

Music Programme

# Renehan Hall, South Campus

# Concert 2: Saturday 8pm

Una Monaghan *The Chinwag*

Brian Connolly *Invisibalia*

Cárthach Ó Nuanáin *The Collapse of Histrionics*

Bryan Robson *Tuning In*

Shane Byrne *The Third Law*

Eoin Smith *Stills*

Francesc Marti *Speech 2*

Ben L Robertson *Natricinae*

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# The Chinwag

*The Chinwag* is a new piece for traditional Irish harp and live electronics, based around a conversation between three elderly ladies in a house in rural Donegal in 2012. Over tea and currant bread, they discuss funerals, the rose bushes, emigration, picking blackcurrants, and the secret to a long life. Composed and performed by Úna Monaghan, snippets of the ladies’ voices are manipulated live by the performer using pitch detection and motion sensor. The resultant sound is a merging of melodies and life stories – an impression of the chinwag rather than the privilege of the whole conversation.

*The Chinwag* directly references both themes of the 2015 SMC conference. Specifically: it engages with folk music in contemporary contexts; it features sounds of both oral and aural traditions; it views the past and present through the eyes of older people; it features new musical interfaces; it uses the gestures involved in Irish harping to trigger and control computer sounds.

**Úna Monaghan** is a harper, composer, and sound artist from Belfast. Her recent work has combined traditional Irish music with bronze sculpture, sound art and movement sensors, and has been presented at conferences and festivals internationally. She completed a PhD at the Sonic Arts Research Centre (SARC) in 2014, researching the boundaries of Irish traditional music performance, including improvisation and live electronics. Úna is co-founder of Quiet Music Night, an evening dedicated to performing quiet music of all genres, especially new and experimental music. She is currently Artist in Residence at the Centre Culturel Irlandais in Paris.

# Invisibilia

This work explores the psychoacoustic phenomena of difference and combination tones as compositional material. The non-linearities of the inner ear are responsible for otoacoustic emissions which cause the ear to produce its own audible sounds when provoked by certain stimuli. When subjected to two stimulus tones (f1 and f2) the ear will, under suitable circumstances, produce distortion products with frequency relationships to the two stimulus tones equivalent to f2- f1 and/or f1+f2. These tones will sound something similar to a soft buzzing, ringing or rumbling when present.

In this piece the ear is responding to sounds that are presented within simple and complex structures. A powerful sensory journey is experienced in *Invisibilia*. Each audience member will hear their own version of the work in many respects as these 'phantom' tones will differ in type and intensity from listener to listener.

*Invisibilia* causes the listener's ears to become instruments. The ear is no longer a passive sensory organ in the listening experience. Here, it is considered to be an active participant in the musical process.

**Brian Connolly** is a third year PhD student from Dublin with research interests in the application of psychoacoustic phenomena concerning the non-linearities of the inner ear within composition. Since starting his PhD in September 2012 at NUI Maynooth under the supervision of Dr. Gordon Delap, Brian has composed the music for Keith Barry's *The Dark Side* tour as well as having written and presented a documentary which explored computer music in Ireland for RTE lyric fm entitled *Why Music Can't Stay Still.* Brian is also producer of the iTunes award-winning podcast series *An Irishman Abroad.*

# The Collapse of Histrionics

This piece is composed for electronics and processed fiddle. Sounds have been generated using standard modular synthesis, the *Skrewell* noise generator from the *Reaktor* environment and microphoned fiddle. The sounds are processed through *Ableton Live*, using a distortion plugin and *Wolfcastle1*, a four-channel granular instrument plus effects programmed by the composer in *Max/MSP* and *Max4Live* (see Figure 2).

Oscillations from the noise generator were stretched and reversed, and the fiddle was tuned down a semitone. Long sustained double stops are played as notated in Figure 1.

As the piece develops the disparity between the fiddle and the electronics become blurred, it becomes difficult to discriminate between the upper fiddle notes and the noise generator oscillations save for some bowed artifacts that reveal the natural timbre of the fiddle.

**Cárthach Ó Nuanáin** is an Irish producer, composer and researcher currently based in Barcelona, Spain. He holds a B.Sc. in Computer Science from University College Cork where he also studied guitar at the School of Music part-time. After completing an M.Phil. in Music & Media Technologies at Trinity College Dublin with a focus on interfaces and real-time composition, he joined the Music Technology Group at Universitat Pompeu Fabra in Barcelona as a Ph.D. Researcher. He has performed and had work featured in Ireland, U.S.A., Spain and Hong Kong.

# Tuning In

This work is an exploration of electromagnetic waves and their capture and conversion into sound waves, as represented by two simulated radios. Within this simulation each speaker in the stereo field represents one radio. The radios autonomously tune between electromagnetic sounds and radio stations separately from each other creating a broken stereo image, the image is unified/resolved when the simulated radios are tuned to the same station.

The source sounds used in this composition are that of a dial radio and electromagnetic wave samples captured in space (and then converted into sound waves) provided by the *Maarble project*.

**Bryan Robson** is a composer and improviser from Co Kildare, Ireland. He holds an BA and MA in Creative Music Technolgies from NUI Maynooth, Ireland where he studied under Victor Lazzarini, Gordon Delap and Jesse Ronneau.

Bryan's music has been showcased in National University, Maynooth, Ireland and was most recently heard at ISTAA conference 2014 in Maynooth as well as the second Csound conference in the Berklee College of Music, Boston.

# The Third Law

The purpose of this composition is to investigate the possibility of a dancer being both the performer and the composer of the piece of music. The dancer is not just moving in reaction to the sound being generated but is actually generating the audio as a consequence of those movements. This is made possible through the use of motion sensing technology facilitated by the Microsoft Kinect sensor.

The roles of sound and motion are intertwined creating a synergy between the performer and the piece. The dancer is no longer merely reacting to the sonic events but instead is an active participant in the creation of the whole auditory and visual experience.

The performer is accompanied by a piece of generative music which has its behavior informed by the gestural qualities of the dance. The dancer is an integral part of the reciprocal feedback system that becomes the composition. For every action, there is an equal and opposite reaction.

**Shane Byrne**: I am a composer of acoustic and electronic music and I am currently engaged in Phd research whiuch focuses on interactivity and participation within electronic music composition.

My current work is focused on physical computing and the potential for human interaction to add to an overall immersive musical experience for both the performer and the audience. My work has more recently led me to investigate the potential for such interaction to facilitate and encourage learning amongst the learning impaired and the autistic community. I also work as a sound designer, foley artist and mixing engineer. My first love is performance and regularly take part in improvisation nights and occasionally play gigs with several noise and progressive rock bands in Dublin.

# Stills

*Stills* is an audiovisual study of movement, space and texture.

**Eoin Smith:** I am electronic musician and composer, based in Skerries, North County Dublin. Since completing my PhD in 2012, I have been exploring various modes of visual processing: I am particularly interested in how audio and visual domains complement and interact with each other. My PhD research focused on utilizing turntable technology, time coded vinyl and purpose built computer music tools, to perform and compose electroacoustic music. While my recent projects have exhibited a multidisciplinary approach in their production, I feel that each strand of my work is unified by an aesthetic, which seeks to explore themes of morphology, textures and spaces.

# Speech 2

Speech 2 is an experimental audiovisual piece created from a series of old clips from the public affairs interview program The Open Mind.

This piece would be a reflection on the action of communicating, highlighting his limitations, and can be labelled as “text-sound-art”, or “text-sound-composition” in an audio-visual framework.

Technically, in this piece, the author has been experimenting how granular sound synthesis techniques, in particular synchronous granular synthesis, can be used for audiovisual creative works. All the piece sounds and images come from that series of clip, in other words, no other sound samples or images have been used to create the final result.

**Francesc Martí** is a mathematician, computer scientist, composer, sound and digital media artist born in Barcelona and currently living in the UK. He has a bachelor’s degree in Mathematics from the Autonomous University of Barcelona, and two master’s degrees, one from the Pompeu Fabra University in Digital Arts, and the other in Free Software from the Open University of Catalonia. He also obtained a scholarship for furthering his studies in Music Technology at IRCAM (Paris).

Simultaneously, he studied music at the Conservatory of Sabadell, where he obtained the Professional Title of Piano with honours. Currently, he is pursuing his PhD in New Media Art at the De Montfort University of Leicester (UK).

As composer and video artist, his works have been performed or exhibited all over the world, including international festivals, events and exhibitions. In 2001 he founded the experimental electronic music project RMSonce. RMSonce's three CDs (Opus e – 2002, The Game of Life – 2005 and Reflections – 2009), released by the Spanish label Medusa Music, have garnered many positives reviews from around the world.

Currently, he combines his artistic and technology projects with his teaching Audio Technology and Image at Open University of Catalonia, and Music Technology at the De Montfort University of Leicester (UK).

# Natricinae

*Natricinae* is an exploration of harmonic spectra through the interplay of physical activation, resonance, & digital signal processing. Using an oscillating magnetic field, the tightened string of a small zither is brought into sympathetic vibration by the composer/performer. From this single harmonic node, an array of individual overtones may be sounded by way of a fourier-based, transposition algorithm (programmed by the composer using Max/MSP). Pitch relationships between transposed partials are derived from sideband values generated through a frequency modulation (FM) algorithm. As the intervals present between these FM sidebands fall outside the scope of equal-temperament, the inclusion of high-order harmonics (i.e. 5th, 7th, 11th, 13th, 23rd, and 31st harmonics) yields a variety of distinctly microtonal intervals. As well as an investigation of spectral tuning, an implicit goal of this piece is to embrace the physicality of medium, including the body of the instrument, the steel strings, and its proximity to the electro-magnetic field. Real-time manipulations, disruptions, and physical preparation of the otherwise, freely vibrating strings are introduced throughout the score, resulting in distortions of rhythm and timbre. Thus, both kinetic & digital artifacts are included as expressive elements within the performance.

**Ben L Robertson’s** work addresses an interest in autonomous processes, biological systems, microtonal/ spectral tuning, and intersections between algorithm and improvisation; often integrating homemade instruments, found objects, sensors, and electro-magnetism to foster new modes of interaction. The composer has taught university courses in composition, music technology, and experimental instrument design. He holds an M.A. in Composition from Eastern Washington University and a B.A. in Music Technology from the Evergreen State College. Past performances and commissions include: Olympia Experimental Music Festival, Pritchard Gallery – University of Idaho, International Noise Conference, Eastern Washington University Symphony Orchestra, Magma Festival, Mobius Science Center, & Gallery 1412.