

# Portfolio: glimpses

Tania Fraga

installations, performances, spectacles, expo-graphic designs

## **Singularidade – Singularity (work in progress since 1973):**

Singularity is a simulation of a non-oriented surface monumental sculpture project. It is a singular object built with carbon steel over a water mirror lake constructed with black granite, measuring approximately: 800×300×300 cm. The goal is to fabricate it through automated manufacturing processes (CAD / CAM). It has five sides, and one of them is a one-side non-oriented surface. It resulted from a 1973 dream. The project for this sculpture received an invitation from the Brazilian curator Radah Abramo to be built at the Bandeirantes Palace Museum, in São Paulo, in 2000. Robotic procedures, a non-existing possibility for art projects at that time in Brazil, will supply the need for precision. Until then, it continues to be an ongoing project. [See:<https://www.youtube.com/watch?v=wg86BPGePDs>]



## Teknoabá:

It is a site-specific choreographic artwork resulting from a meeting between Dani Dini and the computer artist Tania Fraga. It brings new dimensions to the dialogue between virtual and physical realms, which recombine mutually. In line with the Brazilian environment's present situation, amidst fires in many country regions – the artists have brought this issue to the artwork. Therefore, in symbiosis, body, mind, nature, and machine reveal the encounter among these two artists.

The performance occurs inside Tania Fraga's studio with several broadcasts of varied performance viewpoints.

Presented at Spark, SIGGRAPH: LASER Garden, Ars Electronica 2021, Art, Memory and Media 2021.

See: [https://www.youtube.com/watch?v=Df7GKGTum\\_I](https://www.youtube.com/watch?v=Df7GKGTum_I)



## Rainforest Awakens

They are Online performances conceived during the COVID19 pandemic. From Brazil, Fraga takes over Maida's PC in the US and interacts with poetic visionary 3D Rainforest landscapes. Maida dances with the resultant virtual images projected from a MAC laptop over her wall in the US. Together, "live and online," they explore a dreamlike 3D Rainforest. Undaunted, they call the forest spirit to help take care of the rainforest's unfathomable diverse richness and beauty under the music of the electronic composer/musician Steve Hilmy from Florida. It aimed to bring awareness of Brazil's complex problem fighting the epidemic, the economic crises, and the winter fires in many regions. The Brazilian government has acted in controversial ways on all these issues.

Promoted by Artomatic (Washington, DC), Maida Withers Dance Construction Company (US), Tania Fraga Atelier (Brazil), and UFSM (Brazil).



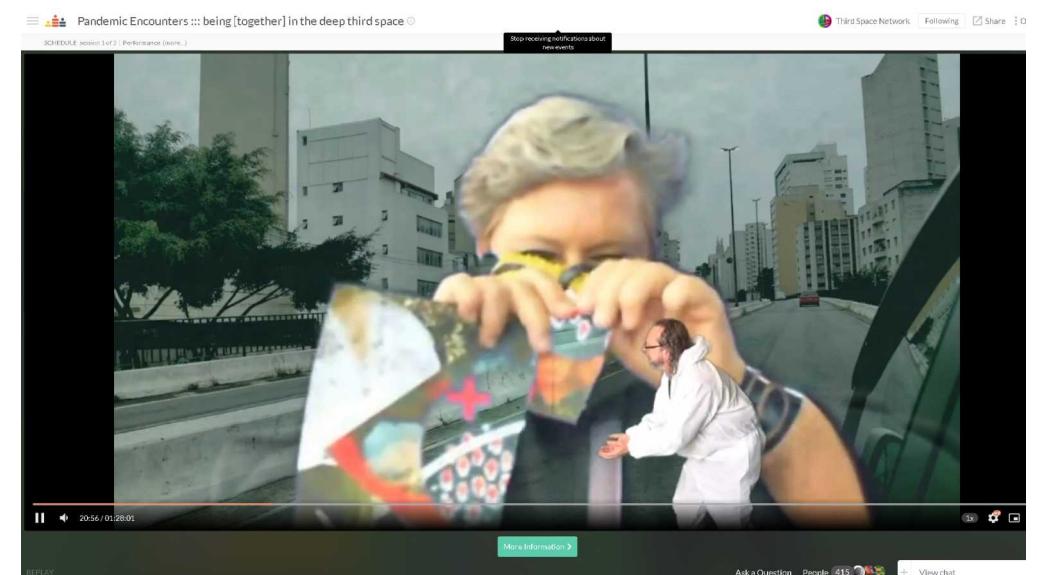
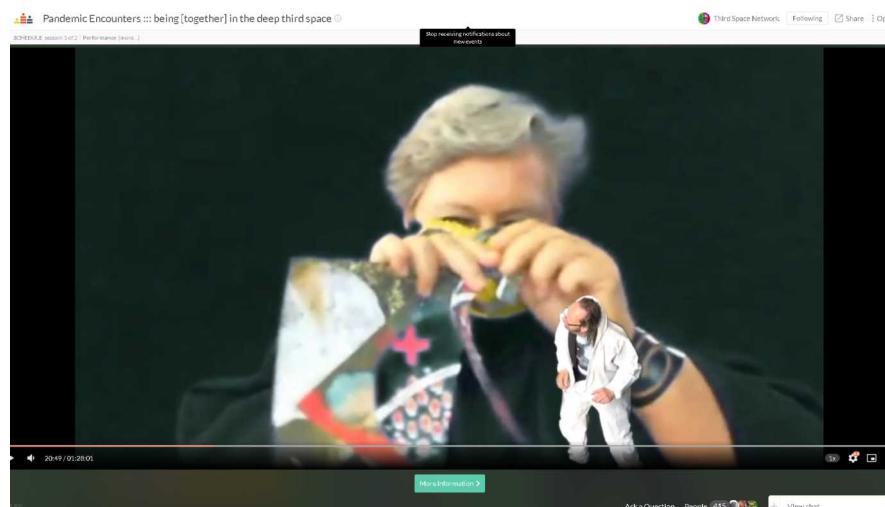
## Online performances

### Pandemic Encounters into the Deep Third Space Network

Online action-performance promoted by Paul Serman (UK), Randall Packer, Gregory Kuhn, and Leonardo's International Society for the Arts, Sciences and Technology, questioning the impact of separation in the state of COVID-19 apocalyptic pandemic.

### Telematic Quarantine

Online performance action held on January 2020 in Riddock Centre, Australia, as part of an online performance promoted by International Lime coast Video Art Festival. The performance installation was designed by British telematics artist Paul Sermon.



## TransFormAcao and Transformation 1 and 2

TransFormAção and Transformation 1 and 2 are collaborative projects weaving art, science, and technology, integrating aesthetic and poetic approaches. They apply theories and processes aiming at a symbiosis through dance and technology. Their theme related to transformations within the fungi realm uses poetic metaphors to create interactive virtual domains manipulated interactively in a CAVE, performances, or site-specific installations. Images of fungi, acquired from Tanya Dahms scanning electron—atomic force microscope, inspired the Java application and used as textures and backgrounds. Their colors, hues, saturation, and values create harmonious domains keeping their quality during any interaction.

**Authors:** Tanya Dahms (microscopic images and performances), David Gerard (interaction device), Tania Fraga (interactive Java scenarios)

Group: Christopher Sensen (CAVE Director), Paul Gordon (CAVE programmer), Holly Wobama (Video), Brian Cechmam e Graeme Hull (photography), Pedro Garcia (Java consultant), and students of the Computer Science curse at Regina University, Canada. In 2007, it received an award for production from the Saskatchewan Art Council, Canada. At the Java3D CAVE in Calgary University, in 2011, the devices used adapted Wii-motes. It was reprogrammed for the stereoscopic installation, TransFormAcao, in 2019, allowing 3D Pulfrich illusion for in-depth perception.

### Exhibitions and Performances:

Stereoscopic installation at Niemeyer Cultural Center, Brasilia, November 2019. Performance at Java 3D CAVE at Calgary University, Canada, in 2011; Spectacle at New Dance Horizons, in July 2007, Regina, Canada.

See: <https://www.youtube.com/watch?v=jFRdeLIOOLE>, <https://www.youtube.com/watch?v=iSkv7oIZhcU&feature=youtu.be>, [http://taniafraga.art.br/computer\\_art/Transformations.html](http://taniafraga.art.br/computer_art/Transformations.html)



Performance at Java3D Cave, Calgary, Canada, 2011

Tanya Dahms

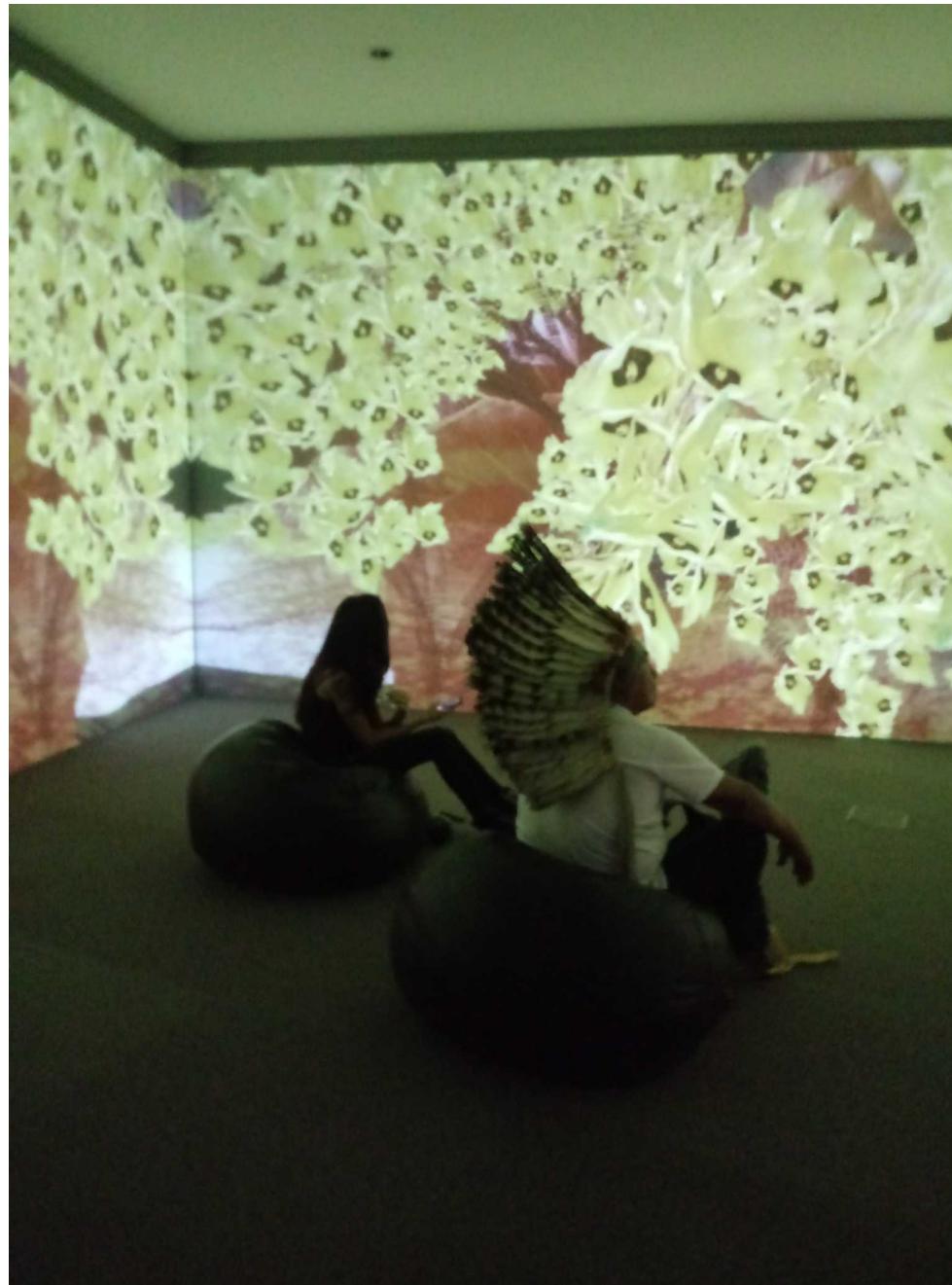
## Epicurus' Garden and Epicurus' Garden 3

Epicurus' Garden and Epicurus' Garden 3 are different versions of a site-specific artwork aiming to express glimpses of a sublime mathematical universe — infinite, potential, imaginary, multidimensional — to characterize a vast field of a Dionysian natural reality. This artwork constitutes a locus for humans, numbers, and emotions. Emotions as data captured by a neural headset and input within the virtual domains affect the virtual garden. They aim to foster symbiosis between human emotional states and automated computer processes. In this garden, emotions like excitement and frustration affect the virtual garden's growth or pollination results by changing their settings. The cycles repeat themselves as seeds that grow differently every time they sprout. Like sea waves or the clouds in the sky, they are always the same and never the same. Within the virtual garden, flowers with intense colors and shapes in movements express, metaphorically, the constant changes of living processes that happen in the earthly gardens. Vetiver essential oil spread through scent diffusers, and music pervades the installation or performance space. The virtual worlds are projected on giant screens using three projectors. The public sits in cushions on the floor inside the installation space.

### **Exhibitions:**

Paço das Artes Cultural Center, São Paulo, 2014; Center of Contemporary Arts of the University of Santa Maria, 2016; Brasilia Planetarium, 2017; National Museum of the Republic, Brasilia, 2018/19.



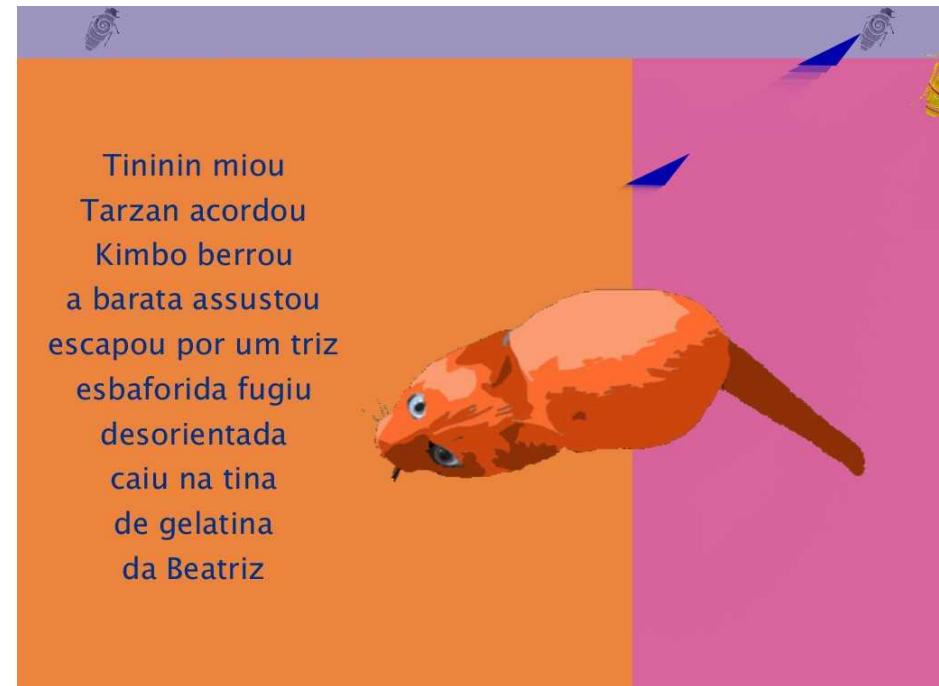
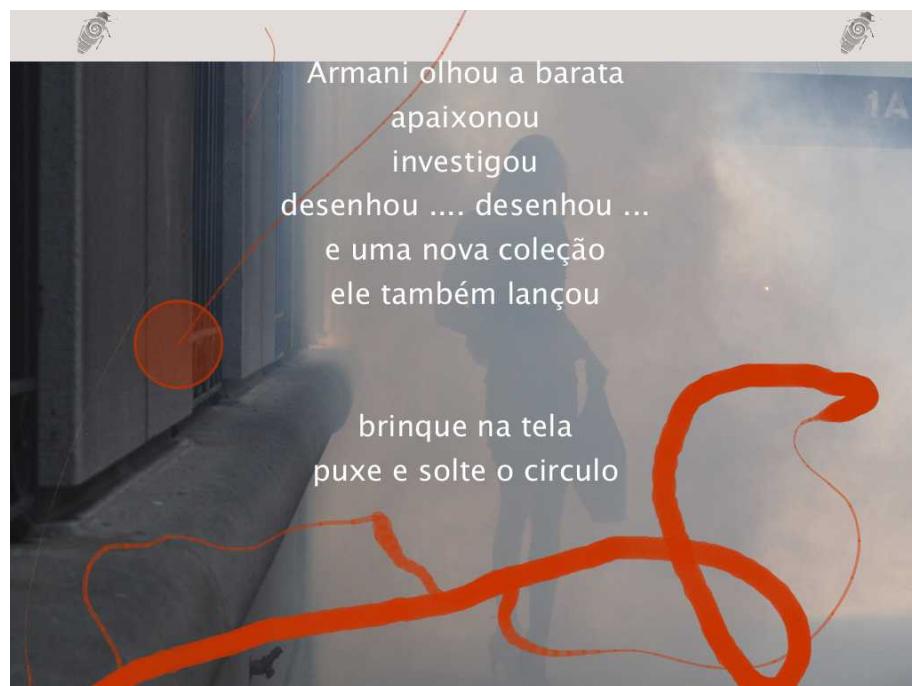


## Short stories: The Bug in the can and Distracted stories

The Bug in the Can and Distracted Tales are dynamic interactive applications programmed using Processing IDE and presented in site-specific installations. They are small stories aiming to develop narratives and storytelling for new media applications environments. The former tells the adventures of a bug coming out of a can ending in a fashion show parade. This process inspires great ateliers of fashion, and she becomes a heroine. The second shows talks among teens related to Greek mythology within their school environment based on the book Distracted Stories (Histórias Distraídas) by the Brazilian writer Cida Chaves.

### Exhibitions:

Cultural Center of Brazil Bank, Brasilia, 2015. National Museum of the Republic, Brasilia, 2015 and 2016.



The Bug in the can's Snapshots

## NumericVariations and MindFluctuations

Numeric data variations create VR artworks and scenarios for site-specific installations, performances, and spectacles. They constitute a locus for humans, numbers, and emotions. A neural headset captures the user's emotions and inputs them within virtual domains making a journey. It is a journey that unfolds with human intelligence development, from the beginning of life until its spreading, as DNA, in the Universe (Panspermia). They aim to foster symbiosis between human emotional states and automated computer processes. In them, emotions like excitement and frustration affect agents inside the virtual domains by changing their settings. The cycles repeat themselves growing differently every time they sprout.

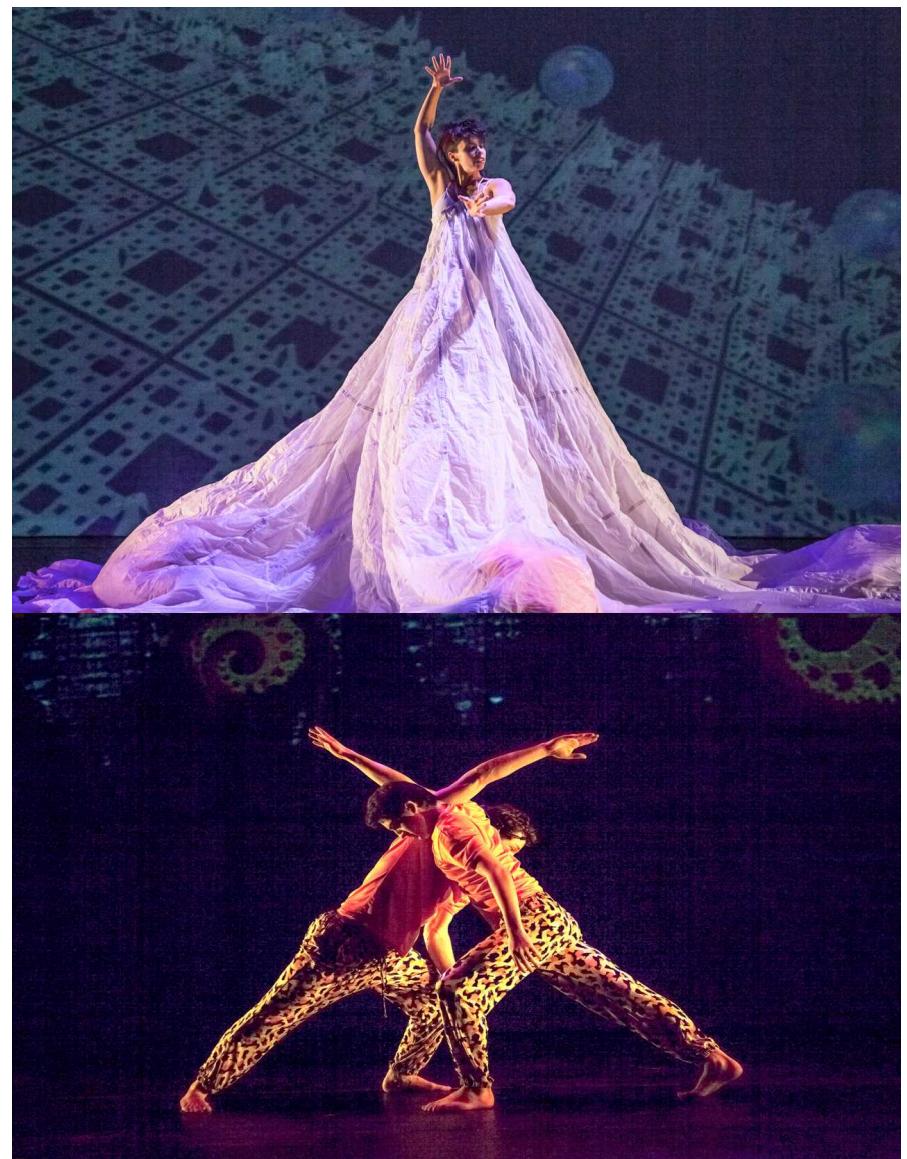
### Exhibitions and spectacles:

The National Museum of the Republic and in the Art center of the University of Santa Maria, both in 2004

See: [https://www.youtube.com/watch?v=u0Z9IjR\\_VuU](https://www.youtube.com/watch?v=u0Z9IjR_VuU) and <https://www.youtube.com/watch?v=WOS6yvKz068>.

In March 2015, it created the interactive scenarios of the dance spectacle **MindFluctuations** performed by the American dance group Maida Withers Dance Construction Company, in Washington, DC, in celebration of its 40th anniversary

[See performance trailer at: <https://vimeo.com/126002412> . Full documentary at: <https://vimeo.com/129893299>].



Left: NumericVariations, Santa Maria Cultural Center, 2014. Right: MindFluctuations at Lisner Theater, Washington, DC, 2015

## Wanderings.Perambulacoes

It is a virtual reality stereoscopic application for site-specific interactive stereoscopic installations. It incorporates fragmentary memory recollections within the virtual environment by inserting images of trips around the world to configure each realm. These photos – chosen and prepared to provide different readings depending on diverse points of view and the users' pathways within four domains – enable connections between memories and perceptions. The perceptions unveil potential uses in the virtual realms. These fragments of memories bring disjointed recollections of the sensations related to beauty and wonder. The installation offers the lyrical cognitive content of experiencing and losing a sense of depth.

[See: <https://www.youtube.com/watch?v=vKbcXIC0bRY>].

## Exhibitions:

Centrer104, Paris, CAC.3, November 2012. 8º Contemporary Art Symposium, Santa Maria University, RS, September 2013. EmMeio#5 exhibition, National Museum of the Republic, Brasilia, October 2013. Space Gallery Lilo, São Paulo, 2016.

Wandererings.Perambulacoes's Snapshots





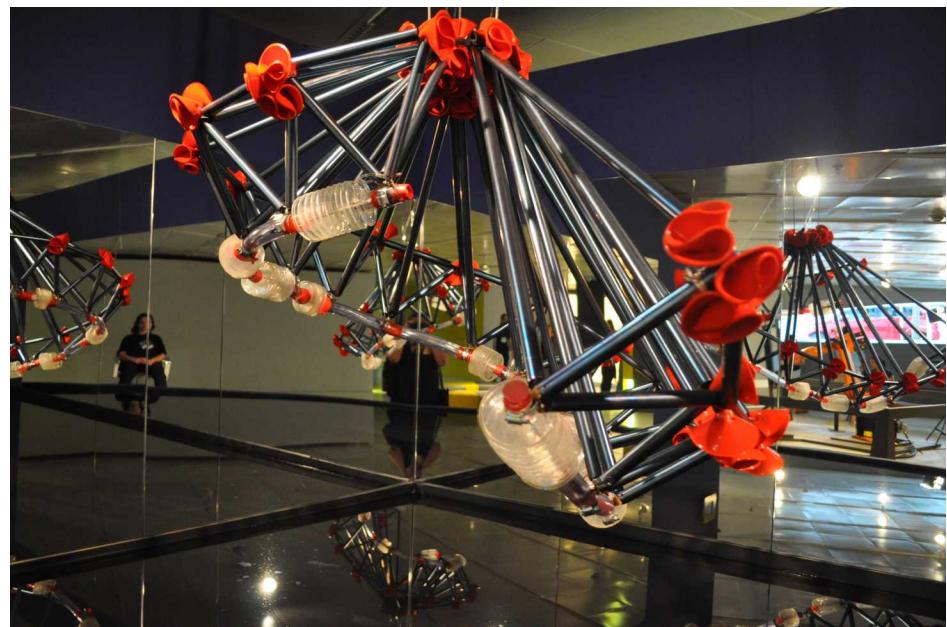
## **Caracolomobile:**

It is an artificial robotic organism that perceives and discriminates human emotional and expressive states through a neural interface and responds with sounds and movements. It explores symbiotic possibilities between humans and machines. It merges neurological information flows with digital circuits to diffuse the boundaries between space, time, knowledge, matter, and body. It is a robotic artwork built with anodized titanium tubes, using automated and brain-computer interface procedures. It composes an installation in a violet-blue environment surrounded by mirrors whose geometry allows maximum movement with minimum effort. Lightness and visceral symbiosis with humans is its poetic option. Its colors, lightness, sounds, organic and flexible movements, and meticulous construction had simplicity as a functional choice. Its brain-computer interface system uses human neural activity, responding to it expressively with sounds and motions.

[See: <https://www.youtube.com/watch?v=ya4N2AcXyE8>].

## **Award/Grant:**

Awarded by the Itaú Cultural Institute for the biennial of Art and Technology Art.ficial Emotion 5.0, held from July to September 2010.



Caracolomobile at exhibition Art.ficial Emotion 5.0, Itau Cultural Institute, Sao Paulo, 2010

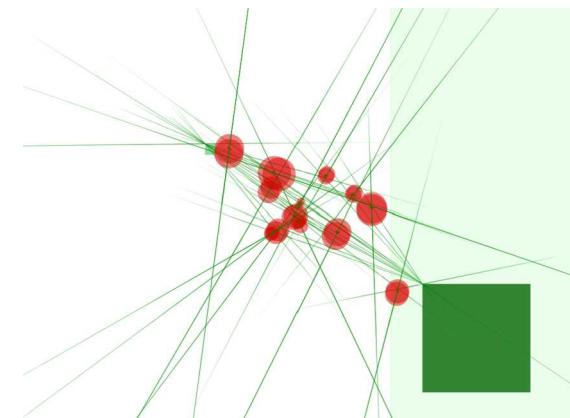
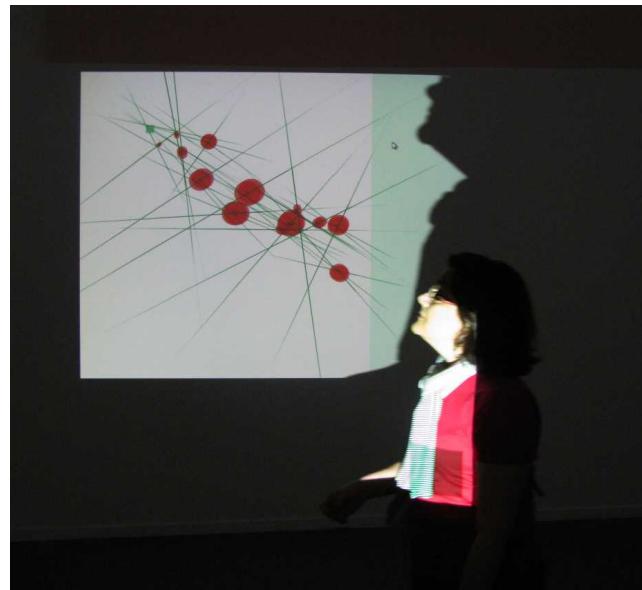
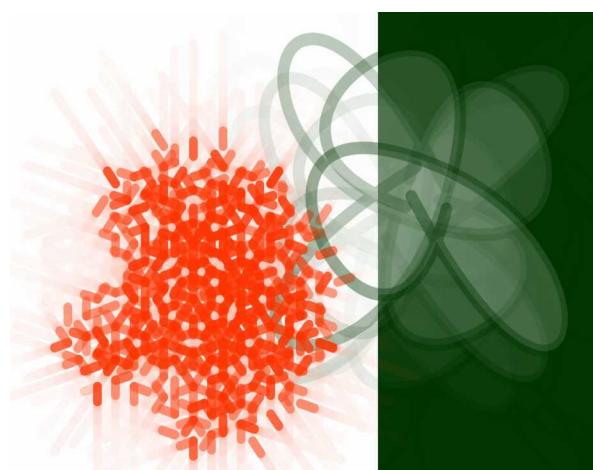
## Collection: Cybernetic Experiments

The Collection is composed of experimental fragmentary poetic experiments created with Processing IDE (Interface Development Environment). They form groups characterized by their aesthetics, prioritizing the geometric and abstract structuring of shapes, colors, sounds, fluid and flexible movements, and their precise and meticulous construction. It is a procedural artwork happening through experiments whose nuances and resonances create relations that enable the emergence of unstable, dynamic, non-linear characteristics generative structures. Its poetics explores lightness and simplicity using a minimum number of elements for the agency of multiplicities and complexities. It seeks the simplicity and the low cost obtained by creating innovative systems whose complex results come from the agency of simple elements and processes with minimal actions. They explore interchanges among the creative artist, the computer that performs the artwork, and the users who give them life. They are executable applications that exploit unpredictable, evolutionary and emerging cybernetic characteristics, with poetics and aesthetics inherent in the realm of art. Symbiotic interactions with users happen through touch screens.

[See: <https://www.youtube.com/watch?v=8rkSaY303jM>].

## Exhibitions:

Gamerz5, Vasarely Foundation, Aix-en-Provence, France, November 2009. Prova de Artista, open studio exhibition, July 2010. EmMeio#2, National Museum of the Republic, Brasilia, October 2010. *Snapshots* used as the front page of the magazine 'Módulo Atelier de Artes Visuais', number 15, UnB, 2010.



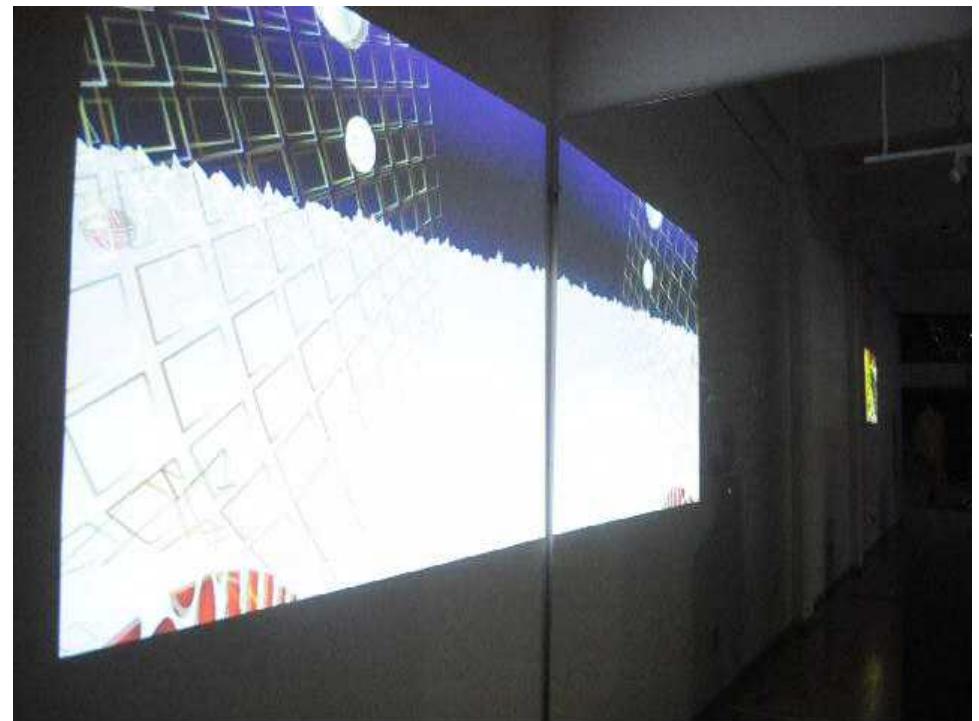
## Fluxions

It is a virtual reality site-specific installation that creates herds of autonomous virtual bots in dreamlike domains to perform improvised dances. Some virtual worlds implement modified versions of artificial life algorithms: Craig Reynolds developed the 'Flocking' algorithm and John Conway's Game of life' one. There are two types of these agents: those who seek (prosecutors) and those who escape (escapees). Prosecutors go after escapees, deviating from obstacles but remaining within the limits and physical properties programmed for them. When the prosecutors find the escapees, they perform, rotating one around the other until random parameters cause them to move away and start another search.

[See: <https://www.youtube.com/watch?v=Xt8xTLscwpM>].

## Exhibitions and events:

Yuri's night, NASA Ames Research Center, USA, April 2008. "Poéticas digitais", 5º Contemporary Art Symposium, University of Santa Maria, RS, 2010.



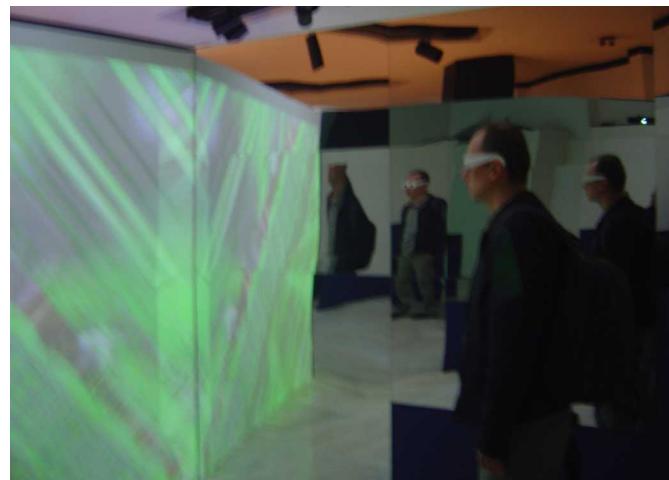
## Fragments.Fragments:

It is a stereoscopic site-specific installation that creates intangible realities and explores unpredictable cognition. The elements of images collected on trips worldwide are inserted into three-dimensional forms, constituting sensory kaleidoscopes. It explores Java 3D possibilities, for example, the "inverse" of some objects creating mathematical, visual realities made possible by computer graphics but which are physical impossibilities, unknown in the material world. Some virtual worlds implement modified versions of artificial life algorithms: 'Flocking' developed by Craig Reynolds and 'Game of life' created by John Conway. It is composed of 12 virtual worlds perceived in depth through glasses with one of the lenses obscured so that the image reaches that eye with a few nanoseconds of delay. Due to the camera's movement, the brain perceives the two eyes' pictures in depth through Pulfrich's illusion.

[See: [https://www.youtube.com/watch?v=B2jLj\\_Us4C0](https://www.youtube.com/watch?v=B2jLj_Us4C0)].

## Exhibitions:

GAG (Galeria de Arte Global), 2007, Sao Paulo. Museum of Modern Art, Toluca, Mexico, March 2008. Museum of Contemporary Art, Santiago, Chile , August 2008. National Museum of the Republic, Brasilia, October 2008. *Snapshot* used as frontal image of the book "Imagens e Números" by Lilian França, UFPe, 2008.



## **ViaBolus\_01, ViaBolus\_01a, and ViaBolus\_01b**

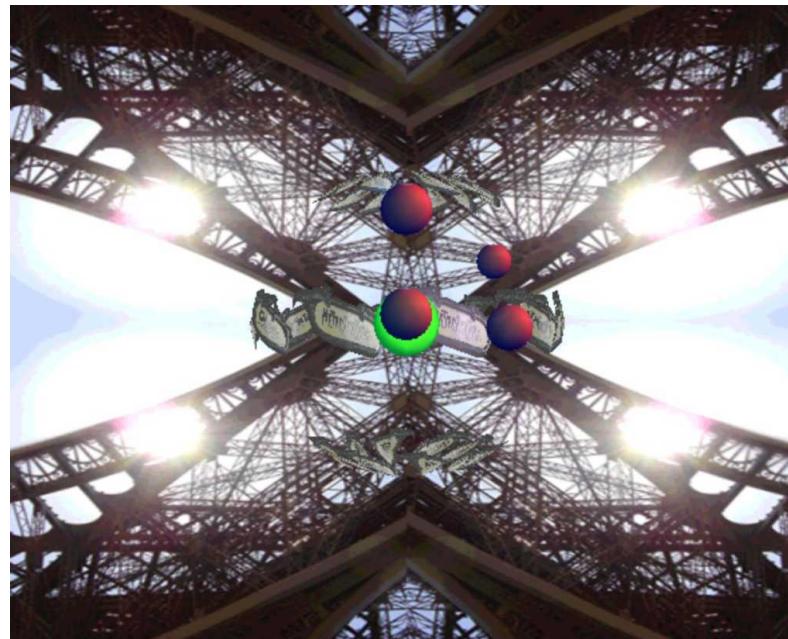
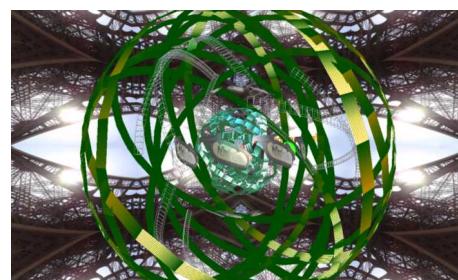
It is a virtual reality installation using a touch screen offering interactive cognitive journeys. It articulates a quasi-charade whose keys are in the artwork title and underlying the user's actions. Each letter and each piece of the artwork's title connotes meanings: keys not explicit to be discovered. The aesthetics of the virtual niches is related to the use of the graphical interface and the "problems" of information management by the computer: For example, WAIT (loading a domain), REBOOT the computer, DISCOVERING\_HOW\_TO\_MOVE.

Its poetic enables users to wander through its space-time, unveiling connections and hidden aspects. It requires attention, memorization, and the participants' concentration. To navigate the niches, users need to shift their attention into intangible mental spaces to find how to "walk," "jump," or "fly" from one point to another, from one domain to another. They are possibilities impossible to be experienced in material realms. It used a touch screen mounted between mirrors in the Cultural Institute Itau exhibition. It used a carpet for games, adapted with natural-colored rubber from the Amazon rainforest, pigmented to react to black light, in the others.

[See: <https://www.youtube.com/watch?v=ooZYhXNs8ko>].

### **Exhibitions:**

Cinético-digital, Itau Cultural Institute, Sao Paulo, July 2005. Diamantina Winter Festival, July 2006. #6.Art, Renato Russo Cultural Space, Brasilia, April 2007.



## **MembranaEstimulável — ResponsiveMembrane**

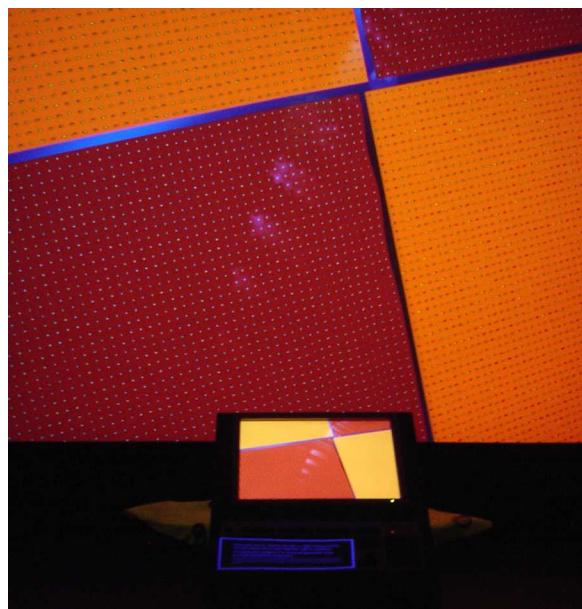
It aims to materialize virtual membranes as a silent artificial organism, organic, interactive, and capable of moving organically with sinuously slow movements. It is an installation looking for new metaphors for nanotechnology materials. It was born as a virtual reality entity. It followed the genuine desire to keep organic quality, lightness, silence, and fluid wave movements. It is a robotic art installation composed of a membrane produced with natural rubber from the Amazon rainforest. It integrates a material that has a social impact due to the sustainability of its use. Silent wave movements and the membrane pigmentation enabled it to shine under black light. They were fundamental characteristics of this artwork where nitinol wires, a memory shape alloy produced by nanotechnology, programmed to replace motors performed silently with organic motions. The computer intermediates the membrane control using a touch screen. With 45 degrees mirrors at the side of the projected screen in the background, the indigo blue installation environment immersed users in this silent ambient, separating them from the outside world. The touchscreen provoked the user's action. The virtual version of the membrane answers, during one minute, while sending the wave data to the computer serial port. The robot responded with the same movement during the same time.

[see: [https://www.youtube.com/watch?v=4HGa8vmC\\_ZY](https://www.youtube.com/watch?v=4HGa8vmC_ZY)]

### **Exhibitions and grant:**

It was commissioned by the Itaú Cultural Institute for the biennial of Art and Technology Art.ficial Emotion 2.0, in 2004.

In April 2007, it participated in an exhibition, curated by Melentie Pandlovisky, at the Experimental Art Foundation, Australia.

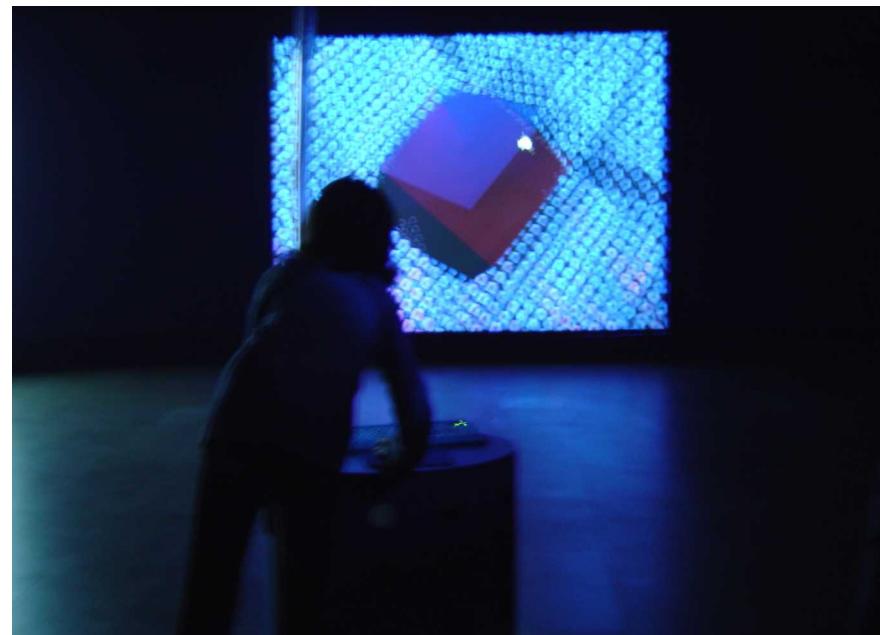


## **m\_branas**

It is a virtual reality installation exploring the nebulous and poetic domain of contemporary physics. Metaphorically, its environments are part of a universe of mystery and magic. — five virtual worlds with poetically agitated vibrate laminae that undulate in mutable fluctuations. The undulating surfaces are metaphors of Stephen Hawking's multidimensional branes. They are thick-less membranes with incomprehensible densities at the abstract and indistinct confines of mathematics, creating a sensitive possibility explored by consciousness. It is the first Java application built with the framework programmed with the Transmídia grant by Itau Cultural Institute in 2003. It explores mathematical membranes made possible by computer graphics. They are possible realities, only speculated as existing within the mathematical Universe—this artwork used stereoscopic polarization glasses in the Java3D CAVE at Calgary University, Canada, in 2003.

### **Exhibitions:**

In 2003 it was presented at the Java3D CAVE at Calgary University, Canada, and shown at the exhibition  $\geq 4D$  at the Bank of Brazil Cultural Center, in Brasilia, in 2004. Snapshots were used in the folder of the Transmídia award. The Java3D CAVE photo is from Julie Sommer.



## NanoShelters: speculating the nanotech home of the future

### Authors:

Tania Fraga (Fluid Cloth: nanoshelters conception and simulation) and material engineer Russell Taylor II (manufacturing processes) aimed to materialize virtual objects using new materials to create mutable architectures. Adaptable architectures with degrees of plasticity acting, showing sensitive behaviors. This collaborative project allowed a new research venue to emerge. This venue relates to the materialization of virtual objects, and it mixes physic computing, nanotechnology, and robotics. A few possibilities were presented as QuickTime VR to explore the simulations.

### Presentations:

The Banff New Media Centre magazine *Horizon Zero*, Canada, commissioned the article Fluid Cloth for the development of this then visionary idea. It was divulged in the number 14 of this magazine, in 2003, and at number 3 of the periodical *Technoetics Arts* (UK).



Homepages from Horizon Zero magazine, Banff Centre, Canada

## Aurora 2001: fire in the sky

It is a collaborative project conceived by the American choreographer Maida Withers and performed by Maida Withers Dance Construction Company, with live music from the Norway composer Oystein Sevag, weaving art, science, and technology integrating aesthetic and poetic approaches for dance spectacles. It aims at a symbiosis through dance and technology. Its theme, related to the Auroras boreal and austral phenomena, offers metaphors and allegories built over understanding the scientific theories related to this phenomenon, such as magnetosphere, solar wind, solar flare, and proton storm, among others. NASA, ESA, and JAXA provided the satellite images.

[See: [http://taniafraga.art.br/computer\\_art/Aurora2001.html](http://taniafraga.art.br/computer_art/Aurora2001.html)]

### **Authors:**

Tania Fraga (virtual scenarios), Maida Withers (conception and choreography) and Group Maida Withers Dance Construction Company (USA), Norway composer Oystein Sevag.

### **Presentations:**

Aurora 2001 premiered in Tromsø, Norway, and in Washington, DC, both in February 2001, in Brasília (only a solo with Joseph Mills) in May 2001, and in Saint Petersburg and Archangelsk, in Russia, in August 2003. The American Research Channel, in 2009.

Joseph Mills interacts with virtual sun



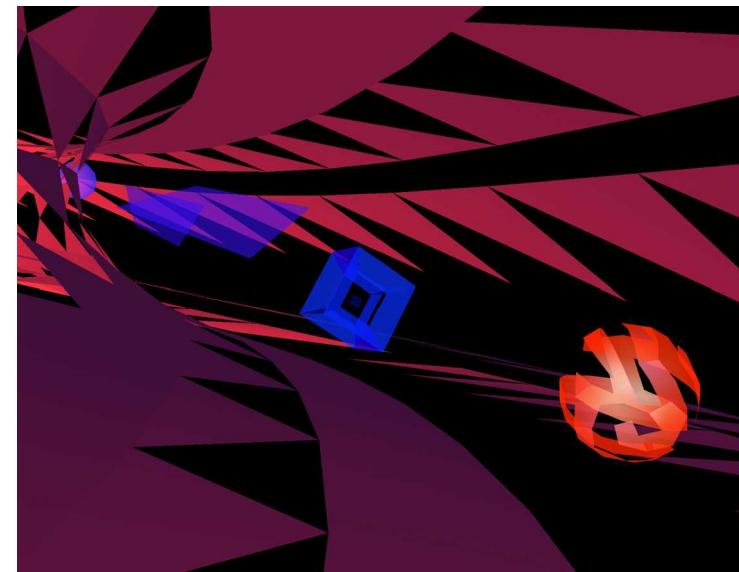
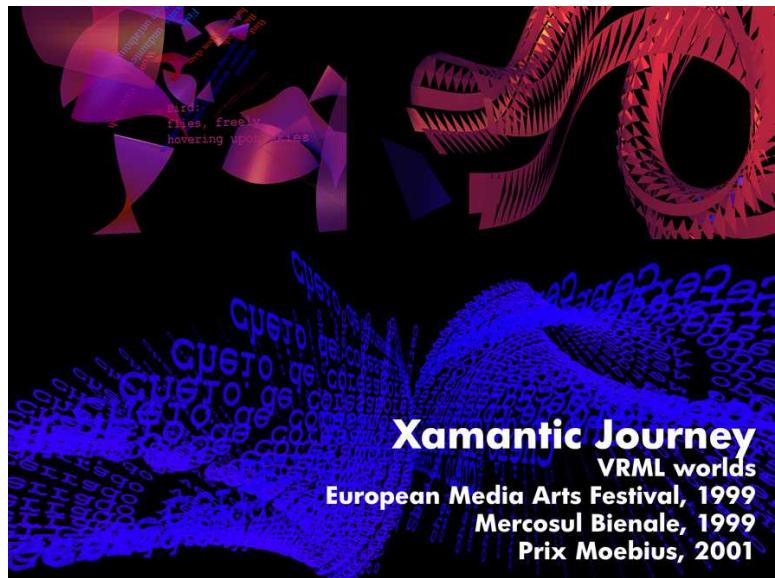
## **Jornada Xamantica . Xamantic Journey**

It is a poetic journey written in VRML (Virtual Reality Modeling Language). It explores shamanic experiences and semantics in the telematic context and proposes non-linear voyages through poetic space-time domains. It is done inside a tube and presents to the participants 33 realms elaborated like allegories. At each step of the journey, the participants need to discover the various means available to make the trip and act to proceed. Sounds are accessed, and hidden links lead the participants to experience diverse aspects of poetic sensibility. In the end, the participant arrives at the Mist Domain, a multiuser interface simulation. Upon accessing this domain, participants receive a box as an avatar, apparently the same for everyone. There are shapes, animations, texts, lights, letters, numbers, links, and sounds inside these boxes unveiled to create a work of art in permanent becoming. This unique piece will only exist as long as the actor-participants are present in this virtual space-time, undoing and remaking, flowing with the net's ebb and flow. This journey was built as a post-doctoral project at Caiia-STAR, in England, in 1999, with a CAPES scholarship. Because distributed processing technology was not there, iI could not implement its final stage.

[See <https://www.youtube.com/watch?v=OzcS8xnFGKs>]

## **Exhibitions and awards:**

Leonardo (MIT) article by Gilbertto Prado, the MercoSul Biennial, Brazil, in 1999; European Media art Festival, 1999; Futur Émergents, Marseille and Avignon, France, in 1999; SEAFAIR '99, Museum of Contemporary Art of Macedonia, Skopje, Macedonia, in 1999; VRML 2000, Monterrey, USA; Graphica 2001, USP; and it represented Brazil at the 2001 Prix Moebius, in China.



## Poéticas em devir – Poetics of becoming

It is an interactive stereoscopic installation that explores lightness, transparency, mutation, poetry, and non-linearity. Itau Cultural Institute commissioned this installation in 1997, and I wrote it in VRML (Virtual Reality Modeling Language).

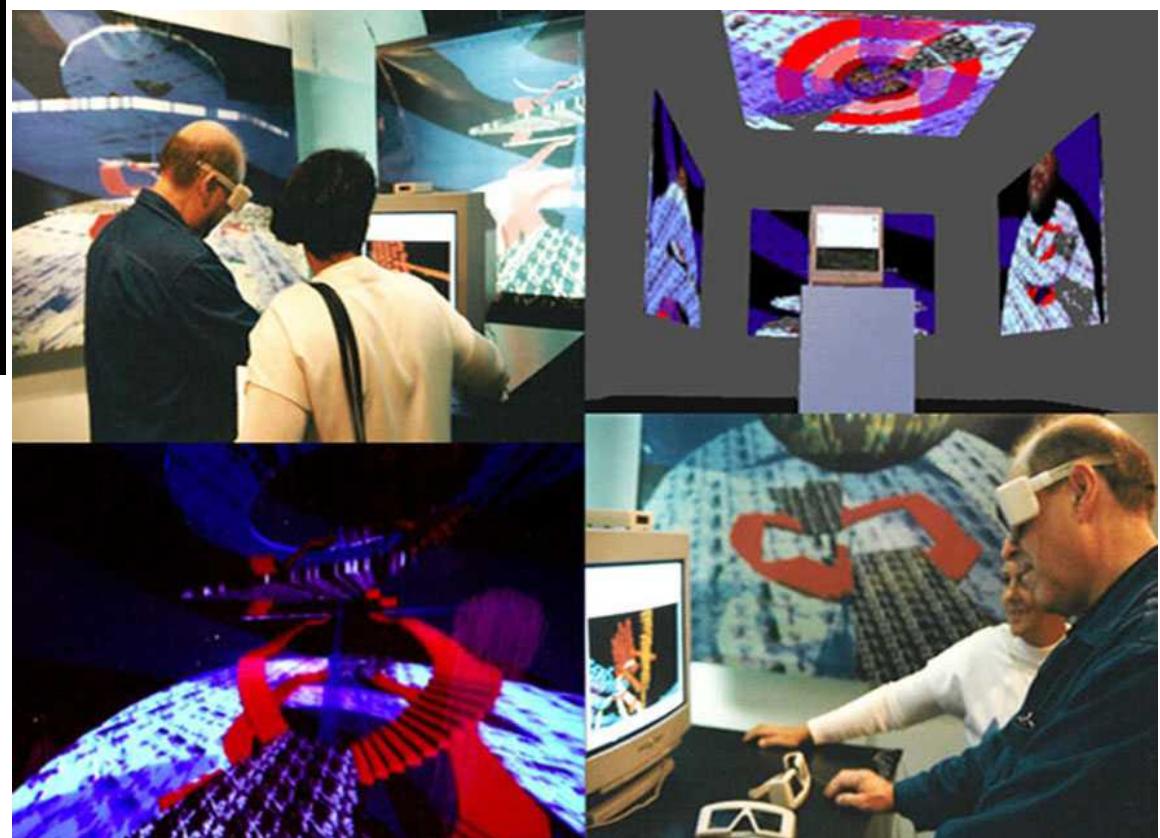
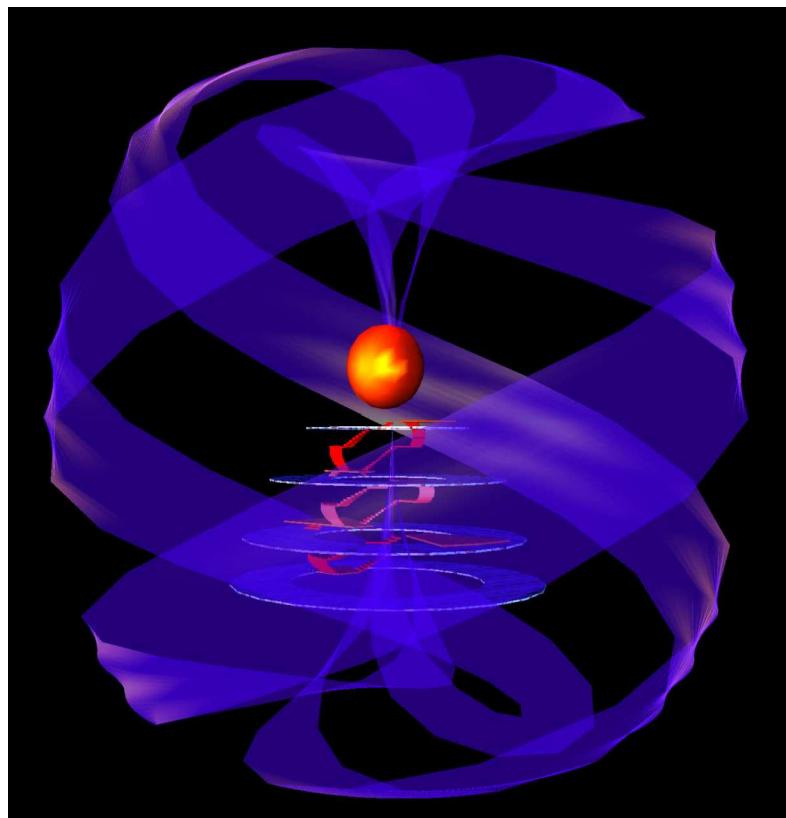
The application needed, at that time, a Silicon Graphics workstation to run it because it was the only one at the time with a video card that simultaneously enabled interaction and stereoscopic presentation. Its virtual worlds immersed the users into their realms through active stereoscopic liquid crystal glasses.

See: <https://www.youtube.com/watch?v=6egurdgbJvk>.

### **Exhibitions:**

Mediações, Itau Cultural Institute, Sao Paulo, 1997;

Itau Cultural Institute, Brasilia, 1998.



## **Simulações Estereoscópicas (Interativas) – (Interactive) Stereoscopic Simulations**

It is a set of stereoscopic objects for installations providing depth viewing. In them, lightness and deepness were the focus of the poetics of this period. If one perceives the object by a normal vision, they will not perceive many details. They also have allowed the creation of animated stereo pairs for VR glasses developed for cellular phones 28 years later.

See <https://www.youtube.com/watch?v=GtBH2p1WAX4>.

### **Exhibitions and research:**

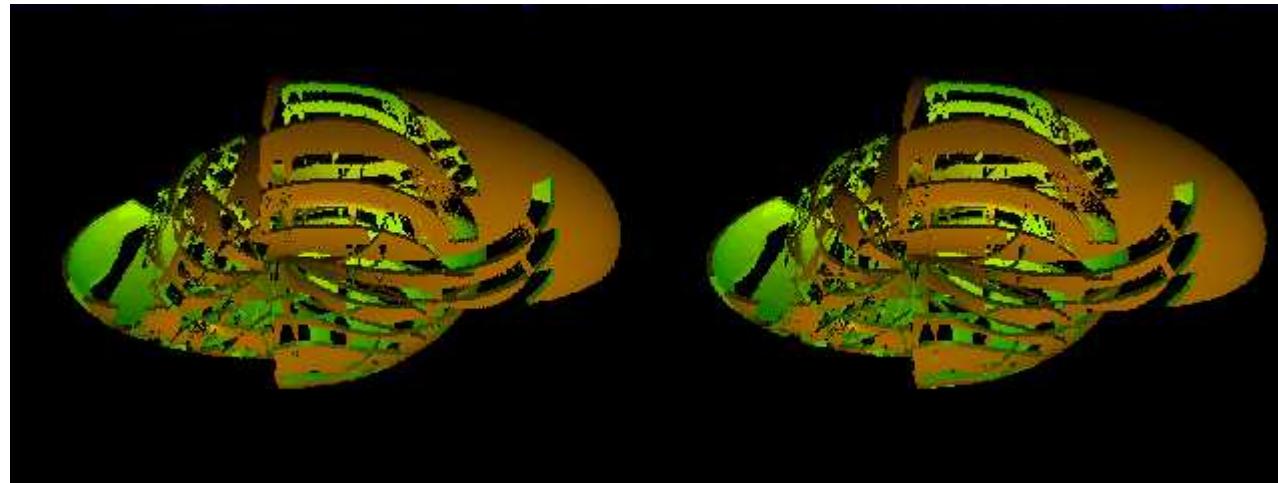
Solo exhibition, Stereoscopic Simulations, held at the Museum of Image and Sound, MIS-SP, and collective exhibition held at the Museum of Contemporary Art, MAC-USP (Art of the 21st Century), both in 1995;  
SIBIGRAPHI, São Carlos, in 1995.

Anaglyphic images printed on T-shirts used by The George Washington Group won the 1992 SIGGRAPH t-shirt contest;  
Exhibition The Art Factor, ISEA93, Art Museum, Minneapolis, USA, 1993;

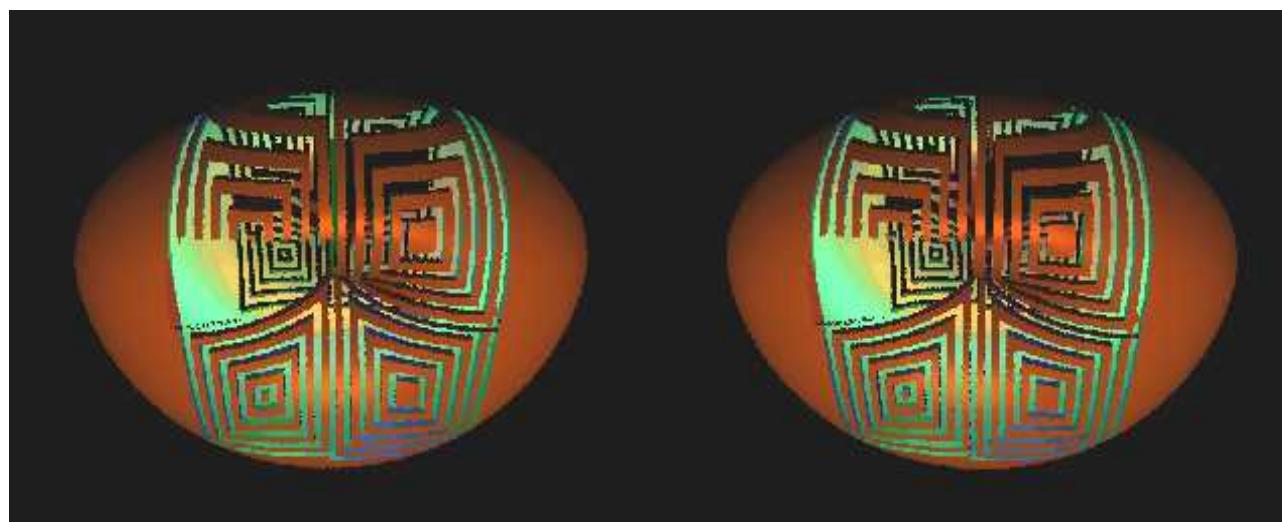
I developed part of the research at The George Washington University as Visiting Scholar and during my Ph.D. in PUC-SP from 1991 to 1995. It is also published online at <http://lsi.usp.br/~tania/>



The Art Factor, ISEA93, Art Museum, Minneapolis



Examples of stereoscopic pairs



## 3D Objects and Thramas

They are synthetic 3D shapes exploring lightness, depth through an unusual combination of solids, and the composed repetition of varied elements as poetics experiences — objects of synthesis exploring the three-dimensional poetic potential of solids construction through computation.

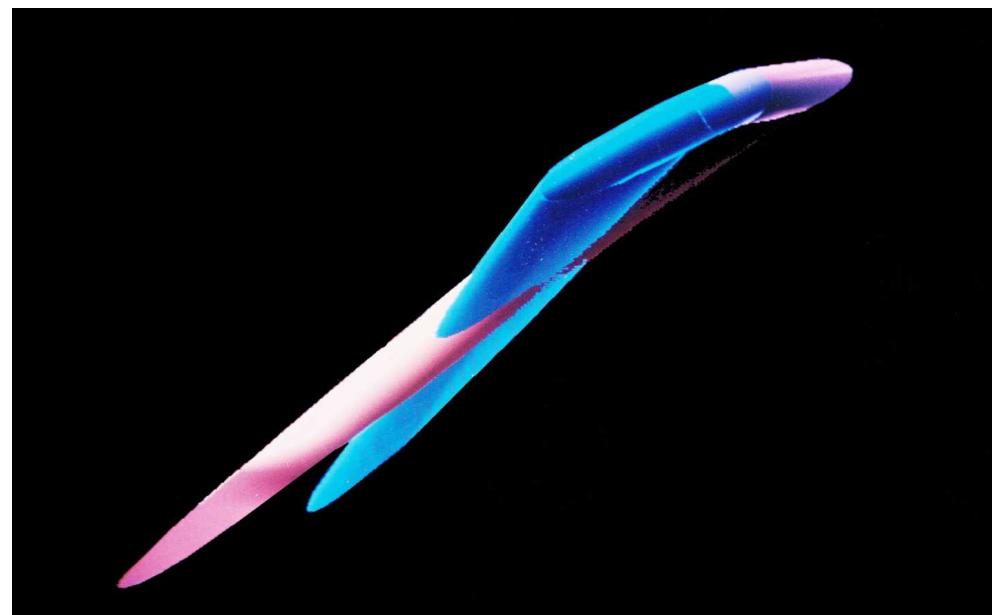
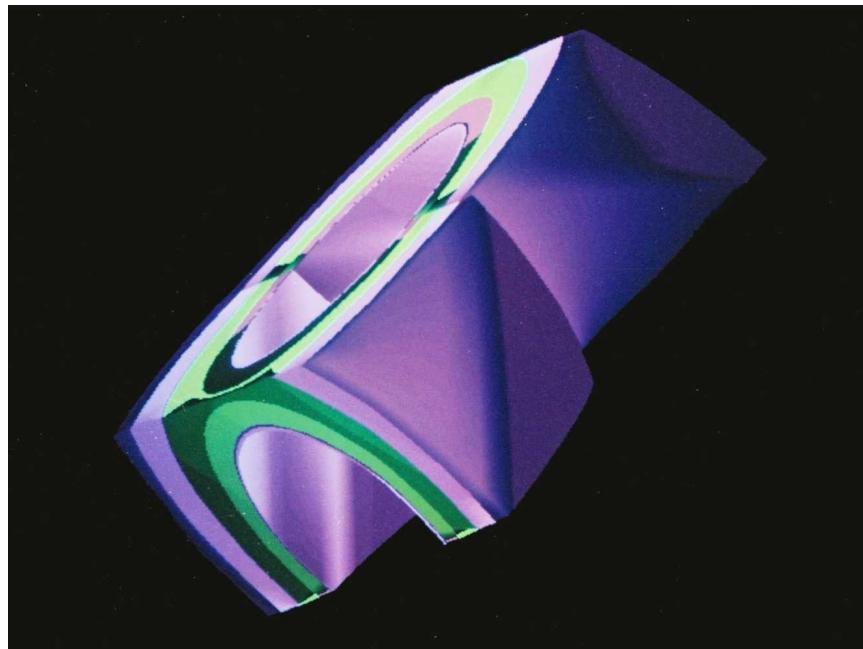
See: <https://www.youtube.com/watch?v=wg86BPGePDs>.

I created these images with PROGRAF software (the first solids processing application built in Brazil) and CMP software for 3D modeling and computer animation developed by Homero Piccolo at the University of Brasilia. The artworks of this period presented objects of synthesis in installations with still images and slides. In the FENASOFT exhibition in 1990, it was possible to use a PC for the first time.

## Exhibitions:

Institute of Arts of the University of Brasilia, IdA-UnB, Casa da América Latina and II Latin American Festival of Art and Culture, FLACC, Brasilia, 1987 and 1988  
Exhibitions with Grupo Infoestética (Infoaesthetic Group: Aluizio Arcela, Bia Medeiros, Homero Piccolo, Paulo Fogaca, Suzete Venturelli and Tania Fraga) at Paris-Cité, Parc Floral, Paris, 1989 and at the Sorbonne University, Paris I, France;  
I Infoestética, at Congresso Nacional, Brasilia, 1990;  
Brasilia Art Museum, Brasilia, in 1991 and 1993;  
Caixa Econômica Federal Cultural Center, Brasilia, 1991;  
FENASOFT, Sao Paulo, in 1990.





## **Computer art exhibitions design and curatorial works**

# **EmMeio# Exhibitions**

From 2008 until 2018, I designed the set of EmMeio# exhibitions held at the National Museum of the Republic, Brasilia.

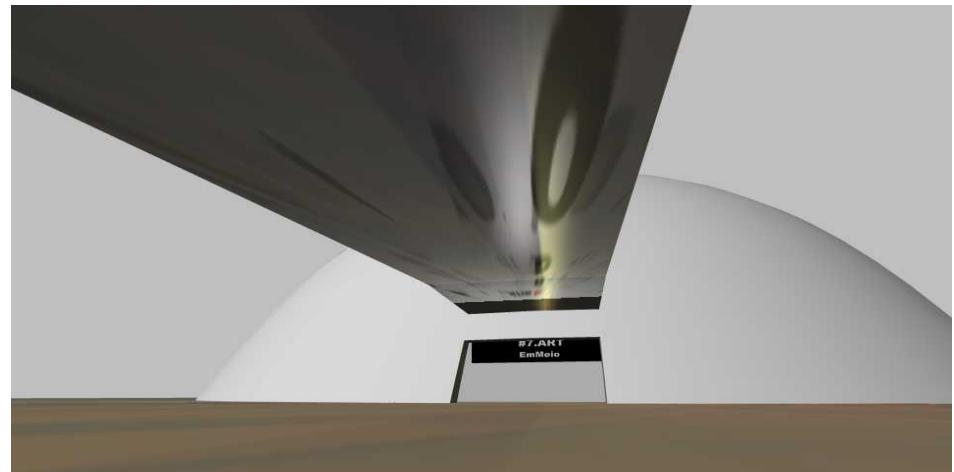
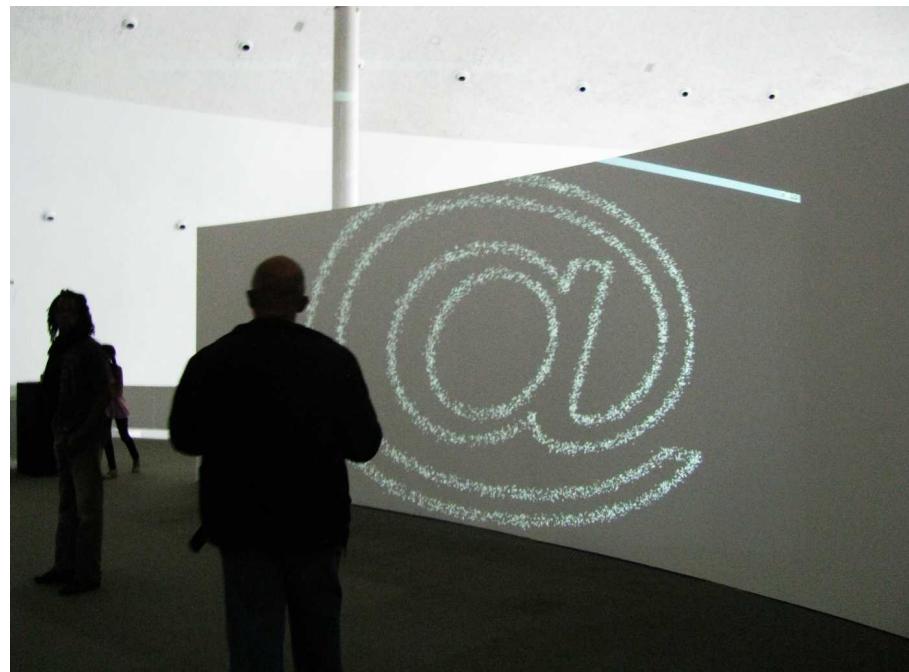
I conceived the expo-graphic design of these exhibitions as meta installations. Since we have had around 35 artists and minimal budgets in each, I have added the concept of self-organization to solve budget issues.

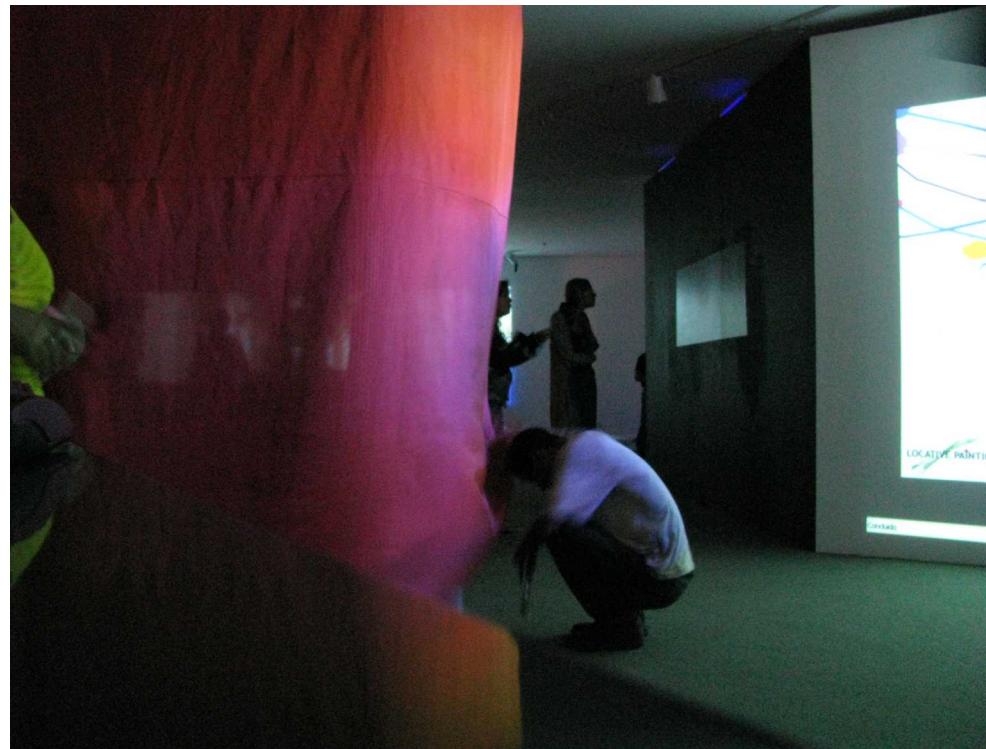
In general, I simulate the exhibition space, talking with the artists or groups to understand their needs and find the best setup for the artwork.

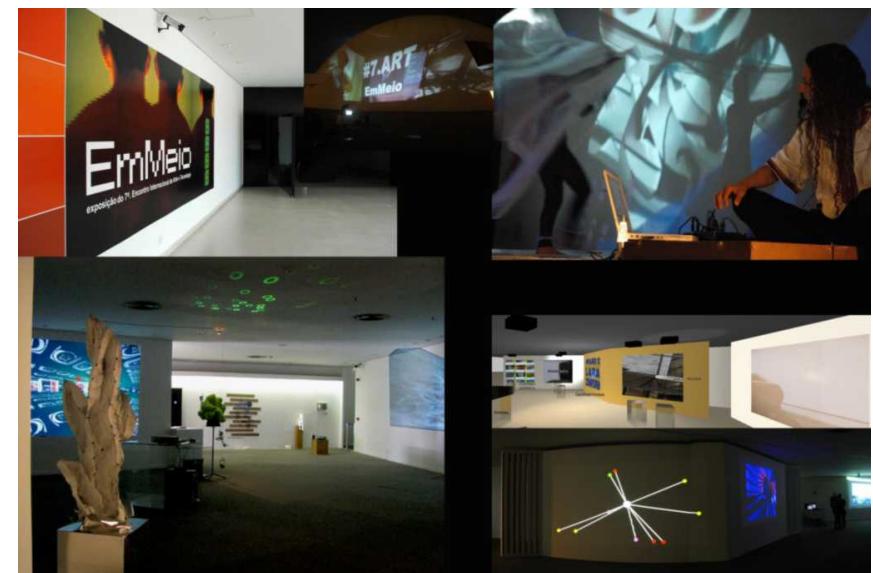
See: [https://www.youtube.com/watch?time\\_continue=1&v=nVjmgROEp5A](https://www.youtube.com/watch?time_continue=1&v=nVjmgROEp5A)

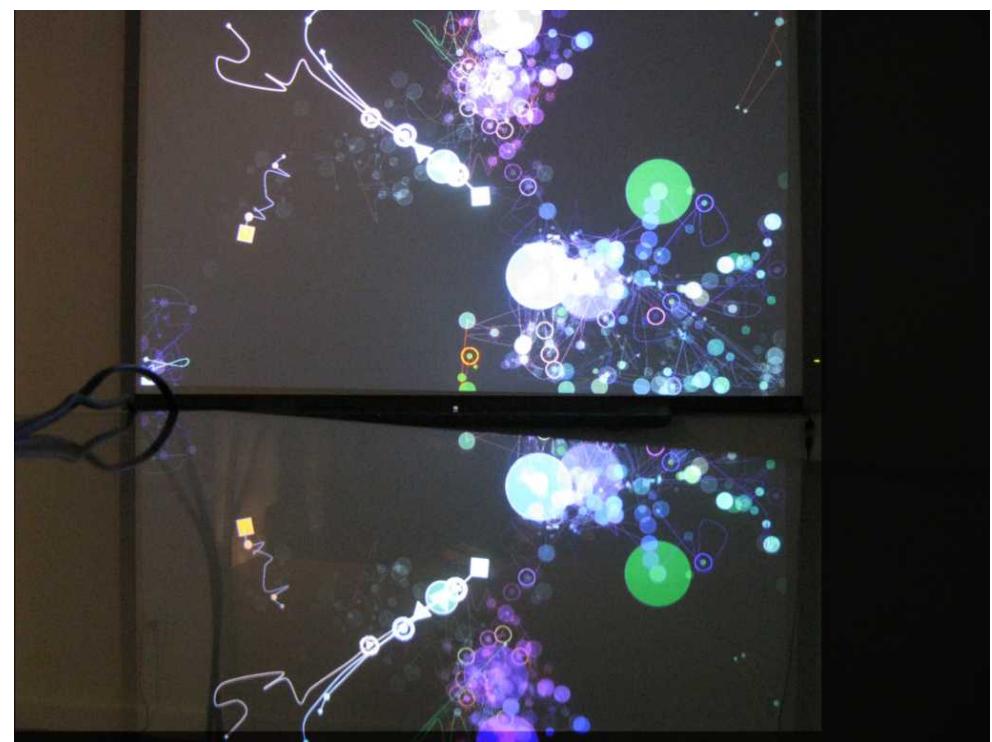
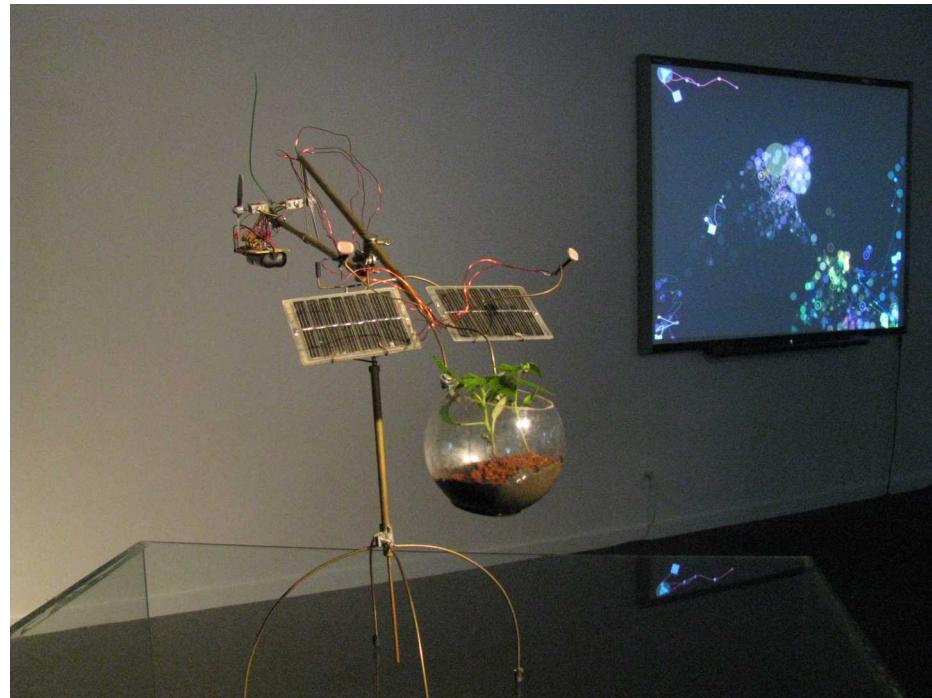
**A few exhibitions photos**

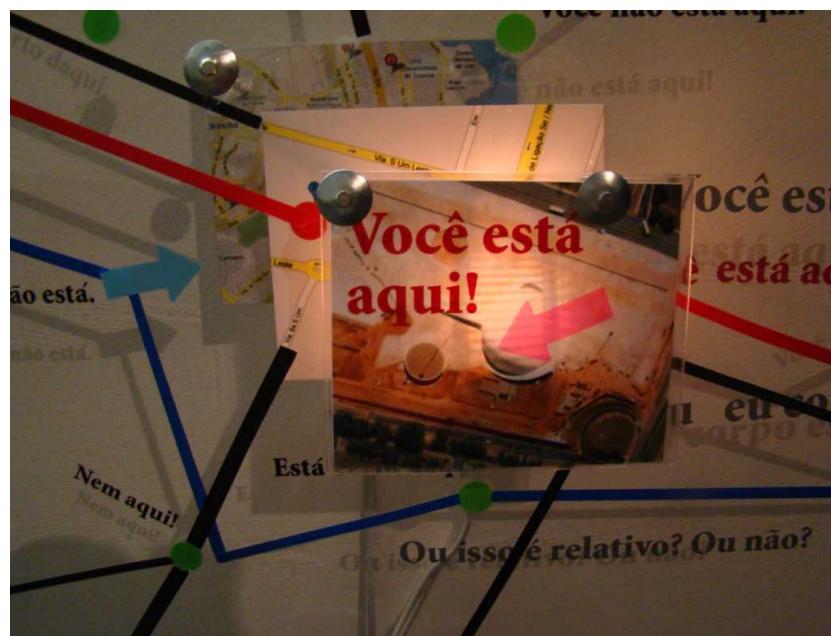
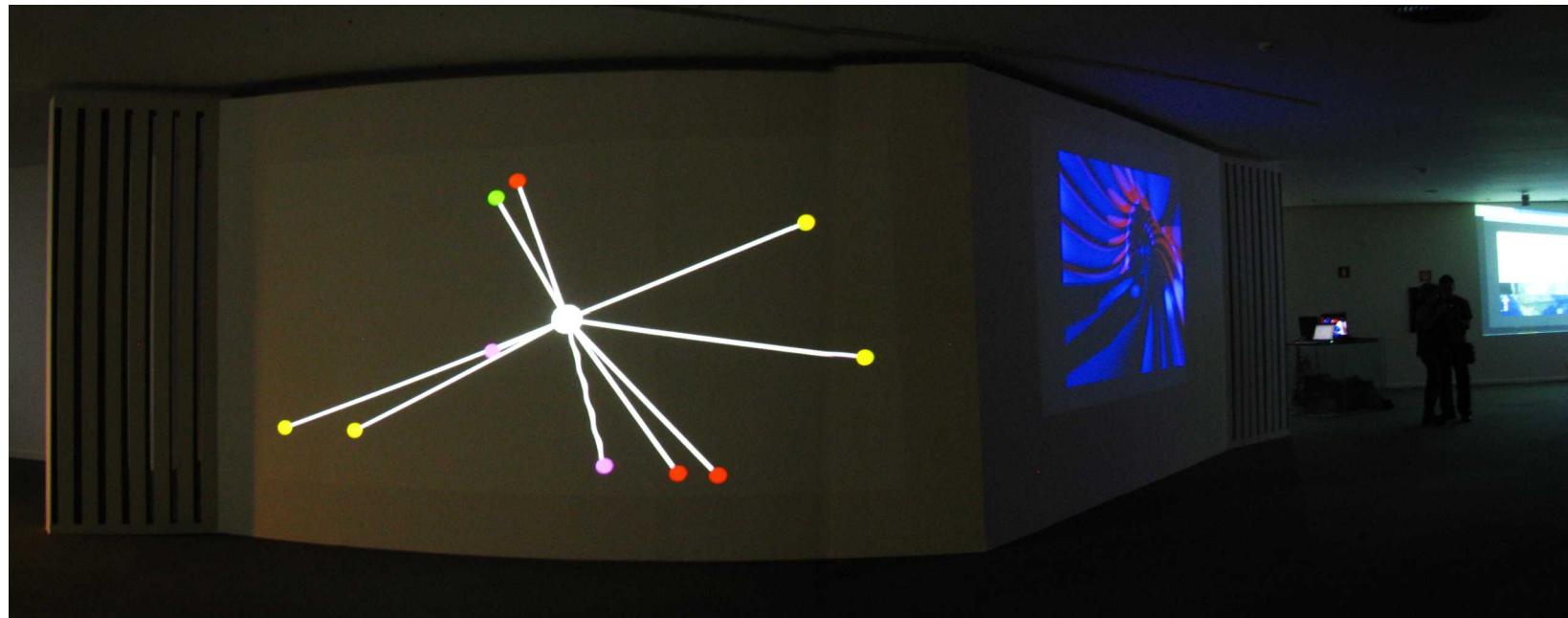


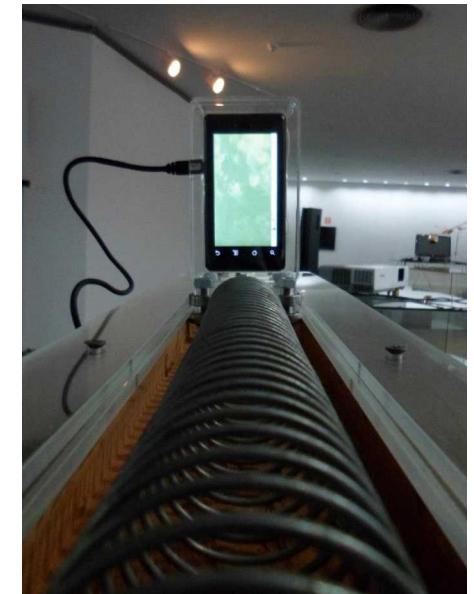










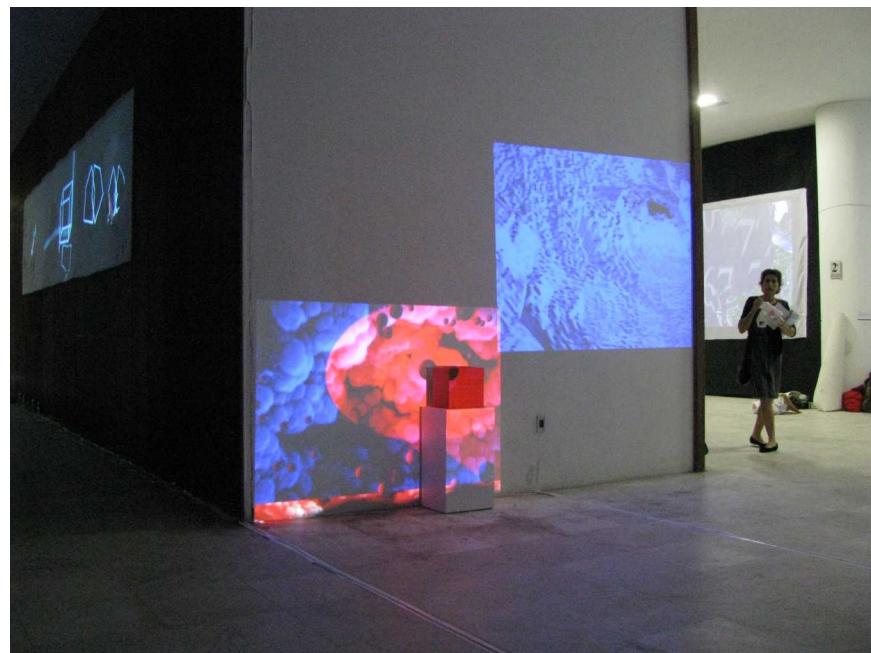


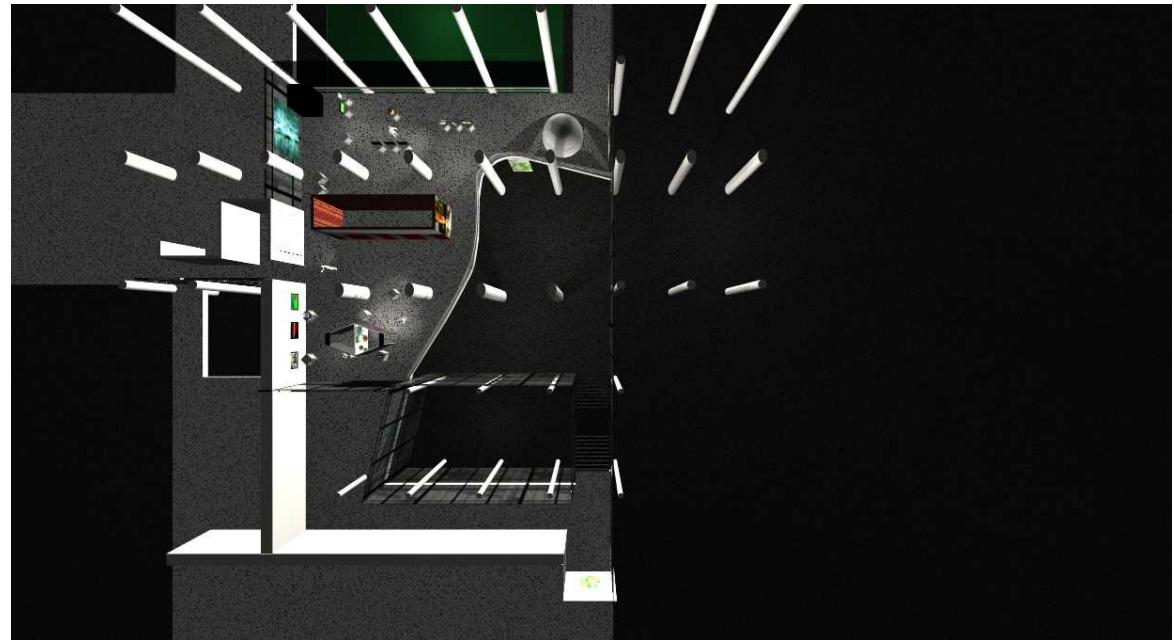


Planning and organization made with simulations

# CAC 4, International Computer Art Congress 4, EBA, UFRJ, 2014





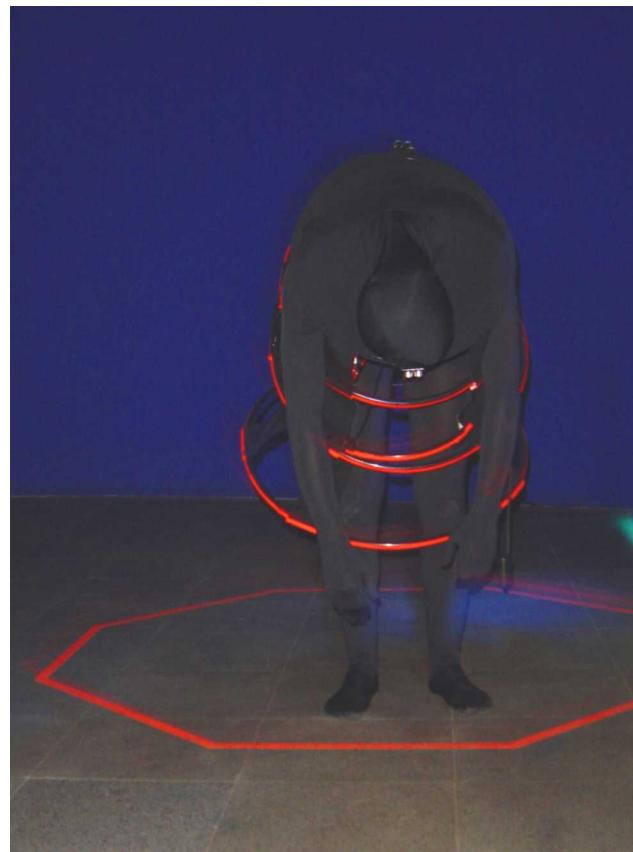


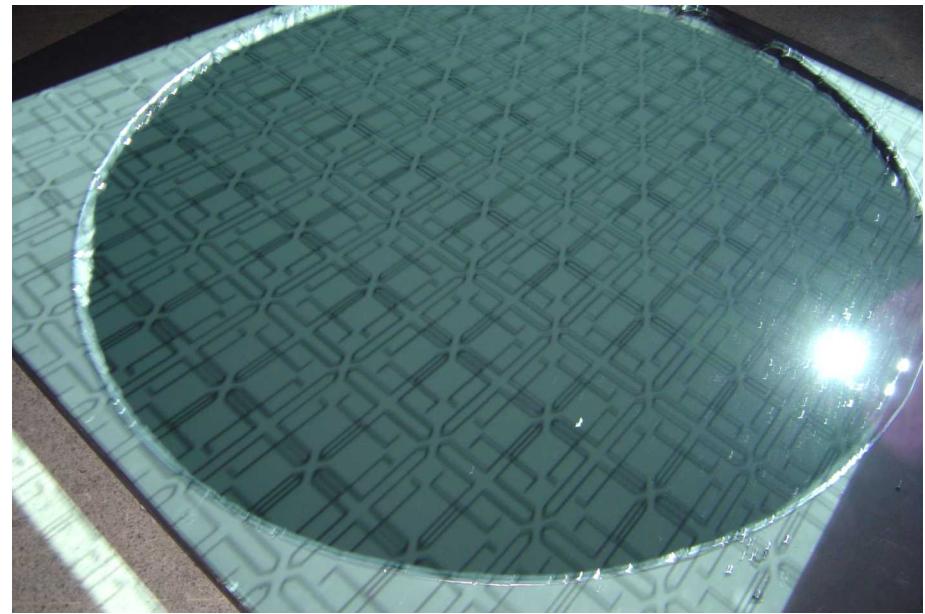
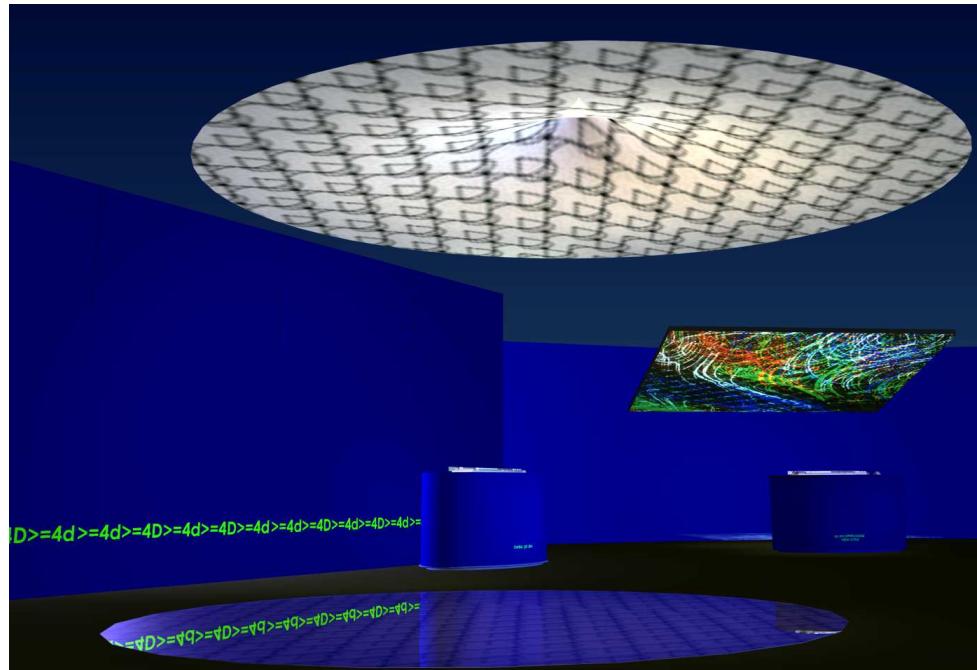


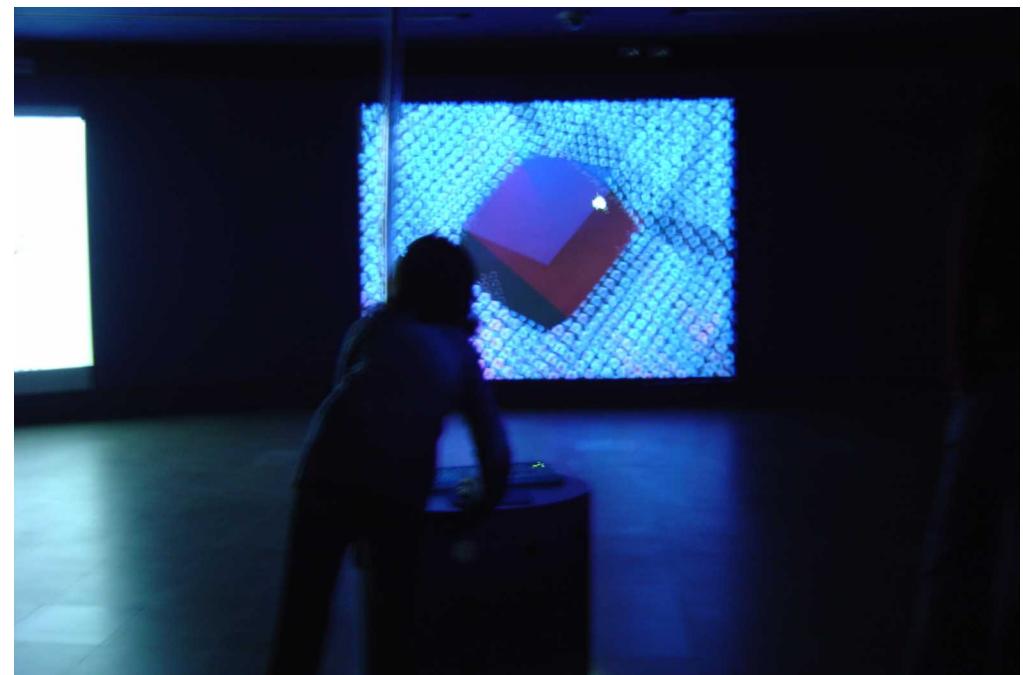
The fundamental expo-graphic design is the exhibition, [Greater than or equal to 4D] **>4D**, held at Bank of Brazil Cultural Center in 2004. I conceived its expo-graphical design as a meta installation. In the resulting space, the audience traversed the works of several artists. The public flew through the diverse installations as if walking in a VR space. I used concepts from quantum physics as metaphors to organize its space-time.

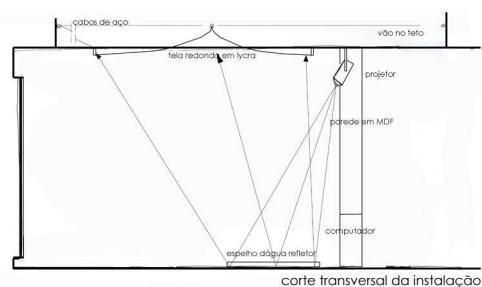
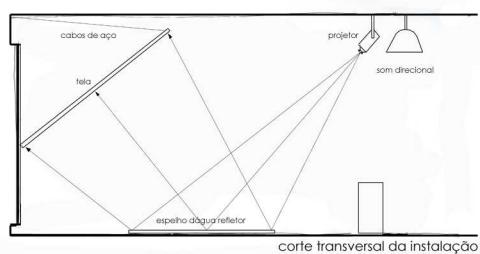
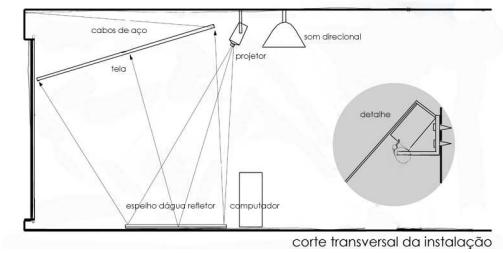
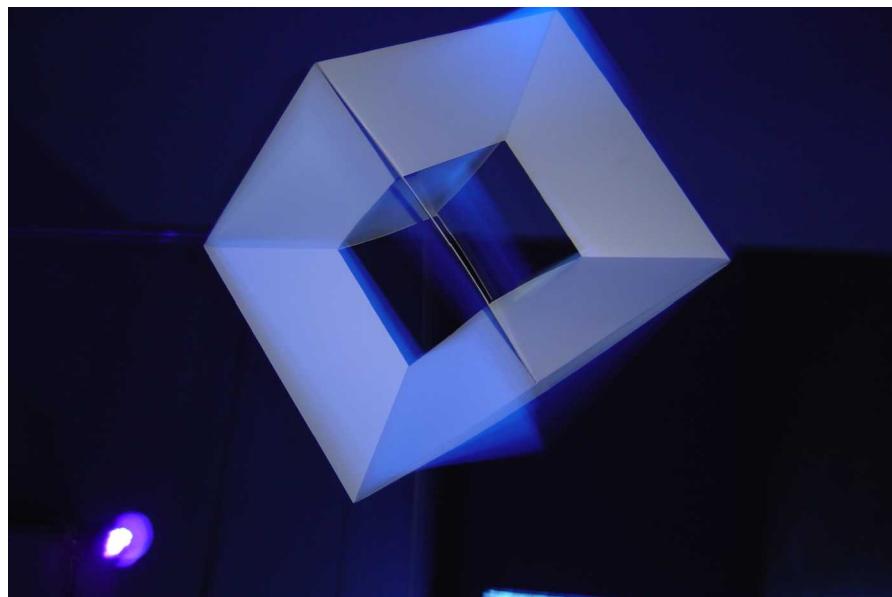
This exhibition created immersive event tunnels of artistic realities for each artwork, offering combinations of tactile and visual shapes, sounds, and lights as sensory and cognitive immersive experiences.

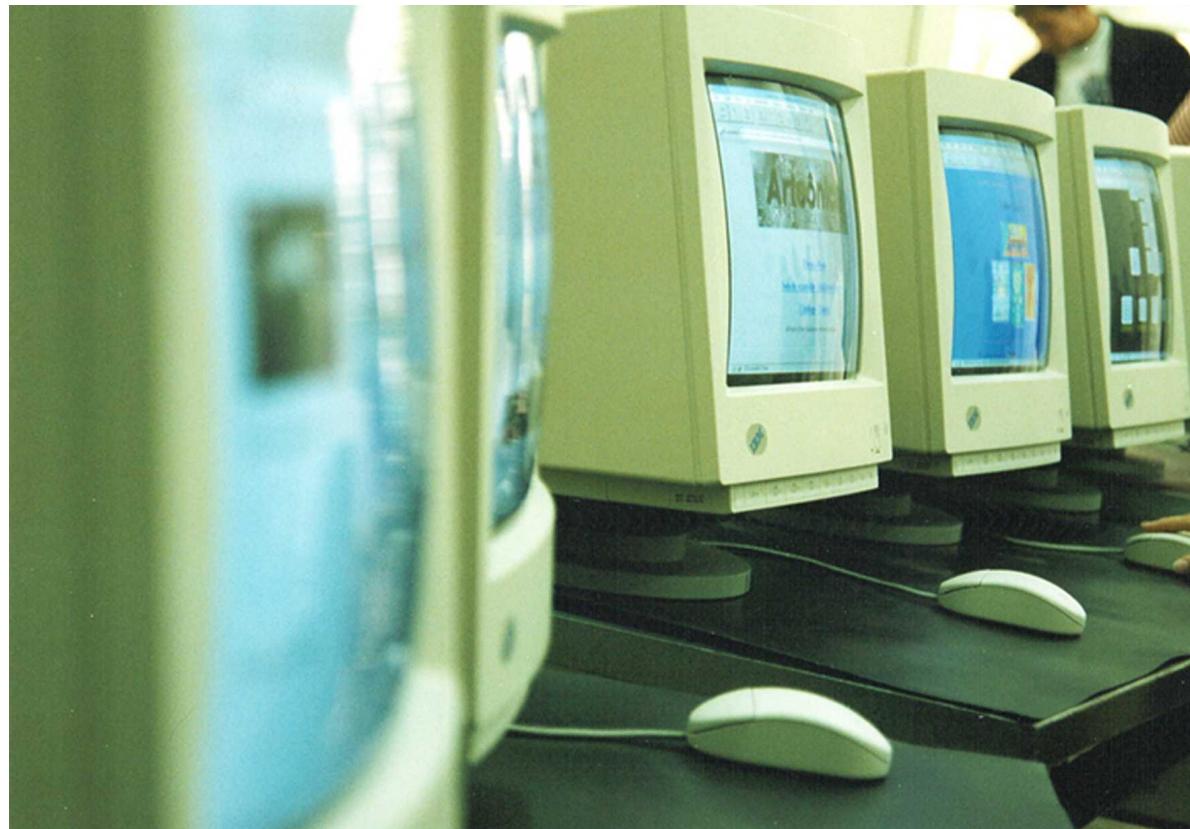
I simulated its spaces and designed all its details, from the installations set up, computers and projectors support to the black light environment letting people read the texts.











The first Online exhibition I organized at PUC-SP, Sao Paulo, 1996