests of the Great Smoky Mountains, prairies of Nebraska, a penguin colony and mountaintop in Tierra del Fuego, and La Selva Biological Station, Costa Rica.

Jez riley French*Independent*

Using intuitive composition, field recording, improvisation and photography, Jez has been exploring his enjoyment of and interest in detail, simplicity and his emotive response to places and situations for over 3 decades. Alongside performances, exhibitions, installations, JrF lectures and runs workshops around the world and his range of specialist microphones are widely used by recordists, sound artists, musicians, sound designers and cultural organisations. He also works as a curator of live events, a record label, of sound installations and an arts zine 'verdure engraved'. In recent years he has been working extensively on recordings of surfaces, spaces and situations and developing the concept of photographic scores and 'scores for listening', which have featured widely in publications and exhibitions. His work has been exhibited in shows and installations alongside that of Yoko Ono, David Bowie, Pauline Oliveros, Chris Watson, Alvin Lucier, Annea Lockwood, Ryuchi Sakamoto, Stars of the Lid, Jeremy Deller, Sarah Lucas, Brian Eno, Signe Liden, Sally Ann McIntyre etc, at galleries including The Whitworth Gallery (Manchester), Tate Modern and Tate Britain, MOT - Museum of Contemporary Art, Tokyo (Japan), Artisphere (USA). For the Hull, Capital of Culture year 2017 year in the UK, Jez has created a number of works including the installation of Icelandic recordings 'the sound of the world turning' for John Grant's North Atlantic Flux festival, and also collaborated with Jan Bang, Arve Henriksen, Eivind Aarset & Opera North on 'The Height of the Reeds', an installation based sound walk in the Humber Bridge. He has been described, in an interview with the British Library, as one of the most influential sound artists of his generation, not only for his own creative work but also for his expansion of extended field recording techniques and modes of listening into key elements of the sonic arts, film, tv, radio, architecture & the games industry.

Jono Gilmurray*CRiSAP, University of the Arts, London, UK*

Jono Gilmurray is a writer, researcher and composer, currently conducting AHRC-funded PhD research into ecology and environmentalism in contemporary sound art, based at CRiSAP (Creative Research into Sound Arts Practice) at the University of the Arts London. Both his academic research and his compositional work stem from a strong belief in the potential of sound art to facilitate a vital and fundamental reconnection between human beings and the natural ecosystems of which we are all an integral part, and upon which we all depend. Jono recently contributed the introductory chapter to a new book, *Environmental Sound Artists: In Their Own Words*, edited by Frederick Bianchi and VJ Manzo, and published by Oxford University Press.

Ben Gottestman*Purdue University, USA*

By combining traditional field methods with passive acoustic monitoring, I develop soundscape monitoring methods that are low-cost, efficient, and elucidating methods of characterizing ecosystem states and biodiversity. I also approach soundscape ecology from an artistic viewpoint, and create compositions and installations to make people connect to the natural world in a more emotional way.

Lisa Hall*CRiSAP, University of the Arts, London, UK*

Lisa Hall is a sound artist based in London exploring urban environments using audio interventions and performative actions. Interrupting behavior and questioning design, these works aim to make space for something new. Lisa has exhibited in and contributed to a wide range of arts events at; V&A Museum, BBC radio 4, Whitechapel Gallery, the Royal Academy, Folkestone Triennale, Lisbon Architecture Triennale, Whitstable Biennale and others. Lisa is a bicrophonic artist at The Bicrophonic Research Institute and research administrator at CRISAP, Creative Research into Sound Arts Practice, University of the Arts London.

Magz Hall*Canterbury Christ Church University, UK*

Sound and radio artist Magz Hall runs artist led group Radio Arts and is senior lecturer at Canterbury Christ Church University. Selected recent projects: *Dreamspace* Jerwood Visual Arts (2016), *Dream Vessels* (2016) V and A London, *Tree Radio* (2015) Yorkshire Sculpture Park, *Reclaim the Airwaves* (2015), Tate Britain, *Spiritual Radio* (2014) Whitechapel Gallery London, *Radio Mind* Deep Wireless Festival Toronto (2012), *Numbers* (2011) Illinois State University and Sidney Cooper Gallery, her sound work has been exhibited and broadcast internationally. *Tree Radio* was shortlisted for the BASCA sonic art prize 2016. Hall's work explores the artistic potential of radio and its use outside of conventional settings. She has produced a series of discreet radio art installations, broadcasts and actions since 2008 which consider alternative futures for the FM as an overarching theme. Within the framing device of a future, vacated FM spectrum used as speculative space within which to re-imagine the utopian potentiality of radio as revealed at its apparent point of obsolescence.

Pamela Harling-Challis*Independent*

Pamela Harling-Challis, M.F.A. is an artist, choreographer and educator. Dance and the dancing body forms/informs her work/play. Her current practice involves long exposure light photography, light boxes, dancing, making, film and installation. Pamela is a member of the Curiosity Collective.

Lauren Hayes*Arizona State University, USA*

Dr. Lauren Hayes is Assistant Professor of Sound Studies at Arizona State University, within the School of Arts, Media and Engineering. AME's mission is to provide groundbreaking research and education on experiential media that integrates computation and digital media with the physical human experience. She teaches courses on site-specific sound art, interdisciplinary improvisation with technology, and embodied and enactive approaches to performance environments. Her research focuses on site-specific performance, and the physicality of sound. She has designed various bespoke and personalised new digital instruments. She has also developed haptic technologies which offer novel and multi-sensory ways of experiencing artworks. In addition to regular international performance (NIME, ICMC, SEAMUS, Sonorities, fEAT, Norberg, Sound Thought, Dialogues Festival, etc.), she has worked with various groups including the elderly, people with profound and complex learning difficulties, and in 2014/15 she led over 200 workshops for 8-10 year olds involving sound, music, and technology. She was recently awarded a City of Tempe and ASU Partnership Grant to collaborate on site-responsive workshops and performances with community partners Free Arts for Abused Children in Arizona, and the Tempe Community Action Agency, which will explore the environmental characteristics of a community garden as a basis for collaborative sonic art performance.

Teddy Hunter*Independent*

Teddy Hunter's work focuses on the relationship between sound, architecture and environment. A combination of sound, film and photography are used throughout her practice to create audio-visual artworks and installations. Hunter is further exploring the relationship of sound and it's environment, sound ecology and is pushing how music and sound can contribute to the awareness of environmental issues to the public. Other projects include writing music for film and song writing.

Tim Howle*University of Kent, UK*

Tim Howle is Professor of Contemporary Music at the University of Kent. He has also worked at the Universities of Hull and Oxford Brookes. He read music at Keele University, studying under Roger Marsh and Mike Vaughan completing a doctorate in composition in 1999. His work centres on acousmatic music including pieces for tape, and also for performer and live electronics and pieces involving visual media. He work has been performed throughout the US, Asia and the EU.

Marie Højlund*Aarhus University, Denmark*

Marie Koldkjær Højlund (1979) is currently undertaking a PhD in Audio Design at Aarhus University, exploring a practice-based and ecological approach to sonic environments in hospitals. She also works as a sound artist and has exhibited sound art installations around Denmark including Kunsthall Aarhus, Kunsten Aalborg, Roskilde Museum for Samtidskunst and Spor Festival. As a composer under the alias Marybell Katastrophy she has received numerous grants and commissions, released several albums and played concerts and festivals around Europe.

Amanda Crawley Jackson*University of Sheffield, UK*

After graduating from the University of Nottingham, I worked in music events management before completing a PhD on the early works of Jean-Paul Sartre. I moved from Nottingham to Paris, where I taught at the École Normale supérieure (Cachan) before taking up the position of Lecturer in French, then Chair of European Languages and Cultures, at the University of Wales, Lampeter. During my time in Lampeter, I served on the federal University of Wales Modern Languages Subject Panel and the Executive Committee of the Society for French Studies (UK). In the years 1999-2001, I was the editor of *Current Research in French Studies*. I joined the Department of French at Sheffield in 2000.

Roxana Bakhshayesh Karam*University of Edinburgh, UK*

I was born on February 22, 1989, in Tehran, Iran. I received my bachelor's degree with distinction from Iran University of Science and Technology in 2011 and have been awarded enrolment in the Master course in Architecture and Technology in the same year. After I finished my postgraduate studies in 2014 in Iran, I applied for a PhD position in the University of Edinburgh under the supervision of Professor Richard Coyne and started my PhD course in October 2014. During my time in the university, I have evolved not only as a designer, but also as a researcher. My approach to architecture as a creative practice is both top-down and bottom-up. My main focus is contemporary architectural propositions and urbanism considering new technologies. I am keen on reviewing design processes and methodologies within the scope of speculative realism and biology/nature. I question the spatial articulation through the interdisciplinary knowledge of architecture, technology and biosemiotics. I started studying organic, grid shell structures in architecture for my Master's dissertation in Iran and have developed a design strategy for a multi complex metro station in west of Tehran. This was the beginning of my journey as an early career researcher at the University of Edinburgh. I have developed research in the area of biomimicry and big data practice in architecture during my first and second year in Edinburgh and also have been actively involved in research groups and teaching accordingly. I am currently in the third year of my PhD. Roxanakarama.com

Esther Wairimu Kiburi*University of Kent, UK*

Esther Wairimu Kiburi is a Kenyan-born composer, sound artist and currently a student at the University of Kent studying a masters in music composition. She holds an undergraduate degree in Popular Music from the University of Kent where Waridi was created and conceptualized. She got the opportunity to diffuse the musical work in an electroacoustic concert in honour of Denis Smalley's, who was in attendance, 70th Birthday Celebration using the MAAST System (a custom made portable and flexible 40 speaker sound diffusion system designed for the performance of electroacoustic music and research in spatial sound). Research interests: electroacoustic soundscape composition, psychoacoustics and the audiovisual correlation, multichannel composition, and spatial sound.

Jonas R. Kirkegaard*University College South Denmark, Denmark*

Jonas R. Kirkegaard (1982) is a Danish sound artist, composer and sound designer working in the field of interaction design, sound installations and multi channel composition. Changing lanes from studying nanoscience back in 2005 he now holds a masters degree in electronic music composition and has been doing sound installations, concerts and performances at Iceland Airwaves, Spot festival, National Gallery of Denmark, SPOR festival, Sonic Arts etc. He has a passion for prototyping, programming and hardware design based on low cost embedded platforms aimed at DIY'ers. These new design tools form the basis of many of his own artistic works but is also the platform for research and lecturing carried out in his employment at University College South Denmark. Here he is developing courses in multi channel composition, prototyping and interaction design aimed at sound designers at the department of Sonic College.

Lauren Koss*The Tides Institute & Museum of Art, USA*

Lauren Koss has found her home in Downeast Maine, working at The Tides Institute & Museum of Art, in the quirky and gorgeous city of Eastport, easternmost city in the U.S. Lauren's video works have been screened in Paris, South Carolina, Connecticut, New York City, Beijing, and Cologne, among other places.

Jamie Lawson*University of Aberdeen, UK*

Jamie Lawson is a PhD candidate in Sonic Arts and Electroacoustic Music at the University of Aberdeen. Jamie's research interests include soundscape composition, field recording, sound archiving, sonification, creative coding (Max/MSP) and automated compositional practices.

Marcus Leadley*Independent*

Dr. Marcus Leadley is an artist, musician and research whose practice engages with sound and environment. He has an MMus in Studio Based Composition and a PhD in Sonic Art, both from Goldsmiths, University of London.

Simon Le Boggit*Independent*

Simon Le Boggit is a multimedia artist living and working in Lincolnshire, UK. Simon is currently focussing on the creation of emotional algorithmic music which spontaneously generates moments of “apparent intentionality”, statistically distilled from pure non-sentient chaos. Any emergent melody, harmony and syncopation in his compositions are a product of chance, and the human brain’s compulsion to identify patterns. Simon’s algorithmic compositions have been performed live, and as acousmatic surround-sound recordings, at music and sonic art festivals in various parts of the world including London, Manchester, Edinburgh, Athens, Barcelona, Vancouver and New York. His ongoing ambition is to explore the possibilities of his compositions being played by soloists, ensembles and orchestras from the world’s vast array of musical cultures.

Ray Lee*Oxford Brookes University, UK*

Ray Lee is an award-winning sound artist and composer. He creates spinning, whirling, and pendulous sound installations and performances that explore “circles of ether,” the invisible forces that surround us.

His immersive and mesmerising works such as the world-wide hit *Siren*, *Ethometric Museum* and his monumental outdoor work *Chorus* aim to make contemporary music accessible and engaging for a wide audience. *Siren* toured the world with significant British Council support. *Ethometric Museum* won him the 2012 British Composer of the Year for Sonic Art. *Force Field* was awarded an honorary mention in the 2008 Prix Ars Electronica. He is a Professor of Sound Art at Oxford Brookes University. Ray is an associate artist of OCM (Oxford Contemporary Music).

Eric Leonardson*Midwest Society of Acoustic Ecology, USA*

Teaching artist, instrument inventor, acoustic ecologist, Executive Director of the World Listening Project, founder of Midwest Society for Acoustic Ecology, President of the World Forum for Acoustic Ecology, and Adjunct Associate Professor in Dept. of Sound at The School of the Art Institute of Chicago: Leonardson performs internationally engaging new audiences actively in art, science, and environment through creative collaborations, research, and technology. As a performer, composer, and sound designer, Leonardson created sound with the Chicago based physical theater company Plasticene (1995-2012). He performs internationally with the Springboard, a self-built instrument made in 1994 from re-cycled and readily available materials. Leonardson leads soundwalks and presentations on acoustic ecology, engaging and collaborating with artists, scientists, and a diverse, multi-generational public in sensing and design of acoustic environments. He co-edited *Ways of Listening, Figures of Thought: A Festschrift for R. Murray Schafer On the Occasion of His 80th Birthday* (2013) with Sabine Breitsameter, and is co-authoring an article now on the history of Chicago radio art with Lou Mallozzi. His recent writings appear in *The Journal of Radio and Audio Media*, *The Journal of Urban Cultural Studies*, and *The Conrad Grebel Review*, and *Leonardo Music Journal*.

Tyler Lewis*University of Aberdeen, UK*

Born in the United States, composer Tyler Lewis spent his childhood creating music. From beginning piano lessons at an early age to writing music for several Seattle-area bands, Lewis learned early-on to combine formal training with his own intuitiveness. In 2016 he received a BFA in Electroacoustic Composition from Concordia University in Montreal, Canada, during which time Lewis became more active in collaborative projects, using his skills as a composer and sound artist alongside filmmakers, visual artists, and other musicians. His composition practice is centered around making field recordings and finding the musicality in the natural soundscapes that surround us. His work has been presented in Canada, USA, Germany, Austria and Scotland. Tyler Lewis is currently based in Aberdeen working towards his PhD with Professor Pete Stollery.

Daniel Llermaly*PDI UNAM-Medialabmx*

Daniel Llermaly (Chile, 1981), Sound Engineer. Works with sound in its different manifestations, through participating in many projects both as musician or sound engineer. He has also collaborated in many community media projects related to sound art and open source technology. He has worked

independently giving workshops related to “electronic lutherie” and the use of technological tools applied to artistic projects. In this context he has presented his work in places such as “Museo de Arte Moderno de Sao Paulo”, “CCJ Sao Paulo”, “Festival Fábrica de Fallas” in Buenos Aires and Santiago or Centro de Cultura Digital in México City. As musician he has collaborated with many artist , including: Marcelo Armani (Brasil), Tomás Tello (Perú), Gilberto Esparza (México), Panetone (Brasil) or Constanza Piña (Chile). He is also co-founder of SUDEX, a platform for exchange and collaboration in different independent artistic projects around South América. He has organized the “Fábrica de Fallas” Festival (Santiago), co-organized the “Encuentro Internacional de Prácticas Sonoras: FRICCIONES” (January 2013, Santiago), he has also worked with sound landscapes producing the collective record “Ferias libres: música y paisajes sonoros” (Jacobino Discos, 2009). Currently he lives and works in Mexico City where he is studying a master in industrial design at the National Autonomous University of Mexico (UNAM), and he is part of the Medialabmx, a non-profit organization aimed to research the links between art, technology and social change.

Rob Mackay

University of Hull, UK

Rob Mackay is a composer, sound artist and performer. He is currently a Senior Lecturer in Music at the University of Hull. Recent projects have moved towards a cross-disciplinary approach, including geology, soundscape ecology, theatre, audiovisual installation work, and human-computer interaction. His work has been performed in 18 countries (including several performances on BBC Radio 3, BBC Radio 1 and Radio France), and a number of his pieces have received international awards (Bourges (1997 and 2001), EAR (1999), La Muse en Circuit (2007)). He has held composer residencies at Slovak Radio (Bratislava), La Muse en Circuit (Paris), the Tyrone Guthrie Arts Centre (Ireland), Habitación del Ruido (Mexico City), and CMMAS (Morelia). He is director of HEARO (Hull Electroacoustic Resonance Orchestra) and is editor for Interference, a journal of audio cultures. Several CDs and Vinyl are available including Rob’s Work. More information at robmackay.net.

Sarah-Joy Maddeaux

Essex Record Office, UK

Sarah-Joy Maddeaux is the Archivist / Project Officer working on the Heritage Lottery Funded project at the Essex Sound and Video Archive (Essex Record Office), *You Are Hear: sound and a sense of place*. As a relative newcomer to Essex, she is enjoying accompanying people on a journey to reappraise the county and what they value about it, through listening to sound recordings from its places and people. She is also enjoying the opportunity to work with sound archives, an often overlooked part of the nation’s documentary heritage. As a researcher at the ICST, Maeder is working on Data Sonification, Acoustic Ecology and artistic investigations of processes and phenomena that are related to environmental issues.

Marcus Maeder

Zurich University of the Arts, Switzerland

Marcus Maeder is a sound artist and composer of electronic music. As an author, Maeder has written on a number of topics in the fields of sound art and digital media. Maeder studied Fine Arts in Lucerne/Switzerland and Philosophy in Hagen/Germany and is currently pursuing his Ph.D. in Environmental Systems Sciences at ETH Zurich. Maeder runs the music label domizil, which he co-founded in 1996 with Bernd Schurer. He has worked as an editor and producer for the Swiss radio station SRF and has been working as a curator and research associate at the Institute for Computer Music and Sound Technology (ICST) of the Zurich University of the Arts since 2005. Maeder also works since 2016 as research assistant at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL.

Annie Mahtani

University of Birmingham, UK

Annie Mahtani is a composer and sound artist working and living in Birmingham. After completing her doctoral studies in composition in 2008 she has worked as a freelance composer, performer, curator and educator. As a composer, Annie has collaborated with dance and theatre and worked on a number of site-specific installations. Her work has been performed extensively in concerts, conferences and festivals internationally. Annie is a lecturer in Electroacoustic composition at The University of Birmingham. She is also co-director of SOUNDkitchen, a Birmingham based organisation which she founded in 2010, dedicated to promoting local sound artists and composers.

Emma Margetson

University of Birmingham, UK

Emma Margetson (1993) is a composer of acousmatic music based in Birmingham and has had works performed across the UK and abroad. Emma is currently studying for a PhD in Electroacoustic

Composition at the University of Birmingham under the supervision of Annie Mahtani, Scott Wilson and Leigh Landy (DMU) funded by the AHRC Midlands3Cities Doctoral Training Partnership. This follows an MA Music in Electroacoustic composition/sonic art pathway (2015); and BMus with honours (2014) from the University of Birmingham. Here she also acts as an assistant for BEAST.

Brona Martin*Independent*

Brona Martin is an Electroacoustic composer and sound artist from Banagher, Co. Offaly, Ireland currently based in Ely, Cambridge. Brona completed a PhD in Electroacoustic Composition under the supervision of Professor David Berezan at NOVARS Research Centre, University of Manchester. Her research interests include narrative in Electroacoustic music, soundscape composition, acoustic ecology and spatialisation. Her acousmatic works composed in stereo, 5.1 and 8-channel have included the creative exploration of soundscapes from Ireland, Manchester, East Coast Australia, Spain and Germany and Cumbria. Her works have been performed internationally in the USA, Canada, Australia, Europe and Asia.

Vic McEwan*Independent*

Vic McEwan is the Artistic Director, of The Cad Factory, an artist led organisation creating an international program of new, immersive and experimental work guided by authentic exchange, ethical principles, people and place. He explores experimental and contemporary arts practice in partnership with diverse community sectors. Vic's practice involves working with sound, video, installation and performance with a particular interest in site-specific work. He is interested in creating new dynamics by working with diverse partners and exploring difficult themes within the lived experience of communities and localities. Vic aims to use his work to contribute to and enrich broader conversations about the role that the arts sector can play within our communities. He sits on the Inaugural NSW/ACT Arts/Health State Leadership Group. Vic is interested in the development of new sound processes in order to extract site specific compositions from people's lived experience and from place. He has created a number of past projects working with communities recovering from trauma and uses contemporary arts practice to aide this journey. Vic was the 2015 Artist in Residence at the National Museum of Australia and the recipient of the Inaugural Arts NSW Regional Fellowship 2014/16.

Huw McGregor*Independent*

Huw McGregor (b'76) studied performance and composition at the Welsh Collage of Music and Drama, and then went on to further his studies with an MA for music for film and recording and editing at Bangor University North Wales. An accomplished 'cellist and competition performer, he was presented with the Grace Williams Memorial Award for composition and performs his works internationally. Huw taught Music Technology at Yale College in Wrexham, North Wales where he specialized in performance and composition, he now wishes to continue his studies in Soundscapes and Electroacoustic composition.

Stuart McLelland*University of Hull, UK*

Stuart is the Head of Geography in the School of Environmental Sciences at the University of Hull. His research interests are in the measurement and physical modelling of flow processes and sediment transport dynamics in river channels. He is particularly interested in the development and application of new techniques for measuring flow and sediment transport dynamics and their application to understanding coherent flow structures.

Philip Mill*Chelsea College of Art, UK*

Philip Mill is a musician and field recordist currently working and living in London, has recently performed at the Cricoteka in Krakow as part of the Polifonie 2016 event series 2016 and created work as part of the Art Language Location exhibition in Cambridge.

David Monacchi*Conservatorio di Pesaro, Italy*

David Monacchi (Italy, 1970) is a researcher, soundscape recordist and eco-acoustic composer. He has been developing his multidisciplinary project Fragments of Extinction for nearly 15 years, conducting field research in the world's last remaining areas of primary equatorial rainforest. The recipient of multiple international awards, Monacchi is pioneering a new compositional approach based on 3D soundscape recordings of undisturbed ecosystems to foster discourse on the

biodiversity crisis through music and sound-art installations. A Fulbright fellow at UC-Berkeley, he has taught at the University of Macerata since 2000 and is now professor of Electroacoustics at the Conservatorio of Pesaro. He has worked for 25 years in interdisciplinary contexts mainly in Europe and North America and produced works for contemporary music, art installation, cinema, video-art, site specific public art. He holds an international patent and is founding member of several scientific and artistic networks.

Adrian Moore

University of Sheffield, UK

Adrian Moore is a composer of electroacoustic music. He directs the University of Sheffield Sound Studios (USSS) where researchers and composers collaborate on new musical projects. Adrian Moore's research interests are focused towards the development of the acousmatic tradition in electroacoustic music and the performance of electroacoustic music. His music has been commissioned by the GRM, Bourges (IMEB) and the Arts Council of England. A significant proportion of his music is available on 4 discs, 'Traces', 'Rêve de l'aube', 'Contrechamps' and 'Sequences et Tropes' on the Empreintes DIGITALes label.

Damian T. Murphy

University of York, UK

Dr. Damian Murphy is Reader in Audio and Music Technology, Department of Electronics, University of York, where he has been a member of academic staff since 2000, and the University Research Champion for Creativity. His research focuses on virtual acoustics, spatial audio, physical modelling, and audio signal processing. He has been principal investigator on a number of related AHRC and EPSRC funded projects relating to room acoustics simulation and auralisation, and published over 100 journal articles, conference papers and books in the area. He is a member of the Audio Engineering Society, a Fellow of the Higher Education Academy, and a visiting lecturer to the Department of Speech, Music and Hearing at KTH, Stockholm, where he specialises in spatial audio and acoustics. He has also held visiting researcher status at a number of universities internationally. Dr. Murphy is an active sound artist and in 2004 was appointed as one of the UK's first AHRC/ACE Arts and Science Research Fellows, investigating the compositional and aesthetic aspects of sound spatialisation, acoustic modelling techniques and the acoustics of heritage spaces. His work has been presented in galleries nationally and at festivals and venues internationally and included varied collaborations with writers, photographers, interactive digital artists. He is a founding member of Geodesic Arts through which most of his more recent work has been produced.

Luca Nasciuti

University of Aberdeen, UK

Luca is a maker. Field recordings are his main source material and he combines different disciplines to draw stories, ideas and reflections on the environment we inhabit. He trained in classical music and visual art in Italy. He moved to London in 2006 and studied towards a BA(Hons) in Music and Performing Arts at the University of East London. He completed a MMus in Studio Composition at Goldsmiths College in 2012. He is now a PhD candidate in Musical Composition at the University of Aberdeen.

Stefan Östersjö

Independent

Stefan Östersjö is a leading classical guitarist specialized in the performance of contemporary music. Since his debut CD (Swedish Grammy in 1997) he has released 20 CDs and toured Europe, the US and Asia. He has been part of numerous collaborations with composers, but also in the creation of works involving choreography, film, video, performance art and music theatre. Since 2006 he has been developing inter-cultural artistic practices with the Vietnamese/Swedish group The Six Tones as a platform. As a soloist he has cooperated with conductors such as Lothar Zagrosek, Peter Eötvös, Pierre André Valade, Mario Venzago and Andrew Manze. He became a research fellow at the Orpheus Institute in Gent in 2009 and is associate professor of artistic research in music at the Malmö Academy of Music. *'Decades ago the Sugarcubes proved to the rest of the world that Icelandic rock was its own original creation -now Nordic Affect promises to do the same for the country's new-music community.'* - *The Chicago Reader*

Martha Otis

University of Miami, USA

Martha Otis is a poet and novelist living in Miami, Florida. Her fiction has been recognized with several awards. Her work has been published in anthologies, magazines, and literary reviews in the United States and abroad, and has been translated into Spanish and Italian. *Apollonia in Etrus*, her first novel, is in search of a publisher.

Garth Paine*Arizona State University, USA*

Garth Paine is a professor of Digital Sound and Interactive Media at the School of Arts Media and Engineering and Digital Culture program at Arizona State University where he also directs the Acoustic Ecology Lab. His passion for sound as an exhibitable object has given rise to interactive environments where the sonic landscape is generated through gesture, presence and behavior and several music scores for dance works using realtime video tracking and bio-sensing and musical compositions that have been performed in Australia, Europe, Japan, USA, South America, Hong Kong and New Zealand and in 2014, Korea, Macedonia, France, UK. His work in new interfaces for musical performance led to his Keynote presentation at NIME2016.

Maria Papadomanolaki*University of Brighton, UK*

SoundCamp work with sound and place, particularly with live audio streams that connect local and remote acoustic and ecological settings in real time. We organise the annual SoundCamp outdoor listening events and produce the 24 hour live daybreak broadcast: Reveil – both on International Dawn Chorus Day each year in May. This project has developed in close association with Wave Farm, Stave Hill Ecological Park, Cyberforest and others. Locus Sonus, in particular, have been key partners and pioneers in hosting, developing and supporting the live audio field.

Matt Parker*CRiSAP, University of the Arts, London, UK*

Matt Parker (b. 1984) is an audiovisual composer and sound artist working with and producing archives that amplify hidden connections between every-day technology and the environment. His work is influenced by the sonosphere, unsound, ecology, the economy of noise, infrastructure studies and the internet. He has a Masters in Music Technology from Birmingham Conservatoire, is the winner of the Deutsche Bank Creative Prize in Music 2014, winner of New Art West Midlands 2016, was shortlisted for the Aesthetica International Art Prize 2015 and was artist in residence at Bletchley Park in 2015. He is the co-director of media infrastructural investigative collective The People's Cloud.¹ Matt is currently a PhD research student within Creative Research into Sound Art Practice (CRiSAP) at University of the Arts London. 1) <http://www.thepeoplescloud.org/>

Clive Parkinson*Manchester Metropolitan University, UK*

Clive Parkinson is the director of Arts for Health. Based at Manchester Metropolitan University, it is the longest established research and development unit of its sort. Clive is a passionate advocate for culture and the arts and is constantly striving to further understand the potential relationship between the arts and public health. He is a founding member of the National Alliance for Arts, Health and Wellbeing, which recently established an All Party Parliamentary Group for Arts, Health and Wellbeing. He is currently a co-investigator on the Dementia & Imagination project in the UK, which is exploring the links between the visual arts, wellbeing and sense of community. Heavily involved in arts and health development work in Italy, France, Lithuania and Turkey, he has recently been working with people in recovery from substance addiction to develop a Recoverist Manifesto. Inequalities and social justice are central to his thinking and his current research scrutinizes the art sectors slavish adherence to reductive methods of understanding its own value. Clive regularly blogs at: <http://artsforhealthmmu.blogspot.co.uk/>

Daniel Parsons*University of Hull, UK*

Dan is Director of the Energy and Environment Institute and holds a Personal Chair as Professor in Process Sedimentology. He is actively researching in several areas related to fluvial, estuarine, coastal and deep marine sedimentology. His research focuses on the interaction between fluid flows and mobile sediment, using a process based approach that combines fieldwork, laboratory experimentation and numerical modelling.

Samuel Pellman*Independent*

Samuel Pellman has been creating electro-acoustic and microtonal music for nearly four decades. Many of his works can be heard on recordings by the Musical Heritage Society, Move Records, innova recordings, and Ravello Records. Recently his music has been presented at festivals and conferences in Melbourne, Paris, Basel, Vienna, Montreal, New York City, Beijing, Capetown, Buenos Aires, Taiwan, Perth, and Prague. He is also the author of *An Introduction to the Creation of Electroacoustic Music*, a widely-used textbook. He teaches music theory and composition at Hamilton

College, in Clinton, NY, and is co-director of its Studio for Transmedia Arts and Related Studies (STARS). Further information about his music can be found at www.musicfromspace.com.

Bryan Pijanowski

Purdue University, USA

I am a Professor of Ecology at Purdue University, which is a large public university located in West Lafayette, Indiana. I am Principal Investigator for the NSF RCN (Research Coordination Network) Global Sustainable Soundscapes Network (GSSN) and the NSF AISL (Advancing Informal Learning STEM) project called Global Soundscapes! Big Data, Big Screens, Open Areas Projects. This workshop brings together people from both projects in hopes of providing some unique cross-fertilization of research and education on the topic of soundscapes. I grew up in Michigan and spent a lot of my summers outdoors enjoying splendid natural resources of this great state. My work in soundscape ecology started over 10 years ago when I purchased my first automated recording sensors and placed them in various habitats around the Purdue University campus and analyzed them for patterns related to ecosystem health. Much of this work was inspired by the early work of Stuart Gage (my postdoc advisor) and others in the non-academic world. My students and I have now conducted soundscapes work in the temperate forests, the desert, the tropics and how in estuarine ecosystems and have gained a lot of knowledge about soundscape dynamics and composition in different ecosystems. We have also recently embarked on new informal learning projects, designed to teach youth, adults and those that are visually impaired, about the science and technologies supporting the field of soundscape ecology. Much of this informal education work is based on multi-media learning, combining the visual, audio, and tactile information outside of the formal educational spaces (online, outdoor camps, field exercises).

Ivana Pinna

Independent

IVANA PINNA. Italian, based in Barcelona. The 'movement', the 'curiosity to learn', the interaction with different culture and other people, her polyhedral activities are element that characterized her art. She likes to explore and to work with different medium (painting, sculpture, performances, space, sound, etc). At the moment she is studying at the "Teatro de los Sentidos" (Theater of the Senses) in Barcelona, exploring a new ways of perceiving the space by building "labyrinths" for intensify the sounds, smell, touch, taste perception. <http://ivanaprojects.com/>.

Katrina Porteous

Independent

Katrina Porteous is a Northumberland-based poet working at the intersection of language, sound and environment. She is best-known for her innovative radio poems, with many productions for BBC Radio 3 and 4, including two landscape-based sound-pieces for Radio 3's *Between the Ears* with producer Julian May, *The Listeners* with Chris Watson, and most recently *Conversations on a Bench*, (Radio 4, October 2016). She has previously worked with composer Peter Zinovieff on *Horse*, an exploration of the landscape, geology and history of the Uffington White Horse (BBC Radio 3 and Sage Gateshead 2011), and on three science-based pieces for Life planetarium, Newcastle, including *Edge* (Radio 4, *Poetry Please Special* 2013) and *Field* (2015). Katrina was Northumberland correspondent for Common Ground's *England in Particular* project, and is an ambassador for the environmental arts organisation New Networks for Nature. Her latest book, *Two Countries* (Bloodaxe 2014) was shortlisted for the Portico Prize for Literature 2015.

Jennifer C. Post

University of Arizona, USA

Jennifer C. Post is currently Lecturer at University of Arizona School of Music and Senior Honorary Research Fellow at University of Western Australia. Her fieldwork in western Mongolia with Kazakh mobile pastoralists focuses on the impact of social, economic and ecological change on musical production. Recent and forthcoming publications include articles on Mongolian Kazakh music in the journals *Ethnomusicology Forum* (2007) and *Yearbook for Traditional Music* (2014), in the edited collection *Current Directions in Ecomusicology* (A. Allen and K. Dawe, eds., Routledge, 2015), in *Music and Sustainable Cultures* (T. Cooley, ed., University of Illinois Press, 2017). Her forthcoming edited collection *Ethnomusicology: A Contemporary Reader Volume Two* includes an article on Kazakh music (Routledge Press, 2017), and a forthcoming monograph *Wood, Skin and Bone: Musical Instrument Production and Challenges to Local and Global Ecosystems*, features case studies on Mongolian and Central Asian musical instrument production (University of Illinois Press, 2017).

Morten Riis*Aarhus University, Denmark*

Morten Riis (1980) holds a PhD degree from Aarhus University and is educated in electronic music composition from the Royal Academy of Music, Aarhus. He currently holds a post doc position at Aarhus University, and was director of electronic music composition at the Royal Academy of Music 2013-2014. Besides his academic work he is a very active sound artist having received numerous grants and commissions, released several albums, played numerous concerts and exhibited sound installations in Denmark, Sweden, England, France, Poland, Finland, Germany and China.

David Rogers*Independent*

David Rogers' creative practice includes installation, combining 3D construction, performance and screen based work, single screen, projections, multiple screen works and audio, ranging from soundscapes to compositional sound. He is a co-director of DIVA Contemporary Ltd, a Dorset-based artist led organisation.

Jessica Rodríguez*Independent*

Mexico. Visual composer and researcher. She has a Master in Arts with a wide work on musical/visual with the new technologies research. She is co-founder of andamio, a collaboration platform where she developed performances, educational projects and research papers. Her practical work has focused in the collaboration with composer to produce audiovisual projects.

Rolando Rodríguez*National Autonomous University of Mexico, Mexico*

Mexico. Currently a PhD student in Arts at UNAM, his work focuses on the exploration of three elements: image, text and sound. It has research and production projects that use analog and digital technologies as tools to explore expanded possibilities through text.

Carmen Rosas*University of Malaga, Spain*

Carmen Rosas. BEng (Hons) Telecommunications. MEng Acoustical Engineering. With an engineer background but passionate about soundscapes and acoustic ecology, she wanted to combine these disciplines on her Master's final project and introduce a different environmental perspective of sound to the studied subjects. She has promoted several activities related to acoustics and sound, like scientific experiences on the European Researchers' Night and listening workshops for children on the first contribution from Spain to La Semaine du Son (UNESCO), and has participated in the IV International Meeting of Researchers on Digital Art History, where her talk about the importance of listening and preserving sound heritage concluded in a very interesting and enthusiastic discussion.

Heather Ross*University of Central Lancashire, UK*

Heather Ross, b1983, Scotland. Lives in London and work as a Lecturer in MA Fine Art, The University of Central Lancashire, Preston and as a Visiting Practitioner, Chelsea College of Art, London. Previous to this, Heather taught on the BA Painting programme at Grays School of Art in Aberdeen (2007-12) Heather Ross graduated with an MA Fine Art, from Chelsea College of Art, London, in 2013. **Current projects include:** Working in conjunction with UCLan and The Merz Barn/Littoral Arts Trust, Cumbria, on a project entitled, *All The Better to Hear You With* - a project exploring sound and language in relation to Kurt Schwitters' writing and Stefan Themerson's book, 'Kurt Schwitters in England,' through the re-activation of Gwyneth Alban Davies' letterpress, currently housed at Merz Barn. **Previous projects include:** *Entartete Kunst*, 2016(speaker); *Works For Air*, 2016 (curated by Rob Mullender) Hanover Project, Preston; *One Minute Volume 9*, 2016 (touring-curated by Kerry Baldry); *FSP* (Film/Sound/Performance) EAVI Nights, 2016, The Brunel Museum, London; *Concrete Gestures*, 2015, The Brunel Museum, London; *Sonica Talks*, 'Creating Sound in Context' (facilitator and speaker)The Lighthouse, Glasgow. **Some selected awards include:** The Dewar Arts Award (2012), The VAS Charitable Trust Award (2012), The Alistair Salvesen Scholarship to Japan (2010), The Shell Premier Award (2009), The RSA John Kinross Scholarship to Florence (2005) and The RSA Guthrie Award for Painting (2005 and 2006).

Dimitrios Savva*Independent*

Dimitrios Savva was born in Cyprus, 1987. He received his Bachelor degree (distinction) in music composition from the Ionian University of Corfu and his Master degree (distinction) in Electroacoustic composition from the University of Manchester. In January 2015 he started his PhD in Sheffield University under the supervision of Adrian Moore and Adam Stanovic. During his studies he had

contemporary composition courses with Joseph Papadatos and Dimitra Trypani and electroacoustic composition courses with Andreas Mniestris, Theodore Lotis and David Berezan. He has attended to electroacoustic composition seminars with Steven Miller, Leigh Landy, Tim Ward, Andrew Bentley and Simon Emmerson. He has also participated in live electronic concerts with the EPHMME student ensemble. His compositions have been performed in Greece, Cyprus, United Kingdom, Germany, Italy, Belgium, France, Mexico, Chile Brazil and USA. His acousmatic composition Erevos won the first prize ex aequo in the student category of acousmatic composition competition Metamorphoses 2012 and his composition Balloon Theories has been awarded with the public prize at the composition competition Metamorphoses 2014.

Dawn Scarfe*SoundCamp*

See Maria Papadomanolaki.

Ambrose Seddon*Bournemouth University, UK*

Ambrose Seddon is an electroacoustic composer whose outputs include acousmatic music, live electronic music, and multichannel sound installation. His work has been performed internationally in concert and on radio, and has received competition prizes and special mentions. Ambrose's research interests include compositional structuring processes, form in electroacoustic music, and the analysis of electroacoustic music. With a background in electronica and experimental pop music, he continually strives to integrate new and varied approaches into his compositional language. Ambrose is Lecturer in Music and Audio Technology at Bournemouth University, UK.

Nikki Sheth*University of Birmingham*

Nikki Sheth is an Electroacoustic composer currently undertaking a PhD in Soundscape Composition at The University of Birmingham following an MA in Electroacoustic Composition at the NOVARS Research Centre, University of Manchester and a BA in Music at Oxford Brookes University. Her main focus is Electroacoustic Soundscape works in both stereo and multi-channel and she has had experience working with visuals and creating interactive installation works. She is strongly influenced by environmental source sounds, having taken recordings in the UK, Australia and Hawaii. Her work has been performed as part of the Sonic Art and Diffusion Festival in Oxford in 2012, the Sonic Arts Fusion Festival in Salford, 2014, at MANTIS, 2014 and as part of BEAST: Envision 2016. She has curated a Late Night at Manchester Museum in 2013, taken part in the Women In Sound/ Women On Sound Symposium in Lancaster in 2015 and has recently been on a Field Recording Workshop with Chris Watson and Jez Riley French.

Aya Shimano-Bardai*Paris-Sorbonne University, France*

Aya Shimano-Bardai is a sound artist and a researcher based in Paris, France. She holds a Masters degree in both Fine arts (ENSA Bourges) and Musicology (Paris-Sorbonne IV), and is currently working on her doctoral thesis on Scandinavian sound art at Paris-Sorbonne/IReMus. Her artistic work varies from electroacoustic compositions, sound installations to video works. While assigning an importance in exploring and capturing concrete sounds, her compositional approach is engaged with abstract and poetic soundscapes emphasizing the narrative quality associated with the spectrum of sound, the physical and the imaginary spaces. With an interest in the interdisciplinarity and hybridity of sonic forms, she also incorporates other mediums in her works while creating a dialogue where sound interacts with the perception of visual elements. Thus, she questions the impact sound has on the environment where it is located and the interaction engaged with the public by exposing the emotional undercurrents during listening.

Steve Simmons*University of Hull, UK*

Steve is a Post-Doctoral Research Assistant in the School of Environmental Sciences at the University of Hull. His research interests lie in the acoustic measurement of suspended sediment concentrations and flow velocities, developing new methodologies that enables a quantification of these important sediment transport parameters across a range of scales from laboratory flumes to large river systems and turbidity currents in submarine canyons.

Dallas Simpson*Independent*

Dallas Simpson is a freelance location performance binaural sound artist and has been performing with and recording in a variety of environments since the mid 1990's. He uses the binaural recording technique exclusively by sampling his own hearing using custom modified in-ear microphones. His

solo and collaborative works are released through a variety of internet labels worldwide and occasionally on CD. In addition he has worked with live bands performing to an audience listening on headphones, and with other artists, using binaural recording techniques.

Jason Singh*Independent*

Jason Singh is a sound artist, composer, beatboxer, sound designer and creative producer. Singh's sound art creations explore the body, voice, nature, ceramics, textiles and technology. In 2012, Singh was the first sound artist in residence at the V&A Museum and since this time has worked with Tate Britain, British Museum, Science Museum London, Whitworth Gallery, Manchester Art Gallery, Manchester Museum, Dulwich Picture Gallery, National Portrait Gallery, Platform Arts and the BBC. Singh experiences overwhelming sensory connections between all things and as a result his sound creations range from vocally recreating birdsong, forestry and natural environments to multichannel, binaural and ambisonic sound installations exploring ceramics, textiles, food, colour, moving image, text and dance. Singh also composes and performs music for film.

Grant Smith*SoundCamp, UK*

See Maria Papadomanolaki.

Stephen L. Smith*University of York, UK*

Stephen L. Smith received the B.Sc. degree in computer science in 1984, the M.Sc. degree in electronic engineering in 1986, and the Ph.D. degree in electronic engineering in 1990, all from the University of Kent, Canterbury, U.K. Since 1994, he has been with the Department of Electronics, University of York, York, U.K., and is currently a Senior Lecturer. His work is currently centered on the diagnosis of neurological dysfunction and analysis of mammograms. He has authored over 75 refereed publications. His current research interests include developing novel representations for evolutionary algorithms, particularly with applications to problems in medicine. Dr. Smith is a Chartered Engineer and a Fellow of the British Computer Society. He is an Associate Editor for Genetic Programming and Evolvable Machines and a member of the Editorial Board for the International Journal of Computers in Healthcare and Neural Computing Applications.

Alex Southern*AECOM*

Dr. Alex Southern is the Auralisation Lead and Principal Acoustic Consultant at AECOM where he has been employed since 2013. He is a previous award holder of a Royal Society Industry Fellowship for the research project, "Next Generation Auralisation for Environmental and Architectural Acoustics." Dr. Southern was formerly an acoustic research scientist with the Virtual Acoustics Team at the Department of Media Technology, Aalto University, Finland and Ph.D. graduate from the Department of Electronics, University of York, UK. His research interests include the application of auralisation and acoustic modelling to environmental and architectural sound design and noise planning and the integration with other emerging immersive technologies. Dr. Southern is a member of the Audio Engineering Society and a full member of the Institute of Acoustics.

Barnaby Spigel*Independent*

present: Barney Spigel is a music producer and sound recordist, currently doing a masters degree in Music In Development at SOAS (London) and running OpenPlayMusic, a social start-up using inclusive, participatory and experimental music and sonic arts for wellbeing, justice and sustainability. Barney (aka spigel sound) produces musical soundscapes with urban field-recordings as part of his research into music as a tool of civic health. Mixing street performance and city sonics with hip-hop, dub, sound art, community media and bass, Barney is exploring an open-space and place-based model of music production as a medium through which citizens can engage with the interests, skills, issues and needs of their local communities and help them become stronger and more resilient to various challenges and threats they face now and into the future. **past:** Barney began playing piano and guitar from a young age, then DJing and producing drum'n'bass, hip-hop and electronic music in his early teens. After completing a degree in Music Production at Leeds College Of Music, he worked as a sound designer, recordist and engineer; theatre technician; live music promoter; and video editor, all the while writing songs and producing music with the ambition of becoming a successful pop artist. With depression and tinnitus, caused by various music-related activities, increasingly damaging his quality of life, Barney decided to follow a different path, soon developing an interest in ethnomusicology and music as a tool of social change, and ultimately leading him to forge the path he's now on.

Adam Stanović*University of Sheffield, UK*

Adam Stanović is known for his electroacoustic/acousmatic compositions, which have been widely performed (throughout Europe, Asia, North and South America and Australasia), published (Elektramusik, Musique et Recherche, Taukey, Sargasso) and prized (IMEB, Musiques et Recherches, Destellos Foundation, SYNC2016, Musica Viva). Alongside his creative work, Adam has written extensively on the presentation and performance of acousmatic music and he is currently interested in the various ontological/phenomenological paradoxes that the acousmatic tradition seems to produce. Adam has taught at a number of institutions and is currently lecturing at The University of Sheffield where he directs the MA in Sonic Arts and the MA in Composition. For more information, visit: adamstansbie.com

Halla Steinunn Stefánsdóttir*Lund University, Sweden*

Halla Steinunn Stefánsdóttir has been the artistic director of Nordic Affect since its inception in 2005. Believing that the exciting things happen 'in the connection' Halla Steinunn's work with the ensemble has been a tour de force when it comes to collaborative relationships with composers, visual artists, and producers. With degrees from The Royal Danish Academy of Music and Indiana University School of Music, Halla Steinunn now holds a PhD position in artistic research at Lund University, in a time where the divide between creator and performer is being questioned in theoretical writings and in practice. In her activity as curator and composer Halla Steinunn has tapped into her extensive experience as radio producer and her output has spanned everything from quadrophonic soundscapes and installation rooms to field recordings. Her playing is featured on albums on the Sono Luminus, Brilliant Classics, Bad Taste Records, Musmap and Deutsche Grammophon labels.

Francis Stevens*University of York, UK*

Francis Stevens received the M.Eng. (Hons.) degrees in electronic engineering with music technology systems from the University of York, UK, in 2014. He is currently a PhD candidate in the Audio Lab based in the Department of Electronics, University of York, UK. His research interests include environmental acoustics, spatial audio, and soundscape evaluation. He is a student member of the Audio Engineering Society.

Nikos Stavropoulos*Leeds Beckett University, UK*

Nikos Stavropoulos (b. 1975) is a composer of predominantly acousmatic and mixed music. His works are performed and acknowledged internationally (Bourges, 2000,2002, Metamorphose, Brussels 2002,2008,2016, SCRIME, Bordeaux 2003, Musica Miso, Potrugal, 2004, Punto de Encuentro Canarias International Electroacoustic Composition Competition 2008, Destellos Foundation 2015, 2016, Open Circuit 2016). Other interests include the performance practice of electroacoustic music, multichannel practices and teaching music and music technology. He joined the Music, Sound & Performance Group at Leeds Beckett University in 2006 and is a founding member of the Echochroma New Music Research Group, a member of the Irish, Sound, Science and Technology Association (ISSTA) and the Hellenic Electroacoustic Music Composers Association (HELMCA).

Sean Taylor*Limerick School of Art & Design, Ireland*

Since 1999 Softday, the art-science collaboration of artist Sean Taylor and computer scientist Mikael Fernström, have engaged with issues relating to natural cycles in time, climate change and its global effects. As a collaborative team they use their arts practice to explore relations to and understandings of nature, expressed through sonifications and multimedia artworks and performances. Both artists are interested in exploring the cracks between various media and creative genres such as expanded theatre, sound art, socially engaged practice, sculpture, music, dance and the application of new technologies. In 2012, Softday started to run creative workshops based on our practice in Acouscenic Listening - a sonically engaged collaborative art practice. Acouscenic Listening draws upon and combines methodologies from a range of other practices, such as Acoustic Ecology, Deep Listening, Creative Soundwalks, Buddhism, Mindfulness, Improvisation and Tai Chi/Qigong exercises with social art practice applications. More information at: www.softday.ie

Anna Terzaroli*Santa Cecilia Conservatory, Italy*

Anna Terzaroli holds a Master's degree in Electronic Music under the supervision of Nicola Bernardini from the Santa Cecilia Conservatory (Dept. of New Technologies and Musical Languages) in Rome, where she is currently completing her Composition studies with Francesco Telli. As a composer she is

dedicated to contemporary acoustic and electroacoustic music. Her musical works are selected and performed in many concerts and festivals in Italy and abroad while her research works in the field of Computer music and Electroacoustic Music are presented in international conferences. She is a member of the AIMI (Italian Computer Music Association) board.

Cheryl Tipp

British Library, UK

Cheryl Tipp is Curator of Wildlife and Environmental Sounds at the British Library, London. She has a BSc in Zoology and has written about many aspects of wildlife sound recording. She is a member of the Executive Committee for the International Bioacoustics Council and sits on the advisory board for the AHRC funded project *Listening to Climate Change*.

Vanessa Tomlinson

Griffith University, Australia

Australian percussionist Vanessa Tomlinson is active in the fields of solo percussion, improvisation, installation, site-specific performance and composition. She has performed at festivals around the world such as Wien Modern, London Jazz Festival, Green Umbrella Series LA, Bang-on-a-Can Marathon NY, The Adelaide Festival of Arts, and Shanghai Festival. She has been awarded artist residencies through Asialink (University of Melbourne), Civitella Ranieri (NY/Italy), Banff (Canada) and Bundanon (NSW). She has recorded on numerous labels including Mode Records, Tzadik, ABC Classics, Etcetera, Clocked Out and Innova. Vanessa currently curates the Amazing Women series at Queensland Conservatorium, and is Artistic Director of the Australian Percussion Gathering (2010/2016), Transplanted Roots: Research in International Percussive Arts (2017) and Sounding Harrigans Lane (2014/15/16/17). Over the years Vanessa has commissioned, inspired and premiered more than 100 works, worked alongside countless wonderful improvisers, and collaborated with visual artists, dancers, and actors in a variety of settings. She is currently Associate Professor in Music at Queensland Conservatorium, Griffith University and Deputy Director of the Queensland Conservatorium Research Centre.

Gustavo Valdivia

John Hopkins University, USA

Gustavo Valdivia is a PhD student at the Anthropology Department of Johns Hopkins University. In his dissertation, he investigates the representation of the Andean environment in climate science, and is currently doing fieldwork in Phinaya, a pastoralist community located at 15500 feet above sea level and located very near to the Quelccaya, to produce an ethnographically grounded exploration of the local understandings of climate in the Peruvian Andes. He is a cofounder of the artist collective Sonic Melting, an artist group interested in exploring the sonic dimension of the Anthropocene.

Chris Watson

Chris Watson Sound Recordings Limited

Watson was a founding member of the influential Sheffield based experimental music group Cabaret Voltaire during the late 1970's and early 1980's. Since then he has developed a particular and passionate interest in recording the wildlife sounds of animals, habitats and atmospheres from around the world. As a freelance composer and sound recordist Watson specialises creating spatial sound installations which feature a strong sense and spirit of place. His television work includes many programmes in the David Attenborough 'Life' series including 'The Life of Birds' which won a BAFTA Award for 'Best Factual Sound' in 1996, and as the location sound recordist on the BBC's series 'Frozen Planet' which also won a BAFTA Award for 'Best Factual Sound' (2012). Watson has recorded and featured in many BBC Radio 4 productions including; 'The Ice Mountain', 'The Reed Bed', 'Jules Verne's Volcano', 'The Ditch', 'The Listeners' and 'The Wire' which won him the Broadcasting Press Guild's Broadcaster of The Year Award (2012). His music is regularly featured on the BBC Radio 3 programme 'Late Junction'. In 2013 Watson received a Paul Hamlyn Composers Award. His installations have been commissioned by international galleries and festivals such as; Sheffield Millennium Gallery, Opera North in Leeds, The National Gallery, London, The Royal Opera House, Covent Garden, The Louvre, Paris and the Aichi Triennial in Japan.

Tom Williams

Coventry University, UK

Tom Williams is an award-winning composer working largely in the field of electroacoustic music. His song cycle 'Like Oranges' received numerous international performances and broadcasts and was recorded on the Kitchenware label; 'Ironwork' for piano and tape was an ALEA III 1993 prizewinning work. His acousmatic work 'Can' won the Italian music medal 'Città di Udine' (2010) and 'Shelter' received a honourable mention at IMEB, Bourge, 2006, and 'Break' was shortlisted for the 2004 Musica Viva competition. Recent collaborations are with the dancer Vida Midgell on two the video

works: 'Voice (a Retracing)' and 'Home (a Replacing)', and also with the New York cellist Madeleine Shapiro on the composition for cello and electronics, 'Dart'; Ms Shapiro gave the world premiere in New York in 2012 and the UK premiere at the INTIME 2012 Symposium; 'Dart' was nominated for the British Composer Awards 2013 and is now recorded on Albany Records, New York. The recent acousmatic work 'Home (Breath Replaced)' was performed at MUSLAB2015 (Mexico City). Other performances in 2016 include ICMC (Utrecht), Sonorities (Belfast), NYCEMF (New York) CMMR (Sao Paulo) and 'Can' at Diffrazioni Festival, Florence, and MUSLAB2016. Tom Williams studied at Huddersfield and Keele Universities and was awarded a doctorate in composition from Boston University, where he studied for three years. He is director of the music programmes, and chair of INTIME music research group, at Coventry University.

Louise Wilson

University of Glasgow, UK

Louise Wilson is a postgraduate student taking the Masters by Research in Ecology and Environmental Biology at the University of Glasgow. Prior to this, she completed her undergraduate degree in Zoology, also at the University of Glasgow, before attending the one year course in Sonology at the Institute of Sonology in the Hague, Netherlands. She has a passionate interest in the role of sound for ecology and conservation, in particular the interaction between humans and wildlife, given the deleterious impact an industrialized and globalized human population has been demonstrated to present for a large proportion of taxa.

Bruce Wolfe

University of Queensland, Australia

Bruce Wolfe is managing director of Conrad Gargett, one of the largest Architecture firms in Australia. He is Adjunct Professor, University of Queensland and president elect for the Australian Institute of Architects, Queensland Chapter. He has a keen interest in the confluence of sound and architecture, as demonstrated by some of his own building projects, including, most recently, the Piano Mill.

Jocelyn Wolfe

Griffith University, Australia

Dr. Jocelyn Wolfe works at Queensland Conservatorium Griffith University. Her PhD examined the sound world of music teachers through the lens of language. Her research interests include how we relate to and qualify sound, including in our natural and built environments, as well as in the context of the expanding sound worlds of new music. Along with Bruce Wolfe, she is co-founder of the Piano Mill.

James Wyness

Independent

James Wyness is an independent composer, sound artist and researcher based in Scotland. His solo work encompasses live electroacoustic music performance, instrumental free improvisation, electroacoustic and electronic music composition, sound installation, digital and acoustic instrument building. He regularly collaborates with musicians and artists of other disciplines, from moving image makers to choreographers and movement specialists. His work has been performed and presented internationally. He has been a recipient of numerous awards and commissions and has worked as a resident artist both nationally and internationally. He holds an MA(Hons) in French Studies and a PhD in Composition from the University of Aberdeen.

Joseph Young

Independent

"Joe Young is one of the most talented and innovative sound artists of our generation." Prof. Lizbeth Goodman, Director SMARTlab UCD. Joseph Young makes sound and installation work for galleries, site-specific spaces and digital media. His most recent commissions are a permanent sound installation for Lewes Castle, accompanied by an a geolocate audio guide, and a Diptych of Soundscape Paintings for Ravilious & Co at the Towner Gallery, Eastbourne. As an artist, Young has performed and exhibited at Tate Modern, Tate Britain, Jerwood Hastings, Estorick Collection, De La Warr Bexhill, Conflux (USA), Seoul Museum of Art and Errant Sound, Berlin. He has guest lectured at Cass School of Art, Architecture & Design; Edge Hill University; University of Essex; Rose Bruford College; University of Sussex and on the MA Digital Media at University of Brighton. His sound pieces have been published and broadcast by Radio 3, Public Record, Furthernoise, One Minute of Silence, Radio Papesse, Green Field Recordings and Resonance FM. Recent work includes In A Shetland Landscape, a four channel soundwork for Shetland Museum & Archives; Revolution #10, a participatory public soundwork about democracy, presented at the House of Commons and The Ballad of Skinny Lattes and Vintage Clothing, an ambitious 6 movement noise opera about artists and austerity, now part of the permanent collection at Estorick Collection, London.

Zhang Mengtai*Independent*

Zhang Mengtai was born Hebei province in China. He gained a BA (Hons) degree in Fine art at Goldsmiths, University of London, and studying MFA Fine arts in School of Visual arts. He works in many different disciplines, concerned with comprehensively and meticulously rendered allegories of power. His work primarily deal with participatory elements, sounds, sculptures and installations. Presented in MOCA shijiazhuang, Handshake 302 shenzhen, Space Heater New York.

Peter Zinovieff*Independent*

Peter Zinovieff is a true pioneer in the field of electronic music. Founder of London's Electronic Music Studio, one of the first studios in the world to use computers to control electronic sounds, he also designed the first commercially available synthesizer in the UK, the VCS3, used by Pink Floyd on *Dark Side of the Moon*. He is described by *Sound on Sound* magazine as 'Britain's Bob Moog'. Zinovieff's distinguished career includes collaborations with composers Sir Harrison Birtwistle and Hans Werner Henze. He has recently come out of retirement to create his own spatial compositions for TBA-21 in Istanbul and Vienna (Matthew Ritchie's *The Morning Line*) and ZKM Karlsruhe, Germany, and collaborations with leading young musicians Aisha Orazbayeva and Lucy Railton. His latest piece with Railton, *RFG*, which combines live instrumentation with an array of pre-recorded, manipulated material, spatially configured for multiple speakers, premiered at Berlin's *Atonal* Festival 2016. *Sun* is his fourth collaboration with poet Katrina Porteous.



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