Lina Lopes

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Lina Lopes is a consultant, entrepreneur and artist. She expresses in her trajectory the intersection between two worlds: art and technology. Graduated in Cinema by University of São Paulo and Master in Design by Anhembi-Morumbi College, she has an interdisciplinary background that also includes theater, engineering and computing.

She has extensive experience in projects, working on the themes of parametric and generative design, video mapping, interactivity, Arduino programming, wearables, internet of things, biomaterials, among others. She is a speaker on innovation and mentor of bootcamps. Directs LILO.THINK, a initiative focused on immersive processes. She is enthusiastic of experimentation, collaboration and improvisation.

In the wearables area, she has experience in research and prototyping projects with flexible conductive materials, pneumatic / soft robotics systems and biomaterials. In 2016, she realized the Touch Skin project, an artistic-scientific residence in the Media Lab of UFG to develop a temporary conductive tattoo, where she entered the universe of science and biological materials. In 2018 she founded BioLiLoLab, a biohacking laboratory, where she is conducting research projects in biomaterials and bioart (http://www.biolilolab.org/).

LECTURES & MENTORING

• São Paulo Fashion Week - Expanded Body: wearables and biohacking (São Paulo, Brazil, 2018)
• Hacking Arts (MIT Media Lab) (Boston, USA, 2016)

PROJECT MANAGEMENT

• Misunderstood Monsters Exhibition: https://youtu.be/G5RoJhYIhqg

• Nestle Experience at Campus Party: https://youtu.be/mFx2dA9O9g4

• Votorantin - Future Lab Energy: https://youtu.be/NoRc0eLxuqs

• More projects: https://www.youtube.com/playlist?list=PLLDlhFlDveseNIFM0E9ibqQyUaQ3TCzsx

EDUCATIONAL PROJECTS

• Bu-Go Publish House: My team created activities to teachers use inside the class (maker education mostly). I also helped to build the process design inside the company. (São Paulo, Brazil, 2021)
• Faber Castell: My team translated concepts and did tutorials about materials for kid of middle school. I did the content direction, design the learning experience and project manager. (São Paulo, Brazil, 2021)
• Camino School: I was responsible for understanding the ecosystem and to translate it to a digital platform. In this way, the company have one way to manages all the process inside and training new teachers and collaborators. (São Paulo, Brazil, 2021)

Lina Lopes

Art is recognized as a kind of human expression. In a certain way, Homo Sapiens extended their work around the world by representing what they saw in drawings on the cave walls, choreographing thanks to the rain gods and singing to the earth. At the same time, he developed more efficient systems of housing, health, transport, in short, science and technology.

It seems that in both expressions, the human being demonstrates his vulnerabilities and ways of overcoming them. As if the fear of death, illness, deprivation of food, shelter or love were driving forces for creation, experimentation and innovation in both art and technology.

Thinking about topics like machine learning or artificial intelligence, we are hoping that machines will do more accurate simulations and decision making than what humans can do. The wish is that they can compute our lives and choices better than we can.

However, if human development is to some way linked to its difficulties and insecurities, what would be the insecurity of a machine? Your obsolescence? The fact that your battery can "die"? Would discovering or teaching insecurity to a machine make it more human? Would overcoming human fears by doing science, art and technology make us more machinic?

Many artists in recent years have used machines with statistical algorithms and machine learning to produce poetry. It is already a fact that machines are capable of making poetry, but are they also capable of "feeling" poetry? Or does this concern the human condition?

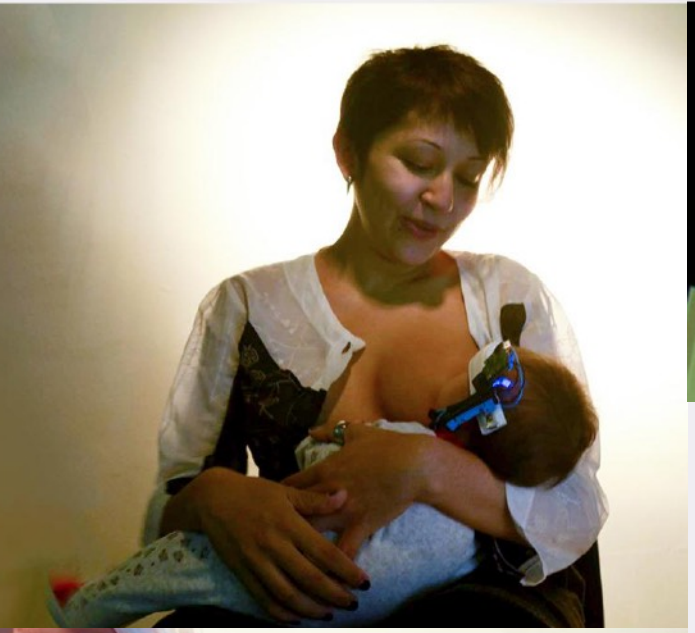
If you want to do a project that involves art, science, technology and a lot of experimentation, let's talk?

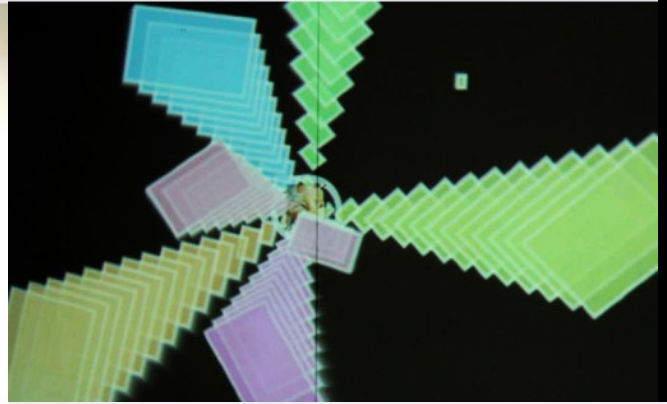
Portfolio
Wearables

Cellular Installation, 2019

Cellular Installation is an interactive installation developed for the Estufa Project - curated creative economy activities within São Paulo Fashion Week (SPFW). The installation works with conductive embroidery that when touched spread lights throughout the work. Made with modular felt pieces that fit together without the need for sewing, it proposes that people participate in the installation by making their own embroidery and expanding the work, making it grow through the shed like a living organism.

To know more: https://youtu.be/RReBTbm8P2Q





CyBaby, 2013

When my daughter was born I did a neural helmet proposal for newborns with a view of the generated data. I was afraid of the next step in my life, being a mom and tried to bring this to my comfort zone: a project in art and technology. In that time, Paloma Oliveira organized Hibrida: experimental prototyping of perception amplifiers. And, with the support of GIIP, an academic group at the University of the State of São Paulo, I had the opportunity to perform with my baby (Diana was 2 months old).

Wear-us, 2016

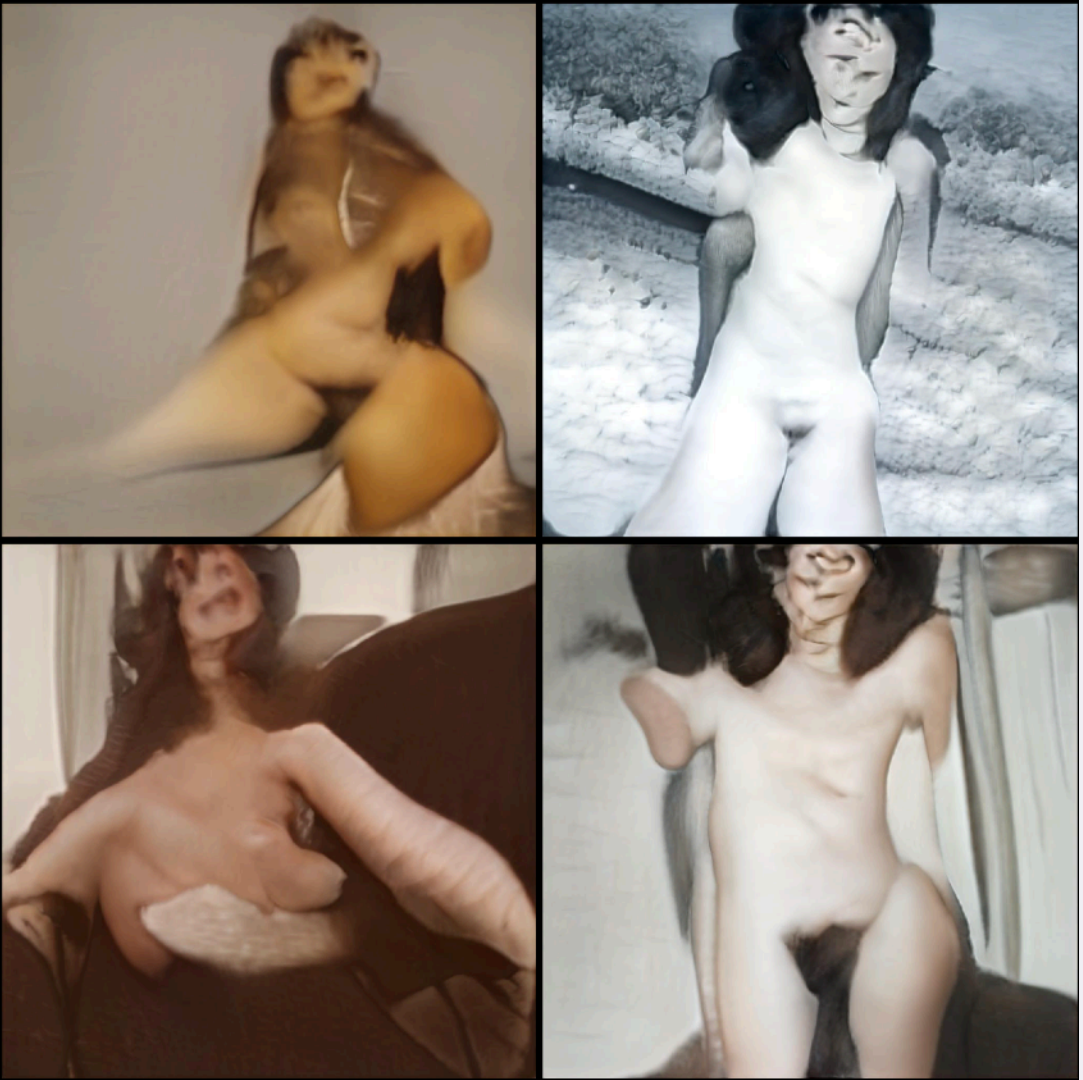
I was talking with Luis Leão about doing something different that end of the year. A meeting, for doing real things about wearables instead of just talking and show references. "We can do". I didn’t know that time I was testing my theory about the collaborative and immersive systems. So, I invited Mau Jabur, Rita Wu, Ricardo O'Nascimento, Renata Portelada, Lúcia Nobuyasu, Rodrigo Rezende and so many others joined to us. We did since from the ideation together: doing wearables for a drag queen perform. Talk about diversity and gender just modifying the shape of the body. In the middle we think about blink the eyes and with conductive eyelashes turn the pneumatic system on, but at the end we did a simple system to clap at some points of the costume and to trigger.

To know more: https://youtu.be/Ocy7BDgFFrY

e-Harlequin, 2018

In 2018 I was in the Fabricademy meeting in Milan. I think amazing Anastasia transformed the Barcelona group in some international training in wearables matters. They did a bootcamp and in 5 days passed through alls subjects: soft electronics, biomaterials, laser cutter, 3d printing and soft robotics. The last one was given by Adriana Cabrera and I decided to do something in that direction. So, e-Harlequin was a nice touch to comfort the saddest character in Italy. A kind way to talk about empathy. The mask was touch-sensitive and trigged the soft collar.

Portfolio
Bio-things

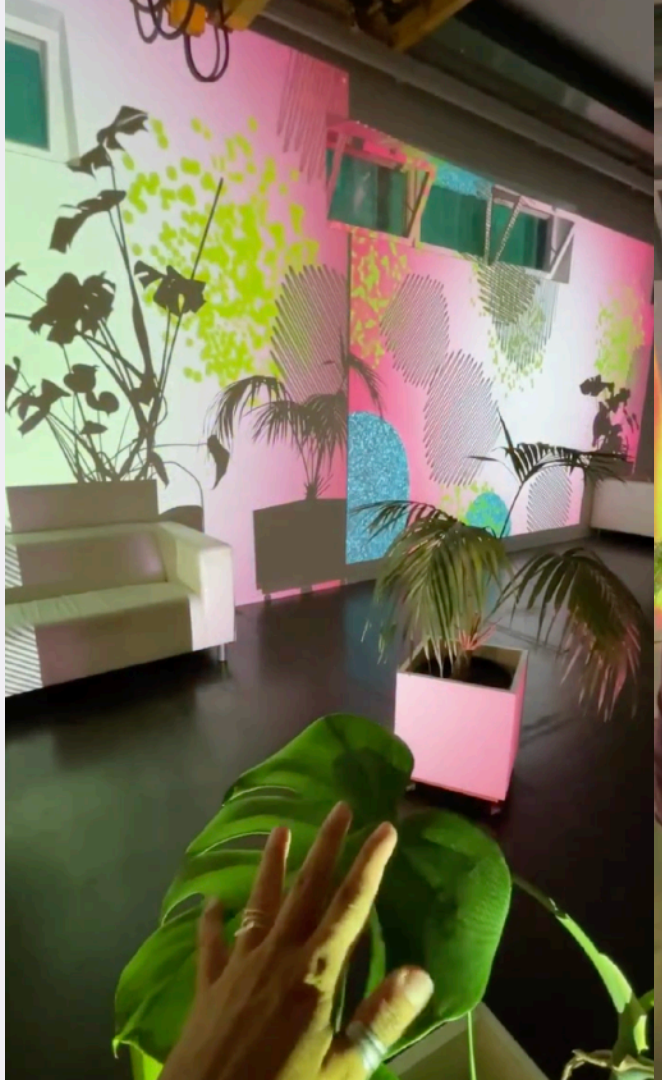


Cryptonudes (2021)

CryptoNudes is a 2021 project I developed with Mari Nagem, exploring the intersection between machine learning, art, and human embodiment. The project aimed to challenge the limitations of AI's ability to understand and simulate human choices, specifically in relation to the human body. Using StyleGAN, a machine learning model, we created a dataset of 512 images sourced from vintage pornography, navigating the complex ethical landscape of copyright, fair use, and artistic representation. The generated images echoed the disturbing, surreal qualities of the works of Francis Bacon and Hans Bellmer, both of whom explored themes of distortion and human form in their art. Interestingly, Instagram’s AI bot flagged the generated images as violating its nudity policy, highlighting the overlap between machine-generated art and human perceptions of the body.

Plant Inception in Basel (2022)

Lina Lopes & Anais-karenin's interactive installation "Plant Inception", entitled "Can Plants dream?", "What they dream about?", "Do seeds dream about became a tree?" transforms BRASILEA into an interactive jungle.



Allien Species (2024)

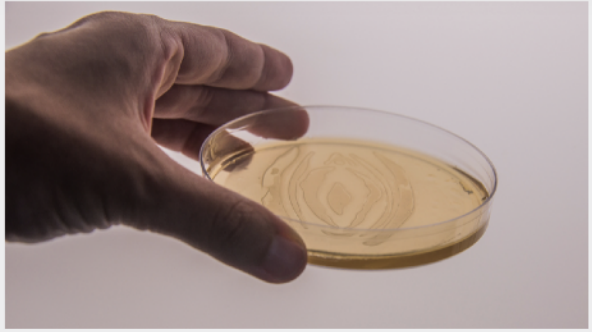
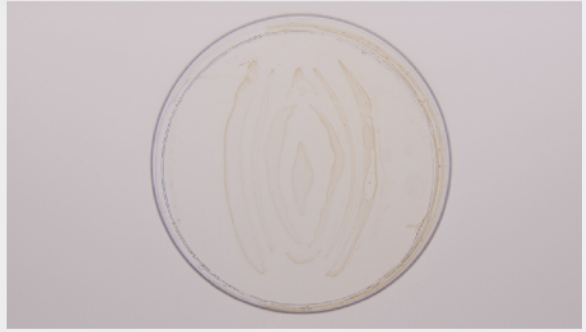
A dynamic NFT project in collaboration with Anais-karenin. “Allien Species” is a series of color coded images, each one referring to an alien species that inhabits in Shizuoka Prefecture. It is based on the official list of alien species determined by the Japanese government and it is acquired as an meta- expression of the continuity of concepts like territory and possesion from colonial to modern world. It streighten the borders between digital and physical and and offers the possibility of virtual maintenance and cultivation of species whose growth is undesirable in the physical world due to symbolical restrictions of belonging and detachment.

BioVolt, 2021

BioVolt - A Flexible Conductive Material for Wearable Applications
The goal of this project was to develop a flexible and conductive biologically based material to be implemented in electronic textiles and wearables for several applications including photovoltaics, biomedical sensors, communication devices etc.

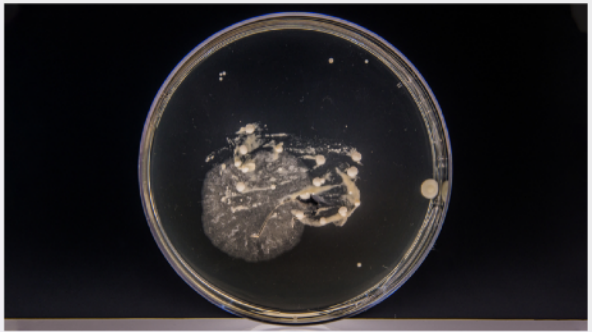
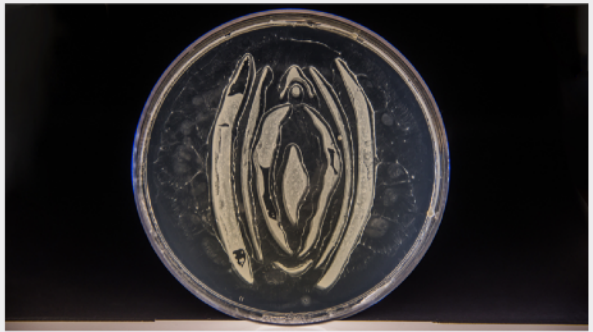
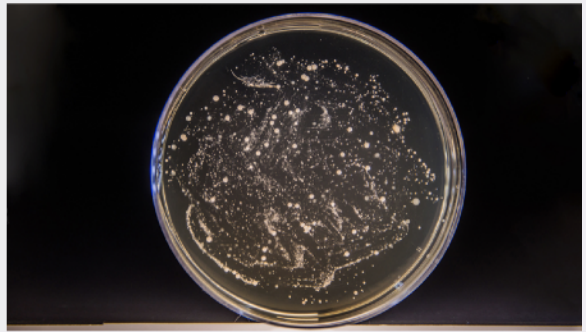
Materials for electronic componentsTo know more: https://youtu.be/JxOhFw31_Nc?si=zivKDVNSosOyzUxm

e-ATable was a result of a online residence in the beginner of the quarantine (VIRUS-19). The work is about doing a edible paper using mushroom and a ink with activated charcoal.

What happens when a group of women appropriates of their own intimate microbiota to make art? Artist's vaginas was an artistic experience resulting from the encounter of female artists and microbiology. By gaining access to basic microorganisms cultivation techniques the participants learned new ways of exploring their own bodies and its invisible aspects. Artist's Vaginas was a artwork part of the exhibition in the Bio Summit MIT in 2019.

http://vaginas.biolilolab.com/en.html

My Medical Bodies, 2020

I think because the pandemic time, the interest for my own body and its representation back again. At the begin of April of this year, my period came and I collected my blood to do a kind of data visualization. It's a gaussian curve. In probability theory, a Gaussian distribution is a type of continuous probability distribution found in nature. Like the height of people in a population, for example. It's a parameter for an analog world. I remember when digital photography was being popularized, the whole point was how to migrate to the digital-binary world respecting this curve. The answer was putting more bits to each point of the curve. And here I'm, trying to digitalize my blood and my body and thinking that my digital twin can't bleed... so, it's alive?

Touch Skin, 2016

Touch Skin was a multidisciplinary research project developed during an artistic residency at the Media Lab of the Federal University of Goiás in 2016 with the sponsor of FUNARTE. The project aimed to develop a conductive temporary tattoo and represents the exploration of new possibilities for innovation in the meeting between science and art. The residency was created by Cleomar Rocha and directed by Izabel Goudart. My partner in this project is Rita Wu and together we set off on a universe of experimentation with various materials to seek to develop our tattoo which was able to conduct current when touched and light an LED.

To know more: https://youtu.be/etNm1xRy9aA

Portfolio
Urban
Intervention

Interafectives Swings was the result of the Residence at RedBull Station in 2016. The theme was "The City and the technology". So, I and Giovanna Casimiro build a big swing with LED's circuits the turn on when people touch each other. It is a proposal to interactive urbane furniture with the intention to make public space more affective.

I started doing projection mapping because the theatre and the performance. Between 2009 and 2010 I did severals experiences using overhead projector, slide projector and digital projector. I met with the firsts softwares in VJing, VideoMapping and programming. For me it was a chance to put together the body and the memory. The actual and the virtual.

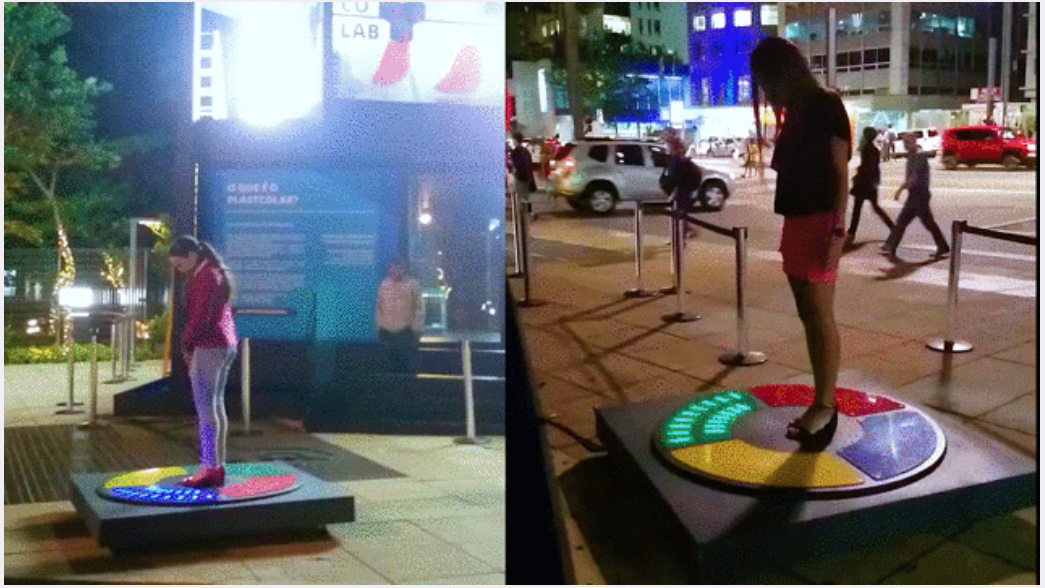
Flat Lina, 2009, performance, portable projection in Paulista Avenue.

prótese de afeto, 2009, Theater Directing completion scene.

Big Simons Says (2017)

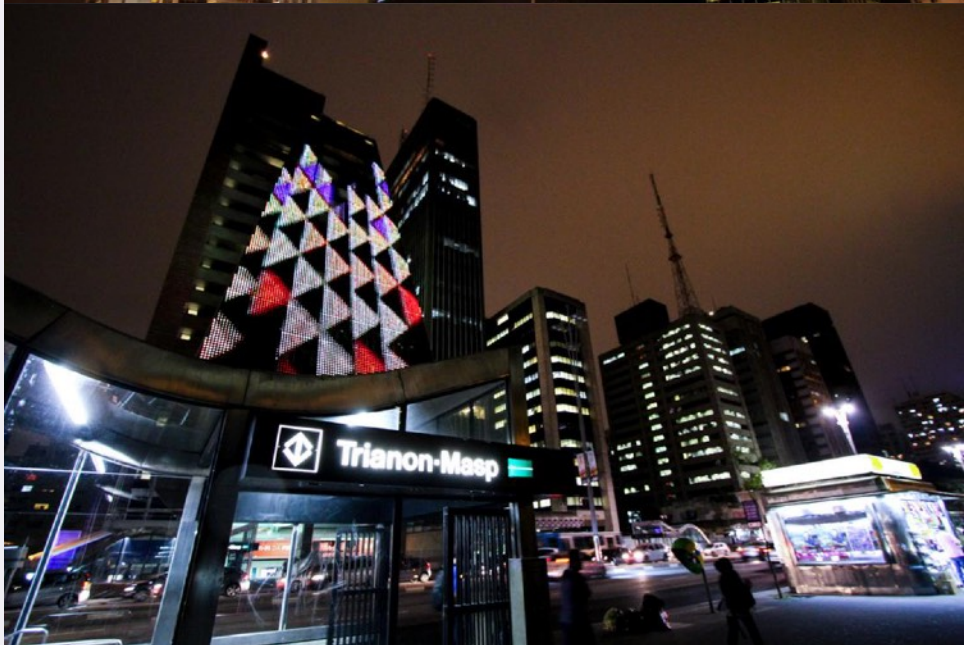
I love when sometimes this kind of challenge appears to me: “we’re a building a huge structure to do exhibitions, workshop and celebrate the digital fabrication and we would like to have some interaction with the lights facade”.

Big Simon Says players need to memorize and repeat without missing a sequence of colored lights. In this version, the game became a milled wood platform in which players made the sequence with their feet. And, at the same time the color sequence was displayed on the giant cube's facade, causing an architectural scale effect. The result caused great enchantment and attractiveness. In addition, the ease of interacting with the installation without instructions also contributed to its success.

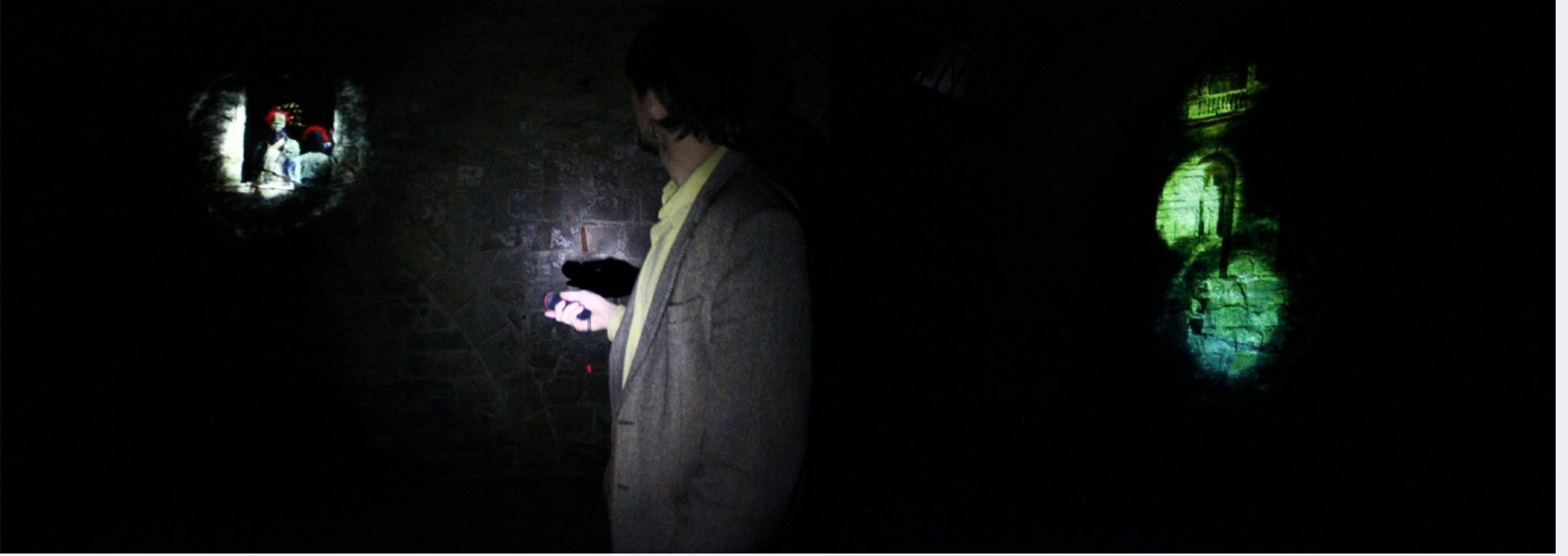


After I was back from Barcelona (2013), I was invited to work as Technical Director at SESI Facade at Paulista Avenue with my greatest partner Luis Leão. We did 4 interactive festivals curated by Marilia Pasculli and Tanya Ravn Ag. I was responsible to integrate many different works from different artists in art and technology at the same machine (with a backup plan) to send the images across the street (using a TV channel!). I remember an international artist asked me: “How you know to do such a thing?” and I answered: “I’m a Brazilian and never give up!” lol. In fact, this facade I remember with great affection, it was the biggest school. I learned so much, not just about technology and platforms, but about public spaces, people looking to interact with space and the architecture. A smart city is an interactive city in many ways...

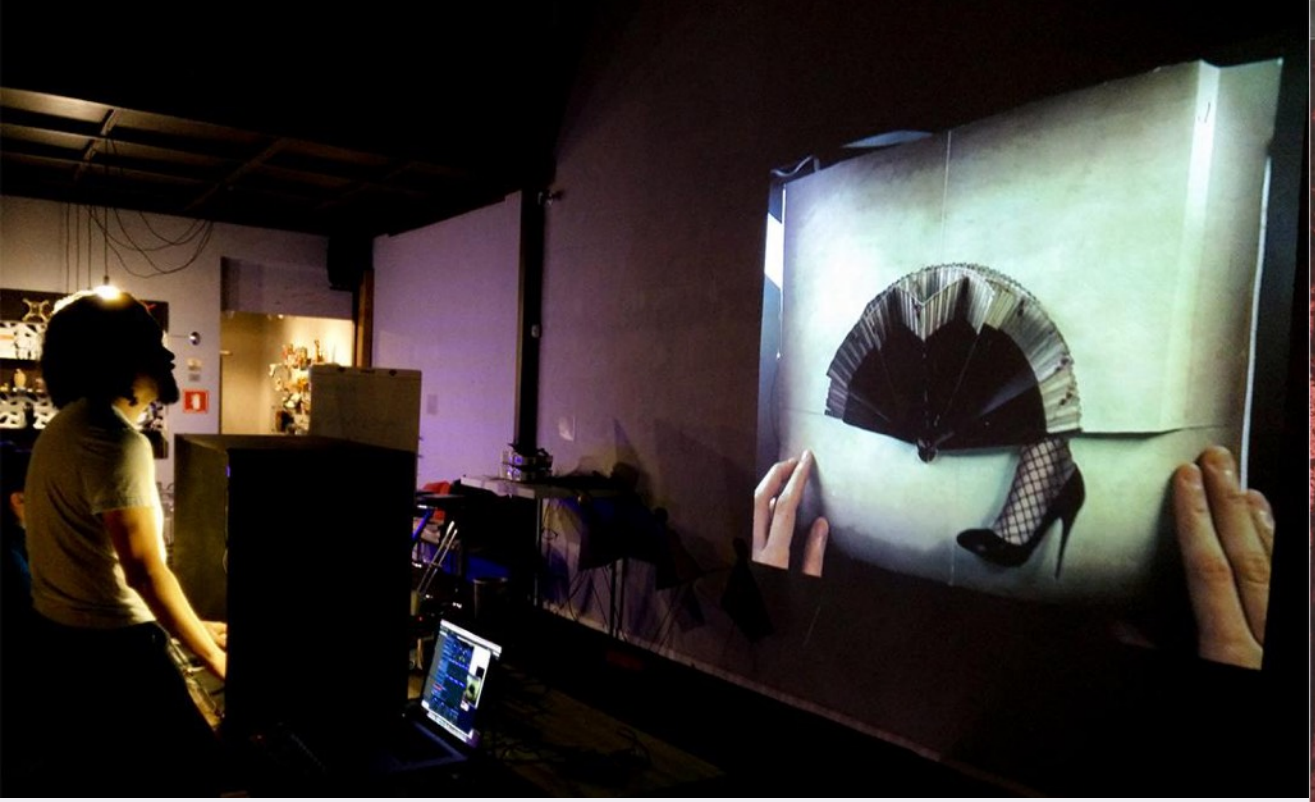
Ah, my uniform was a “sling”. I started working at these festivals when I was pregnant and my daughter was born one week before the second festival. Between the technical essays, I usually did breastfeed her.



Portfolio Mapping and Interactive



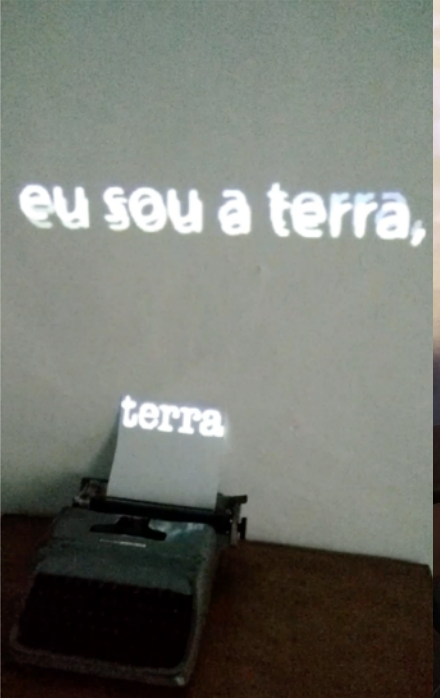
The first version of LABinto was in Barcelona. The interactor was invited to use a flashlight to reveal the images on the wall of a dark space. The subject was the Gothic Neighborhood of Barcelona. A strange character was walking for the Gothic's streets. The caracter was a performer, Cinthia Mendonça using a mask. In LABinto, Paulo Muggler developed a computer vision system to recognise the light of the flashlights, but these lights wasn't a regular one, they were UV lights. In this way, we used this CV layer to mask the projection and to do an interactive installation able to give to the public the choice of to where looking at. This first version was a sweet invitation by Arnout Krediet from Estudio Nómada in 2013. I was so happy for him trusting in our work. The second version was in 2015, after our daughter was born. So, I decided to use the video from her birth without audio. This one I call "intimate version" and was an invitation to be part of "Festival of Art and Technology" in the Artist's Incubator created by Igor Spacek and team.



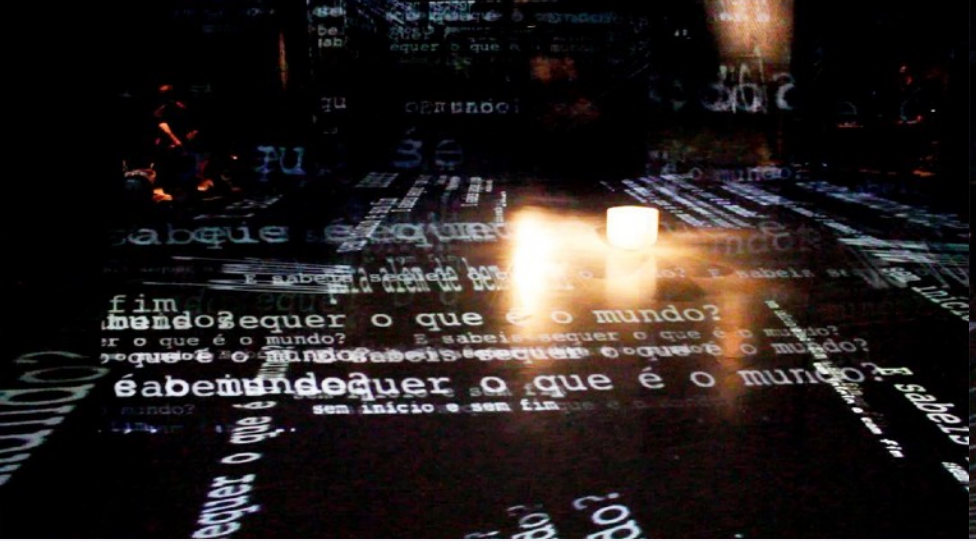
Matéria Estelar is a Rhaissa Bittar's album (2015). She sings from the point of view of the objects. Do the scenario with videomapping was one of the first jobs we did at LILO.ZONE. Funny because our maker space probably is not able to make things alive like her voice. We decided to do a pop up book with the illustrations of the album and put some live camera to show the manipulation of the book in real time at the projection.

When Felipe Arruda invited (2015) to do a videomapping in some educative program that goal was to integrate children with some blindness and sighted children in the same activity, I said: “serious?”. So, we did probably the most conceptual videomapping art of our lifes. How to do images for people who see different from me?

“La casa azul” was an immersive installation and a stage to perform the Frida Kahlo’s history. We did big images with a lot of contrast and the amazing actress Andy Rubinstein with the orientation of the master Livia Motta, did an audio description connected to the narrative. For the videomapping, Paulo Muggler did the environment into the unity3D, an engine for games. This choice allowed us to do a real-time space.




In 2016, I was a researcher in transit at Media Lab/UFG. At that time, a group of researchers was implementing a multimedia layer in the Cora Coralina Museum. She was a poet and her house became a museum of her work and the lifestyle of Cidade de Goiás. The city as well as the museum are world heritage sites. I collaborated with an investigation in projection on smoke, water and typewriter. For the smoke, we tried the smoke used at stage to help to dissipate the lights. As you can see [8], it dissipated the projection also. Then Cleomar suggested using steam. The idea was to simulate the smoke from the wood stove and project the poetry of Cora. About water, I really didn't believe that was possible, but Cleomar insisted. The challenge for this was the use of many pocket-projectors because of the low ceiling of the water spout. But for me, the main goal was to do a permanent installation easy to turn on and maintain. And it was possible thanks to using raspberry pi to do the mapping on the typewriter.



Vesica Piscis was an immersive videomapping installation made for a performance by dancers Maria Mommensohn and Henrique Schuller presented at the Museum of Contemporary Art in 2016. I developed generative graphics that danced in space with the artists and responded to both the movement and the sounds played by live musicians. To know more: https://youtu.be/pWEXY7dq3FU

I love the body arts. For some years (since 2008) I did photographs with projection on the body, from friends and sometimes on my own body. Because it’s hard doing a self-portrait with projection, nowadays I’m teaching my machine using artificial inteligence to follow me.


Access https://youtu.be/EN5Djjp-UfM
and turn on English subtitles
A PETAL FOR THREE (2018)

A Petal for three, 2018

At the end of 2018, Edson called me and said: “Remember the kinetic installation we want to do? Now is the time!”. So, in 20 days with a small team and many collaborators, we did “A Petal for three”.

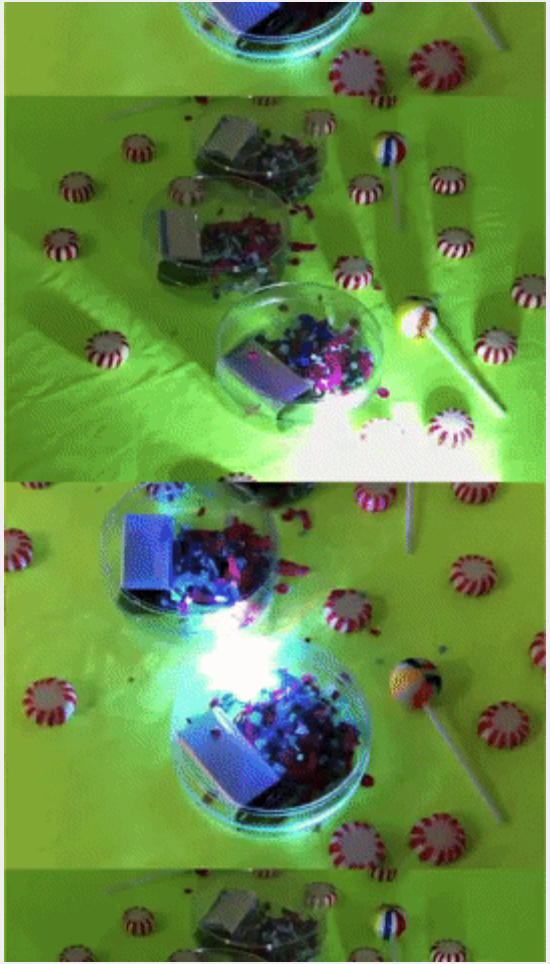
Once people put themselves in one of the corners of the triangular mirror roof, the small triangles move and people can see themselves reflected.

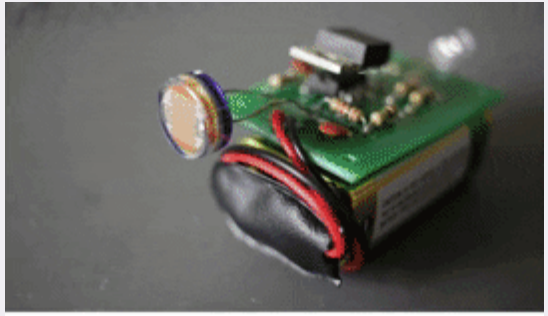
I used an immersive sprint method to realize this job inside LILO.ZONE. This work brought to me the knowledge to do others kinetic installations and a electronic system to quickly setup interactive installations.

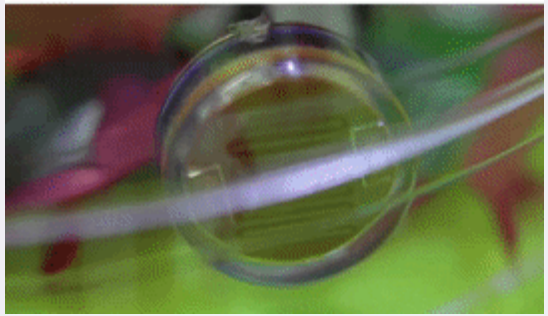
“Parreira Interativa” (2019) was an installation developed for the 12th Campus Party at the invitation of Nestlé. Developed with Mau Jabur, the vine has the conceptual proposal of crossing multiverses. Through floor sensors and a mechanical system of spools and lines, the grapevine responds to the walk of visitors by moving 180 Easter eggs in the waveform.

To know more: https://youtu.be/mFx2dA9O9g4

Prototypes



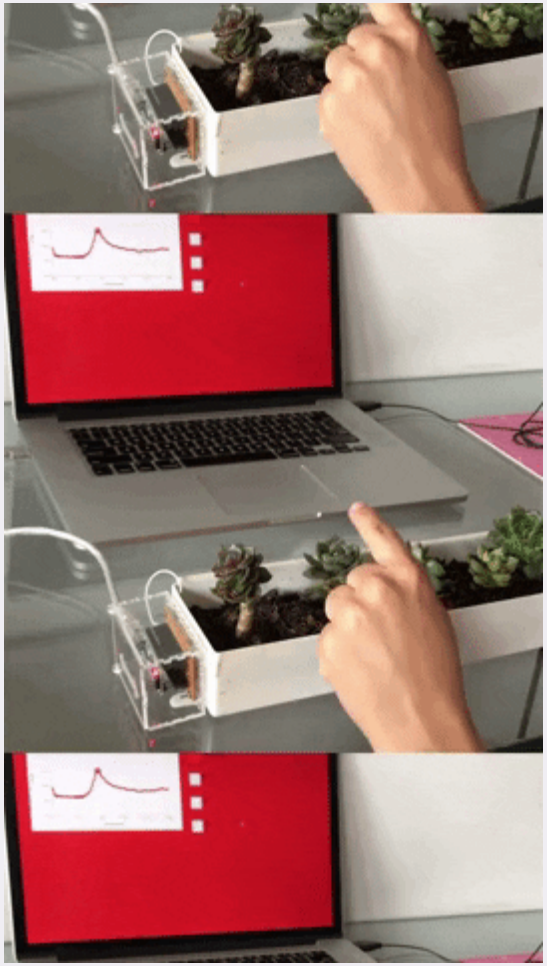




SWEET FIXATION

Eduardo Padilha and I are proposing to talk about the sweetest kind of addiction, sugar! Who can blame Hansel and Gretel? It's simple to start the hole chain reaction and reward mechanisms, isn't ?

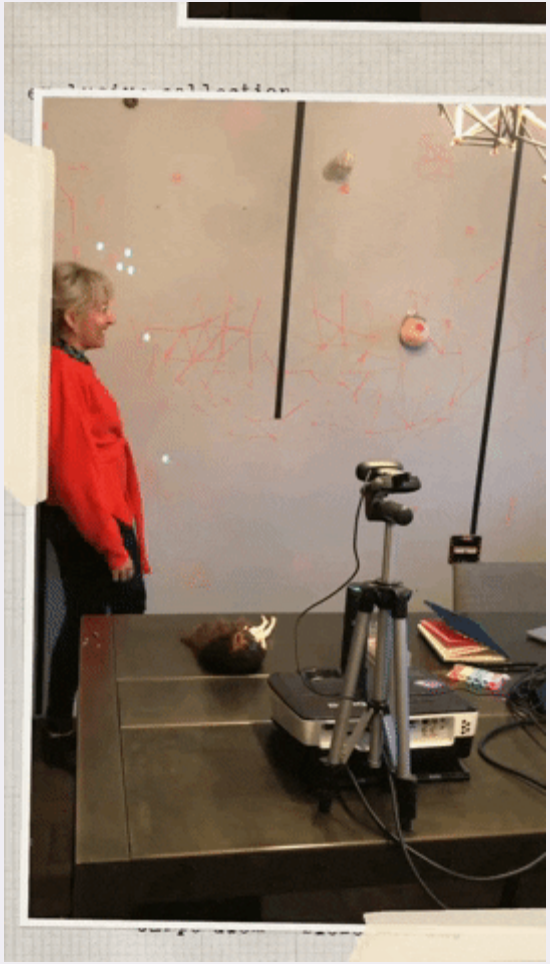
Just use a flashlight or a light of the smartphone and you can see the reaction.



BOTanical

I did the electronics... a little bit of product design with small laser cutting connections... and I'm gardening? Yes, and I love work with touch sensors s2

Next step: use machine learning to training the computer to recognize the touch. I think will be the first ML you need irrigate...



Body videomapping with machine learning. I used a pre trained model able to recognize the human body.

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