EDUCATION, PRIZES AND SCHOLARSHIPS

Brazil.

1954 Born in São Paulo, Brazil. Daughter of Waldemar Cordeiro and Helena Kohn Cordeiro.



1972/1976 Architecture and Urbanism College at University of São Paulo, Brazil.

1962/1972

Laban Art of Movement with Maria Duchenes, São Paulo, Brazil.



1967 Prize Art for Youngs, "O Estado de São Paulo" newspaper, Brazil.

1967 distinguished work at Contemporary Art Museum of University of São Paulo, Brazil. **1974** Prize for M3x3 Contemporary Art Museum of University of São Paulo,

1975 S-8 shooting of Kwar p ritual at Kamaiurá tribe, National Park of Xing . Edition sponsored by São Paulo Research Foundation - FAPESP, Brazil.



1977/1978 classes at Merce Cunningham Dance Studio, NY, USA.

1977 classes at Louis-Nikolais Dance Theatre Lab, NY, USA.

1978 Viola Farber classes, NY, USA.

1978 Janette Stoner classes, NY, USA.

1978 Gus Solomons Jr. classes, NY, USA.

1983 Scholarship of CNP to research about Trajectory-Notation at University of São Paulo.

1986 member of Brazilian Plastic Artists, Armando Ivares Penteado Foundation - FAAP, Brazil.

1993 marry Nilton Lobo and gives birth to Thomas Cordeiro Guedes





1994/96 São Paulo Research Foundation - FAPESP masters scholarship, Brazil.

1996 master thesis Nota-Anna an electronical notation of body movements based on Laban method, master thesis advisor Nelly de Camargo, Art Institute of State University of Campinas - UNICAMP, Brazil.



1999/2001 Eutony professional course, São Paulo, Brazil.

2000/04 São Paulo Research Foundation - FAPESP PhD scholarship, Brazil.

2004 PhD dissertation Looking for Cyber-Harmony: a dialogue between body awareness and electronic media, doctor dissertation advisor Arlindo Machado, Semiotic and Communication Department of Catholic University of São Paulo -PUC-SP, Brazil.

2010 post-doctorate dissertation Joy of Reading at Federal University of Rio de Janeiro, Brazil.

2015 BEEP award of Electronic Art, ARCO Art Fair, Madrid, Spain.



El arte electrónico se normaliza

X PREMIO ARCO/BEEP DE ARTE ELECTRÓNICO

Analívia Cordeiro "M3X3"



2018 member of International Dance Council CIF of UNESCO

2019 post-doctorate thesis The Architecture of Movement, University of São Paulo, Brazil.

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DANCE SPECTACLES, PERFORMANCES AND EXHIBITIONS

1969 choreography and performance at Arts Week, Contemporary Museum of Campinas, Brazil.

1970 dancer in Maria Duschenes Dance Company at 1rst International Congress of Therapy and 5th Psychodram and Sociodram Congress and Museum of Art of São Paulo, Brazil.

1972 dancer in Structured Improvisation under direction of Clyde Morgan at TV Cultura of São Paulo, Brazil.

1973 M3x3 at Interact Man: Machine: Society, International Festival of Edinburgh, Scotland.



1973 Multienvironment, choosen to represent the Architecture and Urbanism College of University of São Paulo at 1st Bienal of Architecture, São Paulo,

Brazil.

1973 M3x3 at Jovem Arte Contemporanea, Contemporary Art Museum of University of São Paulo - MAC-USP, Brazil.





1974 M3x3 at Arte de Sistemas in Latin America, International Cultureel Centrum, Antwerp.

um trenzinho de logradouros públicos um trenzinho de logradouros públicos **1974** M3x3 at Latin American Films and Video Tapes, Media Study of State University of NY, Buffalo, USA.





1974 M3x3 and 0° — 45° at Latin America 74, Institute of Contemporary Arts, London, England.



1974 M3x3 at Festival Experimental, Center of Arte and Comunication - CAYC, Buenos Aires, Argentina.

1974 M3x3 and 0° – 45° at The Bat-Sheva Seminar on Interaction of Art and Science, Jerusalém, Israel.

1975 M3x3 and 0° – 45° at Latin America 74, Espace Cardin, Paris, France.

1975 M3x3, Gestures and 0° — 45°, Goethe Institute, São Paulo, Brazil.



Dança coreografada por computador em exibição no "Goethe"

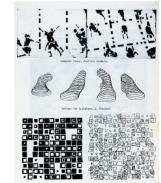
1975 M3x3 and 0° – 45° at Galleria Civica D'Arte Moderna, Ferrara, Italy.

1975 M3x3 and 0° – 45° at International Conference Computer & Humanities/2, University of Southern California, Los Angeles, USA.









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1976 M3x3, Gestures and 0° — 45° at 20th American Dance Guild Conference presented by Jeanne Beaman, Massachussets Institute of Technology, Cambridge, USA. **1976** M3x3, Gestures and 0° — 45°, TV public station - WGBH, Boston, USA.

1977 M3x3 and Cambiantes, Galpão Theater, São Paulo, Brazil.

June 1976

1978 Videodance Workshop under direction of Merce Cunningham and Charles Atlas, Merce Cunningham Dance Studio, NY, USA.

1978 dancer at Janette Stoner Dance Company, Carl Schurlz Park Hockey Field, NY, USA.

1978 dancer at Street -Performances - Rits & Runs II under direction of Gus Solomons Jr., NY, USA.

1978 Cambiantes at Art of Space Era, Von Braun Civic Center of Huntsville Museum of Art, Alabama, USA.

1979 dancer in the choreography Call at III Contemporary Dance Competition, Federal University of Bahia and at I Contemporary Dance Show, Brazilian Comedy Theater, São Paulo, Brazil.

1979 performance at Popular Art Movement, São Miguel Paulista, Brazil.

1980 coreography, direction and dancer in Naturality with Analivia & Company, Galpão Theater, São Paulo, Brazil.

1983 Cambiantes and M3x3 at I Exhibition of Computer Art, SUCESU-SP, Informática 83, São Paulo, Brazil.

1984 Cambiantes at Informática 84, Rio de Janeiro, Brazil.

1985 Ar, co-author Takashi Fukushima at Art Tecnology, Contemporary Art Museum of University of São Paulo - MAC-USP, Brazil.



Dear Ms Cordeiro,

Your filmd and your program were presented last week as part of my presentation for the 20th American Dance Guild Conference at the Massachusetts Institute of Technology. Linda Desmond, computer applications analyst from M.I.T. Computer Science Center commented on your program and Nancy Mason, Dance Coordinator of a public television station in Boston, WGBH, which has done many video dance programs commented on the video aspect of your film.

It is interesting to note that what you were doing was perfectly clear to Linda Desmond, while your text was a complete confusion to Nancy Mason. In general musicians in attendance understood what you and I are doing but many dancers felt, "Why bother with a computer."

Several young people, students at N.I.T. and other universities spoke with me afterwards. Two had done their own programming, one in modern dance with a program similar to mine and one in square (folk) dancing in which the calls were also programmed. Certainly there was a warmer reception to my presentation than when I spoke at the Binational Dance Conference in 1971.

Iou may be interested to know that Jean Babilee did a TV program in Paris in 1971 of a computer generated ballet called "Time Sharing."

Of your work I found that 0 - 45 seemed to be liked the best while Gestos caused the most comment. By the time you get this letter these films will be on their way back to you by a slower route. And if I ever get my work-book published with several dances, I'll send a copy of that also. In the meantime I hope you will keep me informed of your progress.

Thank you ggain for giving me the opportunity to both see and share your work at the ADG Conference. I shall send you any write-ups of the proceedings but such reviews will not be published before next autumn and I shall be out of this country until December so do not expect anything soon.

I am sorry you are not coming to Connenticut. Someday you will and we'll meet at last.

Cordially, lann Jeanne Beaman

Bass Harbor, ME 04653 USA

Stor Cak

1985 0° – 45° at Multimedia, Armando Ivares Penteado Foundation - FAAP, São Paulo, Brazil.

1987 Slow-Scan transmission of the choreography Slow Billie Scan together with Lali Krotozynski and IPAT Group, from the Sound and Image Museum - MIS to the Dax Group, Carnegie Mellon University, Pittsburgh, USA.

1985 performance 0° — 45° at Brazil'70/80 new media/multimedia, Armando lvares Penteado Foundation - FAAP, Brazil.

1988 Cambiantes at VideoDance, Carlton Dance Festival, São Paulo, Brazil.



1988 performance and choreography of VideoVivo, author Otavio Donasci, Contemporary Art Museum of University of São Paulo - MAC USP and at 1st International Show of Scienti c Image, Science Station, São Paulo, Brazil.



1989 Dança Criança, Slow Billie Scan and 0°—45°, at Carlton Dance Festival, São Paulo/Rio de Janeiro, Brazil.

1989 performance na exposição "Mágico Espaço Seu Corpo" na Miriam
Mamber Artwear & Design",
São Paulo, Brazil.

1989 photographic model at Liana Bloisi Wearable Art, São Paulo, Brazil. **1992** direction and dancer at Tableaux with the Micron Virtues Company, São Paulo Cultural Center, Brazil.



1994 direction of Games, choreography of Hagoromo the feather cloak, transcription of Zeami play (1363-1443) by Haroldo de Campos, direction performance Alice K, São Paulo Cultural Center, Brazil.





1996 performance 0° – 45° with Percusion Group of UNESP at opening and videos and M3x3, 0° – 45°, Cambiantes and Trajetória videos at 4th Studio of Image Technology, UNESP/ SESC/SENAI, Brazil.

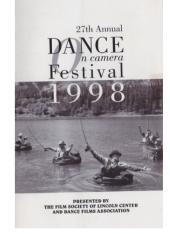


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1997 performances Striptease and 0° – 45° at Mediations, ItauCultural Institute, São Paulo, Brazil.

1997 M3x3, 0° – 45°, Cambiantes, Traceforms, Striptease videos and Striptease 0° – 45° performances at Precursor and Pioneers of Art&Technology, Paço das Artes, Brazil. **1998** Striptease at 27th Annual Dance on Camera, Lincoln Center, NY, USA



1999 Laban's Concepts of Movement, 0° — 45°, Slow Billie Scan and Striptease at IX Festival Internazionale de Videodanza Il Coreografo Elettronico, Institut Français de Naples, Italy



2001 performance at Paintings to Step by Aldir Mendes de Souza with Gícia Amorim, Pinacoteca of São Paulo, Brazil.





2003 M3x3 at Subvertion of Media, ItauCultural Institute, São Paulo, Brazil.

2003/2005 M3x3 at Made in Brazil, ItauCultural Institute, São Paulo, Brazil.



2005 M3x3, 0° — 45°, Cambiantes, Ar, Slow Billie Scan, Striptease and Carne I at Audiovisual of Dança em Pauta Show, Banco of Brazil Cultural Center, SP.



2005 DJMobile co-author Nilton Lobo at Life Goes Mobile, NokiaTrends, São Paulo, Brazil.

2005 Ex-Image co-author Nilton Lobo at Life Goes Mobile, NokiaTrends, Rio de Janeiro, Brazil.

2006 Carne I / II Focus on Dance, International Festival of Videodance, Rio de Janeiro, Brazil.

2007 E/OU at Perspective of Video Creations in Brazil, Banco of Brazil Cultural Center, Brasília, Brazil.



2007 Carne I / II at 6. Film Show, Banco of Brazil Cultural Center, Rio de Janeiro, Brazil.

2007 Carnel/II at Subjetivities, ItauCultural Institute, Brazil. **2007** E/OU at 21 Paulista Audio Visual Show, Brazil.

2007 Unsquare Dance using software X-Motion e Choreogra sm by Luiz Velho, Pure and Applied Mathematics Institute -IMPA, Rio de Janeiro, Brazil.

2008 Unsquare Dance choreography at SIGGRAPH, USA.

2008 Unsquare Dance choreography at SIGRAPI, Cuiabá, Brazil.

2008 Unsquare Dance choreography at Art7, National Museum, Brasília, Brazil.

2009 improvisations Angles and From Skin to Space at Musicircus, Bienal Mercosul, Brazil.

2009 Prepared Body at RadioVisual, Bienal Mercosul, Brazil.

2010 Carne II/III at Liberty is not Enough. The desire has no Name, Rio de Janeiro, Brazil. **2009** M3x3 and Joy of Reading, Luciana Brito Gallery, Brazil.

2010 M3x3 at 1969-1974, Museum of Contemporary Art of University of São Paulo MAC USP, Brazil.



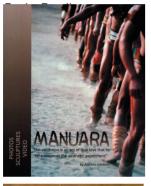
2013 images of Flesh I at Fragmented Geometry, Contempo Gallery, São Paulo, Brazil.





2013 M3x3 installation, Anita Beckers Galerie, SP-Arte, SP, Brazil.

2014 Manuara at Brazilian Museum of Sculpture -MUBE, São







2014 co-curator together with Fernando Cocchiarale and Arlindo Machado of the exhibition Waldemar Cordeiro Fantasia Exata at Paço Imperial, Rio de Janeiro, Brazil. **2015** M3x3 installation, 0° —45°, documents and Cambiantes sculpture at Anita Beckers, ARCO Art Fair, Madrid, Spain.



2015 M3x3 installation, M 3x3 creation documents at Moving Image Contours: Points for a Surrounding Movement, Tabakalera, San Sebastián-Donostia, Spain.

2015 M3x3 installation at
Expanded Senses.
Frankfurt, Germany.
2015 Bienal Mercosul,
Porto Alegre, Brazil.

2016 M3x3 installation at The End of The World exhibition, Centro Pecci, Italy.

2017 M3x3 and Cambiantes at Radical Women exhibition, Hammer Museum, Los Angeles, USA. 2018 at Brooklyn Museum, New York; and Pinacoteca, São Paulo, Brasil. **2017** M3x3 at Videos in LatinAmerica exhibition, Laxart, Los Angeles, USA.



Anita Beckers and Analivia in Frankfurt, 2015.

2017 M3x3 at Anita Beckers Galerie booth, LOOP Festival, Barcelona, Spain

2018 M3x3 Installation at Algoritmos Suaves exhibition, Comunitat deiMusei de Valencia, Valencia, Espanha.

2018 individual exhibition unforgetable Kicks at Museu de Arte Moderna, Rio de Janeiro, Brasil.2019 at UNIBES cultural, São Paulo, Brasil.

2018 Coder Le Monde, Centre Pompidou, Paris, France

2018 Chance and Control, Victoria&Albert Museum, London, England.

2018 35. Film Interntional Festival Jerusalem, Israel.

2019 M3x3 installation at Faces exhibition, Es Baluard Museu dArt Modern I Contemporani de Palma, Spain.

2019 M3x3 at El Giro Notacional exhibition, Museo de Arte Contemporáneo de Castilla y León, Spain.

2019 SP-Arte, Masters section, Galeria Isabel Aninat booth, SP, Brasil.

2019 Fairest of the Fair, Bao Out Post, Manilla, Philippines.

LECTURES. WORKSHOPS AND PUBLICATIONS

1973 lecture A Dance Language Research, Armando lvares Penteado Foundation - FAAP. Brazil.

1974 paperback Computer Dance TV TV/Dance at The Bat Sheva de Rotschild Seminar on Interaction of Art and Science. Jerusalem. Israel.

1975 M3x3 included in the learning program of Bezalel Academy of Arts, Jerusalem, Israel.

1975 guest lecture with the paperback Computer Dance TV TV/Dance introduced by Grace Hertlein at International Conference on Computers & Humanities/2, Los Angeles, USA.

1975 article about Brazilian art by Pierre Restany, Domus magazine, Italy/ France.

neare il ruolo di Walter Zanini, diret- stematica che e stata ripresa dalla Palazzo della Biennale a Ibiraquera, mata. della Città Universitaria.

ge a un interesse prolondo per la ne e di scetta: si tratta di un ritorno ricerca condotta dai giovani, mi è all'essenza della natura umana, alle sembrata sintomatica di una presa sue motivazioni primarie. di coscienza, in ogni caso. Questi L'atteggiamento di Wesley Duke Lee artisti, più o meno legati ai circuiti è curiosamente parallelo. Uscito dal tradizionali, sono sensibili alla criti- « realismo magico » questo artista ca radicale dell'arte in sé. Se si di Saõ Paulo realizza da qualche vuole sfuggire al circuito che è il anno delle strutture d'ambiente fonloro, vale a dire al circuito della date sulla tecnologia avanzata e sulproduzione e della diffusione d'ope- l'elettronica: il suo « Helicoptero » re d'arte/valori di mercato, bisogna di 4 metri di diametro è un ambiente trovare una risposta alla domanda: circolare interamente auto-program-« l'arte, perché? ». E questa doman- mato. da sbocca direttamente ed inevita- Questa stessa serenità la si ritrova bilmente su una ricerca di linguag- presso Franz Krajcberg, il cantore gio basata sulla metodologia delle e il demiurgo dell'ecologia tropicasclenze umane. È il solo strumento le, quando è nel suo ambiente. di cui dispongono i giovani artisti Krajcberg è noto per le sue sculture per tentare di ritrovare un nuovo le- arborescenti, che sono dei framgame personale tra l'arte e la socie- menti, scelti ed assemblati, di rami, là. Alla domanda: « l'arte, perché? » di tronchi e di radici aeree raccolti rispondono: « l'arte, perché no? », in situ, nel cuore della foresta ver-Alla sociologia dell'arte rispondono gine. lo ho seguito le sue ricerche con, una arte sociologica: nuove per quindici giorni, nei suoi diversi proposizioni psicosensoriali, semio- luoghi di « lavoro »: il Minas Gerais tiche, antropologiche. Lo struttura- con le sue terre ferruginose, Nova lismo linguistico offra loro un me- Viçosa a sud di Bahia, con gli altodo di analisi dei sistemi di lin- beri del mango e le spiagge delguaggio. Ed era precisamente la l'Atlantico (Isla dos Coqueiros) dove versione francese di questo genere la bassa marea lascia scritti sulla di ricerca che io ero venuto a pre- sabbia dei disegni metamorfici di sentar loro, sotto gli auspici della cui l'artista prende il calco dal vivo; Ambasciata di Francia a Brasilia e la Piaui, infine, riserva infinita di dei servizi culturali del Consolato paesaggi rupestri, sahariani, extra-Generale di Rio. Penso che questo temporali. genere di informazione sia stato ben A livello dell'alternativa tecnologia/ e le a dire dal gruppo limitato di artisti menso capitale di energia inventiva. ne concettuale e sociologica di que- mistica, all'inverso e contro tutto, è

tore del Museo d'Arte contempora-nea dell'Università di Sao Paulo, Analivia Cordeiro è l'onlant prodige che riesce a conciliare le esigenze della « computer dance »: a 21 anni e le illusioni di due generazioni alla gira il mondo per presentare i suoi volta. Alloggiato per il momento in spettacoli, i suoi film, la sua teoria uno spazio appena sufficiente nel dell'espressione corporale program-

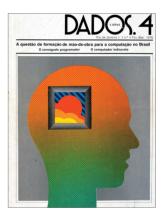
il Museo godrà in futuro d'uno spa- La programmazione sistematica si zio assai più flessibile nel cuore fonda sulla memoria del computer e la sua strutturazione sulla nozione Questa inquietudine, che si aggiun- di semplificazione, di discriminazio-

accolto da coloro cui era diretto, va- natura, il Brasile costituisce un imbrasiliani interessati ¿ una riflessio- Il simbolo di questa virtualità otti-

1976 Review by Martin J. Tracy, USA.

1976 Article The

Programming Coreographer at Dados e Idéias magazine no. 4. Rio de Janeiro. Brazil.



1977 article The Programming Coreographer at Computer Graphics & Arts, February, California, USA.



1978 Article The Computer in Choreography by John Lansdown, London, England.







Although readers of this journal will be aware that few areas of endeavor are untouched by the impact of the computer, it will surely come as a surprise to many that even ballet, perhaps the most human of all arts, is being influenced by computing techniques and concepts.

In dance the human body is the instrument the choreographer plays upon (with the active cooperation of the dancer) to create scenes of the figure in motion over time. There is in dance the creativeness of the choreographer in devising interesting, or exciting, movements; there is the creativeness of the dancer in achieving these movements that sometimes even overshadow the original creation.

My question to myself ten years ago was, is there a place for the computer in this intensely creative, intimately personal art? I was familiar with some of the attempts to utilize the computer to compose poetry or prose, to produce kinetic aculpture, or to create music. I tried to draw common principles from these efforts to apply to ballet.

My first experiments with computer-generated dance produced sequences that were pleasing to both dancers and viewers, but they provided for too little human participation, while running up computer time charges beyond my means. Later experiments, as you will see, struck what I felt to be a better balance between human and computer participation.

Background

As far back as 1964, Jeanne Beaman and Paul Le Vasseur at the University of Pittsburgh used

August 1978

The Computer in Choreography

John Lansdown System Simulation Ltd.

computers to generate simple sets of instructions to be performed by solo dancers.¹ In 1966, Michael Noll produced a computer-animated film showing primitive stick-figures moving about a stage to programmed choreographic instructions.² More recently Brazilian choreographer Analivia Cordiero has used programs to generate dances and their television coverage.^{3,4} A great deal of work, however, is aimed not at creating dances but at assisting choreographers and others in visualizing body movements.

During the late 1960's Israeli choreographer Noa Eshkol and others at the University of Illinois worked on computer-assisted movement notation and produced programs which allowed a choreographer to see a machine-plotted representation of the movement paths of limbs.⁵ At about the same time, Carol Withrow at the University of Utah devised programs to describe limited movements of a stick-figure by relating angular displacements of limbs to curves drawn on a graphic display.⁶

Currently, there is a great deal of work on computer interpretation of dance notation—notably in one scheme known as "Labanotation." Zella Wolofsky at Simon Fraser University wrote a program to output stick-figure interpretations of Labanotation commands,⁷ and this work has been enhanced and developed by Barenholtz and others.⁸ Smoliar, Weber, and Brown at the University of Pennsylvania have described work for the interactive editing of Labanotated scores.^{9,10} Janette Keen at the University of Sydney has developed a high-level computer language compatible with Labanotation and suitable for the graphic display of movement.¹¹ Savage and Officer at the University of Waterloo have devised an interactive system

0018-9162/78/0800-0019\$00.75 @ 1978 IEEE

1983/1987 director and teacher of Analivia Dance School, São Paulo, Brazil.

1984 lecture Trajectory-Notation Research at XVII National Congress of Computing, Rio de Janeiro, Brazil.

1988 The Programming Coreographer in the catalogue of Brazil'70/80-Art/New Media/Multimedia, Brazil.

1989 Laban Method of Movement Analysis course, Psychology Institute of University of São Paulo, Brazil.

1990 paperback and Laban Method course at Scene Arts School of University of São Paulo, with Cybele Cavalcanti and Claudia Homburguer, Brazil.

1996/1997 Laban Theory classes at Jung Psycotherapy with Focus on the Physio-Psyche Integration course, Sedes Sapientae Institute, São Paulo, Brazil.

1995/97 Body Analysis at Fashion School of Santa Marcelina University, Brazil.

1998 lecture Representation Aspects, Industrial Design School - ESDI, Rio de Janeiro, Brazil.

1998 workshop A Dialogue Between Senso-Perception and Arti cial Languages in Body Language Universe, Paço das Artes, São Paulo, Brazil.

1998 video/book Nota-Anna an electronical notation of body movements based on Laban method, Annablume and São Paulo Research Foundation -FAPESP publishers, Brazil.



1999 lecture Nota-Anna at Body Dramaturgy: Laban, Goethe Institute, Brazil.

1999 lecture Nota-Anna at Invenção: Thinking the Next Milenium, ItauCultural Institute, Brazil.

1999 workshop and lecture at The 1999-2000 Sawyer Seminar, University of Chicago, USA.

1999 lecture/practical demonstration at L'Ombra dei Maestri Rudolf Laban: gli spazi della danza, Universit degli Studi di Bologna, Italy.

L'OMBRA DEI MAESTRI Rudolf Laban: gli spazi della danza ann di Indeni Casul Inte

2001 lecture Analysis of Human Motion Using Java Technology, JavaOne Conference, Sun's 2001 Worldwide Java Developer Conference, with Nilton Lobo, San Francisco, USA. **2001** creation of the Waldemar Cordeiro CD-Rom, Galeria Brito Cimino, Brazil.

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2002 workshop at II International Symposium of Dance in Wheel Chairs, State University of Campinas - UNICAMP, Brazil.

2002 workshop The In uence of the Sight in the Bone Alignment, 3rd Brazilian Journey of Eutony, Brazil. 2003 lecture Real Time Motion Capture Using Java Technology at JavaOne Conference, Sun's 2003 Worldwide Java Developer Conference, with Nilton Lobo, San Francisco, USA.

2004 workshop Looking fot Cyber-Harmony a Dialogue Between the Body Awareness and Electronic Media at Cinético-Digital, ItauCultural Institute, Brazil.

2006 lecture Pocket Art Video Show, Jewish Cultural Center, Brazil.



2006 article Dance of the Machine, the Body and the Mind, FAPESP Magazine, December, Brazil. 2007 lecture Body and Arts, course Products in Process: the Gesture in Arts, Architecture and Urbanism College of University of São Paulo, Brazil.

2009 lecture Body

Language and Technology, International Congress 7.ART, University of Brasília - UnB, Brazil.

2009 article Feet and Health, Em Cotia magazine, Brazil.

2012 lecture Waldemar Cordeiro to the monitors, XXX Bienal de São Paulo, Brazil.

2013 Acquisition of M3x3 single channel and M3x3 installation by the Museum fur Konkrete Kunst, Ingolstadt, Germany.

2014 editor of the book Waldemar Cordeiro Fantasia Exata, ItauCultural, Brazil. 2015 lecture Manuara at Indians of Brazil Seminar Life, Culture and Death, Guita e José Mindlin Library, University of São Paulo, Brazil.



2015 panel Thinking and Writing Movement

Technology Revealing a Hidden Feature of Human Expression, B3 Moving In Biennale, Frankfurt, Germany.

2015 Workshop and lecture Movement Notation from Computer Dance to Nota-Anna, Tabakalera, San Sebastián-Donostia, Spain.

2015 Workshop and lecture Movement Notation from Computer Dance to Nota-Anna, Bienal do Mercosul, Porto Alegre, Brazil. **2016** workshop Movement Notation from Computer Dance to Nota-Anna, Centro Pecci, Prato, Italy.

2017 workshop Wellness, Therapy and Technology, Centro Pecci, Italy.

2017 workshop Notación del Movimiento Humano, Museu D Art Contemporani de Barcelona, Spain.

2017 workshop at Festival LOOP, Barcelona, Spain.

MUSEUM COLLECTIONS

Museu de Arte Contemporanea da Universidade de São Paulo - MAC USP, Brasil

Museo Reina Sofia, Madrid, Spain

Oskar Schlemmer Archives, Switzerland

Museum f r Konkrete Kunst, Ingolstadt/ Germany

BEEP Coleción de Arte Electronica, Spain

Victoria&Albert Museum, London, England

Museum of Modern Art MoMANew York

VIDEO CREDITS

O°↔45° version I with interview, 4min26sec, black&white, Brazil 1974 Performers: Analivia Cordeiro Music: Fox Trot by William Russell conducted by John Cage Production: Computer Center of State University of Campinas UNICAMP, TV Cultura de São Paulo

O°↔45° version III, 1min59sec, color, Brazil, 1974/1989 Performers: Analivia Cordeiro Music: Fox Trot by William Russell conducted by John Cage Edition: Analivia Cordeiro, Renato L. Pahim Production: Gil Ribeiro, Sinc Video

Air, 5min59sec, color, Brazil 1985 Performers: Analivia Cordeiro Scene Designer: Takashi Fukushima Music: air on G string by Johann Sebastian Bach Edition: Analivia Cordeiro Production: Analivia Cordeiro

Architecture of Movement, 1min20sec, color, Brazil 2014/2006 Music: alive School of Samba in Carnival Edition: Analivia Cordeiro Production: Analivia Cordeiro

Cambiantes version I, 4min58sec, color, Brazil 1976 Performers: Analivia Cordeiro, Beatriz Maria Luiz, Cybele Cavalcanti, Fabiana Cordeiro Photographer/Camera: Pedro Farkas Music: Raul do Valle Edition: Analivia Cordeiro Production: Computer Center of State University of Campinas UNICAMP and Prefeitura de Campinas Cambiantes version II, 5min9sec, black&white, Brazil 1976, 2014 Performers: Analivia Cordeiro, Beatriz Maria Luiz, Cybele Cavalcanti, Fabiana Cordeiro Photographer/Camera: Pedro Farkas Music: Raul do Valle Edition: Analivia Cordeiro Production: Computer Center of State University of Campinas UNICAMP and Prefeitura de Campinas

DJMobile, color, 30sec, Brazil 2005 Performers: Analivia Cordeiro, Alexandre Kloc, Gilson Kloc, Grilo Production: Fox + TV

Education, 1min7sec, black&white, Brazil 2007 Performers: Analivia Cordeiro, Lucas Tumkus Music: Education by Modest Mouse Edition: Analivia Cordeiro Production: Analivia Cordeiro

Flesh I, 7min13sec, color, Brazil 2004 Performer: Cristina Brandini Poem: E.E. Cummings, 1958 Music: human sounds mixed by Analivia Cordeiro Edition: Analivia Cordeiro Production: Analivia Cordeiro

Flesh II, 3min, color, Brazil 2005 Performers: Analivia Cordeiro Poem: E.E. Cummings, 1958 Music: Prelude G Sharp Minor by Rachmaninov interpreted by David Hellfgott Edition: Analivia Cordeiro Production: Analivia Cordeiro Flesh III, 4min8sec, color, Brazil 2007 Performers: Analivia Cordeiro, Cristina Brandini Poem: E.E. Cummings, 1958 Music: Analivia Cordeiro Edition: Analivia Cordeiro Production: Analivia Cordeiro

Gestures, 4min24sec, black&white, Brazil 1975 Performers: Analivia Cordeiro, Fabiana Cordeiro Music: John Cage Edition: Antonio Carlos Rebesco Production: TV Cultura de SãoPaulo

Kwarup, 16min 36sec, color, Brazil 1975 Performers: the whole Kamaiurá Tribe Music: sounds of everyday life and the song Paraná Edition: Analivia Cordeiro Production: FAPESP

Laban Art of Movement, 25min10sec, color, Brazil 1999 Performers: Analivia Cordeiro, André Sampaio, Bruno Sampaio, Claudia Barnabé, Claudio Kozakowski, Cybele Cavalcanti, Gilson Kloc, Luciana Stoiani, Mara Cordeiro Kloc, Maria Luiza de Lima, Gregoire Cordeiro Belhassen, Leonard Cordeiro Belhassen, Nilton Lobo Guedes, Thomas Cordeiro Guedes, Thomas de Felipe, Tião Carvalho, Zelia Monteiro Music: Rodolpho Grani Jr. Edition: Analivia Cordeiro and Tamara Ka Production: Analivia Cordeiro

Laban History, 7min20sec, color, Brazil, 1999 Performers: Analivia Cordeiro, Cybele Cavalcanti, Denilton Gomes, Fabiana Cordeiro, JC Viola, Juliana Carneiro da Cunha, Lisa Ullman, Maria Clara Guedes, Maria Duschenes, Marie Albertas, Patricia Noronha, Ruth Toledo, Silvia Duschenes Edition: Analivia Cordeiro Production:

M3x3, 6min30sec, Brazil 1973 Performers: Analivia Cordeiro, Beatriz Maria Luiz, Cybele Cavalcanti, Eliana Pena Moreira, FabianaCordeiro, Marina Helou, Nira Chernizon, Silvia Bittencourt, Solange Arruda Music: metronome sound Production: TV Cultura de São Paulo

Micron Virtues, 8min51sec, Brazil 1992 Performers: Analivia Cordeiro, Lali Krotoszynski, Luciana Gandolpho, Rosa Hercoles Music: 7th Symphony 2nd mov by Mahler Edition: Analivia Cordeiro Production: Analivia Cordeiro

Nota-Anna bicycle by Pelé, 30sec, color, Brazil 1994 Music: Rodolpho Grani Jr. Edition: Analivia Cordeiro Production: Analivia Cordeiro

Nosotros El Pueblo, 36sec, color, Brazil 2007 Performers: Alexandre Kloc, Analivia Cordeiro Music: Wonderful Copenhagen by Dave Brubeck uartet Edition: Analivia Cordeiro Production: Analivia Cordeiro

Save the Nature, 55sec, color, Brazil2007 Performers: Analivia Cordeiro, Thomas Cordeiro Guedes Music: Aluja de Xango by Baba Messias Edition: Analivia Cordeiro Production: Analivia Cordeiro Slow Billie Scan, 4min6sec, color, Brazil 1987 Performers: Analivia Cordeiro, Lali Krotoszynski Music: Don't Explain by Billie Holiday Edition: Analivia Cordeiro Production: Image and Sound Museum - MIS

Striptease, 9min50sec, color, Brazil 1997 Performers: Analivia Cordeiro Poem: Written in the Skin by Ademir Assunção Music: Rodolpho Grani Jr. Edition: Analivia Cordeiro Production: Analivia Cordeiro

Touch Performance, 7 min31sec, color, Brazil 2009 Performers: Analivia Cordeiro, João Penoni Edition: Analivia Cordeiro Production: Paço das Artes

Trajectories, 2min19sec, black&white, Brazil 1984 Performers: Carolina Melardi, Caroline uintella, Juliana Sayão, Luciana Stoiani Music: by Chopin Edition: Analivia Cordeiro Production: Analivia Cordeiro

Understable Fuzziness, 2min11sec, color, Brazil 2007 Performers: Analivia Cordeiro, Cybele Cavalcanti Poem: Picture of Spring by Vladimir Maiakóvsky Music: Air on G string by Johann Sebastian Bach Edition: Analivia Cordeiro Production: Analivia Cordeiro Unsquare Dance, 2min34sec, color, Brazil 2007 Performers: Alice Bodansky, Analivia Cordeiro, Ilana Paterman, Julio Lucio, Thomas Guedes Music: Unsquare Dance by Dave Brubeck uartet Edition: Analivia Cordeiro Production: Institute of Applied Mathematics - IMPA

You, 2min44sec, color, Brazil 2011 Performers: Analivia Cordeiro, Breno Flesh, Erica Usui, Roberto Moraes and Grupo Amudi Edition: Analivia Cordeiro Production: Polytechnic School of University of São Paulo

Wearables, 9min45sec, color, Brazil 1989 Performers: Analivia Cordeiro, Andrea Kraemer, Carmita Lion, Glaucia Amaral, Liana Bloisi, Fernando Penteado, Maria Teresa Castor, Silvia Mecozzi Music: Laurie Anderson, Carlos Saura, Shadowfax, Traditional Japanese Music, Ruidos Y Ruiditos, Nino Rota Edition: Analivia Cordeiro Production: Miriam Mamber Gallery

What We Have Done, 43sec, color, Brazil 2007 Performers: Analivia Cordeiro, Thomas Guedes Music: metronome and Rainforest by Ken Davis Edition: Analivia Cordeiro Production: Analivia Cordeiro

ABOUT THE AUTHORS

JEANNE BEAMAN (born 7 October, 1919, San Francisco began her career in dance as a member of the San Francisco Ballet (1938-40. She studied at the School of American Ballet and with Martha Graham in New York in 1936, attended the Bennington School of Dance in 1938, and on the West Coast she studied with Adolph Bolm, William Christensen, May O' Donnell and José Limón. In 1942 she received an M. A. in Physical Education at Mills College. In the 1960s she was making some of the first computer dances. Beaman is Professor Emerita at the University of Pittsburgh, where she taught from 1961 to 1974.

She was a founder of the American College Dance Festival Association and the Pittsburgh Dance Council. After moving to Massachusetts in 1974, Beaman became Dance Coordinator of the Massachusetts Arts and Humanities Foundation (1975-78.

From 1979 to 1982 she was a dance evaluator for the New England Foundation for the Arts. She served as a member of the Massachusetts Cultural Council from 1986-1992. Jeanne Beaman received the Dance Alliance's Dance Champion Award in 2004.

FERNANDO COCCHIARALE, PhD, professor and independent curator. He wrote the book Abstracionismo Geométrico e Informal, with Anna Bella Geiger (Rio de Janeiro: Funarte, 1987 and has also written numerous articles and essays and books, catalogues, newspapers and art magazines in Brazil and abroad. He was Funarte Visual Arts Coordinator (1991-1999 and curator-coordinator for the Rumos ItauCultural Artes Visuais (1999-2000 and 2000-2002. He participated on j uries and selection committees for more than 20 exhibitions such as 10th. 15th and 16th National Fine Art Salons in Rio de Janeiro (1987, 1995 and 1998, respectively. He was curator of the Museum of Modern Art of Rio de Janeiro (2000-2007 and Laura Alvim Cultural Center, Rio de Janeiro (2011-2012. A fiew of the exhibitions he curated won important prizes like Hélio Oiticica: Museu é o Mundo (ItauCultural, 2011 and Waldemar Cordeiro: Fantasia Exata (ItauCultural, 2013. He lives and works in Rio de Janeiro, Brazil.

GILBERTO DIMENSTEIN is a Brazilian journalist. He is currently the publisher of Catraca Livre, appointed by Financial Times as one of the most inspiring applications of digital technology for social good. He also keeps a column at CBN radio.

Dimestein has published many works regarding human, children'a and youth rights, besides works on citizenship. For 2011 he was a Fellow at Harvard's Advanced Leadership Initiative, where he worked in partnership with researchers at the Media Lab of MIT on an Internet program to help cities transform themselves into learning communities (Open City Labs, known as "Catraca Livre" (Free Turnstile) in Brazil).

He started his career at Shalom, a magazine dedicated to the Jewish community. Subsequently, he worked in Veja, Jornal do Brasil, Correio Braziliense, Itima Hora. For his reporting on social issues and his experiences with educational projects, Gilberto Dimenstein was named by poca magazine in 2007 as one of the hundred most influential figures in the country. Dimenstein was one of the creators of Andi (News Agency for Children's Rights), which is circulated in Brazil and several countries in Latin America. In 2009, a document prepared at Harvard Business School, named him as an example of community innovation for his neighborhood-school project initially developed in São Paulo and replicated across the country.

MARIA DUSCHENES (Budapest, 26 August, 1922 São Paulo, 5 July, 2014) is a pioneer of modern dance in Brazil. As a teacher and choreographer was the main person disseminating the work of Laban in the country, offering practical and theoretical training in Laban Movement Theory for educators, psychologists, dancers, choreographers and actors.

JOHN LANSDOWN (2 January 1929 Cardiff, Wales 17 February 1999) was a British computer graphics pioneer, polymath and Professor Emeritus at Middlesex University Lansdown Centre for Electronic Arts, which was renamed in his honor in 2000. From the early 1970s to the 1990s, he had influential roles in several professional bodies, and chaired the Science Research Council's Computer Aided Building Design Panel, through which he implemented a world leading strategy for developing computer aided architectural design in British universities. He had enormous influence as one of the founders and as secretary of the Computer Arts Society (1968–1991).

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MARCELO LEITE is special reporter and columnist for the prestigious Brazilian newspaper, Folha de São Paulo (Folha) and also at the digital media version, Folha.com.

Graduated in Journalism by the School of Communications and Arts at USP (1979), he was also the Ombudsman at Folha (1994-1996), representing the interests of readers by the Writing Department. He was also editor of Science, Opinion and World and correspondent in Berlin.

His doctoral thesis in Social Sciences from the State University of Campinas (Unicamp) was published in March 2007 by Editora UNESP, with the title of "Promises Genome". Despite the academic degree, he does not consider himself a social scientist.

He specialized in science journalism as a Fellow of the Krupp Foundation in Germany (1989-90), where he apprenticed in the magazine "Bild der Wissenschaft" and the newspaper "Stuttgarter Zeitung". In 1997-98, he was Nieman Fellow at Harvard University. In 2005, he received the José Reis Award for Scientific Journalism, the National Council for Scientific and Technological Development (CNPq). In 2009, won the Esso Award for Scientific Information, Technological and Ecological with the special magazine staff "In the Heart of the Antarctic".

ARLINDO MACHADO, born in Pompeia (Sao Paulo state), on July 17, 1949, is a Brazilian researcher, professor of the Graduate Program in Communication and Semiotics at PUC-SP and the Department of Film, Radio and Television of ECA-USP and curator of art. Its field of action covers the universe of so-called "imaging techniques", ie those images produced by various technological mediations, such as photography, film, video and digital media. On these topics, he published some books, as Eisenstein: Geometry of Ecstasy (Brasiliense), A speculate Illusion (Brasiliense), The Video Art (Brasiliense), Pre-cinemas & Post-cinemas (Papirus), The Television Taken Seriously (Senac), Art and Media (Zahar) and numerous articles in specialized journals. It is also co-author of Made in Brazil: Three Decades of Brazilian Video (Ita cultural). It was critical of photography and video in the Folha de São Paulo journal during the period 1984-86. In the art area, he was curator of several exhibitions, including Art and Technology (MAC, São Paulo, 1985), Cinevideo (MIS, Sao Paulo, 1992, 1993), The Video Art in Brazil (MAM, Rio de Janeiro, 1997), Art and Technology, and Emotion Art.ficial II (ItauCultural Institute, São Paulo, 1997, 2001, 2003, 2004), Waldemar Cordeiro: Fantasia Exata (ItauCultural, 2013).

He also organized several exhibitions of Brazilian and international electronic art and directed six short films in 16 and 35 mm and three multimedia works on CD-ROM. He received the National Photography Award from FUNARTE in 1995 and the Art and Technology Award Sérgio Motta in 2007.

MARTIN J. TRACY, M.A. in Dance Ethnology; Ph.D. candidate in Biotechnology, University of California, Los Angeles; author of article on comparative movement notation and computer assisted choreography; currently teaching in the Department of Dance, University of California, Los Angeles, 1976.

LUIS VELHO is a Full Researcher/Professor at IMPA Instituto de Matemática Pura e Aplicada of MCT, and the leading scientist of VISGRAF Laboratory. He received a BE in Industrial Design from ESDI/UERJ in 1979, a MS in Computer Graphics from the MIT/Media Lab in 1985, and a PhD in Computer Science in 1994 from the University of Toronto under the Graphics and Vision groups. His experience in computer graphics spans the fields of modeling, rendering, imaging and animation. He has published extensively in conferences and journals of the area. He is the author of several books and has taught many courses on graphicsrelated topics. He is a member of the editorial board of various technical publications. He has also served on numerous conference program committees.