

Institution: Leeds Metropolitan University
Unit of Assessment: 25 Music, Drama, Dance and Performing Arts
Title of case study: Echochroma New Music Research Group
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>The impact of the research by the Echochroma New Music Research Group at Leeds Metropolitan University relates to new approaches to interactivity in music performance and composition. The group has produced internationally recognised creative works as well as outputs that discuss and establish theoretical models and approaches within contemporary composition, new media and entertainment. These works have been presented internationally to both professionals and the wider public, gaining recognition for outstanding work through international prizes, and influencing practice in the areas of education, entertainment and composition at local, national and international level.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Underpinning research by the Echochroma New Music Research Group covers a range of fixed, live and interactive audio media conducted at Leeds Metropolitan University. The group aims to produce and disseminate work at an International level, including the composition of electroacoustic music and the creation of interactive and generative systems for composition, live performance and entertainment. The group also seeks to broaden access and participation in the experience of new electroacoustic works and interactive music/sound. While the research presented in this impact case study has been conducted at Leeds Metropolitan University, it has been informed by previous research posts, lecturing positions and residencies at the Universities of York, Newcastle, and De Montfort.</p> <p>The research includes composition of artistic works, development of original theory on interaction with music/sound in new media and extensions of existing definitions of compositional practice within contemporary music and sound art. The research outputs encompass original artefacts (software/compositions/performances) as well as theory relating to the compositional, musical and sonic applications of interactive music and sound technologies in an interdisciplinary media context. Electroacoustic composition practice is considered fundamental in informing this work within an interactive context.</p> <p><i>Livecell</i> (Ash and Stavropoulos) aims to explore new methods of interaction with generative systems in a performance context. <i>Livecell</i> is an interactive system for live performance in which the user engages in supervisory control of a generative system to produce a musical score in real-time over a network. Outputs from this research have been published, performed and presented at an International level (International Computer Music Conference, Pixiliarations Festival, New Resonances Festival, Korean Electroacoustic Music Society), as well as receiving International awards (NEMArt Prize 2010, Electric Monster Laptop Ensemble Commission Award 2011).</p> <p>Stavropoulos' electroacoustic work utilises multi-channel formats and techniques for control over spatially articulated sonic environments, to underline intrinsic, spectral, and extrinsic space of sound objects. The command over spatial motion and immersive acoustic spaces accommodates structural relationships between spatial profiles of different sound objects and by emphasising or generating dynamic spectromorphology and character of individual structural elements. This work has informed research by developing sound materials to be used in interactive composition and performance systems. His work has been published in the METAMORPHOSE, SCRIME and CIME/ICEM labels, and has won numerous international competition prizes including Bourges, Metamorphose, Musica Viva and Punto de Encuentro Canarias International Electroacoustic Composition Competition.</p>
<p>3. References to the research (indicative maximum of six references)</p> <p>1) Stavropoulos N. (2009) <i>Nyctinasty</i> [Acousmatic composition / fixed media]. Festival</p>

Impact case study (REF3b)

Internacional de Música Electroacústica "Primavera en La Habana"

- First Prize at the 2009 Punto de Encuentro Canarias International Electroacoustic Composition Competition, Spain.

2) Stavropoulos N. (2011) *Granatum* [Acousmatic composition / fixed media]

- Destellos Foundation Electroacoustic Music Competition, Prize Selection.

3) Stavropoulos N. (2008) *Polychoron* [Acousmatic composition / fixed media]

- Shortlisted for the Bourges Electroacoustic Music Competition.

4) Ash, K. & Stavropoulos, N. (2011) *Livecell* [Software/Performances/Paper]

- Winner 2010 NEMArt Prize (Barcelona, Spain)
- Honorary Mention Monster Electric Laptop Ensemble Commission Award, (Montana, USA) 2011.

4. Details of the impact (indicative maximum 750 words)

The group strives to communicate its work both within and beyond an academic audience in an effort to raise public and industry awareness of new interactive and compositional approaches. This has been accomplished through the dissemination of creative works, performances, theory and educational resources leading to the developments in the applications of music technologies in an interdisciplinary media context discussed below.

Since its inception in 2010, Livecell, the interactive generative composition and performance system by Ash and Stavropoulos, has won International acclaim demonstrating impact in new technologies for musical expression through awards (NEMArt Prize 2010, Monster Electric Laptop Ensemble Commission Award 2011) and invited presentations. It has also been widely presented at academic, public and industry events in Europe, USA and Asia to a broad range of audiences including performances at:

- International Computer Music Conference, Huddersfield, 2011
- Pixilerations Festival, Providence, USA, 2011
- New Resonances Festival, Wilton's Music Hall, London, 2012
- Interface 2012, Birmingham

as well as less formal demonstrations in which the work has engaged the wider public, with many non-specialist users benefitting positively from an engaging interaction with a system for the creation of contemporary instrumental music. The work has been presented in this context at the BBC Radio 3 Free Thinking Festival, 2011, ("BBC Radio 3 brings together leading thinkers for a weekend of provocative debate, new ideas, music and drama" attended by over 4700 members of the public), Networked Electronic Media Summit, 2010 ("the event involves up to 400 attendees, 20 sponsors, 50 exhibitors and 40 speakers and authors selected following a competitive call for papers.") and the Thinking Digital Conference, 2011 ("Exceptional talent from the worlds of technology, science, business, media and the arts.").

The reach and significance of the electroacoustic works by the group is demonstrated through numerous International performances including:

- Music under the influence of computers, Atkinson Hall, California, USA 2010
- International Festival Primavera de La Habana, Havana, Cuba 2010\
- Sound Junction, Sheffield University, UK, 2010
- Sound Studio Concert, City University, 11th May, UK. 2010
- Days of Electroacoustic Music, Corfu, 29th Oct, Corfu, Greece, 2010
- XVI Festival Internacional de Música Electroacústica, Tenerife, Spain, 2009

as well as international awards:

- 2009 Punto de Encuentro Canarias International Electroacoustic Composition Competition, Spain, First Prize.
- Destellos Foundation Electroacoustic Music Competition, Prize Selection.
- Bourges Electroacoustic Music Competition, Shortlist.

The group curates the biannual Echochroma concert series at Leeds Metropolitan University, presenting compositional outputs from members of the group and guests (including Manuella Blackburn, Liverpool Hope University, Adrian Moore, Sheffield University, Dale Perkins, Leeds College of Music). Attendees (estimated at a total of 1000 to date) at this free concert since 2008, have included members of the public, as well as students at Leeds Metropolitan University, their friends and their families. Informal feedback indicates that a considerable number of audience members had no previous exposure to contemporary music composition and performance practice.

Following the growing recognition of the group's work, the Echochroma collective has been invited to curate concerts and present work at the Noisefloor Festival (Staffordshire University), in which original practice-led research was presented from academic staff, postgraduate and undergraduate students, Interactive Audio Game Showcase and MANTIS Festival, NOVARS Research Centre, University of Manchester, alongside other invited international artists from academia and industry, further extending the reach and impact of their research.

Research by the group also informs more localised educational and entertainment activities, including composition for theatre and dance (Mooted Theatre Company, York Shakespeare Project), interactive sound installations (York Minster, Swaledale Festival), youth workshops (Opera North and local primary schools), and a regular after-school computer programming club (Code Club) in which 9-11 year olds create new interactive audio-visual works and games. This gives the group further opportunity to disseminate compositional and interactive concepts from their International-level research to many across the region.

The group is continuing to develop its profile and capacity for international impact, and has a clearly defined and forward-looking trajectory for future development. Further high-impact research outputs have been confirmed for 2014. Ash is currently involved in a £160 000 project that has successfully received funding from the Wellcome Trust and Arts Council, which is anticipated will reach over 150,000 young people in 2014. The project will draw from research into interactivity, sonification and live generative systems, and includes an interactive childrens' theatre show that will tour the UK, as well as an interactive installation in the INTECH Science Centre, Winchester, which receives over 150,000 visitors a year.

5. Sources to corroborate the impact (indicative maximum of 10 references)

Stavropoulos N. (2009) *Nyctinasty*:

- 1) <http://www.eldia.es/2009-11-04/cultura/cultura10prn.htm>
- 2) <http://www.canariasahora.es/articulo/canarias/el-xvi-festival-de-musica-electroacustica-recala-en-tenerife-con-seis-dias-de-conciertos-y-sesiones-en-vivo/20091103145933206874.html>
- 3) <http://ecodiario.economista.es/cultura/noticias/1667051/11/09/CANARIASEI-XVI-Festival-de-Musica-Electroacustica-recala-en-Tenerife-con-seis-dias-de-conciertos-y-sesiones-en-vivo.html>
- 4) http://www.puntodeencuentrocanarias.org/XV/puntodeencuentrocanarias/imagen/Nota_de_Prensa_PEC.pdf
- 5) President of the Spanish Association of Electroacoustic Music

The President was on the Jury of the Punto de Encuentro Canarias International Electroacoustic Composition Competition, Spain and can corroborate the impact of the research output as discussed above.

- 6) Director of Spring in Havana Festival

Impact case study (REF3b)

Laboratorio Nacional de Música Electroacústica

Ash K. & Stavropoulos N. (2010) LiveCell:

- 7) <http://nem-summit.eu/nem-art/> - 2010 NEMArt Competition (Winner)
- 8) <http://wiltons.org.uk/event.php?p=402> - Performance at New Resonances Festival, London
- 9) World Economic Forum Young Global Leader (2006).
Member at Commissie Audiovisuele kunsten
Board Member at The Hub Brussels
President at [FoAM](#)