

CATEXIS



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1. A GESTURAL TRILOGY

Catexis is the second part of a trilogy centered on the analysis and development of the interaction between sonic gesture and dance gesture. Catexis is constructed upon sound transformation of phonemic gestures emitted by the dancer that constitute the germ of dance motion itself. The piece explores the existence of a natural morphology present in certain phonemic objects, this means that the physiological activity of the vocal tract involved in its production is analogical to the described phenomena in the “real world”. The motion of the organs in the vocal tract (uvula, velum, larynx, tongue, teeth, etc) conform a miniature choreography which is amplified through dance motion and sonic transformations diffused in a multichannel loudspeaker array.

The piece has been created with the support of an Scholarship for the Creation and Development of Scenics Arts of Comunidad de Madrid. The first part is Acusmatrix, and it is based on sonic transformations of european birdsong moving and interacting with the dancer in a three dimensional sound environment. Acusmatrix was created under a period of residence established between La Casa Encendida and Universidad de Alcalá de Henares.

The project is also supported by **Cie Gilles Jobin**.

CONCEPTION AND IDEA: Pablo Palacio / Muriel Romero

CHOREOGRAPHY AND PERFORMANCE: Muriel Romero

MUSIC COMPOSITION: Pablo Palacio

LIGHTS : Muriel Romero y Pablo Palacio.

MOTION TRACKING: Pablo Palacio.

FILM REALIZATION AND EDITION: Pablo Nieto

SUPPORTS: Universidad Alcalá de Henares, La Casa Encendida and Comunidad de Madrid



2.FORMAL AND THEORETICAL ASPECTS

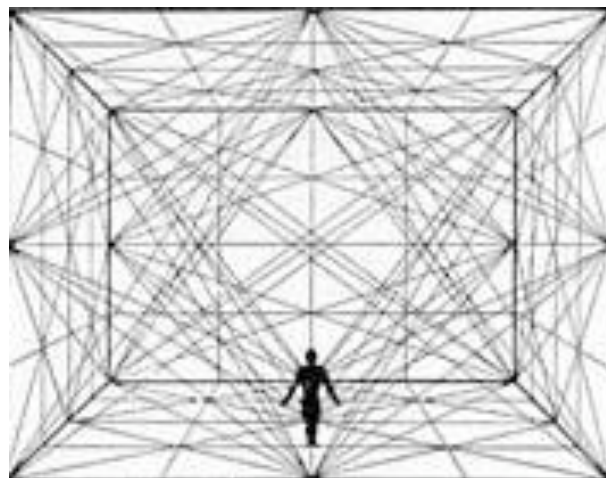
2.1 General description

Catexis is an interactive creation for one dancer and sound design in eight channels. The focus of the piece lies in the correspondence between dance gesture and sonic gesture.

The piece concretizes the attempts of Rudolf Laban of making a three dimensional geometric and morphodynamic analysis of dance motion, placing the dancer in a virtual space of cubic proportions.

Following this line of thought Catexis places the dancer in a three dimensional sound space interacting with sonic objects that are successively transformed according to their trajectory and dynamic morphology.

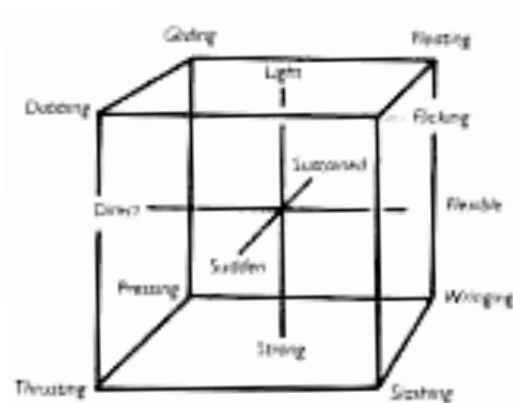
Catexis is constructed upon digital transformations of phonemic objects emitted by the dancer that operate as a sonic bio-extension of her body motion. Each phonemic gesture constitutes the sonic and dance seed of each scene. The objective is to suggest an analysis of the natural morphology of certain phonemic objects through sound transformations and dance motion considered as an extension of the physiological activity of the vocal tract involved in phonetic production.



2.2 Dance gesture, sonic gesture and acusmatic.

Rudolf Laban synthesized the infinite motor repertoire of the human body in eight basic efforts, one for each vertices of the cube: Pressing, Flicking, Wringing, Dabbing, Slashing, Gliding, thrusting y Floating.

Laban plotted the space and temporal dynamics of these basic efforts or gestures as a function of time (sudden-sustained), space (direct-flexible) and weight (light-strong) in a three dimensional graph he called the dynamosphere, making an analysis of the inner energy flow involved in motor activity.



These and other aspects of Laban notation may also be considered in relation to the nature and articulation of sound objects. In a music concert we observe how the sound that we listen to depends on the sensorimotor coupling of the player with the instrument. For instance, a violin pizzicato is caused by brief strokes (dabbing) and is light and sudden, whereas

a double-bass glissando slides (gliding) and is strong sound object that can be sustained in time.

On the other hand, there are musics in which we don't see the gestures that cause the sounds, those are imagined or inferred and their ambiguous and mysterious morphology make us doubt about their origins. This is the case of acusmatic music, designed in most cases by electroacoustic means and to be diffused in public using different configurations of loudspeakers that emphasize the character of the piece.

- Acusmatic: name given to the disciples of Pythagoras that during five years listened to his lessons hidden behind a curtain, unable to see him and observing the most rigorous silence. Adjective: it is said of a noise or a sound heard without seeing the causes of its origin.

In the acusmatic conception masking sound sources produces an inter-sensorial dissociation between ear and eye, and focus our perception in the nature of sound shapes. In Catexis dance fills metaphorically the visual void, drawing back the pythagorean curtain and completing the perceptual experience through a new audiovisual association.

In this manner Catexis becomes an experimental matrix designed in order to establish a gestural relation between human motion and sound, relying on the existence of a common gestural substrate for both phenomena. Elements of both perceptual domains (ear and sight) with a morphodynamic affinity are associated and stressed in different levels:

-Geometric: Sound objects move around according to the trajectories outlined by the dancer, constructing geometrical shapes that are manipulated and transformed by means of linking points in the space delimited by the loudspeakers.

-Stability-instability: The dancer oscillates between balance and unbalance, analogically sonic objects evolve from order to chaos either in the temporal plane (periodic-aperiodic rhythms), or according to their spectromorphology, that is, moving between harmonicity and noise (we perceive as noise those sonic objects whose spectra is totally unstable, and we say that are harmonic those sounds in which the physical components or frequencies are stable.)

-Morphodynamic: It is directly connected with the efforts, the energy-motion trajectory that creates and models sound and movement, how it is originates, sustains in time and vanishes. Dance motion and sound are conceived as organic structures that follow analogous growing processes.

These levels of gestural interaction do not act isolated but combine and mutually reinforce. The geometric space motion depends directly on the morphodynamic trajectory, and both levels are affected by stability. For example, an object that is 'floating' in space conveys a certain geometry, different from other that is 'thrust', and would be more stable than other object that is being 'flicked'.

2.2 Sound transformation in Catexis

The necessity of continuity exerts so much fascination on the imagination as the idea of transformation or change of shape. At the same time we search for connections with our origins we aspire to transform ourselves in order to achieve personal fulfillment. Darwin established a continuity between the multiple transformations that compose the chain of being, and the fact that there's still a missing link raises many questions....In this manner, it's not a surprise that the most relevant aspect of any composition is the way in which the material is transformed, and that sometimes we discard interesting ideas in favor of a better continuity or fluency.

The sonic universe of Catexis is constructed upon digital transformations of phonemic objects emitted by the dancer. Why this choice? Linguistic flow constitutes a complex model of timbric transformation. Phonemes are sonic objects of great interest due to their dynamic morphology, producing subtle transformations that span from the harmonic spectra of vowels to the sonic turbulence (noise) in 's' or 'f', including the granular iterations of the sound 'r' or the percussive nature of phoneme 'p'. The focus is the search of a natural morphology of phonemic objects, finding analogies between the physiological activity in the vocal tract involved in its production (sound gesture), and the motor activity of the dancer (dance gesture). Lets consider some examples. If we analyze the word 'stop' we encounter an accumulation of energy in the 's' that is abruptly interrupted by the rigid and vertical position suggested by the tongue in the phoneme 't'. Afterwards the 'p' reaffirms the cease of activity. Another example appears in the phonemic object 'sl-' that we encounter in such words as 'slide' or 'slip'. It consists again in an accumulation of energy in 's' that, in this case, is gently released ('l') on the stable spectrum of a vowel. This release of energy is produced sliding or gliding the tongue over the velum establishing an analogy with such a kind of phenomena in the real world. Furthermore, the motion of the different organs of the vocal tract (velum, uvula, tongue, larynx, teeth, etc) involved in these sonic gestures create a miniature choreography in which we find the eight basic efforts or gestures proposed by Laban. This so called miniature choreography is amplified through dance motion and sound transformation diffused in a multichannel array .

Catexis presents a sound generation method with a tree structure. Starting with a sound (phonemic objects in this case) the transformations produce successive metamorphosis of the original, creating a genealogy of perceptually interconnected sounds with multiple junctions and branches.

These transformations comprise the multidimensionality of sonic space and reflect the fact that sound is a continuum in constant transformation. Too often we listen to electroacoustic music composed under the instrumental-notational model consisting of static sound objects and ignoring the potential of computers for transforming any sonic material with the only limit of the imagination.

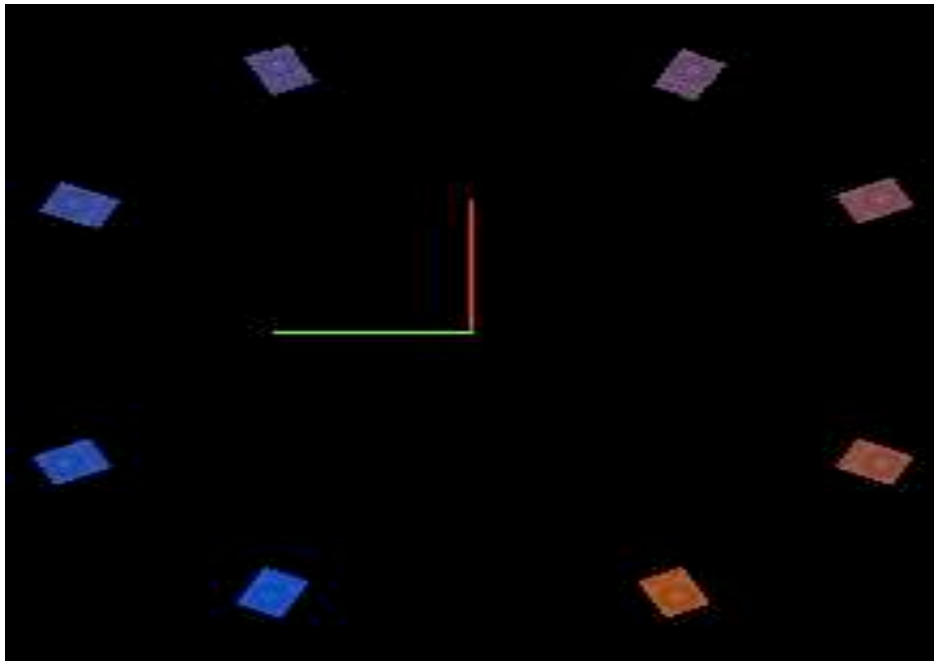
The conception of sound as an organism in constant evolution has a great adaptive potential when working with the body and keeps a close relation with the organic nature of dance itself.

Sound transformations are designed with Supercollider language and C.D.P. (Composers Desktop Project) software.

3. STAGE CONFIGURATIONS: SOUND AND LIGHTS.

3.2. Sound

An eight loudspeaker array surrounds the stage and the stage. The audience is placed in front of the stage (lower part of the graphic), and the stage (dancer) in the upper part of the graphic. The sounds move through the speaker set developing their own choreography.



3.2. Lights

Catexis is composed of several scenes with sonic blackouts that reinforce the acusmatic nature of the piece. The flow between white light and sonic blackouts is automated and articulated following residual classes. In order to achieve this goal a sensation of total darkness is required. The motion of the lights is computer controlled.

4. SCENES AND PHONEMES

Each scene develops one or several of the basic efforts proposed by Laban. This development is actually an expansion of the phonemic gesture that constitutes the sonic and dance seed of the scene. The objective is to suggest an analysis of the



natural morphology of certain phonemic objects through sound transformations and dance motion considered as an extension of the physiological activity of the vocal tract involved in phonetic production.

Three of the scenes depart from phoneme

's', this is because the 's' is noise, that is, its spectra contains sonic information in all frequency bands, so it is a great source of energy or initial impulse to the motor activity of dance and sound.

The video contains five scenes of Catexis :

1-'cl-, -ng': Phonemic objects 'ping', 'pang', 'cling', 'clang' and 'clong' are successively transformed in percussive and elastic objects that shake (*flicking*) and dissolve (*floating*) in different sonic and dance entities.

2-'spr-': The chaos of frequencies comprised in 's-' (*thrust*) passes through a constriction 'p-' (*press*) and then is fragmented into the iterative morphology of 'r-' (*wring*). This phonemic sequence appears in several words referred to a similar natural morphology such as 'spread', 'spray' or 'sprout'.

3-'multiplex': The motion of the dancer thrusts and controls the position in space of masses of vocal sounds that are gradually transformed in a water texture. This texture is finally reduced to a crystal grain of sound controlled by the motion of the eyelids.

3-'sl-': In this case the stored energy in 's' is gently released via sliding the tongue over the alveolar surface inside the mouth. Afterwards, the vowel 'a' is sustained and dissolved into a cloud of *glissandi* that swing and slide more and more violently.. This gesture is transmitted to dance motion in the shape of continuous slide (*gliding*) of limbs moving between light and darkness, specially when some sonic fragments that come out from the texture "affect" the equilibrium of the dancer.

4-'st-': Sudden interruption of the motion or energy stored in 's' by a rigid and vertical posture. This posture is suggested by the downward motion of the tongue against the teeth in 't'. These sensation is enhanced trough spectral freezing of the word 'stop', algebraic rhythms that collapse and the blocking of the limbs

5 PERFORMANCES AND OTHER ACTIVITIES RELATED WITH THE PROJECT

- Performance of Stochos at [Mercat de las Flors](#). (Barcelona, Spain). October 15th and 16th, 2011.
- Performance of Stocos at [VAD](#) (Festival International de video i arts digitals). (Gerona, Cataluña). October 8th, 2011.
- Stochos production residence at [Mercat de las Flors](#). Barcelona (Spain). In the period July 18th- August 8th, 2011.
- Seminar Workshop at [GVA Sessions 2011 Made in Festival Electron](#). Geneve (Switzerland). July 16th and 17th, 2011
- Performance of Catexis at [Bipod](#) (Beirut Intenational Platform of Dance). (Beirut, Libanon). April 28th, 2011.
- Interactive Sonic Gesture (Workshop). [Conservatorio Superior María de Ávila](#). Madrid (Spain). March 15th and 16th.
- Concert + conference with Palindrome. March 7. [Birmingham Conservatoire](#). (Birmingham, England).
- Sonic Space (workshop). In the context of the [Master in Performing Arts Practices and Visual Culture \(UAH\)](#). [National Museum Reina Sofía](#) (Madrid, Spain). February 26th-27th and March 12th, 2011.
- [Project for handicapped \(2010-2011\)](#). Developing interactive sonic technologies for handicapped people with Palindrome Intermedia performance group. Investigation residence in [L'ARC](#), (Romainmotier, Switzerland). February 2011.
- Performance of Facing the Blank Page at the Alliance Française in [Attakkalari India Biennial](#), Bangalore (India). January 30th 2011.
- Music composition and light programming of Facing the Blank Page, for [Maqamat Dance Theatre](#). In the period December 2010 - January 2011.
- Performance of Catexis at [Art-Ort](#). (Heidelberg, Germany). October 8th, 2010.
- Workshop on Trevor Wishart's composition Tongues of Fire at [Impresentables 2010, La Casa Encendida](#), (Madrid, Spain). June 23th, 2010.
- Performance of Catexis at [MOVs](#), La Casa Encendida. (Madrid, Spain). June 11th and 12th, 2010.
- Performance of Catexis at [Dansa Valencia](#). (Valencia, Spain). May 7-9, 2010.
- Performance of Acusmatrix at ARTe SONoro, [La Casa Encendida](#). (Madrid, Spain). April 25th, 2010.
- Sonic compositon of The Bending Line Project, for [Missouri State University](#) (Missouri, EEUU). The piece will be premiered at the Ellis Hall for the Performing Arts on March 21, 2010.

- Performance of Acusmatrix at the [Bains Numeriques Festival](#) (Centre Des Arts Enghien-Les-Bains, France). March 13, 2010.
- Teaching Sound Space at the [Master of Contemporary Practice and Visual Culture of the UAH](#) (Madrid, Spain). March / April 2010.
- Premiere of Catexis at [Escena Contemporánea](#) 2010 (Madrid, Spain). January 22-24, 2010.
- Konokol at Columbus, Ohio. Performed by [Palindrome Inter Media Performance Group](#). November 11th, 2009.
- Presentation of Catexis (film version) at [Festival Panorama de Dança](#) in Rio de Janeiro (Brazil). November 6th and 13th, 2009.
- Composition of Konokol for the [WOCMAT](#) International Workshop of Computer Music in Tai-Pei (China). Performed by Palindrome. October, 2009.
- Composition and design of sound installation for the [BallettMainz Staatstheater](#) project The Irin (Mainz, Germany). 2009-2010.
- Performance of Acusmatrix at [1, 2 Na Dança](#) (Belo Horizonte, Brasil). September 12, 2009
- [Structural Aspects in Acusmatrix](#) (article). In Cairon 12, Body and Architecture. Universidad de Alcalá. June, 2009.
- Performance of Acusmatrix during [Geneve Sessions 2009](#) at [Arsenic - Centre d'art scénique contemporain](#) (Lausanne, Switzerland). June 16, 2009.
- Performance of Acusmatrix at [Reencontres Choreographiques de Carthage - Danse et Nouvelles Technologies](#) in Tunisia. May 3, 2009.
- Sound Transformation: Continuity and change of form (talk), at the [Medialab Prado Madrid](#) (Spain). January 17, 2009.
- Performance of Acusmatrix at [La Casa Encendida](#) (Madrid, Spain). October 31 and November 2, 2008.
- Performance of Acusmatrix at [Centro Párraga](#) (Murcia, Spain). October 12, 2008.
- Composition of Catexis with the aid of a Scholarship for creation of Scenic and Cinematographic Arts of La Comunidad de Madrid. May-November 2008.
- Performance of Acusmatrix at Auditorio [Centro Cultural Puertas de Castilla](#) (Murcia, Spain). May, 2008.
- Showcase of Acusmatrix at [Univeridad de Alcalá de Henares](#) (Madrid, Spain). May, 2008.
- Artist in Residence at [Universidad Alcalá de Henares and La Casa Encendida](#) (Madrid, Spain). In the period March-May, 2008.

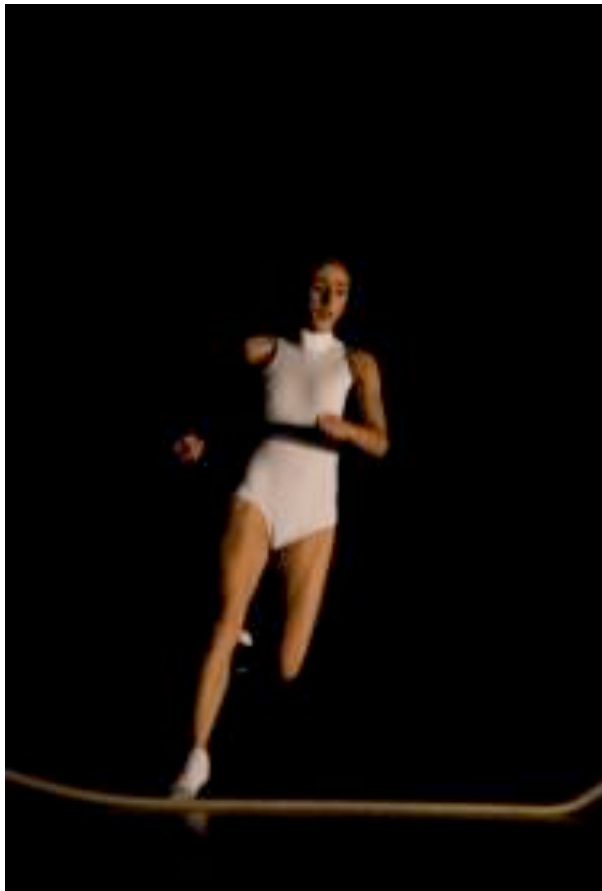
6. ARTIST'S BIOS

MURIEL ROMERO

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913505947



Training

Ecole Rudra Bejart

Real Conservatorio de Madrid

School of Lola de Ávila.

National Ballet School. Spain

Prizes

·Prize Critic/Press, Internacional Ballet Competition, Moscow 1987.

·Prix de la Fondation de Paris, Prix de Lausanne, 1986.

·1º Prize, National Dance Competition, Barcelona 1985.

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Companies

Dresden Semper Oper Ballet. First Soloist.

Gran Théâtre de Genève. First Soloist.

Compañía Nacional de Danza (Nacho Duato).

Deutsche Oper Berlin. First Solist.

Nationaltheater Mannheim. First Soloist.

Bayerisches Staatsballet Munchen. First Soloist.

Compañía Nacional de Danza (Maya Plyetskaya).

Repertoire

Dornröschen (P. Wright), Ein Sommernachtstraum, Der Nussknacker (J. Neumeier); Raymonda, Paquita, Don Quijote (M. Petipa); Chopiniana (M. Fokine); La Fille mal Gardée (F. Ashton); Napoli, La Sylphide (A. Bournonville); Petrushka (H. Mandafunis); Serenade, Symphony in C, Who Cares?, 4 Temperaments, Thema und Variationen, Concerto Barocco (G. Balanchine); Sarcasm, 5 Tangos (H. van Manen); Arenal, Duende, Coming Together, Cautiva, Mediterrànea, Cero sobre Cero, Remansos, Por Vos Muero, Self, La Floresta (N. Duato); Petite Mort, Sechs Tänze (J. Kylián); Herman Schmerman, In the Middle, Somewhat Elevated; Enemy in the Figure (W. Forsythe); Kir (O. Naharin); Bad Blood (U. Dove); Paradise (Saburo Teshigawara); Romeo and Juliet, The Nutcracker, The Third Eye (P. Touzeau); Vertigo Maze (S. Celis); Fee der Lebendigkeit/Rubinfee, "Dornröschen" (A. Watkin nach M. Petipa); Peter Funk, Bochorno, Orlando (C. Aznar).

Projects

Unterwegstheater. Heidleberg.
La Anonima Imperial .Barcelona.
Compagnie Buissonnière .Lausanne.
La Ribot, (as an extra) .Madrid.
9x9.. C de la B & Sasha Waltz .Berlin.

Coreographies

At the moment 2. Teatro La linterna Magica. .Praga.
Cabaret Pedrolo. Compañía de Teatro La quadra Mágica .Barcelona.
Acusmatrix. La Casa Encendida. Madrid
Catexis, Comunidad de Madrid, Festival Escena Contemporánea.

Theatre creations

"Nadia Monologue" (P.Riera) .Teatro La Riereta. Barcelona.
"Panoramas" (P.Riera,N.Yanko) .Compañía de Teatro Panoramas. Barcelona.
"F.F.S.S." (M.Feijo).La Casa Encendida. Madrid.

Teaching

- Professor of Technologies of the body at *Master in Performing Arts and Visual Culture*, Universidad de Alcalá (Madrid).
- Conservatorio profesional de danza. Madrid.
- Escuela Camargo. Murcia.
- Conservatorio de danza . Praga

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Academic Formation

- Trumpet, composition and orchestration at E.M.C.
- Synthesis and sound transformation with Trevor Wishart and Jean Claude Risset at C.D.M.C.
- University degree in psychology and psicoacustics at Universidad Complutense de Madrid.

Ensembles

- SOF (2002). Sonic art project based on the explanation in sound of geometric and algebraic structures.
- TUNYI (2004) electroacoustic ensemble that combines improvisation with some innovative sound transformation techniques.

Festivals, theatres....

Birmingham Conservatoire (Birmingham, UK), WOMACT international computer music workshop (Tai Pei, China), Missouri State University (Ellis hall), La Casa encendida Territorio Eléctrico (Madrid, Spain), Attakkalari (Bangalore, India), Annecy Scene Nationale (France), Beirut International Dance Platform (Beirut, Líbano), Reencontres Choreographiques de Carthage-Danse et Nouvelles Technologies (Tunis), LEM (Barcelona, Spain), Luzern Théâtre La Fourmi (Luzern, Switzerland), Rising Stars (Sevilla-Cádiz-Jerez, Spain), Salle des Eaux-Vives (Geneve, Switzerland), Grange de Dorigny (Lausanne, Switzerland), Arsenic - Centre d'art scénique contemporain (Lausanne, Switzerland), Escena Contemporánea (Madrid, Spain), 1-2 Na Dança (Belo Horizonte, Brasil), Bains Numeriques (Enghien-Les Bains, France), Madrid Jazz Festival / Getxo Jazz / Ibiza Jazz Festival (Spain), FIT (Belo Horizonte, Brazil), Centro Párraga (Murcia, Spain).

Recordings

Tunyi “Autoplástico” CD Ecléctica Madrileña y Nuevos Medios (2006)

Sof “Sof” EP Metástasis (2004).

Anthology of Noise and Electronic Music. (Sub Rosa) 2010.

Dance Compositions

·*BlumenKabarett*, (2006-2007). Composed for the Compagnie Buissonnière-Lausanne. Switzerland

·*Androgina de Minas* (2007-2008) .Composed for Compagnie Buissonnière-Lausanne. Switzerland

·*Acusmatrix* (2007-2008). Created under a period of residence established between La Casa Encendida and Universidad de Alcalá de Henares. Spain

·*Catexis* (2008) . Created with the support of a Scholarship for creation and development of Scenic and Cinematographic Arts of La Comunidad de Madrid. Spain.

·*Giseliña* (2008). Produced by the CCG (Centro Coreográfico Galego). Spain

·*Konokol* (2009). Para el WOMACT (Tai Pei, China), performed by Palindrome Inter Media Performance group.

·*The Irin* (2009-2010). BallettMainz Staatstheatre (Mainz, Germany).

·*Bending Line Project*. Missouri State University. (Missouri, E.E.U.U).

Other sonic Art Pieces

·*Autopoiésis* (2006-2007). Premiered on Alter-Arte 2008 (Murcia, Spain)

·*Silem* (2005-2006). Included in the CD of TUNYI “Autoplástico”. (La Ecléctica Madrileña y Nuevos Medios)

·*Irratio* (2005). Premiered on Territorio Eléctrico 2005 (La Casa Encendida, Madrid).

Workshops, lectures, software

·Professor of Sound Space at *Master in Performing Arts and Visual Culture*, Universidad de Alcalá (Madrid).

·Workshop on sound transformation (Centro cultural Puertas de Castilla , Murcia)

·Workshop on harmony and composition in the frame of new digital technologies (La Casa Encendida, Madrid).

·Sound transformation in *Acusmatrix*: construction of a three dimensional sound theatre (Lecture).

·Structural aspects of *Acusmatrix* . CAIRON 12 Journal of Dance Studies 'Body and Architecture'. University of Alcalá.

7. REFERENCES

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- Harrison, J. 1998. “ Sound, Space, Sculpture: Some Thoughts on the ‘What,’ ‘How,’ and ‘Why’ of Sound Diffusion and Related Topics.” *Journal of Electroacoustic Music*11:12–20.
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- Schaeffer, P. 2003. *Tratado de los objetos musicales*. Alianza Música
- Smalley, D. 1997. “ Spectromorphology: Explaining Sound Shapes.” *Organised Sound* 2(2):107–126.
- Wishart, T. 1996. *On Sonic Art*, S. Emmerson (ed.)
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