



SOUND/IMAGE 19

Exploring Audiovisual Practice
and the Sonic Image

9/10
NOV
2019

Stockwell Street,
University of Greenwich,
SE10 9BJ

Welcome

Professor Stephen Kennedy, Head of School of Design
University of Greenwich

Welcome to Sound/Image 2019. Now in its 5th year the event continues to develop its reach and standing in the world of audio-visual research. We are once again delighted to have you visit us at the University of Greenwich, and we look forward to your contributions, whether in the form of paper, presentation, performance, questions and responses, or more informal conversations. The centrality of sound to the wider aesthetic realm continues to draw us into a multitude of interdisciplinary encounters, and in a year that has seen the passing of Michel Serres, one of the most consistent and incisive contributors to this area of research, it's worth remembering:

"Music is so called because it is the sum of all the muses: it adds to every art – no art excels without it. As an acoustic support and a precondition of meaning, music is a constant vibrating presence beneath our dialogs." (Michel Serres, *Angels: A Modern Myth* 1995:84)

Professor Stephen Kennedy
Head of School of Design

Thank you to our reviewers for their time and support in evaluating this year's submissions:

Alo Allik
Walter Baccoli
Christopher Cook
Nuno Do Nascimento Correia
Susana Gomez Larranaga
Thomas Görne
Jim Hobbs
Mishael Holdbrook
Andrew Knight-Hill
Kristin Kuldkepp
Catherine Maffioletti
Shalom Onyeukwu
Ian Thompson
Anna Troisi
Stefan Troschka
Julie Watkins

Programme

Day One: Saturday 9 November 2019

09:30 – 10:15	Registration & Coffee	Entrance
10:15 – 10:30	Conference Welcome Dr Andrew Hill, University of Greenwich	Lecture Theatre 11_0004
10:30 – 12:30	Session One	
	<p>Paper 1: Embodied Cognition and the Soundtrack's Spatiotemporal Contract Adam Melvin and Brian Bridges, Ulster University</p> <p>Paper 2: Hearing, Sight and a Host of Other Senses Aki Pasoulas, University of Kent</p> <p>Paper 3: Immersive Point-of-Audition: Alfonso Cuarón's Three-Dimensional Sound Design Approach René Idrovo, University of York</p> <p>Paper 4: Virtual Futures Allegra Shorto, Khora Contemporary</p>	LT 11_0004
12:30 – 13:30	Lunch Break (lunch not provided)	
13:30 – 15:45	Session Two	
	<p>Keynote and Screening 1 - Terry Flaxton</p> <p>Opening Up (excerpt) Presentiments (excerpt) The Gap (excerpt) The World Within Us Zagorsk Skin Deep (excerpt) One Second to Midnight In Re Ansel Adams Carnival of Light Drawings and Inscriptions (excerpt) radiant sound radiant light Reimagining New York Without Meaning</p>	LT 11_0004

15:45 – 16:00	Afternoon Break	Outside LT 11_0004
16:00 – 17:30	Session Three	
	<p>Concert 1</p> <p>Tempus fugit Paolo Pastorino, Independent Artist</p> <p>Voish of Magic Véro Marengère, Université de Montréal</p> <p>tried calling, Mx and Un-(Synthetic Hair) Harry Gorski-Brown, Royal Conservatoire of Scotland</p> <p>Footprints of Creatures Ulf A. S. Holbrook, University of Oslo, RITMO</p> <p>Petroglyph Heloise Tunstall-Behrens, Trinity Laban Conservatoire</p> <p>Undercurrent_2 Paula García Stone, Independent Artist</p> <p>First Rituals David Holland, DMU</p> <p>Erstwhile Neil O Connor, University of Limerick</p> <p>Dolce tormento Einike Leppik, Estonian Academy of Music and Theatre</p> <p>Rewind Pete Stollery, University of Aberdeen</p>	First Floor Studio 11_1003
17:45 – 18:45	Session Four	
	<p>Screening 2</p> <p>Mountains of Cinder Mark Cetilia, Rhode Island School of Design</p>	LT 11_0004

	<p>Angular Momentum Michael Betancourt & Jean-Philippe Feiss, Savannah College of Art & Design</p> <p>Displacement Maxime Corbeil-Perron, University of Montreal</p> <p>Imagine Simone Longo, Conservatorio G.F.Ghedini di Cuneo</p> <p>Motion of the Leviathan Max Bodendorf, University of Applied Sciences Hamburg</p> <p>Otsimine Edgar Pacheca Ruiz, Estonian Academy of Music and Theater</p> <p>VOID Andrew Knight-Hill, University of Greenwich</p> <p>Straße Moritz Schuchmann, HAW Hamburg</p>	
19:00 – 20:00	Session Five	
	<p>Concert 2 - Annette Vande Gorne</p> <p>Haiku Terre</p>	<p>First Floor Studio 11_1003</p>
20:30 – 22:30	Conference Dinner	<p>The Cutty Sark Pub, 4-6 Ballast Quay, Greenwich Peninsula, Greenwich SE10 9PD</p>

Day Two: Sunday 10 November 2019

10:30 – 10:45	Introduction and Welcome	LT 11_0004
10:45 – 12:45	Session Six	
	<p>Paper 5: Hyperobjectivity in the Art of Lumia by Thomas Wilfred [b.1889 d.1968] Trent Kim, University of the West of Scotland</p> <p>Paper 6: The creation of The Angst of the String (The Glass String) Dr Brigid Burke, Independent Artist</p> <p>Paper 7: The Video Game as a Sound Interface: Towards new instrumental gestures? Hervé Zénouda, Toulon University</p> <p>Paper 8: The importance of sensuality in electroacoustic music: A presentation of my work as a Composer Véro Marengère, Université de Montréal</p>	LT 11_0004
12:45 – 13:45	Lunch Break (lunch not provided)	
13:45 – 14:45	Session Seven	
	<p>Keynote - Annette Vande Gorne Did you say « acousmatic »?</p>	LT 11_0004
14:45 – 15:00	Afternoon Break	Outside LT 11_0004
15:00 – 16:00	Session Eight	
	<p>Paper 9: The Atmospherics Trond Lossius & Jeremy Welsh, Independent Artist / Trondheim Academy of Fine Art, Norwegian University of Science and Technology</p> <p>Paper 10: Verbalizing Sculptural Sound Phenomena in Electronic Music and Sound Arts – Towards a Share Perceptual Space (SPS) Gerriet Krishna Sharma / Angela McArthur, IEM Graz / Queen Mary London</p>	LT 11_0004

16:00 – 17:00	Session Nine	
	<p>Screening 3</p> <p>Uriel Jing Wang, University of Massachusetts, Dartmouth</p> <p>Broken Slide – Into the Mouth of the Butterfly Gerhard Nierhaus, Institute of Electronic Music and Acoustics, Graz</p> <p>Trotters Stuart Pound, Independent Artist</p> <p>Environment Built for Absence (an unofficial/artificial sequel to J.G. Ballard's "High Rise") Tivon Rice, University of Washington</p> <p>Stages Paul Klooren, Estonian Academy of Music and Theatre</p> <p>Boogie Stomp Stuart Pound, Independent Artist</p> <p>Accumulator # 4 Jeremy Welsh & Michael Francis Duch, Norwegian University of Science and Technology, Trondheim</p>	LT 11_0004
17:30 – 19:00	Session Ten	
	<p>Performances</p> <p>Hands Feed Roots Brigid Burke, Independent Artist</p> <p>Stars and Stripes Jim Hobbs</p> <p>F 18W T8 G13 865 Dawid Liftiner, Academy of Media Arts Cologne</p>	TV Studio 1 B013 - Basement
19:00 – 20:00	Drinks Reception	
20:00	Conference Close	

Audio-Visual Installations (Stockwell Gallery & Project Space – Ground Floor)

Communicating Vessel: Portal of Emotion
Christian Groothuizen, University of East London

Time-piece
Hye Young Sin, Academy of Media Arts, Cologne, Germany

Ethnic Diversity in Sites of Cultural Activity
Ryo Ikeshiro, Bath Spa University

Singing Light 2
Julie Watkins, University of Greenwich

Listening Room (TV Studio 2 B012 – Basement)

Pied de vent
David Arango Valencia, Université de Montréal

Abstracted Objects
Emma Margetson, University of Birmingham

Ragam Bunyi
Fahmi Mursyid, ITENAS

Quatre machines pour sauver le monde
Léa Boudreau, Université de Montréal

Banlieue cuivrée
Nicola Fumo Frattegiani, Conservatory of Music of Frosinone

Sense
Ricardo Dal Farra, Concordia University

Phoenix and Firewhip
Seth Shafer, University of Nebraska, Omaha

Vacuus
Feliciano Chiriaco, Conservatory U. Giordano (Foggia)

Special Guests

Annette Vande Gorne

Haiku

Inspired by the temporal brevity and long imaginative resonance of hai-ku, this piece evokes contrasting universes of the four seasons in a surround sound space divided into 16 channels.

Nature, its cycle of seasons and related human activities is an ideal playground for the sound landscape, a genre specific to the acoustics I approached in 1986 (landscape/velocity). Here, a series of small paintings per season, arouses in each listener, from a selection of a few classic and contemporary Japanese haiku, an imagination, mental images, emotional memories. To the primordial quality of a haiku according to Bashô's disciples: invariance and fluidity, responds the couple "permanence and variation" of Schaeffer's typology, the one that characterizes any Apollonian style "where everything is only order and beauty" (Baudelaire).

Haiku: Springtime

In the first stage, spring is evoked by a series of three haiku: bird games, water games, children's games. These three paintings compare fragments of the classical repertoire -shakuhachi, Messiaen, Murray Schafer, Ravel, Debussy- and composed sound landscapes.

Haiku: Printemps was created in 2016 at the Métamorphoses d'Orphée de Musiques & Recherches studio and premiered on October 9 at the Wallonie-Bruxelles centre in Paris, during the Ars Musica festival.

Haiku: Summer (16 channels, 11'07)

To Mario Mary

Summer is imagined because throbbing insect games disturb the torpor of a dream, a summer afternoon, a kind of motionless journey. In summer, its heat awakens extravagance, the crazy dance of will-o'-the-wisps. Each painting has its own sound and spatial writing and energetic images found in Debussy, Ligeti, Hindemith, Berlioz, Vivaldi, Jean-Michel Jarre, Prokofiev, Dufourt or Moussorgski.

Haiku: summer was realized in 2018-19 in M&R's 16-channel studio "Métamorphoses d'Orphée" and given as a world premiere at the Rencontres Internationales de Musiques Electroacoustiques de Monaco 2019, on April 20.

Haiku: Winter (12'30 16 channels)

To Daniel Teruggi

1. Stepping on the snow
2. monotonous game
3. game of grains at the corner of the fire
4. sound set (tribute to Bernard Parmegiani)

Haiku: winter translates, through the choice of the pictorial themes of each painting, sensations of still time, monotonous silence, freezing and warm cocoon linked to our imagination of this season.

Haiku: Hiver was produced in 2017 in the 16-channel studio "Métamorphoses d'Orphée" of Musiques & Recherches, with the help of the Wallonia-Brussels Federation, Ministry of Culture, Artistic Creation Department, Music Directorate. Commissioned by the INA-grm created on 26 January 2018 at the Maison des pratiques artistiques amateurs in the GRM concert "mes compagnons" chosen by Daniel Teruggi.

Terre (1991) 25:59 5th element to François Bayle f u s i o n Last element in the Tao cycle, the Earth is the place for transformation and fusion, it is the melting pot of the other materials. It is also the last step of knowledge : that of the synthesis between things. Paradoxically- once again sight is deceiving-it is more about Energy than Matter, of primeval energy in two forms: radiation and particles. The transformations of excerpts from the four other elements fit seven models : mechanism (repetition), wave (ebb-flow), door (opening-closing), breath/ejection, breath/crawling, corpuscles, rotation. They go through a common process that emphasizes intermodulations, transformations, and, once 'remusicalized' and changed in time by the playsequence technique, they generate strange similarities : from Diversity to Unity. Everything is in everything else : Tao. Sounds are then reclassified according to dynamic criteria of movements, energies, and development in time : in continuous movement (spiral, fall, projection, crawling); in broken balance (chaos, truncations, clusters, rhythm -Yang); and motionless (rotation, shimmering-allures, repetition, contemplation-Yin). s y m b o l Before creation : symmetry and motionlessness. Asymmetry, movement and impact : released energy. Particles, organization of the matter. Magma, flow and ebb. Manifestation of the matter, union. Dance of life. Breath. Upward spiral. Setbacks and new starts. Towards Omega. f o r m The general form is a double conical spiral whose base is located in the centre : from creation (radiation, particles)-manifestation of matter and rhythm-to Omega. It is in constant evolution : variations. The descending fifth (sky/earth of the Tao) constitutes its central tonic axis. The form also integrates 8-track spatialization as a criterion for evolution : space is structured by geometrical figures. These figures, as well as all the internal movements that run through them, are linked to the temporal structure of the piece, which is based in external time on a gradual lengthening of each of the parts joined together, and on a gradual speeding up of internal (psychological) time. a n e c d o t e The moral (Pierre Schæffer's "Leçon de chose") to be gained from the experience of Terre (Earth) is the following : the internal energy of a sound, its movement, its morphology, can resist for a long time to any type of transformation process, even cumulative processes. A mark, a trace, of the original remains. Perhaps only the dissociation of a sound into elements arbitrarily redistributed in time can reduce that given sound to a neutral object, fit for any use, a note. Terre was commissioned by the Ina-GRM, produced at the GRM in their Syter and 123 studios (Paris, France), and mixed at the Métamorphoses d'Orphée studio (Ohain, Belgium). It premiered on January 30,1991 in a concert of the "Clair de terre" series organized by the Association pour la création et la recherche électroacoustique du Québec (ACREQ), under the direction of Robert Normandeau, at the Planétarium de Montréal (Québec). Many thanks to Yann Geslin and Daniel Texuggi for their essential and persevering help.

Annette Vande Gorne (Charleroi, 1946) can be heard in concert (more than 500) in many European countries, as well as Canada, China and South America, presenting repertory works of acousmatics in addition to her own works, usually on a 80-loudspeaker acousmonium.

Her music focuses on the sounding energies of nature; she uses natural sounds and transforms them in studio to create an abstract, expressive, and non-anecdotal musical language. The relationship between text and music is another subject she often explores.

She produced an acousmatic opera "yawar fiesta" which completely renews the genre while creating a link with the past.

She studied classical music at the Royal Conservatory of Mons and Brussels, and with Jean Absil (fuga, instrumental composition). She also studied electroacoustic composition with Reibel and Schaeffer at the Paris National Conservatory.

She is the artistic director of Brussels' international acousmatic festival *L'espace du son*, and of the international competitions *Espace du son* (spatialization) and *Métamorphoses* (acousmatic composition).

Vande Gorne founded and still leads the non-profit association Musiques & Recherches, and the studio Métamorphose d'Orphée (founded in 1982). She is the publisher of the electronic *Lien* and of the *Electrodoc documentation center* www.musiques-recherches.be

She taught electroacoustic composition: Royal Conservatories of Liege, Brussels and Mons where she created a complete electroacoustic department in 2002. Professor emeritus since 2016.

Keynote - Annette Vande Gorne
Did you say « acousmatic »?

Introduction to acousmatic specificity

Acousmatic music: reversal of compositional objectives communicate through and for perception, search for universals.

3 categories of images/Charles Peirce¹

The relationship to causality, a very specific problem of acousmatic music, is acutely and consciously posed in the sound landscape. We can detect three levels of relationship to the photographed reality, which F. BAYLE summarizes under the terms of: I-SONS, DI-SONS, ME-SONS.

Sound Landscape is the very originality of acousmatic music on support, to no other transmissible musical genre. It is the sound-image (im-sound according to F. Bayle), which addresses the imagination through sound and its listening: mental image and its degrees of representation.

It is based on the knowledge and recognition of the reality heard.

Why this theme

A sign, or repraesentamen, is something that takes the place of someone else in some way or in some way². The set of all signifiers (beyond codified language) and its anthropological study is called semiosis.

What is a sign?

The three categories of sign according to Charles Pierce

To account for the power of diversification whose semiose is, Peirce is based on the distinction between the three forms that the sign according to whether it plays on the principle of resemblance (the icon), the participation (the index), or diacritical differentiation (the symbol).

Search for archetypes³

The world of physics, which describes and models how nature works, is one of the best paradigms for linking perception and memory to the known.

Listening conduct

The acousmatic modality of studio work induces a totally different compositional behaviour: No longer to consider sound in abstracto, for itself, according to a desired character, but to make choices according to the impact on my perception, on my imagination, according to a meaning that I want it to express. In the studio, thanks to the immediate listening on loudspeakers of the work being built, the composer is the first voluntary guinea pig of the psychoacoustic effect of sound and its relationship to the imagination.

¹ Peirce, C.S.1931-1935, *Collected Papers*, Cambridge, Harvard University Press.

² Murphey M. G., 1961, *The Development of Peirce's Philosophy*, Harvard University Press, reissue 1993, Indianapolis, Hackett.

³ Vande Gorne, A. Translation Vaughn, D. Treatise on writing acousmatic music on fixed media, LIEN vol IX, Ohain 2018 80p.

Strategies then result that are oriented towards the listener and the conduct of his imagination in the direction desired by the composer, according to what the temporal course of the work offers as it progresses.

Writing and composition

Writing⁴

1. another listening and understanding of sound: the energies-movements
2. write with editing: 9 cases
3. write with the mixture: 3 results, crossfade, mixed music
« *What the East Wind Saw* » *Ce qu'a vu le vent d'Est*⁵, an example of a time control
4. the new polyphonies
5. transformations: 5 domains, 4 operations

Writing and composition

It is necessary to make a distinction between writing and composition: writing which would be grammar, a language (Pierre SCHAEFFER, according to the Linguistics of Saussure) and the construction which would be the container (Gestalt, formalism, structuralism). The perceptual analysis by classification of the sound events considered in themselves is defined by P. SCHAEFFER's "*Traité des objets musicaux*"⁶. A functional perceptual analysis grid, studying the case scenarios of the relationships between sounds and their structural functions, was developed by Stéphane ROY⁷

From an analytical point of view, a musical work could be considered as responding to one or more levels of conception:

Writing: basic level, craft level.

Process: out-of-time level (to use XENAKIS terminology), conceptual level.

Language: a set of procedures, stylistic level.

Structure: "liaison agent" structural level.

Form: "container" formal level.

Meaning: the purpose of a work, level of communication.

Musical composition would therefore be the implementation and stratified encounter of all these levels (production), which then allows everyone to understand the work (reception) according to each person's level of sensitivity and culture.

Acousmatic musical composition is a search for language that communicates to the imagination, to the conscious and unconscious perception of the listener, below any code and abstraction.

⁴ Vande Gorne, A. Translation Vaugh, D. Treatise on writing acousmatic music on fixed media, LIEN vol IX, Ohain 2018 80p.

⁶ Schaeffer, P. Treatise on musical objects Translation Dack J. and North C., University of california press 2017 569p.

⁷ Roy, S. L'analyse des musiques électroacoustiques : Modèles et propositions, Paris, l'Harmattan 200

Permanence / Variation as a criterion of form

We can review the history of music from the perspective of this couple of Pierre SCHAEFFER.

For example, classicism is linked to permanence (because of the perfect interlocking of all levels of analysis: cellula-figure-motif-theme/cadence-modulations- sonata form, etc.) while variation or enumeration takes over during the Baroque and Romantic periods.

1. Chance and complexity

- random music - overdetermined writing - stochastic music

2. Permanence and simplicity

- repetitive music -loop -theme/variations -germ -suite form –sequences

Process and Form

- Process/form correlation
- New processes
 - dynamic:
 - morphodynamism
 - spatial movements and geometries
 - static :
 - spectral evolution, flux, metamorphoses
 - modeling :
 - natural models
 - scientific models (physics, mathematics, cognitive sciences)
- Sequencing - Development - Variation - Narrativity, dramatisation, catharsis
- Virtuosity

Working Methods

By the method of predictive composition everything is conceived in advance: time (psychological), materials, form, writing, event relations (combinatorial), or even, the whole process is set up and runs automatically, including, and especially if it is chance itself) according to the theory developed by Umberto ECO in his book *opera aperta*.

Pierre HENRY, on the contrary, is an experimental type composer, he does not prepare anything except the basic materials related to the project.

1st act: the classification.

2nd act: before composing the piece, we try the sounds, the sets (pre-mixing) with the transformations, the phrasing searches (editing).

There are two schemes for those who consider great form. Those who visualize it in advance: inside, they place sounds, articulations, sentences, or others who conceive it according to a sound logic developed as the work progresses (concrete approach).

The goal is to respect the initial project.

Language is related to the working method. It is often related to technology, processing and sound sources.

For the experimental composer, the work ends when he feels that the internal classification, the adequacy to the model, the generation of materials by transformation, the pre-mixes, the articulation points correspond to the final state of the project.

The provisional composer stops when he has completed the task he had initially set himself, with more or less retouching.

Keynote and Screening - Terry Flaxton

I only know how to make art - everything else fits around that imperative and is drawn in: from drawing, to making music, to understanding technology, to cooking, to walking, to talking, to alliterating. And yet everything else has an imperative within it and this too affects the idea of making art. This behaviour has various titles such as 'technicity' where a toolmaker makes a tool to manipulate the world and in turn becomes manipulated both by the new world she has created and also the tool itself – or 'cortical epigenesis' a term invented by cognitive neuroscientists which describes that whatever we repeat as an action, conditions the growth of that layer of material that surrounds the brain (where we they mystically and unaccountably attribute the location of the human spirit). Alternatively Antoni Tapies said that 'the artist is the shaman of the tribe who takes herself onto the mountain to get accept the lightning strike of insight and innovation'. Having received the pain of the entering of knowledge a period of integration occurs such that the newly changed shaman might then come and reveal those insights to the tribe. Cognitive Neuroscientists concur by naming humans as 'cognitive nodes' and artists, writers, engineers as 'cognitive distributive nodes....'

In my talk, which I will illustrate by those ideas gathered in moving image form, about being 66, about being involved in art since I was 8 when I received my first instrument which then morphed into sound composition, about how I learned about all the separate media before the digital era had begun but that its signs were present before its arrival – in my own BA of communication design which was about synthesising the knowledge obtained in one medium – like learning about the golden mean in painting and design and then abstracting that idea to then infer it into sound design, or culinary design, or touch – or even in the use of duration. My teachers were dimly aware that really there is only one sense - the common sense, mind, and that all other senses is a specific attribute of being in the world. I also embrace having forgotten more than I remember and that means I have internalised all of the details so that they become incarnate knowledge that once knowing something gives to those that no longer care for the detail. To that end I have just obtained a doctorate in Higher Resolution Imaging which I have promptly forgotten.

British artist Terry Flaxton (b. 1953) has worked since 1970 with writing and sound composition, photography and film, developing a particular interest in analogue video during the 1970s. He received a BA Hons in Communication Design in 1979 and spent over 30 years working as a cinematographer, which included shooting the third ever electronically captured movie with Channel 4 and the BFI's *Out of Order* in 1986. He wrote edited and directed various documentaries for television including American and Soviet Foreign Policy in the Third World with people like Jonathan Steele and Noam Chomsky and also completed a 5 part series for Channel 4 on Video Art. He was a Professor of Cinematography and Director of the Centre for Moving Image Research and worked on early forms of HDR which is encoded into today's HDR TV's.

His work today focuses on durational forms of the digital including sound, video, print and installation. He is widely recognised as an artist who creates challenging moving image work that has been featured in publications including *A History of Video Art*, Bloomsbury, 2006 and 2014; *Diverse Practices*, University of Luton Press, 1996; and *A Directory of British Film and Video*, Arts Council England, 1997. His works are held in various collections including Lux London, Video les Beaux Jours Strasbourg and AICE Milan. His work 'In Re Ansel Adams' is in the permanent collections of the Harris Museum and the Royal West of England Academy of Art. Earlier works are represented by Lux, Later works are represented by sedition art. Current exhibitions *Radiant Sound, Radiant Light* RWA Bristol, *Reformation: The Intersection of Dreams* The Bishops Palace Wells.

Abstracts

Saturday Session One (10:30 – 12:30)

Adam Melvin and Brian Bridges, Ulster University
Embodied Cognition and the Soundtrack's Spatiotemporal Contract

Cinema's audiovisual language is often treated in terms of distinct planes of image and sound, with the soundtrack itself comprising multiple modes ranging from established musical structures to more extensively textural sound design, much of which may serve affective framing functions rather than conforming to a simple diegetic/non-diegetic dichotomy. Some authors have sought to elucidate the mechanisms and functions of how sound and image may influence each other, most notably Chion's (1990) audiovisual contract. Whilst treating music and sound design as separate may provide for some specificity within our analytical frameworks, the acoustic circumstances of many contemporary soundtracks provide examples in which sound texture, gesture and timbre combine to delineate spatial attributes and territories. Furthermore, commentary relating to the haptic score (Mera, 2016) has highlighted imperatives around considering music and sound design in integrated contexts (Kulezic-Wilson, 2019). This paper will seek to develop the approach Mark S. Ward (2015:166) proposes for considering the cinematic soundtrack via a spatiotemporal contract based upon concepts from embodied cognition, most specifically, the image schema theory of Lakoff and Johnson (1999), placing particular emphasis on the potential for audio to articulate and structure perceptual space. It will seek to explore aspects of cross-modal integration between both music and sound design and sound/music and the image via spatiotemporal concepts and models derived from image schema theory, with a particular emphasis on embodied spatial models of timbre, elaborating upon the timbre-space models of Grey (1977) through the application of embodied concepts; see Roddy and Bridges (2018). In more integrated soundtracks, spatial perspective, via timbral articulations, can be seen to grow in importance beyond the simple delineation of mental/internal and physical/external action. Timbral gestures are seen to provide the communication channels facilitating cross-talk between axes of spatial (delineation/diffusion) and temporal (integration/disintegration) structures. As the soundtrack, in this context, is considered primarily in terms of the implications of its auditory materiality, the visual territories are reinforced or undercut with affective auditory planes whose syntax and structure seems to function in relation to models from embodied cognition. Cinema, as a multimodal, audiovisual 'language', is thus a contract between space and time via mechanisms and frames from embodiment. Embodied models of timbre within the soundtrack can therefore provide one means by which the soundtrack can be treated in an integrated manner, both in its own right, and in relation to the visual. References Chion, M. (1990) trans. Gorbman. C. Audio-Vision: Sound on Screen. Columbia Univ. Press, New York Grey, J.M. (1977) Multidimensional perceptual scaling of musical timbres. *Journal of the Acoustical Society of America*. 61(5):1270-1277 Lakoff, G. and Johnson, M. (1999). *Philosophy in the Flesh*. New York: Basic Books. Kulezic-Wilson, D. (2019) *Sound Design is the New Score: Theory, Aesthetics, and*

Erotics of the Integrated Soundtrack. Oxford: Oxford Univ. Press
Mera, M. (2016) 'Materializing Film Music', in Cooke, M. and Ford, F. (eds) *The Cambridge Companion to Film Music*. Cambridge: Cambridge Univ. Press, pp.157-172
Roddy, S & Bridges, B. (2018) Sound, Ecological Affordances and Embodied Mappings in Auditory Display. In: M Filimowicz & V Tzankova (eds), *New Directions in Third Wave Human-Computer Interaction*. 1 edn, vol. 2, Human-Computer Interaction Series, Basel, Switzerland, pp. 231-258. <https://doi.org/10.1007/978-3-319-73374-6>, <https://doi.org/10.1007/978-3-319-73374-6>
Ward, M. (2015) 'Art in Noise: An Embodied Simulation Account of Cinematic Sound Design'. In: Coëgenarts, M and Kravanja, P. (eds) *Embodied Cognition and Cinema*, Leuven University Press, pp.155-186

Adam Melvin is a composer and lecturer in Popular and Contemporary Music at Ulster University, Derry~Londonderry, Northern Ireland. A great deal of both his compositional and research practice is concerned with interrogating the relationship between music, sound, site and the visual arts, particularly moving image. He has received numerous international performances and broadcasts of his music; his research has been published in *The Soundtrack*, *Short Film Studies* (Intellect) and in the *Palgrave Handbook of Sound Design and Music in Screen Media*. He is a member of Dublin's Spatial Music Collective.

Brian Bridges is a composer and lecturer based in Derry~Londonderry, Northern Ireland, where he lectures in music technology at Ulster University and is Research Director for music and associated subjects. He is the current president of ISSTA (the Irish Sound, Science and Technology Association) and serves on the editorial board of *Interference: a Journal of Audio Culture*. Much of his work is inspired by connections between perceptual processes, creative practices and technologies, and his creative output includes sound-based installations, audiovisual pieces and electroacoustic and acoustic composition, including microtonal and spatial music. He is a member of the Spatial Music Collective and is represented by the Contemporary Music Centre.

Aki Pasoulas, University of Kent
Hearing, Sight and a Host of Other Senses

This paper explores a compositional method based on the interpretation of information received through all senses as gestural and textural activity in the aural domain; it attempts to map our experiences from a number of systems (visual, gustatory, olfactory and haptic environments) to another (aural space). The paper starts from the method I followed when creating my latest composition, as a case study for this approach. For the making of my piece I used information collected through multisensory walks, including environmental recordings and sensory maps as starting points to create layers of sound material. The piece does not employ data sonification digital processes, but instead, it conveys sensory information from the immediate environment as either sonic gestures or textures. Starting from Smalley's motion and growth processes, I approached my experiences as shapes developing in time. Gesture implies a motion, a temporal structure, whereas texture implies a consistency, the feel and appearance of something. The

construction of the piece involved mapping sensory experiences on a relative timeline on separate soundmaps, smellmaps, touchmaps, tastemaps and sightmaps. Composite layers of that information were combined with recognisable sounds from the environmental recordings I made during the walks, to form musically meaningful structures. For example, according to my interpretation, a smell that starts strong and disappears slowly can be represented by a relatively fast attack that gives rise to a texture which gradually disintegrates and disappears; whereas grazing in a passing gesture bristles of tall cereal crops can be translated into thin high-frequency spectral lines appearing and disappearing over lower-frequency oscillating figures. Transferring experiences between senses followed a loose interpretation in my recent piece, but focusing on constructing more detailed maps will overcome this tendency. Similar structural processes can be followed for all senses, where possible, which are combined to create polyphonic structures that eventually form larger sections in a composition. In addition, my composition explores interrelationships between music, time perception, memory and the listening environment, as it is based on a number of multisensory walks with senses acting on different timescales. Ultimately, the composition becomes an imaginary soundscape approached in a non-linear way, in the sense that no story is unfolding but rather, it is a presentation of snippets of experiences about particular spaces, places and times, based on a specific theme. Evidently, listeners will not relive the experiences I had through the multisensory walks, as the composition does not replicate them. Instead, this process allows us to use creatively information that we receive from other senses, often neglected when thinking about sound.

Aki Pasoulas is an electroacoustic composer, Director of Education and the Director of MAAST (Music and Audio Arts Sound Theatre) at the University of Kent. He also taught at universities in London including City, Middlesex, and the University of the Arts, and he holds a PhD on timescale perception in electroacoustic music. His research interests include acousmatic music, time perception in relation to music, psychoacoustics and sound perception, spatial sound, acoustic communication, and soundscape ecology especially in relation to listening psychology. He has written for instruments, found objects, voice, recorded and electronic sound, composed music for the theatre and for short animation films, and organised and performed with many ensembles. His scholarly and music works are published through EMI/KPM, ICMA, Sonos Localia, HELMCA, Cambridge University Press and Oxford University Press. Aki received honourable mentions at international competitions, and his music is continuously selected and performed at key events worldwide.
(<http://www.aki-pasoulas.co.uk>)

René Idrovo, University of York

Immersive Point-of-Audition: Alfonso Cuarón's Three-Dimensional Sound Design Approach

Technological advances have always had an impact on the development of new audio-visual aesthetics. Recently, exploiting the spatial capabilities of immersive sound technology in the form of Dolby Atmos, Alfonso Cuarón introduced in *Gravity* (2013) an innovative sound design approach that enhances the illusion of 'presence' in the space of the diegesis by always

maintaining a coherent, realistic, and immersive representation of a given point-of-audition. Such sonic strategy – which we have termed immersive point-of-audition – provides a three-dimensional representation of the filmic space, localising sound effects, music, and dialogue in accordance to the position of the sources within the diegesis. In this paper, we introduce the definition and main characteristics of this emergent sound design approach, and using Gravity as an illustrative example, we argue that it has the potential of facilitating the processes of transportation and identification in cinema.

René Idrovo is an emergent filmmaker and scholar. He is a lecturer in sound related subjects at Universidad UTE, Ecuador; and a Ph.D. Researcher in Film and Television at University of York, UK. His research studies the impact of sound technology in the generation of new audio-visual aesthetics, focusing on the relations that exist between realism, the sonic space, and the immersive experience in cinema. His work has been published in academic journals in Latin America, United Kingdom and Europe. As part of the Ecuadorian National Scholarship Programme, he has been selected among a large number of applicants to become one of the leaders that shall contribute to the development of the country's film and television.

Allegra Shorto, Khora Contemporary
Virtual Futures

Immersive technologies are changing the nature of what an artwork is and how it is valued. Technological developments are beginning to blur the boundaries between virtual and physical space. Amidst this shifting landscape Khora Contemporary is rethinking the value of an artwork in a market that seems to increasingly value experience over possession.

Allegra Shorto is Art Director of Khora Contemporary and is based between London and Copenhagen. Her work focuses on establishing Virtual Reality as a widely applied medium within the arts, through collaborations with artists and institutions working with new digital technologies. Allegra has a background in contemporary art curation and holds a degree in History of Art from the University of Cambridge.

Saturday Session Two
(13:30 – 15:45)

Keynote and Screening - Terry Flaxton
See page 16.

Saturday Session Three (16:00 – 17:30) Concert

Paolo Pastorino, Independent Artist
Tempus fugit

Sed fugit interea, fugit irreparabile tempus, with this phrase Virgilio describes the temporal condition to which the man is subjected. It is a phrase that comes from a context of life very different from that of modern man but still calls a very delicate question as interesting and current, life as a function of time.

"Tempus fugit" comes from a series of personal reflections on the perception of time. A time that escapes and devours all the things it has created. A time as a state of consciousness and perception that expands and contracts itself. A time observed on the faces of others, on my city, on my nearests and dearests. That time which influences us in our choices and which constantly fills our present in imagining the future and remembering the past.

Paolo Pastorino (Sassari – Italy - 1983) is an electroacoustic-acousmatic composer and music technologies professor in high school.

Since 2006 he starts to work as sound technician for some Rock, Industrial and Nu-Metal bands. He studied and graduated in electronic music and sound technologies at the Conservatory of Sassari and he is specialized in the same course at the Conservatory of Cagliari. His compositions have been presented in several contemporary and electroacoustic music festivals in different countries of the world: Convergence 2019 (De Montfort university, UK), EMAS (UK), Sound thought (UK), NoiseFloor festival (UK), Sound Spaces (Sweden), NYCEMF (New York), Mantis Sonification (Manchester), Sonorities (Belfast), Spot – Octandre (Bordeaux), VERV (Venice), OUA Electroacoustic Music Festival (Osaka University Of Arts), Dias de Música Electroacústica (Portugal), Festival Contemporanea Acusmatica (Udine -IT), PLAY900 (Museo Novecento – Florence), Festival MUSLAB (Buenos Aires), Datscha Radio 17 festival (Berlin), Microtopies (Barcelona), Elektro Arts (Romania), Klingt gut! International Symposium on Sound (Hamburg), Forum Wallis - Festival International de Musique Contemporaine (Switzerland), Seoul International Computer Music Festival (Gwangju), EX_NIHILO (Mexico), NSEME Louisiana State University (USA), San Francisco Tape Music Festival (USA), Mixtur (Barcellona), NWEAMO Festival (Tokyo), CIM (Cagliari - IT), EMUFest (Rome), CIRMMT (Centre for Interdisciplinary Research in Music Media and Technology - Montréal), Art and science days (Bourges, France).

Véro Marengère, Université de Montréal
Voish of Magic

A composition in which air-related sounds like breath, insecticide pulveriser, swords being swung, pan flute made of recycled straws and horse's whinnies dances with modular synthesis and

melodies inspired by Messiaen. It tells a story, it tells a story so much that you can almost see the sounds. You can see the story.

It is Voish of Magic.

It is an airy world of fairies, sensuality and intimacy.

Véro Marengère is a composer and sound artist based in Montreal. Graduated from the Digital Music program of University of Montreal, her work is strongly influenced by Suzanne Ciani, Anna Friz, Holly Herndon and the experimental underground scene of Montreal. She creates musical compositions and performances aiming to carve a dialogue between sensuality and sound. Shaped by her work within the field of dance and instrumental music, her language blends together elements of music, sound design, dance and live performances. In the midst of her versatility, her artistic concern remain constant: fostering intimacy through the intangible and finding a balance between digital processing and organic sources.

Harry Gorski-Brown, Royal Conservatoire of Scotland
tried calling, Mx and Un-(Synthetic Hair)

tried calling, Mx uses material recorded from a few days spent in the north of Scotland with friends Bobby Kakouris and Andrew Herrington. The piece follows a journey through Eden Court in Inverness where we attended a music conference and interrupts itself with jumping between the surrounding hills and countryside around where we were staying. Featuring "Mother Whale" by Megan Airlie.

Un-(Synthetic Hair) is a trio of violin, cello and double bass. Using recording of improvisations, the material throughout the piece becomes gradually more processed, allowing for the exploration of resonant acoustic instruments within an entirely flexible electronic sound world.

Harry Gorski-Brown is a musician living and working in Glasgow, Scotland.

Ulf A. S. Holbrook, University of Oslo, RITMO
Footprints of Creatures

An impulse is a signal which is entirely zero apart from a short spike of an arbitrary shape. Footprints of creatures is a journey into a terrain consisting of multitudes of small impulses, bent and shaped through networks of delays and filters. Although the sound materials are of an abstract origin, they are heard as through a sense of characterizations of space and object. The movement, shifts and turns in the sounds forms and disbands new relationships between sounds and their spaces and creates narratives before breaking up into abstraction. Footprints of creatures is composed in 5th order higher order ambisonics and is presented in stereo.

Ulf A. S. Holbrook is a composer, sound artist and doctoral research fellow at the RITMO Center for Interdisciplinary Study on Rhythm, Time and Motion, Department of Musicology at the University of Oslo. The focus of his research is on the perception of sound objects in spatial audio representation systems at the convergence of signal processing applications and sonic creation. His research proposes the soundfield as a link between a sound object and the spatialisation of sound masses which share the same multidimensional space. His work is performed and exhibited in galleries, as well as at festivals and conferences internationally.

Heloise Tunstall-Behrens, Trinity Laban Conservatoire
Petroglyph

Through 'Petroglyph', Heloise Tunstall-Behrens investigates myths surrounding Paleolithic stone carvings, inspired by Gobustan National Park in Azerbaijan. The piece continues her interest in vocal writing, which began with an experimental opera, 'The Swarm' written about honey bees. The piece contains vocals from herself and Franziska Boehm, which are combined in formations inspired by the flocking patterns of birds, in an ongoing investigation into the dynamics of collective behaviour. Tunstall-Behrens layers the vocals with field recordings of ringing stones and rock echoes as a further research into 'archeo-acoustics'. Written for Huddersfield Immersive Sound System (HISS), the piece will be performed at Huddersfield Contemporary Music Festival this year.

Heloise Tunstall-Behrens is a London-based composer, singer, performer and installation artist, working in the field between vocal and instrumental music, electronics and performance. Heloise's research investigates the spatialisation of sound and the resonance of bodies, spaces and objects. She is currently working with dancers from Trinity Laban, where she is studying a Masters of Music in Composition, exploring the balance on the threshold between body, voice, space, and sound. In 2016, she received Arts Council England funding to write and perform *The Swarm*, a 60-minute choral work about swarming honey bees, which will soon be released as an album. In December 2018, she had an orchestral piece performed which explored the resonant frequencies of a cave. She currently sings and composes with the all-female Deep Throat Choir (Bella Union).

Paula García Stone, Independent Artist
Undercurrent_2

I aim to make compositions that place us in a situation or state of mind. The sounds, although mostly abstracted, may reference occurrences in life, living in our bodies and in this world. I use my own field recordings, medical diagnostic sound, electronic abstractions and processing. This is a multitrack composition which I will play as a stereo file over the diffusion system. The title refers to the sounds that occur underneath, in water or skin maybe, suggesting an otherness to what we normally perceive with our ears.

Paula García Stone As I am from a long tradition of Visual/Fine art practice, when I studied sound design & music technology at London College of Communication, I was struck by the use of visual language, such as shape, form, background and foreground, gesture and so on. The spatial and therefore corporeal aspect also fitted with my previous focus and thinking, where the human presence is there even in its absence. My sound compositions explore the spirit of being in a particular space, situation or state of mind. My first album was released on 21st September 2019 with the label Linear Obsessional.

Performance Feb 2019 Linear Obsessional at The Loudspeaker Orchestra in St Alfege Church, University of Greenwich concerts. Played my composition 'Savour the day' over a 20 speaker diffusion system with musician Sue Lynch improvising on flute and clarinet. Dec 2nd 2018 Desire lines, Husk Brewers, London, Three musicians performed to my composition 'Savour the Day'. June 16th 2018 Screening of 'Night Drift' and improvising to it on laptop with Sue Lynch on tenor saxophone and clarinet, and Richard Sanderson on melodeon at the IKLECTIK. Recorded and mixed by St Austral Sound May 20th 2018 Screening of a new version of Night Drift' at The Arts Cafe Lewisham. Playing laptop with Richard Sanderson on melodeon and Charlotte Keeffe on trumpet. December 5th 2017 Screening of 'A Dead Flower Reanimates' a silent film for wind instruments, during the London New Wind Festival organised by Catherine Pluygers. Eight musicians improvised to the theme and imagery, IKLECTIK, London October 8th 2017, during solo show 'Convergences in Time', Hundred Years Gallery, performed with electronics during screening of own film, 'Night Drift', with Sue Lynch on sax and clarinet. Also screened a test version of my film 'A Dead Flower reanimates' while musicians Sue Lynch, Catherine Pluygers and Richard Sanderson improvised. September 2015 The Summer Pedalling Games – 'Velocipede sketches' sound piece for ERNA, a sonic bicycle which was ridden around London Fields Park. Nov 2014 The Horse IMPROV club at the Dog House in Kennington London. Solo improvisation with film and sound files. April 2008 Southbank Centre, London. Performed as part of David Toop's laptop orchestra, Unknown Devices, with The London Sinfonietta and The RNCM. 30 min improvisation with projections by Pablo Fiasco. <http://paulagarciastone.com>

David Holland, DMU

First Rituals

In this piece I wanted to explore the relationship between the sounds of ordinary or 'miscellaneous' rituals and routines (represented by objects such as pans and a wine bottle) and 'sacred' rituals (represented by objects such as a prayer bowl). I was interested in how these everyday sounds can transcend their origins to suggest associations with rituals that carry more meaning or significance. At times in the piece these sounds move towards purity, harmony and even the suggestion of voice, while at other moments they become layered, noisy textures that circle and envelope the space.

David Holland is an internationally performed composer and researcher with a particular interest in music technology and education. In 2017 he was awarded a PhD in the field of

Music, Technology and Innovation from DMU, which was sponsored by the Midlands3Cities Doctoral Training Partnership. His research has focused on widening access to new forms of music and the powerful role that creativity can play in this. He received the Rolf Gehlhaar Award for Electronic Music Composition from Coventry University (UK) in 2010 and was a finalist in the 2014 Bangor Dylan Thomas Prize for Electroacoustic Composition at Bangor University (UK). His work has recently been broadcast on Czech (Vitava - Radiocustica) and Dutch (Concertzender) radio. He is currently a postdoctoral fellow at De Montfort University (DMU) (Leicester, UK) on the Creative Economy Engagement Programme funded by the Midlands4Cities partnership. He also works as a part-time lecturer at DMU and a researcher on the EU Interfaces project concerned with bringing new music to new audiences.

Neil O Connor, University of Limerick
Erstwhile

Erstwhile was composed using SPEAR - an application for audio analysis, editing and synthesis. It works in the following way - an analysis procedure represents a sound with many individual sinusoidal tracks (partials). This analysis is then time stretched, processed and spatialized. This process helped me to alternate density in an evolving manner, and to texture and tone.

Neil O Connor Composer and Performer has been involved in experimental & electro-acoustic music for the past 21 years and has performed in Ireland, Europe, Australia, Asia and the US. His work has been shown/performed at MOMA, New York, IRCAM Paris, Institute of Contemporary Art, London and has held residencies at the Massachusetts Museum of Modern Art and EMS – Swedish Institute of Electro-Acoustic Music, Stockholm, Sweden. Neil has worked / collaborated with members of the Crash Ensemble, Philip Glass Ensemble and the Glenn Branca Ensemble. Neil studied at Trinity College (M.Litt/PhD Mus) under Composer Donnacha Denheny and has lectured in Composition and Performance Technology since 2005 at Art Institute of California (San Francisco), The Institute of Audio Research (New York City) and Trinity College (Dublin). He is currently based at DMARC (Digital Media Arts Research Centre), Dept. of Computer Science, University of Limerick, Ireland.

Einike Leppik, Estonian Academy of Music and Theatre
Dolce tormento

dolce_tormento is an acousmatic composition that is based on different type of samples (instrument, field recordings etc), all samples are processed with Audiosculpt using different treatments and analysis. The name of the composition is referring to the madrigal *Sì dolce è'l tormento* by Claudio Monteverdi. The composing process started with one short sample I cut from the recording of this madrigal. Later on the general idea developed and moved far from Monteverdi, but the concept of something fragile and torturing at the same time remained.

Einike Leppik is an Estonian composer and audiovisual artist. She is living currently in Tallinn and teaching audiovisual composition at the Estonian Academy of Music and Theatre. Leppik

graduated from Antwerp Royal Academy of Arts in 2011 and later proceeded her studies at the Estonian Academy of Music and Theatre in Audiovisual Composition. In 2017 she received her Master's degree in Classical Composition. During her studies she followed internships at the State Conservatory of Music "Giuseppe Tartini" in Trieste (supervised by Paolo Pachini) and at the Conservatory of Music "Benedetto Marcello" in Venice (supervised by Riccardo Vaglini). Leppik has taken part in different masterclasses and her music and installations has been presented and performed in numerous festivals such as Estonian Music Days (Estonia), Summersound (Finland), Segnali (Italy), Videoformes (France), eviMus, InSonic (Germany), Gaudeamus Muziekweek (the Netherlands) and Àgora Actual Percussió (Spain). Leppik has been writing acoustic and electroacoustic music for different ensembles and solo instruments, her special interest is combining the field of sound with other forms of art. She has been composing also for short movies, dance performances, installations and her own audiovisual works. Her main interests in music is its communicative and synaesthetic quality.

Pete Stollery, University of Aberdeen
Rewind

Rewind looks back over a 40-year association with the studios at the University of Birmingham, both as undergraduate/postgraduate student in the early days of BEAST through to undergraduate/postgraduate external examiner. A lot has changed, and some of it can be heard in this piece, including sounds/extracts of pieces made in the studios during this time.

Thanks for sounds to: Anonymous, Jonty Harrison, Jo Hyde, Andy Lewis, Adrian Moore, Alistair MacDonald, Nick Virgo, Rachel Williams.

Rewind was commissioned by BEAST for BEAST FEaST 2019 and premiered in the Dome Room, Bramhall Building, University of Birmingham on 2 May 2019.

Pete Stollery studied composition with Jonty Harrison at the University of Birmingham, where he was one of the first members of BEAST in the early '80s. He composes music for concert hall performance, particularly electroacoustic music and more recently has created other work, including sound installations and internet projects. In 1996 he helped to establish the acousmatic collective invisibleARts and in 2004 he was part of the setting up of sound, a new music incubator in NE Scotland. His music is published by the Canadian label empreintes DIGITALes.

Saturday Session Four
(17:45 – 18:45)

Mark Cetilia, Rhode Island School of Design
Mountains of Cinder

Mountains of Cinder is a fixed-media work made under the guise of my solo project Apathy and Steel, featuring video generated using custom software written in C++ and GLSL in conjunction with the OpenFrameworks toolkit for creative coding, and acting as a response to an improvised sound work created using Fraktur v.4, the hybrid analog / digital performance system I have been developing and utilizing in live and studio settings since its inception a decade and a half ago. The current iteration of Fraktur is a hybrid analog / digital performance system consisting of custom software written using the SuperCollider audio synthesis / algorithmic composition platform, live-patched analog modular synthesis, and a variety of commercial and bespoke hardware controllers. Fraktur is wide-ranging in its scope and abilities, featuring signal generation and manipulation using analog modular synthesis techniques, live sampling, audio manipulation, and signal generation using digital oscillators, gesture recording and playback for parameters throughout the entire Fraktur ecology, and creation of data sequences that may be utilized by digital synthesis algorithms or output as voltages to an analog modular synthesizer. Sound and image for this piece were captured in real time with only minimal editing / post-production.

Mark Cetilia is a sound / media artist working at the nexus of analog and digital technologies. Exploring the possibilities of generative systems in art, design, and sound practice, Cetilia's work is an exercise in carefully controlled chaos. Over the past two decades, he has worked to develop idiomatic performance systems utilizing custom hardware and software, manifesting in a rich tapestry of sound and image. Mark is a member of the electroacoustic ensemble Mem1, which the Oxford University Press' Grove Dictionary of American Music describes as "a complex cybernetic entity, comprised of two human artists plus their instruments" whose "evolving, custom-built systems are as important an aspect of the duo's achievements as their ever-innovative sound." He is also a member of the experimental media art group Redux, recipients of a Creative Capital grant in Emerging Fields for Callspace, a monumental sound installation that reverses the paradigm through which cellular telephony removes users from their surroundings by networking site-specific sounds to a central listening environment. Cetilia holds a Ph.D in Computer Music and Multimedia from Brown University and an MFA in Digital + Media from the Rhode Island School of Design, where he currently teaches classes on art, technology and sound. Cetilia's work has been screened / installed at the Institute of Contemporary Arts (London, UK), the Ben-Ari Museum of Contemporary Art (Bat Yam, IL), Oboro (Montréal), O' (Milan), R.K. Projects (Providence, RI), and SoundWalk (Long Beach, CA). He has performed widely at venues including Café OTO (London, UK), the Borealis Festival (Bergen, NO), STEIM (Amsterdam, NL), Los Angeles Contemporary Exhibitions, Roulette (NYC), Goethe-Institut (Boston), Menza Pri Koritu (Ljubljana, SI), Issue Project Room (Brooklyn, NY), Uganda (Jerusalem, IL), the San Francisco Electronic Music Festival, Sound of Mu (Oslo, NO) and Electronic Church (Berlin, DE). His

sound works have been published by Interval Recordings, Radical Matters, Dragon's Eye Recordings, Farmacia 901, Iynges, Anarchymoon, Quiet Design, and the Estuary Ltd. imprint, which he runs with his partner Laura Cetilia.

Michael Betancourt & Jean-Philippe Feiss, Savannah College of Art & Design
Angular Momentum

Angular Momentum was produced as a visual music collaboration where Michael Betancourt created the visuals and Jean-Philippe Feiss created the music.

Michael Betancourt (°1971) is a critical theorist and research artist who works with movies and static imagery. A pioneer of databending images and video, he produced his first visually seductive glitch works in the 1990s by bringing the visionary tradition into the present: by emphasizing their digital origins, his aesthetics allows the viewer to find poetic meaning in everyday life. His movies screened internationally at the Black Maria Film Festival, Contemporary Art Ruhr, Festival des Cinemas Differents de Paris, Director's Lounge (Berlin), Millennium Film Workshop, and Experiments in Cinema among others.

Jean-Philippe Feiss born in 1977, he studied cello at the Conservatory of Boulogne with Xavier Gagnepain. After that he played jazz and improvisation in several bands. He founded Sibiel, a trio with guitar and double bass, in 2001. With Sibiel he played many concerts, recorded 3 albums and wrote music for 4 silent movies. He also plays in a cross over project with Louis Sclavis and a baroque trio. Since 2000 he has played with Richard Bona, Patrick Watson, Inga Liljestrom, Vincent Courtois. Since a few years he works with visual artists like Sigalit Landau from Israel and Michael Betancourt from the USA, doing some sound and music for video or sculptures installations.

Maxime Corbeil-Perron, University of Montreal
Displacement

An expressionist composition, that explores illusions, fear and wonder, through flickers of stop-motion animation, electroacoustic music and analogue video synthesis.

Maxime Corbeil-Perron is a composer and audiovisual artist whose work has been noticed by many international competitions and events. His work has been qualified as "pushing the boundaries of abstraction" and "defying any explication or labelling". A polymorphous artist active for more than a decade in music, experimental cinema, and various performative forms of the moving-image. Maxime Corbeil-Perron graduated (MA) with highest honours from Montreal's Music Conservatory, where he studied electroacoustic composition with Martin Bédard and Louis Dufort. He is currently a PhD candidate in sonic arts at the University of Montreal (CA) under the direction of Nicolas Bernier.

<https://maximecorbeilperron.com/>

Simone Longo, Conservatorio G.F.Ghedini di Cuneo
Immagine

"Immagine" is a sound based video that explores the multiplicity of a memory as confused flashback. Sounds, time, space, the way as our mind groups, decode and order stimuli and store in remote memory. The images emerge from a past but are not organized in a chronological order, re-contextualized in a new world they lose their primordial meaning. The work is directly linked to the audio as "visual music concept", the pictures used are recorded in Rotterdam by Cosenude Media Projects. The work was designed during a session of Music Through The Wall [MTTW Rotterdam], where the sound takes some elements from.

Simone Sims Longo is a composer of electronic music and new media artist. He is interested in creating and processing sound in the digital domain, focused on timbre exploration with different techniques. In his works he often uses a multilevel iteration of sound samples, investigating on asynchronous polyrhythmic texture changes. His sonic identity is characterized by a dry and edgy sound. Through multichannel speakers diffusion he explores the musical space and exploits the interaction of the sound with architectural elements. He also focuses his activity on the relation between audio and video in real time, he performs acts of visual music that explores the perception of audiovisual phenomena. He obtained a master degree in electronic music at G. F. Ghedini Conservatory of Cuneo.

Max Bodendorf, University of Applied Sciences Hamburg
Motion of the Leviathan

Motion of the Leviathan explores the aesthetics of noise. Through manipulation of video captured from a deficient screen noise is transformed to become the new subject whereas the actual representation dissolves into abstraction. The intention is to transcend the image which is based on a defect smart phone screen from its secular origin to create a sublime atmosphere out of audiovisual interdependencies and abstraction. The sound design consists of only two tracks. The first one is a consistent drone which is set to several different reverbs over time so the alternation of sound is not directly perceivable. The second track consists of noisy synth which alternates its spectrum of sound generating a rhythmic texture that varies in its intensity.

Max Bodendorf is an interdisciplinary designer, artist and author working within audiovisual media and media theory. He is currently studying in the master program time-based media at the University of Applied Sciences in Hamburg.

Edgar Pacheca Ruiz, Estonian Academy of Music and Theater
Otsimine

Otsimine means "Searching" in Estonian. This work is a journey of searching for the unknown. A leap into the void using photographs by Etienne Boile to give shape and color to an ambiguous and mysterious destiny where doubts and uncertainty are represented as holes and slits that arouse the curiosity of the viewer. This work is an abstract representation of how human beings can reach disturbing and unsuspected stadiums and conclusions through investigation and the need to solve our innermost vital intrigues.

Edgar Pacheca Ruiz (Alicante, 1990). Audiovisual artist, composer and music teacher. He studied Audiovisual Composition at the Estonian Academy of Music and Theater and Composition at the Superior Conservatory of Alicante. Winner of the SOIS CULTURA contest in the category of New Creators. His works have been screened at festivals such as the "Estonian Music Days", the "eviMUS 2018" of Germany or the PROJECT XIII (CEU) in Valencia, where he was finalist of the Audiovisual Creation contest. Currently studying a master program of Audiovisual Composition in Estonian Academy of Music and Theater.

Andrew Knight-Hill, University of Greenwich
VOID

"The non-place never exists in pure form; places reconstitute themselves in it; relations are restored and resumed in it".

Marc Augé - Non-Places

Inspired by Marc Augé's notion of non-place, this audio-visual composition explores how impressions of space and place (both positive and negative) can be constructed from the materials and textures of a neglected space.

Tones and textures intersect sonically and visually to alternately expand and contract our impressions of space, drawing us into an experience of this non-place.

The concept of the non-place is dynamic, in symbiotic opposition to that of place. In the same way, noises & tones, light & shadow and textures & forms, sit in audiovisual opposition. Such materials (all captured in one physical space) have been edited, extended and expanded in order to extrude impressions of an enveloping space; thus seeking to construct the dynamic contrast between place and non-place.

But, the piece is not conceptual. It should be experienced. A journey in spaces through lost, neglected and forgotten forms and material...

Andrew Knight-Hill (1986) is a composer of electroacoustic music, specialising in studio composed works both acousmatic (purely sound based) and audio-visual. His works have been performed extensively across the UK, in Europe and the US. Including performances at Fyklingen, Stockholm; GRM, Paris; ZKM, Karlsruhe; New York Public Library, New York; London

Contemporary Music Festival, London; San Francisco Tape Music Festival, San Francisco; Cinesonika, Vancouver; Festival Punto de Encuentro, Valencia; and many more.

His works are composed with materials captured from the human and natural world, seeking to explore the beauty in everyday objects. He is particularly interested in how these materials are interpreted by audiences, and how these interpretations relate to our experience of the real and the virtual. He is Senior Lecturer in Sound Design and Music Technology at the University of Greenwich and programme leader of Sound Design BA.

a.hill@gre.ac.uk www.ahillav.co.uk

Moritz Schuchmann, HAW Hamburg
Straße

The abstract experimental film investigates right-wing extremist crime scenes in Germany. The photographic material of street textures and surfaces, which has been shot at three exemplarily selected crime scenes in Rostock, Bottrop and Magdeburg is re-animated digitally and transformed into an immersive visual experience. Schuchmann combines methods of Formalism and Abstract Animation with an intensive sound design to explore the places and to give viewers a new perspective. The project was funded by the Faculty of Design, Media & Information of the HAW Hamburg.

Moritz Schuchmann was born on 22.06.1993 near Darmstadt in Hesse. After studying digital media, he moved to the Hanseatic City of Hamburg, where he studied in the Master's program Time-Based Media – Sound / Vision. A workshop on the topic "Abstract Narratives - Narrative Abstractions" with video artist Max Hattler paved his way for the future in the field of experimental film. A strong Formalism in the tradition of Absolute Film is the basis of his work. Schuchmann wrote his master's thesis on the subject of Meaning in Abstract Animation. Exhibitions & Film Screenings: Platzhirsch Festival | Duisburg, Germany | 30.08. - 01.09.2019 Solo Exhibition at Klub der Künste | Deichtorhallen Hamburg, Germany | 02.05. - 18.05.19 Anifilm Festival 2019 | Trebon, Czech Republic | 10.05. - 12.05.19 - Abgedreht Festival | Hamburg, Germany | 13.12. - 14.12.2018.

Saturday Session Five
(19:00 – 20:00)

Concert Annette Vande Gorne
See page 9.

Sunday Session Six
(10:45 – 12:45)

Trent Kim, University of the West of Scotland
Hyperobjectivity in the Art of Lumia by Thomas Wilfred [b.1889 d.1968]

Lumia is an early-mid 20th century art form pioneered by a Danish born American artist, Thomas Wilfred. As an early example of new media art, Wilfred developed this unique art form through technological innovation (a series of Lumia devices named 'Clavilux') and various aesthetic experimentations inspired by other art forms including theatre, music and abstract painting. This paper situates the art of Lumia within the field abstract art at large and applies the concept of 'Hyperobjectivity' by Timothy Morton to explain Lumia's unique method of abstraction. I describe this method of abstraction as how an image ejects the viewer in motion and contextualise the materiality of Lumia as machine animation and reflective media as a means of perpetually disorienting a point of view. I compare Lumia to other types of abstractions in this presentation, but also to examples of generative art and argue that the aspect of 'Hyperobjectivity' found in Lumia makes the art incomprehensible than infinite or random. By the incomprehensibility, viewers are not embedded in the world of the image produced by Lumia but are strictly out-with the image. Moreover, the silence of Lumia can reiterate this way of abstraction: seeing out-with image or being ejected by the image. In short, Lumia moulds time and space, and light is there to witness, relay, and participate in the changes in motion.

Trent Kim is a programme leader for BA (Hons) New Media Art at University of the West of Scotland. He started his career in live media and then expanded it onto video art and animation. His works have been shown in South Korea, the US and UK and he has given lectures in various HE institutions including the University of Glasgow, Glasgow School of Art, Royal Conservatoire of Scotland, Kyungsung University (South Korea) and Yale University (US). He is a PhD candidate in animation at the Royal College of Art (London) and his specialist subject areas include lumia (early-mid 20th-century American art by Thomas Wilfred), animation, abstraction and phenomenology.

Dr Brigid Burke, Independent Artist

The creation of *The Angst of the String* (The Glass String)

Chamber Music/instrument building/audio/visual performance is becoming a new field of creative practice and performance. It's fuelled by the imagery of three dimensional art spaces in contemporary performance culture and is increasingly acceptable and engaging with old art forms and new technologies combined with live digital audio and imagery projection.

In this analysis, I will examine detailed aspects of specific audio/visual/instrument building in live performances. *The Glass String* formerly *The Angst of the String* for Chamber strings, String Percussion instruments, live electronics/pre-recorded and video depicts different performance outcomes from the same instruments, score, and intention, from the original onset of the idea. I

will focus on the performance spaces and audio-visual delivery across a range of spaces and performers including separate audio and visual outcomes.

The Glass String (formally *The Angst of the String*) in the long term will be the creation of an ensemble work for chamber string ensemble - 8 violinists, 4 cellos, 4 String Percussion instruments, live electronics/pre-recorded and video. The percussion and string instruments are made from glass, paper, gold leaf, lights, discarded violins, violas and cellos, live and pre-recorded electronics and video. It is a notated, audio-visual composition for Chamber Ensemble. The artistic rationale is based on 24 deconstructed pieces of violins, violas and cellos. *The Glass String* explores different audio outcomes using surfaces of vibration, overtone, intonation and attack on the string from both the traditional and percussion string instruments exploring old traditional technologies and new phenomenon. Each string instrument has been transformed into a string/percussion instrument that has attached microphones, effects units that are controlled by switch pedals and sensors by the performers and electronic artist that controls the live visuals. The instruments have also attached lights and cameras that are projected live with pre-recorded visual footage and live cameras. The Chamber ensemble plays the transformed string instruments and their conventional string instruments. The score explores extended techniques, percussive sounds, graphic /traditional notations and microtonality, whisper sounds and glissandi.

This creation will investigate sound worlds from each of the Chamber instrumentalists from a mechanical investigation with a wash of constant rhythmic patterns repeated that gradually become disjointed and fragmented as the effects are changed throughout the composition. *The Glass String* combines thick textures and extremities in all the instrumentation both audibly and visually.

Brigid Burke is an Australian composer, performance artist, clarinet soloist, visual artist, video artist and educator whose creative practice explores the use of acoustic sound and technology to enable media performances and installations that are rich in aural and visual nuances. Her work is widely presented in concerts, festivals, and radio broadcasts throughout Australia, Asia, Brazil, Europe and the USA. Brigid's main focus is integrating musical ideas with a combination of different media. Each component of media is a tool in the exploration of her artistic process: sound (acoustic, laptop, clarinets and electronics), composition, improvisation, installation, collaboration (with dancers, acoustic performers and other new media performers), print making, pen and ink drawings, painting and animation (digital).

Her involvement New Music has led her to integrate sound, visuals, video mixing and theatre in her performances of her own work and in collaboration with other composers/performers. Other ensembles Brigid performs with are: Tri Duo with Grania Burke, Nunique Quartet, Pausa with Adrian Sherriff, Collage and BHZ with Mark Zanter

and Steve Hall based in the USA and Duo with David McNicol piano. Currently she curates with Mark Pedersen SEENSOUND a monthly Visual Music series at the LOOP Bar Melbourne - seensound.com

Recently she has been a recipient of an Australia Council Project Music Fellowship & new work commissions 'Burning Antrils', 'Coral Bells' & "Instincts and Episodes' also Artist in Resident at Marshall University USA with a Edwards Distinguished Professor Artist Residency, Indiana University USA in 2015 & 2017 also ADM NTU Singapore. Also most recently she has presented her works on the Big screen at Federation Square Melbourne, Tilde Festival, ABC Classic FM. and International Media Festival at the Trafacka Arena in Prague, ICMC International Computer Music Conference Perth Australia, Echofluxx 14-19 Festivals Prague, Generative Arts Festivals in Rome, Milan, Ravenna & Florence Italy, Asian Music Festivals in Tokyo, The Melbourne International Arts Festival, Futura Music Festival Paris France, Mona Foma Festival Hobart, The International Clarinet Festivals in Japan and Canada also Seoul and Australian International Computer Music Festivals. She has a PhD in Composition from UTAS and a Master of Music in Composition from The University of Melbourne. www.brigid.com.au

Hervé Zénouda, Toulon University (France)

The Video Game as a Sound Interface: Towards new instrumental gestures?

This proposition aims to shed light on an emerging creative field the "audio games": a crossroad between video games and musical composition aided by computer. Today, a plethora of small applications, which propose entertaining audio-visual experiences with a preponderant sound dimension are available for game consoles, computers, and mobile phones. These experiences represent a new universe where the gameplay of video games is applied to musical composition. In proposing to manipulate what we refer to as "a-musicological" representations (i.e. using symbols not normally associated with traditional musicology to manipulate and produce sound), this creative field raises a number of questions about representations of sound and musical structures, but also invite to be aware of new instrumental gestures dictates by these new interaction with sound and music and interrogates the musical results produced by these extra-musical goals. Furthermore, these objects play an undeniable role in the rise of a new amateur profile, already put forth by authors like Vilém Flusser (Flusser, 1996), with regards to photography. After having defined the characteristics and the limits of this field and highlighting a few of the historical milestones (abstract cinema, gaming theory in music, graphic actions and graphic scores, open and random composition...), we will study a few examples of musical games and try to spot on some of these new gestures and new music structure which could be issue from the confrontation of these two different cognitive objectives : play a game by manipulating his own gameplay and compose music. For that, we need to create new analytical tools for these new cultural objects.

After musical activities (drummer, composer, producer) and designer/developer of interactive devices, Hervé Zénouda has been teaching at the University since 2000 (University of Paris 13-Villetaneuse). In 2006, he defended a PhD in Information and Communication Sciences and was appointed Associate Professor at the University of Toulon and the I3M laboratory (Nice / Toulon) in 2007. His thesis was published by Editions L ' Harmattan in 2008 under the title Images and sounds in contemporary art hypermedia: from correspondence to fusion.

Véro Marengère, Université de Montréal

The importance of sensuality in electroacoustic music: A presentation of my work as a Composer

The sonic contact is a sonic touch or a proximity touch. It can be perceived as a light brush. Touch can be heard in the sound as it carries a sensory quality. Through its intrusive and invisible nature, the sound hoists a sensual, sexual and even healing power. While sensuality is electroacoustic music's strongest property, it remains its biggest taboo. In my process as a sound artist, I mainly utilize this particular power of sound throughout my compositions and performances.

Sunday Session Seven

(13:45 – 14:45)

Keynote: Annette Vande Gorne

Did you say « acousmatic »?

See page 12.

Sunday Session Eight

(15:00 – 16:00)

Trond Lossius & Jeremy Welsh, Independent Artist / Trondheim Academy of Fine Art,

Norwegian University of Science and Technology

The Atmospherics

The Atmospherics (River Deep, Mountain High) is an ongoing collaborative project by Trond Lossius and Jeremy Welsh. The project researches notions of "place" explored through field recording in sound and video that capture unique qualities from rural and urban areas. The material is processed and edited in order to realise large-scale (and sometimes smaller scale) audio-visual installations. Aspects and elements of different locations are combined to produce temporary places that refer to but does not literary represent actual places that have been visited and documented. The material collected often exploits contrasts - for example, between industrial structures and the natural landscape, motion and stillness, sound and silence, or light and dark. Imagery in part comes from West Norwegian landscapes well known from the work of 19th-century national romantic painters. A question in the project has been how to see and listen

to these landscapes from a 21st-century perspective? How to capture certain qualities of the visual and auditive identities of these places, and then use these as raw material to compose something new? To what degree do information and impression of the places converge or diverge in sound and image field recordings? Processes of abstraction and filtering allow transformations of the material. Editing and montage de- and re-contextualise the images and sounds. Multiple viewpoints within an installation and the use of surround sound enable the construction of an immersive environment that invites the viewer to interact with the material through their perceptions, memories and emotional responses. During field trips, the artists record video material in 4K and audio in ambisonics. Subsequent treatment of field recordings also implies research into creative use of these high-definition formats. Audio-wise this involves software development when needed, including the porting of Ambisonic Toolkit to Reaper. An ongoing field of research in the project is how to make ambisonic field recordings a malleable material in the creation of music and sound design. How can the creative workflow with ambisonics in audio editing software become agile in a way that resembles standard work with stereo audio? The project also explores strategies for using larger loudspeaker rigs in installations while reducing the visual interference with multiple video projections and screens. Audio-visual relationships are of vital interest. The Atmospherics seldom make use of one-to-one couplings between audio and video and instead explore the potential of several parallel looping media streams. The loops all have varying durations and fuse into a constant flow of new combinations that invites new cross-readings and chance encounters between layers. Each installation develops in response to the specific exhibition location. To that extent, the works have an aspect of site-specificity and respond to the architectural and acoustic qualities of the installation space. Material is edited, modified and mixed in situ so that each time the work takes on new aspects. Since 2014, the project has resulted in a series of installations in Bergen, Trondheim, Arendal, Førde, Utne and Campania, Italy.

Jeremy Welsh (b. 1954, Gateshead, UK) lives between Trondheim and Bergen. He works within video, installation, photography, audio and performance. He is a professor of visual arts at the Academy of Fine Arts in Trondheim, NTNU. He was a former professor, master coordinator and dean at the Bergen Academy of Art and Design (2001-2013), and founder and curator at The Film & Video Umbrella, London (1988-1990). His education is from Nottingham Trent University (1977) Goldsmith's College, University of London (1982). His works have been included in several national and international collections, like the National Museum of Art, Architecture and Design, Oslo, Trondheim Art Museum, Arts Council Norway, ZKM Media Center (Karlsruhe) and MacQuarie University Art Collection in Sydney. jewelsh.blogspot.com

Trond Lossius (b. 1966, Bergen) is based in Bergen. His projects investigate sound, place and space, using sound spatialisation and multichannel audio as an invisible and temporal sculptural medium in works engaging with the site. He has collaborated on a large number of cross-disciplinary projects, amongst others with the contemporary performance group Verdensteatret. He graduated with a Master degree in Geophysics from the University of Bergen and went on to study music and composition at The Grieg Academy. From 2003-2007

he was a research fellow at Bergen National Academy of the Arts. Lossius has previously been Head of Artistic Research and Fellowship Programme at Oslo National Academy of the Arts. He is one of the developers of the software framework Jamoma, and he has ported Ambisonic Toolkit to a set of plugins for the Reaper DAW. trondlossius.no

Gerriet Krishna Sharma / Angela McArthur, IEM Graz / Queen Mary London
Verbalizing Sculptural Sound Phenomena in Electronic Music and Sound Arts – Towards a
Share Perceptual Space (SPS)

This contribution is concerned with questions whether the aesthetics of spatialized electronic music of today take into account the perception of the audience at all and how to find terms that could be helpful for composition and analysis of spatialized sound. We are dealing for some time now with spatial sound phenomena that have spatial dimensions like proliferation, width, height etc. forming diverse sound masses that can penetrate, layer, move around each other and define by their properties - space itself. However, to date with the different formats existing, projection techniques and devices, software tools, spatial concepts explained and discussed it is virtually unresolved what the different listening groups hear where in the created space, how they experience plastic sound objects and how they would describe them for themselves. Therefore, the question of common spatial perception remains important in a field of art that claims space and spatial experience as aesthetically being central. Thus, these phenomena are perceived by composers, scientists and audiences causing 'something' we call a shared perceptual space (SPS) defined as the intersubjective space where the perception of these different listener groups intersect. While there has been plenty of exchange between science and art since the beginning of computer music, there has been very little between composers and the audience about the possibilities of appreciation and different perceptions of the spatial sound phenomena that are actually inherent in the spatial sound-composition. Electroacoustic music hosts two diametrically opposite cultures: On one side we find the exact sciences of acoustics, informatics, and engineering all of which define conditions of sound production, the very instruments of executing any compositional design. On the other side we find the culture of music appreciation by the ear. Whereas the first aspect is heavily loaded with well-defined verbal concepts that are shared among a community of specialists, the aural, musical aspect that embodies musical thought and projects it to the audience is almost devoid of a consistent terminology as far as electroacoustic music is concerned. Thus a fundamental problem within every aesthetical discussion in this field resides in the contradicting approaches of science and art: Scientific discourse seeks to eliminate ambiguity in its terminology and definitions. An artistic discourse would on the contrary often seek to be as polyvalent as possible, suggesting a network of meanings or implications. Thus the scientific ideal is more often than not alien to an aesthetically oriented discourse. However, there is also a need for some intersubjective agreements in the aesthetic field so that music can be meaningfully discussed in words. Within this lecture approaches and methodologies are introduced how to develop and derive a specific terminology on "sculpturality" for a certain way of spatial sound projection. By this we intent to encourage the aesthetic discussion about space in spatial sound composition and therefore enlarge the compositional contingencies of this art.

Angela McArthur is an artist, lecturer, and PhD student at Queen Mary University London. Her work draws from the technologies, perception and art of sound in space, to tackle an intersection of the three. In recent years she has been focused on the aesthetics of distance in spatial audio for immersive environments. She has worked in studio, live and location environments, and maintains a commitment to field recording as part of the compositional process. Her explorations centre around natural environments and micro listening.

The interdisciplinary imperatives of spatial audio have shaped her thinking and work, and she values an almost intertextual approach to working across different disciplines. With a background in sound as well as image, she is interested in the assumed need for sound and image to syncretise, and adhere to realism. She challenges such notions by foregrounding the aesthetic potential inherent in the medium, and asking whether spatial audio attributes might not instead elicit new ways of listening. What does it mean to listen in three-dimensions?

She was recently artist-in-residence 2019 at the Institut für Elektronische Musik (IEM) | Graz. She recently exhibited at Ars Electronica (cinematic VR film in collaboration with the BBC), Tate Modern (Exchange, in collaboration with the People's Palace Projects), Society & The Sea (audiovisual installation) and worked with a US-based geo-scientist's infrasonic recordings of the ocean, for an installation to highlight the impact of marine acoustic pollution. In 2017 she co-directed a Sheffield Docfest-shortlisted cinematic VR film, using interactive granular synthesis. She is working towards her PhD at the Centre for Digital Music and in the Media & Arts Tech programme. She completed her masters in the School of Music & Fine Art at the University of Kent with composer Claudia Molitor and fine artist Sarah Turner. She has lived mostly in London, but other places include New York, Sydney, Canada, and Hong Kong. www.angelamcarthur.com Twitter @AngelaMcArthur1

Gerriet Krishna Sharma is a composer and sound artist. He studied Media Art at the Academy of Media Arts Cologne and composition/computer music at the University of Music and Performing Arts Graz. In October 2016 he completed his doctorate at the scientific-artistic doctoral school Graz. His thesis is titled "Composing Sculptural Sound Phenomena in Computer Music". He lives in Berlin and Graz.

Within the past 15 years he was deeply involved in spatialisation of sound in 3D environments like Ambisonics and Wave-Field Synthesis and the transformation of sound into body-space relations. Between 2010 and 15 he conducted the series of works „Oblivious to Gravity“, an artistic research project with electroacoustic aural architectures in vacant urban spaces. Commissioned by the cultural funds of the state of Styria/Austria (A9) and the Sparkassenstiftung Cologne/Germany.

He was senior researcher and composer within the three year artistic research project "Orchestrating Space by Icosahedral Loudspeaker" (OSIL) funded by the Austrian Science Fund (FWF) with 40 publications, over 20 lectures and 12 internationally premiered

compositions. He had been appointed as DAAD Edgar Varèse guest-professor at Electronic Music Studio, Audio communication (AK), TU Berlin for WS 2017/18. Since 2019 he is working on a book on „spatial practices“ and new compositions, exhibitions and a lecture series.

Sunday Session Nine

(16:00 – 17:00)

Jing Wang, University of Massachusetts, Dartmouth
Uriel

Uriel is a collaboration between visual artist Harvey Goldman and composer Jing Wang.

Jing Wang, a composer and virtuoso erhu artist, was born in China. Ms. Wang has participated in numerous musical communities, as a composer and a performer of diverse styles of music. Her compositions have been selected and presented in China, Spain, France, Italy, Serbia, Turkey, Romania, Russia, Australia, Japan, Argentina, and throughout the United States. They have also been recognized by the American Society of Composers, Authors, and Publishers and Electro-acoustic Miniatures International Contest Spain. She was the winner of 2006 Pauline Oliveros Prize given by the International Alliance for Women in Music and has been awarded the MacDowell Colony Fellowship, the Vilcek Foundation Fellowship, and the Omi International Musicians Residency Fellowship. As an active erhu performer, she has introduced the Chinese indigenous erhu into Western contemporary music scene with her wide array of compositions for chamber ensemble, avant-garde jazz improvisations and multicultural ensembles. She has also successfully performed erhu concertos with several symphony orchestras in the United States. Ms. Wang is currently an Assistant Professor of Music at the University of Massachusetts Dartmouth where she teaches electroacoustic music, composition, and music theory.

Harvey Goldman has created critically acclaimed work in the fields of ceramics, digital imaging, animation and music. He is founder of the Digital Media program at the University of Massachusetts Dartmouth. His work has been exhibited widely throughout the United States, Europe and Asia. He has received grants from the National Endowment for the Arts, The Ford Foundation and the Massachusetts Council on the Arts and Humanities. Goldman's work is included in numerous private and public collections including the Iota Center for Experimental Animation, Boston Museum of Fine Arts, Everson Museum of Art, Decordova Museum, Currier Museum of Art, and the Crocker Art Museum. His animations have been screened throughout the world including, the Smithsonian's Hirshhorn Museum, the Corcoran Gallery of Art and the White Box Museum, Beijing, China. His interests include gardening, storytelling, world music, sound exploration, language development, writing systems and basketball. He resides in Dartmouth, Massachusetts with his wife and fellow artist, Deborah Coolidge.

Gerhard Nierhaus, Institute of Electronic Music and Acoustics, Graz
Broken Slide – Into the Mouth of the Butterfly

The visual components of this multimedia project consist of movies/photos which are taken with various high magnification macro and microscopic devices from one single broken microscopic slide containing some parts of an insect's body. It was not the intention to produce realistic imagery, but to photographically explore this single object in order to render visible the hidden beauty of varying abstract landscapes. 'Magnification' was also the motivating idea for the composition of the piece. Based on generative principles, the music grows out of a simple constellation of numbers which creates complex structures by unfolding in time.

For other projects see: gerhardnierhaus.com

Gerhard Nierhaus studied composition with Peter Michael Hamel, Gerd Kühr and Beat Furrer. Working within both traditional and contemporary digital and intermedial formats, his artistic output includes numerous works of acoustic and electronic music and visual media. He works at the Institute of Electronic Music and Acoustics (IEM) at the University of Music and Performing Arts Graz, Austria, and teaches Computer Music and Multimedia.

Stuart Pound, Independent Artist

Trotters

We trot towards a riddle.

Boogie Stomp Pink

This boogie dance performed by William & Maeva was downloaded from the internet. Vertical sections taken from each frame are arranged into 24 panels to show pattern and movement across every second of it. First shown at the Ottawa International Animation Festival in Sept 2017.

Stuart Pound lives in London and has worked in film, digital video, sound and the visual arts since the early 1970's. Since 1995 he has collaborated with the poet Rosemary Norman. Video work has been screened regularly in London and at international festivals.

Tivon Rice, University of Washington

Environment Built for Absence (an unofficial/artificial sequel to J.G. Ballard's "High Rise")

Beginning in late 2017, the demolition of the Netherland's Central Bureau of Statistics office created an extreme type of slow cinema for railway passengers travelling between The Hague and Amsterdam. Over the following year, as the building was methodically deconstructed from the top down, I visited the site each month to document the gradual erosion. Using a drone and a digital mapping process, photogrammetry, I created an archive of virtual 3D models. As the building's architecture and its inevitable collapse were reminiscent of J.G. Ballard's 1975 High Rise, I further sought to accompany this scene with the voice of a machine learning system trained on

the complete corpus of Ballard's writing. This recurrent neural network generates texts that describe the materials, invisible bodies, and possible narratives residing within the broken grounds of the building. The resulting film combines digital animation and the voice of the machine learning system. It debuted at the 2018 Modern Body Festival in The Hague's Theater de Nieuwe Regentes, a former swimming pool built in the 1920's. Made possible by The Modern Body Festival, Yukun Zhu, Google Artists and Machine Intelligence, Maxwell Forbes, and the University of Washington Center for Digital Arts and Experimental Media. Narration by Kevin Walton.

Tivon Rice is an artist and educator working at the intersections of visual culture and technology. Based in Den Haag (NL) his work critically explores representation and communication in the context of digital culture and asks: how do we see, inhabit, feel, and talk about these new forms of exchange? How do we approach creativity within the digital? What are the poetics, narratives, and visual languages inherent in new information technologies? And what are the social and environmental impacts of these systems? These questions are explored through projects incorporating a variety of materials, both real and virtual. With recent films, installations, and A.I. generated narratives, Rice examines the ways contemporary digital culture creates images, and in turn build histories around communities and the physical environment. While much of Rice's research focuses on emerging technologies, he continuously reevaluates relationships with sculpture, photography, and cinema. His work then incorporates new media to explore how we see and understand a future thoroughly enmeshed in new data/visual/production systems. Rice holds a PhD in Digital Art and Experimental Media from the University of Washington. He was a Fulbright scholar (Korea 2012) and is currently an Artistic Researcher at the Delft University of Technology. His projects have travelled widely with exhibitions in New York, Los Angeles, Seoul, Taipei, Amsterdam, London, Berlin, and São Paulo.

Paul Klooren, Estonian Academy of Music and Theatre
Stages

It is a short abstract narrative that was made using a mixture of filmed footage and hand-drawn elements that were then animated. All the sounds (except for the song in the middle) originate from a guitar.

Paul Klooren born in 1994 in Tallinn, Estonia. Currently studying audiovisual composition in the Estonian Academy of Music and Theatre and works mainly with filmed footage and animation.

Jeremy Welsh & Michael Francis Duch, Norwegian University of Science and Technology,
Trondheim
Accumulator # 4

This work follows a series with the same title (Accumulator 1,2, 3) etc as well as realizations of works by Pauline Oliveiros, Michael Pisaro, Hanne Darboven, John Cage and others. All of these combined live music for double bass with film/video. Works have been exhibited, performed and presented at conferences in Norway, Austria and Ireland.

Jeremy Welsh (1954, UK) is a visual artist and professor of Fine Art. Has exhibited internationally since the late seventies. Formerly exhibitions coordinator at London Video Arts (later known as The Lux) and former director of Film & Video Umbrella, London. Resident in Norway since 1990.

Michael Francis Duch is a professional musician and associate professor of musical performance. He has worked with many renowned musicians within contemporary and improvised music and is a member of leading Norwegian ensemble Lemur. Duch has released several solo and collaborative albums of own and others' music and is a member of Scottish/Norwegian avant-rock band Amor.

Sunday Session Ten (17:30 – 19:00)

Brigid Burke, Independent Artist,
Hands Feed Roots

Based on the transformation of old buildings and sounds that are deconstructed into sounds and interwoven rhythms that depict a race against time and reaching the finishing line. Computer generated sounds have been mixed with clarinet, glass, traffic and air to create this energetic and pulse driven work. The visuals transport the viewer with snapshots of both degenerated line drawings of the buildings; that are fractured and contribute an ever-changing landscape of urban living.

Brigid Burke is an Australian clarinet soloist, composer, performance artist, visual artist, video artist and educator whose creative practice explores the use of acoustic sound, contemporary new music, technology, visual arts, video, notation and improvisation to enable cross media performances. Her work is widely presented in concerts, festivals, and radio broadcasts throughout Australia, Asia, Brazil, Europe and the USA. Currently she curates SEENSOUND a monthly Visual Music series at the LOOP Bar Melbourne - seensound.com. She has been a recipient of an Australia Council Project Music Fellowship and numerous new work commissions, Artist Residencies – USA, Australia and Singapore. Also most recently she has presented her works on the Big screen at Federation Square Melbourne, Tilde Festival, ABC

Classic FM. and International Media Festival Prague, ICMC International Festivals, Generative Arts Festivals in Italy, Asian Music Festivals, Tokyo, She has a PhD in Composition from UTAS and a Master of Music in Composition from The University of Melbourne. www.brigid.com.au

Jim Hobbs, University of Greenwich
Stars and Stripes

Thirteen years ago, prior to moving to the UK from the States, I received a "Freedom Pack" from my wife's brother. This package contained all sorts of patriotic bumper stickers, badges, fridge magnets, and of course, an American flag. Stars & Stripes is a deconstruction/reconstruction of that flag - mathematically measured and structurally assembled using a very strict recipe: 50 stars, 13 stripes, two grommets, and a shitload of American spirit. The accompanying sound is a combination of a new score produced by Mordant Music with live overdubs from the film's 16mm optical soundtrack.

Jim Hobbs (b. 1975, USA, Lives/Works UK) Jim Hobbs' work utilizes a variety of media including 16mm film, video, installation, site-specific work, drawing, sculpture, sound and photography. His work and research investigate the personal and social implications of loss, oblivion, history, memory and the subsequent acts of remembrance/memorialisation. The work bears particular focus on how the use of architecture and monuments become a type of physical manifestation of that which is absent, and how these "stand-ins" can be used, manipulated, etc. More recently, his work has moved into the realm of filmic installations, utilizing film as a time based material and medium to investigate these concerns. Intrinsically interlinked with this is a constant questioning of the role of the analogue within the digital age – how it functions, if it can override associations with nostalgia, and notions of the quality of image and how that relates to memory. He has exhibited his work internationally in various museums, galleries, public spaces, and festivals. Most recently he has toured the project (I)MAGESOUND(S) in the USA and Europe including Walter Bruno Auditorium, Lincoln Center at New York's Public Library for the Performing Arts and the Danish Film Institute. He is the Programme Leader for MA Digital Arts and Senior Lecturer for the School of Design at The University of Greenwich, London, UK.

Dawid Liftiner, Academy of Media Arts Cologne
F 18W T8 G13 865

Audiovisual Performance // 12 Minutes 10 x Fluorescent tube, Arduino, relays F 18W T8 G13 865 is a highly concentrated audio-visual performance with a self-built instrument. Through a digital interface via software, Arduino and relays, fluorescent tubes are turned on and off controlled by the performer. Only the sound and noise produced by the tubes itself are recorded and (without manipulation) amplified. The high pitch sounds from the starters, the low hum from the ballast. What you see is what you hear, and what you hear is what you see. When the tubes are turned off, the performance is finished.

Dawid Liftiner *1986, in Austria, currently based in Cologne / Germany. In my works I explore sensory and synaesthetic states through hand-built electronics harnessing the essential properties of light and sound across installations and performances. Since 2018 I cooperate with the Neue Musik Ensemble ElectronicID as a light sound artist. Also, I am a co-founder with Stefan Tiefengraber of the curatorial soundart project radio433. Formal Education, 2010 - 15 University of Art and Design Linz / Austria, Time-based and Interactive Media, BA 2015 - 16 Chinese Culture University 中國文化大學 Taipei / Taiwan (R.O.C.), Mandarin TOCFL Band B 2016 - now Academy of Media Arts Cologne / Germany, Media and Fine Art, Diploma.

Audio Visual Installations

Christian Groothuizen, University of East London
Communicating Vessel: Portal of Emotion

The object is 3D printed from data sourced from a series of field recordings made by the artist. The recordings explore sound's complex relationship with architecture and the built environment. The work describes both the exploration through making of real objects and a nascent enquiry into 'Sound Objects' as phenomenological events, drawing from Pierre Schaeffer's view that the Sound Object, 'is a kind of phenomenological quest for the essence of sound'. These investigations form the basis of an investigation into architectural space, sound and memory.

In his Ten Books of Architecture, Vitruvius (80 BCE to 15 BCE) describes how bronze 'acoustic urns' were placed amongst theatre audiences to enhance the vocal performance of actors on stage.

There are no known extant examples of this Greco/Roman technology. With the rediscovery of Vitruvius' writings in the middle ages, many stone chapels, throughout France and England, were constructed with stoneware urns placed within the walls to obtain a similar effect. Modern scientific analysis shows that the effect is negligible. A recent theory suggests that the vessels were employed as portals to communicate with angels.

Christian Groothuizen is a New Zealand born artist, working and living in London. He has been described by Creation Records founder Alan McGee as 'a bit of a space cadet'. He was a founder member of the 80's Indie rock band The House of Love, after the band's demise in the mid-nineties he studied architecture and became a full-time educator. He is currently a doctoral candidate in Fine Art at the University of East London. His interests are in sound practice, listening, field recording and exploring the phenomenological and emotional role of sound and acoustics within the built environment.

Hye Young Sin, Academy of Media Arts, Cologne, Germany
Time-piece

Time-piece is based on a six-meter-long structure of honeycomb paperboard. Dried plants, a stone, needles, erasers, wine corks, a metallic brush and cable-ties are combined with electronic devices. Those small motorized objects make subtle sounds by touching the cardboard in their different ways. Each sonic movement slowly changes by time due to a gradual decline of batteries and gains a new rhythm after the power supply changes. This sounding dynamics are contrasted by the visual linearity.

To arrange and combine the mundane with the electronic, especially using the batteries, is inspired by the film *Le Bonheur* (1965) which questions individual role and social function in terms of family dynamics, as Agnes Varda, a director of the film, mentioned, "Each of us is unique but

replaceable. If a woman fulfils her functions as a wife, mother, cook, and gardener, the family does well. Every woman may discover her identity, her talent and her place but she is replaceable insofar as she fulfils her social function."

Hye Young Sin Born 1988 in Seoul, South Korea lives and studies in Cologne, Germany
2016 – Academy of Media Arts, Cologne, Germany (Kunsthochschule für Medien Köln)
2007 – 2014 Seoul National University, Seoul, South Korea / Bachelor of Arts in Information and Culture Technology / Bachelor of Arts in Consumer Science.

Ryo Ikeshiro, Bath Spa University
Ethnic Diversity in Sites of Cultural Activity

Stand in front of the webcam to be racially profiled by the computer! Are you more likely to be waving a flag at the Last Night of the Proms or to the unofficial ISIS anthem, or is the gay anthem *Go West* more your soundtrack?

Ethnic Diversity in Sites of Cultural Activity poses the question of whether computers can be racist by highlighting the potential for discrimination of face recognition technology. The work locates faces, detects skin colour and alters the sound and image produced depending on the ethnic diversity of the visitors to the exhibition. Different music is selected depending on where the work is exhibited. The project has been presented in the UK, Austria, Germany, Poland, Switzerland, Korea and Japan.

Through a crude racial profiling of visitors, it draws attention to an increasingly common technology which is an example of how a seemingly neutral entity such as a computer can reinforce existing power structures. The context of a playful interactive installation is also a reflection of how we rarely focus on the ways in which software functions, instead becoming preoccupied with the interface; most software are prepackaged "black boxes" inaccessible due to their proprietary and closed nature. In addition, it is not completely infallible as with most software and it may be possible to trick the algorithm e.g. by visitors covering parts of their face, using make-up or changing lighting conditions which they are encouraged to do.

Ryo Ikeshiro is an artist, musician and researcher working with audio and time-based media to explore possibilities of thinking through sound. He is interested in the artistic potential of computation and code as well as their cultural and political dimension i.e. both the aesthetic possibilities brought about by the technology and its wider context. Techniques of sonification – the communication of information and data in non-speech audio – are harnessed in an artistic context, with algorithms and processes presented as sound to investigate computational creativity and the relationship between the audio and the visual. In addition, the manifestation through sound and technology of issues of identity and Otherness is explored. Comparable processes to sonification are also used, such as ideophones in East Asian languages – words which evoke silent phenomena through sound. Ryo's output

includes installations and live performances in a variety of formats including immersive environments using multi-channel projections and audio, 360-video and Ambisonics (spatial audio), field recordings, interactive works, Teletext art and generative works. Recent themes explored include echolocation, computer vision, artificial intelligence, algorithmic bias, sonic branding, urban regeneration, singing voice synthesis, 3D-printing and engraving, mental health, noise, emergence and non-standard synthesis. Ryo has presented his works internationally in a wide range of contexts including exhibitions, festivals, concerts and screenings as well as academic conferences. He was part of the Asia Culture Center's inaugural exhibition in Gwangju, South Korea, and his TeleText art pages have been broadcast on German, Austrian and Swiss national TV. He is a contributor to Sound Art: Sound as a medium of art, a forthcoming publication from ZKM Karlsruhe and he is featured in the Electronic Music volume of the Cambridge Introductions to Music series. He has a PhD from Goldsmiths, University of London. The topic explored was real-time data sonification and visualisation – or live “audiovisualisation” – of emergent generative systems within the framework of audiovisual and computational art. He also works as a lecturer.

Julie Watkins, University of Greenwich
Singing Light 2

In a dark spacious room a projector throws colourful animations onto the black walls and translucent screens. Shapes playfully animate. An acousmetre's voice wells up. According to Michel Chion an acousmetre is an:

[A]cousmatic character whose relationship to the screen involves a specific kind of ambiguity and oscillation... We may define it as neither inside nor outside the image. It is not inside, because the image of the voice's source – the body, the mouth – is not included. Nor is it outside, since it is not clearly positioned offscreen.
(Chion, et al, 1994, 129)

Walk into a space that treats the entire space as a painter's canvas, like Hans Richter's movie-canvas but with depth in real space.

Three frames showing the progression of the movie-canvas down and out of screen, revealing a small black rectangle.

The voice and the animation go beyond the frame; background changes with foreground, negative shapes change to positive shapes and evanescent illusions are created. Walk into the film, find your own path around the screens and see the animations from all sides. Create your own shadows. Come and be immersed in your own way.

Julie Watkins is a senior lecturer in Film and Television at the University of Greenwich. She worked as lead creative in prestigious Post-Production facilities in Soho and Manhattan. She designed concepts, led Technical Direction, Animation, Motion Graphic and Visual Effects Teams, for Commercials, Broadcast Graphics and Films. She taught at New York University. She joined the University of Greenwich in 2006, initiated a Film and Television degree and

partnership with the BBC. She has MA (distinction) in Graphic Design from University of the Arts London. Supporting her visual music practice she has presented papers and shown work at DRHA 2014, 2015, 2016 and 2017 and Sound / Image 2015, 2016, 2017 and 2018, Seeing Sound 2018, EVA 2018, published papers in Body Space & Technology Journal in 2016, 2017 and 2018 and is now completing a PhD.

Listening Room

David Arango Valencia, Université de Montréal
Pied de vent

Je connais pas les mots pour dire cela...
I do not know the words to say this...

David Arango Valencia is a composer from Montreal interested in acousmatic and visual music, electronic music and soundscapes, mixing various mediums that can express meaningful and immersive experiences. David has studied composition at Université de Montréal under the direction of Jean Piché, Robert Normandeau and Martin Bédard.

Emma Margetson, University of Birmingham
Abstracted Objects

...coins ...foil ...metal pan ...cellophane ...bubblewrap ...noise

A collection of found sound objects originally explored in a hands-on creative workshop exploring sound, object and mark making at The Barber Institute of Fine Arts. The recorded found sound objects from this workshop were repurposed for this eight-channel composition, *Abstracted Objects*.

Emma Margetson is an award-winning acousmatic composer and sound artist based in the Midlands, UK. Her works have been performed nationally and internationally and was recently featured on the British Music Collection's #AComposerADay series, which showcased the profiles of 31 female composers and their unique contributions to composition in the UK. Emma's compositional work is focused on developing novel compositional approaches that are actively geared towards increasing engagement with electroacoustic composition in order to reach wider audiences, in particular disadvantaged segments of the community, and younger people. Furthermore, Emma has collaborated with a variety of organisations across the West Midlands including the Ikon, Research & Cultural Collections at the University of Birmingham, The Barber Institute of Fine Arts and Sampad. Emma is currently in the final phase of studies for a PhD in Musical Composition from the University of Birmingham funded by the AHRC Midlands3Cities Doctoral Training Partnership under the supervision of Annie Mahtani and Scott Wilson. She is currently a member of BEER (Birmingham Electroacoustic Ensemble for Research) and her work has been published with Urban Arts Berlin, Sonos Localia and obs akycma AUDIOR 068.

Fahmi Mursyid, ITENAS
Ragam Bunyi

This acousmatic composition is about my re-interpretation of Indonesia music instruments (gamelan, bonang, saron, karinding, and sundanese flute) specific in West Java in minimalist

direction. All sounds recorded by only one mic condensor and to computer-based digital signal processing for manipulation the raw materials in micro sampling, granular synthesis, change the pitch/octave, reverse, play at different speeds, and create droning sounds (less effect, only reverb). The composition, inspired by nature, organic structure, climate change, politic situation, and landscape around me here.

Fahmi Mursyid is a contemporary musician, composer, sound designer and producer based in Bandung, Indonesia. He began releasing recordings under various monikers and labels since 2011 - now. Fahmi uses found objects and computers to create the glitches, sampling, granular synthesis and electronic sound characterising his work.

Léa Boudreau, Université de Montréal
Quatre machines pour sauver le monde

In January 2019, young students from Jean-Baptiste-Meilleur elementary school in Montréal took part in a little brainstorm: to imagine fantastic machines under the theme «Quatre machines pour sauver le monde» (Four machines to save the world). No limit, no other instruction, all ideas were welcomed. Based on their suggestions, I composed this piece, expressing with sound and music the devices thought out by the youngsters but also their surrounding environment. The work is divided into four parts which respect the original titles given by the schoolchildren :

- 1- Une machine volante qui fonctionne à la pollution et qui la transforme en air pur (A flying machine that functions with pollution and turns it into fresh air)
- 2- Une machine-robot en forme d'animal pour sauver les animaux qui n'ont pas de maison et qui sont dans la rue (An animal-shaped robot-machine to save homeless animals that live on the street)
- 3- Une machine pour envoyer toute la neige qui tombe ici au pôle Nord pour ne plus que ça fonde (A machine to send all the snow falling here to the North Pole so it doesn't melt anymore)
- 4- Une machine-bateau-sous-marin pour nettoyer les océans (A machine-boat-submarine to clean the oceans)

Léa Boudreau is a composer and musician based in Montréal, Qc. Born in 1993, she nourishes a passionate relationship with sound since her teenage years. It was a time when she used to spend days as a hermit, listening and creating. Oh how few things have changed. Nowadays, she continues to create with performance and composition in which she hopes to explore the infinite possibilities of everyday objects and to express the thousand of ideas she has kept in her mind for a long time now. In 2019, she won the 3rd prize in the Canadian Electroacoustic Community's JTTP contest for her piece Quatre machines pour sauver le monde and in SIME competition (International Electroacoustic Music Week, Lille University) with her piece Recovery. She also received the Marcelle award 2019 from the Université de Montréal music

department for the work she accomplished during her academic journey (prize named after Marcelle Deschênes who created the electroacoustic composition program in 1980). In 2017, she received the 3rd Hugh-Le Caine prize from the SOCAN Foundation Awards for Young Composers for her piece Dementia.

Nicola Fumo Frattegiani, Conservatory of Music of Frosinone
Banlieue cuivrée

Banlieue cuivrée. Suburb brass. Crumbled concrete. The matter fragmentation, its chaos and energy, counterpoised to its implacable, pure and monolithic immobility. The cement shifted through the metal and the leather. The expression "*banlieue cuivrée*" comes from the will to represent the life of a cement magma with its morphed and dynamics fluctuations, its slackening and but also with its static poses sublimated in the urban architectonic context. Hence concrete. A specific matter. A "fact" surrounding our daily space. A rigid corporeality but that comes in liquid form. Concrete. Suburb. Banlieue. The colour grey. The composition has been built using exclusively concrete samples of metallophones and membranophones instruments. Brass is the dominant metal colour in the musical context, hence the second French term *cuivrée*. To this light a copper mass, alternating its breath in different ontological sound statuses, is the resulting terminological syntaxes.

Born in Perugia, Nicola Fumo Frattegiani graduated from D.A.M.S. (Academy of Arts Music and Show) at the University of Bologna, with a thesis on Luigi Nono's work "Intolleranza 1960". Later he has advanced Master's degree on "The musical cultures of 1900's" at the University of Tor Vergata in Rome, and a bachelor's degree on "Electronic Music and New Technologies" (course electroacoustic composition) at the "Francesco Morlacchi" Conservatory of Music of Perugia. Currently Nicola Fumo Frattegiani is attending the Master's degree of "Electronic Music and New Technologies" at the "Licinio Refice" Conservatory of Music in Frosinone (course audiovisual composition). His works have been presented at various national and international festivals including ICMC International Computer Music Conference (South Korea), NYCEMF New York City Electroacoustic Music Festival, ICMC-NYCEMF (USA), SMC Sound & Music Computing Conference (Cyprus), Atemporánea Festival Internacional de Música Contemporánea (Argentina), Festival Futura Mondes Parallèles (France), Synchresis Festival Internacional de Arte Sonoro y Música Electroacústica (Spain), Evimus Saarbrücker Tage für elektroakustische und visuelle Musik (Germany), MUSLAB Muestra Internacional de Música Electroacústica (Brazil), Echofluxx International Festival of Experimental Film, Music, Dance and Poetry (Czech Republic), Audio Mostly a conference on interaction with sound, BFE/RMA Research Students' Conference, Convergence International Conference/Festival of Music, Technology and Ideas, Noisefloor Festival (United Kingdom), Diffrazioni Firenze Multimedia Festival, XXII CIM Colloquium of Musical Informatics, Venice Biennale of Architecture (Italy). Author and performer, his research deals with electroacoustic music, sound for images, video, art exhibition and in particular compositions for theatrical performance.

Ricardo Dal Farra, Concordia University
Sense

The meaning of life. The meaning of the things we do.

The direction in which we move... where we are going.

Complications and complexities that are smoothed out with the passing, in one way or another, for the good, for the bad sometimes. Time is a fiction that surprises us.

After the action, the startles, the interventions and the infinite searches, the reflection, and a step after the previous one, among the thousands of the road.

Dr. Ricardo Dal Farra (Buenos Aires, 1957) is a composer and new media artist, educator, historian, and curator working in the intersection of the arts, sciences, and technology. He is a Professor at the Music Department of Concordia University, Canada (<http://goo.gl/SeuhUx>) and founder-director of the Electronic Arts Experimentation and Research Centre - CEIARTE of the National University of Tres de Febrero, Argentina.

He has been researcher and consultant on electroacoustic music and media arts history for UNESCO, France; director of the Hexagram Centre for Research-Creation in Media Arts and Technologies, Canada; associated researcher of the Music, Technology and Innovation Research Centre at De Montfort University, in the UK; senior consultant of the Amauta - Andean Media Arts Centre in Cusco, Peru; coordinator of the international research alliance DOCAM - Documentation and Conservation of the Media Arts Heritage; and director of the Multimedia Communication national program at the Federal Ministry of Education, Argentina.

Dal Farra has presented his sound-art, electroacoustic and visual-music works in more than 40 countries, and recordings of his pieces are published in 23 international editions (including CDs by Computer Music Journal and Leonardo Music Journal, by MIT Press). Among others, he received awards and commissions from the Sao Paulo International Arts Biennale, Brazil; the National Endowment for the Arts, Argentina, the Concours International de Musique Electroacoustique de Bourges, France; the Centro di Sonologia Computazionale of the University of Padua, Italy; and the International Computer Music Association.

Funded by The Daniel Langlois Foundation for Art, Science and Technology of Montreal, he created the largest collection publicly available of Latin American Electroacoustic Music, including a database with over 2,000 recordings of works digitally preserved, composed 1957-2007 by almost 400 composers, and +200,000 words (<http://www.fondation-langlois.org/html/e/page.php?NumPage=556>).

Dal Farra is founder-director of the international conference series *Understanding Visual Music* - UVM (held in Canada, Argentina, and Brazil), and founder-director of the international conference series *Balance-Unbalance* (held in Argentina, Canada, Australia, United States, Colombia, the UK, and The Netherlands) on how the media arts could contribute to solving the environmental crisis (<http://balance-unbalance2018.org>). He also has been leading art-

science projects, like the three editions of the sound-art international contest organized with the Red Cross Climate Centre, and designed multiple art-science-technology educational programs.

Dr. Dal Farra was the artistic director of the Mexican electronic arts biennale *Transitio* in 2015, and a guest keynote at *Congreso Internacional de Humanidades Digitales* (2016) and *SIGRaDi - Ibero-American Digital Graphic* (2016), held in Argentina, and *HDRio - I Congresso Internacional em Humanidades Digitais* (2018), held in Brazil. He is an active member of several editorial boards: *Leonardo/ISAST* (MIT Press, USA), *Organised Sound* (Cambridge Press, UK), *Journal of Research on Music Education* (ADOMU, Argentina), *Resonancias - Musical Research Journal* (Catholic University of Chile), and organizations such as: *Electroacoustic Music Studies Network*, *Colegio Latinoamericano de Compositores de Música de Arte*, and *Earth-to-the-Earth*. He is also a member of the board of the *FullDome Festival* (Jena, Germany), and *ISEA International*, formerly the *International Society for the Electronic Arts*. <https://www.facebook.com/ricardo.d.farra> <https://www.concordia.ca/faculty/ricardo-dal-farra.html>

Seth Shafer, University of Nebraska, Omaha
Phoenix and Firewhip

South of the equatorial plane, near the great Cleft scarring the continent called Aquila (named after its eagle-shaped form), lies an unusual biome that has evolved to generate and survive great discharges of energy and fire. The forest is dominated by tesla trees, which under certain meteorological conditions, violently release explosions and lighting bolts of static electricity that ignite massive wildfires across the Pinion Plateau. Only the hardiest lifeforms like phoenix shrub, firewhip, amber lambent, glowbirds, and multihued gossamers are witnesses to the volatile conditions of these flame forests.

The materials used in this piece are inspired by Dan Simmons's novel *Hyperion* and were produced using ambisonic and binaural techniques.

Seth Shafer is a composer and researcher whose work lies at the intersection of technology, new media, and art/science, with a specific focus on real-time notation, interactive music, and algorithmic art. Seth's compositions have been performed internationally and across the USA. Recent performances include the 2018 International Computer Music Conference (Daegu, South Korea), 2018 Sound and Music Computing Conference (Limassol, Cyprus), 2017 Conference on Technologies for Music Notation and Representation (A Coruña, Spain), the 2016 Sound and Music Computing Conference (Hamburg, GE), 2015 Shanghai Conservatory Electronic Music Week (China), the 2014 International Computer Music Conference (Athens, GR), and the 2013 Festival dei Due Mondi Spoleto (Italy). In addition, his piece *Pulsar [Variant II]* for trumpet and computer was a finalist for The Engine Room's International Sound Art Exhibition 2015 (London, UK). His sound installations have been shown at Kaneko (Omaha), the Perot Museum of Nature and Science (Dallas), Long Beach Museum of Art's Pacific Standard Time Exhibit, and the Long Beach Soundwalk. Seth is Assistant Professor of Music Technology at the University of Nebraska at Omaha. He holds degrees from the University of

North Texas and California State University, Long Beach. As a performer, Seth played tuba in the Golden State Pops Orchestra, co-founded and co-directed the Cole Conservatory Laptop Ensemble, and performed in various new music ensembles. He has also played in several popular bands including a performance on the Grammy-winning Vampire Weekend album *Modern Vampires of the City*.

Feliciano Chiriaco, Conservatory U. Giordano (Foggia)
Vacuus

"*Vacuus*" is an acusmatic composition on a fixed support that describes the movement of the bodies in an empty space. The meaning of "*Vacuus*", the Latin word, is in fact "Empty", which identifies itself in the structure in the low frequencies and in the dark sounds, in the space so as to be perceived around the listener. "Space" is the key word of the composition, in which all the elements are positioned and moved around independent orbits, which approach and move away until they collide. Then start all over again, you can hear the rotating bodies approaching. Only at the end there will be the decisive battle, the creation. Thanks to the synthesis and sampling processes the sound follows the rotation in the space created by the reverbs and the dynamic compressions. Getting lost in the void is an instinctive reaction, one loses the real perspective, and one abandons oneself to wander about. "Spinning around and getting lost in the dark vacuity, confused by the total lack of importance and feeling."

Feliciano Chiriaco is an Italian electroacoustic music composer. He frequents the third year of Electronic Music at the Conservatory U. Giordano of Foggia. He studied with N.Monopoli, R.Zanata, L.Gregoretto and C.Valentini. His music has been performed on numerous occasions such as KLG Festival, NYCMEF, MUSLAB in Madrid and in Mexico City, Atemporanea Festival in Buenos Aires. In 2017 he published "*Rêve*", an audio-video installation, on the "Live" catalog, Paginaria Editions. In 2017 he composed "*Studio Rimico N.1*", for the video-installation "*Upgrade My Soul*" by R.C.Giannotti. In 2017 he composed the soundtrack of "*Andrea Firenze*", a film by A.Varano. In 2018 he published "*Nocna Mora*" for flute and live electronics. In 2018 he taught electronic music at the association "BeatHoven Music Academy". From March of 2018 he collaborates as Sound Enveloper with "Engineering Samples". From January of 2019 he works as Sound Engineer at "Moto Armonico" Recording Studio in Barletta.

