



**PIKSEL XX**



The image features a vibrant orange background. In the center, the letters 'AI' are rendered in a large, bold, white 3D font. The letters are surrounded by several white 3D plus signs of varying sizes and orientations, creating a dynamic and celebratory composition. The lighting on the 3D elements gives them a sense of depth and volume.

AI

2003 - 2022

# PIKSEL 20 YEARS ANNIVERSARY

## BERGEN 2022

“The development, and therefore use, of digital technology today is mainly controlled by multinational corporations. Despite the prospects of technology expanding the means of artistic expression, the commercial demands of the software industries severely limit them instead. Píksel is focusing on the Free/Libre and Open Source movement as a strategy for regaining artistic control of the technology, but also a means to bring attention to the close connections between art, politics, technology and economy.”

— Píksel festival Píksel is an international network and annual event for electronic art and technological freedom. Part workshop, part festival, it is organised in Bergen, Norway, and involves participants from more than a dozen countries..

## PIKSEL TEAM

**Director/curator:** Gisle Frøysland  
**Co- curator/producer:** Maite Cajaraville  
**Design:** Jenny Pickett (APO33)  
**Píksel Cyber Salon:** Malitizn Cortés (CNDSD)  
**Production assistant:** Tiril Frøysland  
**Kids program and Volunteer program:** Ina Glosli  
**Video editor:** Tommy Grov  
**Streaming:** Gisle Frøysland, Tommy Grov, Bertha Chan, Ingrid Ormevik  
**Computer technician:** Alexander Crawford  
**AV Technician:** Eirik Hunnes

**Assistants:** David Farias, Luna Scéau, Katarina Kierulf  
**Photographer:** Martin E. Koch  
**Press:** Renate Synnes Handal  
**Reporters:** Kirstyn Williams  
**Merch:** Iselin Tara Rathke  
**Driver:** Filip Nordhagen  
**Catering:** Marianne Hjelvik, Norman Rønneseth, Jan Forland  
**Volunteers:** Vera Halvorsen, Viktorija Prunskute, Meliha Dogan  
**Streaming server:** Tommy Juvik / 4bytes.no

## PARTNERS

PíkselXX is supported by the Municipality of Bergen, Arts Council Norway, Vestland fylkeskommune. Píksel22 collaborates with Kunstscolen i Bergen KIB, Bergen Dansesenter, PRODA and, Critical Engineering Working Group/ Sarah Grant.



KUNSTSKOLEN I BERGEN



Embajada de Noruega



APO-33

## CONTACT

PIKSEL Produksjoner  
Strandgaten 207  
5004 Bergen  
Norway  
post@piksel.no

<https://piksel.no/>  
<https://22.piksel.no/>

## VENUES IN BERGEN

@ Studio 207 / Strandgaten 207  
@ BIT Teatergarasjen / Strandgaten 205  
@ Kunstscolen i Bergen KIB / Marken & Kaigaten 37  
@ Marken 13 A / B  
@ Piksel Cyber Salon / IDLE  
@ Bergen Dansesenter / Georgernes Verft 12  
@ Østre / Skostredet 3

## TV CHANNELS

Pikselfliks: <https://www.twitch.tv/pikselfliks>  
Pikselfliks LIVE! :  
<https://www.twitch.tv/pikselfest>  
<https://www.youtube.com/c/PikselProduksjonerBergen>  
<https://www.facebook.com/piksel.no>  
Piksel FRIKANALEN TV: <https://frikanalen.no/>



# SCHEDULE

## THURS 17 NOV

### @ KIB, Kunstscolen i Bergen

18:00 – AI AI AI Exhibition opening

### @ KIB Atrium

18:00 – Coping Strategies Exhibition opening

19:00 – Performance: Tango for us Two/Too by Joana Chicau

### @ KIB Auditorium

18:00 – AI AI AI Video program

### @ Marken 13 A / @ Marken 13 B

18:00 – AI AI AI | We are Here FM Exhibition opening

18:00 – AI AI AI | Minus Exhibition opening

### @ Studio 207

21:00 – AI AI AI | Skogen Exhibition opening

22:00 – IDLE Performances with APO33 + CNDS

### @ BIT Teatergarasjen Strandgaten 205

21:00 – AI AI AI | memoryMechanics Exhibition opening

22:00 – IDLE Performances with APO33 + CNDS

## FRI 18 NOV

### @ KIB, Workshop I

10:00-13:00 – Ewasteroid with Paul Granjon

### @ KIB, Workshop II

10:00-13:00 – Live collaborative radio with witd Mezcal August Black

10:00-13:00 – Introductory workshop for patching for sensors In pure data with Kris Kuldkepp

### @ KIB, Workshop III / Online

10:00-13:00 – Prototyping DIY smart robots with Arduino and Machine Learning with Ivan Iovine

### @ KIB, Kunstscolen i Bergen

11:00-18:00 – Exhibition – AI AI AI

### @ KIB Auditorium

10:30-13:00 – Talks Coping Strategies

– Sarah Grant

– Futura Trópica by Juan Pablo García Sossa

– Isaac Kariuki & Tamar Clarke-Brown

– VFRAME by Adam Harvey

13:00-15:00 – Video program interviews with the artists

15:00-18:00 – Artists Presentations

– Digital Culture & Cyborg Bodies, Idun Isdrake

– Taper, An Online Magazine for Tiny Computational Poems, Nick Montfort

– PD Kris Kuldkepp

– BITS AND BYTES, Marko Timlin

– Pillows talks, Miller Puckette, Kerry Hagan

– ShadowPlay, Dan Wilcox

– Composting audio and other networking apps, August Black

– Paul Granjon

### @ KIB Atrium

11:00-18:00 – Exhibition Coping Strategies

15:00-18:00 – Workshop Coping Strategies Open Wave-Receiver by Shortwave Collective

### @ BIT Teatergarasjen Strandgaten 205

12:00-13:00 – Workshop Memorymechanics

### @ Østre

21:00-01:00 – Audiovisual Performances / Concerts

– John Bowers

– Pleasure Force, Dr Nexus + Kris Kuldkepp

– Ventriloquist Ontology, Afroditi Psarra + Tingyi Jiang

– Meta Music Machines [Fluorescent Markov Beat], Oskoff

– Solar Return, Julien Ottavi + Jenny Pickett

– Gravel, Malte Steiner

– Mimoidalnaube, Michał Seta

# SAT 19 NOV

## @ KIB, Workshop I

10:00-13:00 – Ewasteroid with Paul Granjon

## @ KIB, Workshop II

10:00-13:00 – Intro to PdParty with Dan Wilcox

## @ KIB, Workshop III / Online

10:00-13:00 – Neural Networks in Pure Data with Alexandros Drymonitis

## @ KIB Atrium

10:00-13:00 – Workshop Coping Strategies: Messaging with lights in a not internet era!  
by Sarah Grant

11:00-18:00 – Exhibition Coping Strategies

15:00-18:00 – Workshop Coping Strategies: Open Wave-Receiver by Shortwave Collective

18:00-19:00 – Performance MTCD – A Visual Anthology of My Machine Life, Teresa Dillon

## @ KIB Auditorium

10:30-13:00 – Seminar PIKSEL XX.  
20 years of Libre Electronic Art ,  
moderated by Dusan Barok (SK/NO)  
– Grethe Melby (NO)  
– Malte Steiner (DE)  
– John Bowers (UK)  
– Paola Torres Núñez del Prado (PE/SE)

13:00-15:00 – Video program interviews with the artists

15:00-17:30 – Seminar PIKSEL XX.

20 years of Libre Electronic Art ,  
moderated by Dusan Barok (SK/NO)

– Per Platou (NO)

– APO33 – Julien Ottavi & Jenny Pickett (FR)

– Marc Dusseiller (CH)

– Asimtria / Marco Valdivia (PE)

## @ Bergen Dansesenter

10:00-13:00 – Workshop Soft Control and body actuation  
by Afroditi Psarra and Tingyi Jiang

## @ KIB, Kunstskolen i Bergen

11:00-18:00 – Exhibition AI AI AI

## @ Østre

21:00-03:00 – Audiovisual Performances / Concerts

– E-09 Alexandra Macia + Seamus O'Donnell

– screenBashing Magno Caliman

– robotcowboy Dan Wilcox

– AUTO{}Construccion, CNDSO  
& Iván Abreu

– YupanaSimi Marcos Valdivia and

Milagros Saldarriaga

– Miller Puckette +Kerry Hagan +

John Bowers Trio

– Live coding party music

by Servando Barreiro and Per-Olov Jernberg

---

# SUN 20 NOV

## @ KIB Auditorium

11:00-15:00 – Video program interviews with the artists

11:00-15:00 – Online Presentations

- Creative PCB Design for Manufacturing using SVG2 Shenzhen, Budi Prakosa
- Haptic Box and its entangled flows, Dave Riedstra
- Journey to tde Planet of nuclear Chewing Gum, Vera Sebert
- I make music and videos with statistics software, MusikeR

19:00-22:00 – Online Concerts

– Akira, Shawn Lawson

– Incidental Effects, Giuseppe Torre

– Intersections, Mauricio Roman,

Alejandra Tapia

– Strip & Embellish,

Hanns Holger Rutz Daniele Pozzi

– The Gesturewriter, Joseph Knierzinger

– Usurpation Rite, Angel Salazar



**SPECIAL  
PROGRAM**



# SEMINAR PIKSEL XX

## 20 years of Libre Electronic Art

To celebrate the 20 Píksel Anniversary, join us at the seminar “PIKSEL XX. 20 years of Libre Electronic Art”. Focusing on the Free/Libre and Open Source movement as a strategy for regaining artistic control of technology, it brings attention to the close connections between art, politics, technology, and economy. The seminar revolves around artistic practices related to open-source biokitchen art, politics, and surveillance in information technologies, and visual/sound instruments made by electronics, using Free/Libre software and hardware (FLOSS).

Over the 20 years, Píksel has become a solid international network and annual event for electronic art and technological freedom. Part workshop, part festival, it is organised in Bergen, Norway, and involves participants from more than a dozen countries exchanging ideas, coding, presenting art and software projects, doing workshops, performances and discussions on the aesthetics and politics of free/libre technologies.

As the head of PNEK Stahl Stenslie wrote in The Experimental Emerging Art magazine issue Nº1, about the 2015 Píksel edition: “Píksel is more than a festival. It is a contemporary academy in the experimental arts. Organized by Gisle Frøysland and Maite Cajaraville, Píksel turns Bergen into a creative explosion of new, emerging forms of creative expression and strangely attractive experiments. The 2015 version saw anything from deep noise concerts to workshops in Do-It-Yourself, open source biokitchen art to electro-mechanical sculptures and surveillance bots. It was an event not just for visitors, but also an exquisite arena for the exchange of ideas and inspirations between artists. The feeling of the festival was intimate and local, yet a temporary home to a wide number of international guests from all over the world. Píksel is what PNEK is about: getting stronger through networking and building bonds across boundaries of thinking and acting.”

**The seminar takes place on Saturday 19th at Kunstscolen i Bergen Auditorium in 2 different sessions. Dušan Barok is the moderator and the editor of the book.**

### **Morning sessions (10:30-13h):**

Grethe Melby (NO)

Malte Steiner (DE)

John Bowers (UK)

Paola Torres Núñez del Prado (PE/SE)

### **Afternoon sessions (15-17:30h):**

Per Platou (NO)

APO33 – Julien Ottavi + Jenny Pickett

(FR)

Marc Duseiller (CH)

Asimtria / Marco Valdivia (PE)



# PIKSEL KIDZ LAB

In 2015, Píksel Festival, the Bergen festival focusing on new media art and open digital culture, introduced Píksel KidZ Lab, an artistic laboratory for kids to understand and build new media artworks. After 8 years of experience working with kids and technology, the program is rooted in the autumn schools program.

Píksel kidz lab 2022 proposes three new workshops: **Creating Audio and Visual effects with Code – LIVE Coding!** with @Antonio Roberts, **Messaging with lights in a not internet era!** with Sarah Grant and **Ewasteroid** by Paul Granjon.

All the workshops are free attendance. To participate send us an email to: [piksel22@piksel.no](mailto:piksel22@piksel.no)

## Creating Audio and Visual effects with Code – LIVE Coding!

Antonio Roberts (UK)  
@: Studio 207,  
Age: 10-18 years old.

The internet is full of ‘open-source’ free software that we can use to create exciting sound and visuals. This workshop for children aged 10ish will introduce Live coding to the kids. Live coding is an audio visual performance practice that revolves around the creation and modification of code and algorithms in real-time.

Antonio Roberts will introduce the group to the Estuary live coding platform, with the aim of writing computer programs “on the fly”.

## Messaging with lights in a not internet era!

Sarah Grant  
@KIB Atrium 10-13 h  
Coping Strategies /PIKSEL KIDZ LAB – Age 10-18

What would happen if we no longer had the internet or mobile phones? How would we send messages to each other? Drawing inspiration from insects and ancient forms of signalling using light, we will learn in this workshop how to create our own blinking firefly lanterns for wirelessly transmitting messages.

## Ewasteroid

Paul Granjon  
@KIB Workshop I – 10-13h  
PIKSEL KIDZ LAB – Age 10-100

The beauty and the ugliness of electronic waste fight it off in this workshop for curious people. Starting with a pile of electronic waste items such as printers, pc towers, DVD players the participants will build a spinning asteroid made of out of date components and found timber, mining the old machines for intricate and complex parts. The resulting temporary sculpture is both celebration of human engineering and sinister indicator of an extractivist civilisation gone in overdrive.



# IDLE DIGITAL TOOLS FOR INCLUSIVE ART EXPERIENCES

Inkluderende Digitalt Laboratorium for Eksperimentell Kunst (IDLE) is an innovative artistic and participatory project based on a digitally updated art venue space, Studio 207, in Bergen.



The venue's audiovisual devices are controlled remotely through a virtual gallery. Artists and audiences can manipulate lights, videos, and sounds, to create different atmospheres through the Internet of Things technologies. The public designs spatial audiovisual experiences for those that are In Real Life at the venue and simultaneously in the virtual gallery!

IDLE intends to offer a creative virtual meeting point for school kids, youngsters, people with reduced mobility who wants to interact with the physical world, and all of those art curious lovers that want to look for new physical-virtual new experiences. The project explores new collaborations and forms of interaction between different art and cultural forms.

IDLE is an innovative project initiated by Píksel, in collaboration with CNDS, Malitzin Cortés and Iván Abreu, APO33, Jenny Pickett, Julien Ottavi, and Romain Papion and Martin Koch. It is a 3 years project supported by the Municipality of Bergen and the Arts Council Norway.

PIKSELXX AI AI AI is presenting for the first time this experience to the world. To do the premiere in Bergen we have invited the artists and developers of the project CNDS, Malitzin Cortés, Iván Abreu, APO33, Jenny Pickett, Julien Ottavi, and Romain Papion to create the first sound and visual, physical and virtual experience. Join us at Studio 207 and the @Píksel Cyber Salon on Thursday Nov 17th - 22-23h.



# SKOGEN – THE FOREST

Skogen is a collaborative project between Hillevi Munthe (NO) and Elisabeth Schimana (AT)

“The forest” is a spatial textile installation with incorporated electronics and metal wires with shape memory, so-called shape memory alloy (SMA) or muscle wire. The muscle wire creates programmed movement in the fabric.



In the gallery space, tubes of textile hang from ceiling to floor at regular intervals. They fill the room, but it is still possible to walk between them. The tubes are made of light, transparent silk partially felted with raw wool. The felted surfaces are knotty, bubbly and rough. At irregular intervals, the textile lifts up from the floor and stays there before slowly descending back towards the floor. The promise happens quickly, suddenly, while the denial is slow. It is as if the installation breathes and lives. As the audience moves

through the installation, they wear headphones with a field recording from the forest at Druskininkai outside Vilnius recorded with specially built microphones.

**Electronic textile** : Muscle wire is a metal alloy of nickel and titanium that can switch between two states, activated by heating. When the metal wire is below a certain temperature, it is soft and flexible. At a certain temperature, it contracts to the shape it has been set to “remember” through a precise shaping process. By connecting it to an electronic circuit, I use resistance heat to activate the contraction and can program the intervals. The circuit is partly textile, partly made of traditional electronic components. I construct the textile components myself from conductive textile material. Incorporated into the textile, the muscle wire creates a fluid, organic movement that gives a surprisingly strong physical experience of the presence of something alive.

**Textile** : Felting silk and wool together (nunofelting) makes it possible to work with transparency/opacity and structure in the surface in a completely unique way. In the felting process, the wool shrinks by about 40 per cent, while the silk does not shrink. With a very thin layer of raw wool (untreated wool directly from the sheep), the felted parts will shrink to the maximum and give a structured surface with knots and bubbles. The process is rarely completely predictable. After the tubes are felted, they are dyed with plant colors from leaves, plants and mushrooms. The material’s own color helps to determine the result of the dyeing, so that it is not possible to have full control over the result here either.

**Sound** : The field recording is a displaced auditory memory from a concrete place. The sound recording from Druskininkai was made with a custom-built microphone: a mannequin head on a human-tall pole with the microphones placed near the ears. The sound has been recorded as a human would experience it, in a clear three-dimensional auditory space. In the recording of the forest's deafening silence, you hear insects buzzing close by, frogs and the wind rustling in the trees. The silence of the forest is full of life.



**Hillevi Munthe** (NO) has worked with electronic textiles since 2009 on her practical research project on e-textile materials and techniques carried out in collaboration with the Bergen Academy of the Arts titled Soft Technology. "The forest" is a continuation of this work.

E-textiles have become increasingly well known in recent decades and describe both the incorporation of traditional electronics into textile materials and the construction of textile components and electronic circuits. With textile material with current-carrying properties, you can knit sensors, embroider wires or sew entire circuits. E-textile is part of an open source and DIY tradition within electronic art and at the same time in a textile art tradition where knowledge of techniques for the construction of flexible surfaces is crucial for how the circuits are built. An embroidered or sewn circle can be shaped, expanded and stretched to the desired expression, and thus becomes a meaning-bearing unit in itself.

### **Elisabeth Schimana**

Schimana studied electro-acoustics and experimental music at the University of Music and Performing Arts Vienna, computermusic-composition at the IEM, Graz and musicology and ethnology at the University of Vienna. Her work concentrated for many years on space / body / electronic. She has ongoing cooperations with the Austrian Kunstradio. She also focus on research in the field of woman, art and technology. Elisabeth Schimana gives lectures and holds composition workshops all over the world.



# COPING STRATEGIES

curated by Sarah Grant, Critical Engineering Working Group

We are excited to present Coping Strategies, a new exhibition curated by Sarah Grant, Radical Networks. As part of the 3 years Píksel collaboration with The Critical Engineering Working Group, Coping Strategies joins the works of Lauren McCarthy, Juan Pablo García Sossa, Isaac Kariuki, Teresa Dillon, Shortwave Collective, Joana Chicau, and Adam Harvey. Coping Strategies is part of the PIKSELXX AI AI AI program, in Bergen from 17-27 Nov.

Sarah Grant in her curatorial statement, affirms that by now we begin to understand the extent to which our personal and professional interactions are mediated by the digital, from user interfaces to data harvesting networks of surveillance. As digital captives, we have little agency over our membership and the extent of our participation within these obfuscated systems.

How can we put some space between ourselves and these dominant structures? How can we push back and reclaim agency over the narrative that is written about ourselves and our communities by these intrusive technologies? How do we mitigate digital crisis?

Coping Strategies is a program of works, including presentations, workshops, and performances, that demonstrate artist-led approaches to recasting our role in the asymmetrical relationship between ourselves and the dominant providers of information technology.

By demonstrating concrete actions that we as individuals and as communities can take in response to these domineering information systems, Coping Strategies hopes to provoke excitement and reassurance that we don't have to passively accept the default settings of our digital lives.

## PROGRAM

### EXHIBITION

@ KIB, Kunstscolen i Bergen  
Nov 17th -27th - opening  
18-21h

- rest of the days 11-18h

Futura Tropica by Juan Pablo  
García Sossa

What do you want me to  
say? by Lauren McCarthy

### TALKS

@ KIB Auditorium

Nov 18th - 11-13h @KIB Auditorium

Futura Trópica by Juan Pablo García Sossa

Coding : Braiding : Transmissions by Isaac Kariuki

VFRAME by Adam Harvey

### PERFORMANCE

@ KIB Atrium

Nov 17th - 19h

Tango for us Two/Too by Joana Chicau

### PERFORMANCE

@ KIB Atrium

Nov 19th - 18h

MTCD - A Visual Anthology of My Machine Life, Teresa  
Dillon

### WORKSHOPS

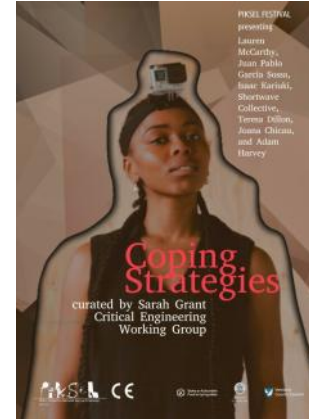
@ KIB

Nov 18th & 19th - 15-18h

Open Wave-Receiver by Shortwave Collective

Nov 19th - 10-13h

Messaging with lights in a not internet era! by Sarah  
Grant



**Lauren Lee McCarthy** is an artist examining social relationships in the midst of surveillance, automation, and algorithmic living. She has received grants and residencies from Creative Capital, United States Artists, LACMA, Sundance New Frontier, Eyebeam, Pioneer Works, Autodesk, and Ars Electronica. Her work *SOMEONE* was awarded the Ars Electronica Golden Nica and the Japan Media Arts Social Impact Award, and her work *LAUREN* was awarded the IDFA DocLab Award for Immersive Non-Fiction. Lauren's work has been exhibited internationally, at places such as the Barbican Centre, Fotomuseum Winterthur, Haus der elektronischen Künste, SIGGRAPH, Onassis Cultural Center, IDFA DocLab, Science Gallery Dublin, Seoul Museum of Art, and the Japan Media Arts Festival.

**Joana Chicau** is a graphic designer, coder, researcher — with a background in dance. In her practice she interweaves web programming languages and environments with choreography. She researches the intersection of the body with the constructed, designed, programmed environment, aiming at widening the ways in which digital sciences is presented and made accessible to the public. She privileges the use of Free-Libre Open Source software, and collaborates with various international practitioners in the fields of art, design and technology on both commissioned and self-initiated projects. She has been actively participating and organizing events with performances involving multi-location collaborative coding, algorithmic improvisation, discussions on gender equality and activism.

**Sarah Grant** is an American artist and professor of new media based in Berlin at the Weise7 studio. Her teaching and art practice engages with the electromagnetic spectrum and computer networks as artistic material, social habitat, and political landscape. She holds a Bachelors of Arts in Fine Art from UC Davis and a Masters in Media Arts from New York University's Interactive Telecommunications Program. Since 2015, she has organized the Radical Networks conference in New York and Berlin, a community event and arts festival for

critical investigations and creative experiments in telecommunications.

**Juan Pablo García Sossa** jpgs / Futura Trópica Netroots (\*Bogotá, COL) is a Designer, Researcher and Artist fascinated by the clash between emerging technologies and grass-root popular culture in tropical territories. His practice explores the development of cultures, visions, realities and worlds through the remix and reappropriation of technologies from a Tropikós perspective (Tropics as Region and Mindset). JPGS has been part of diverse research institutions and design studios and currently is a design research member at SAVVY Contemporary The Laboratory of Form-Ideas' Design Department in Berlin and Co-Director of Estación Terrena, a space for Arts, Research and Technologies in Bogotá.

**Adam Harvey** (US/DE) is an artist and research scientist based in Berlin focused on computer vision, privacy, and surveillance. He is a graduate of the Interactive Telecommunications Program at New York University (2010) and is the creator of the VFRAME.io computer vision project, Exposing.ai dataset project, and CV Dazzle computer vision camouflage concept.

**Shortwave Collective** is an international, feminist artist group established in May 2020, interested in the creative use of radio. We meet regularly to discuss feminist approaches to amateur radio and the radio spectrum as artistic material, sharing resources, considering DIY approaches and inclusive structures. Members include Alyssa Moxley, Georgia Muenster, Brigitte Hart, Kate Donovan, Maria Papadomanolaki, Sally Applin, Lisa Hall, Sasha Engelman, Franchesca Casauay, and Hannah Kemp-Welch

**Tamara Clarke-Brown**



# PERFORMING ARTS WORKSHOPS

electronics and free/libre technologies applied to the performing arts



Piksel's basic idea is that artists, across disciplines, should have control over their own production. Therefore, tools like free software / open hardware are seen as best suited to this. Internationally, Piksel is perhaps one of the important meeting places for players in this field.

After 20 years of existence, the Piksel Festival has shown a variety of performing arts pieces exploring creatively interaction with sound synthesis, lights or video through pressure sensitive sensors and body movements. In collaboration with Bergen Dansesenter, this program intends to facilitate performers, choreographers, actors, artistic directors, the integration of digital tools on their shows as a way to develop new dialogues with the audiences.

The program includes 2 workshops: Soft Control and body actuation by Afroditi Psarra with the collaboration of Tingyi Jiang, and, memoryMechanics by Karen Eide Bøen, Mads Høbye, Lise Aagaard Knudsen, Maja

Fagerberg Ranten and Troels Andreassen. Both working with Artificial Intelligence trained to process natural language or AI as a place to play with memories.

## PROGRAM

18th - 12-13h

memoryMechanics by Karen Eide Bøen, Mads Høbye, Lise Aagaard Knudsen, Maja Fagerberg Ranten and Troels Andreassen

@BIT Teatergarasjen, Strandgaten 205.

19th - 10-13h

Soft Control and body actuation by Afroditi Psarra with the collaboration of Tingyi Jiang

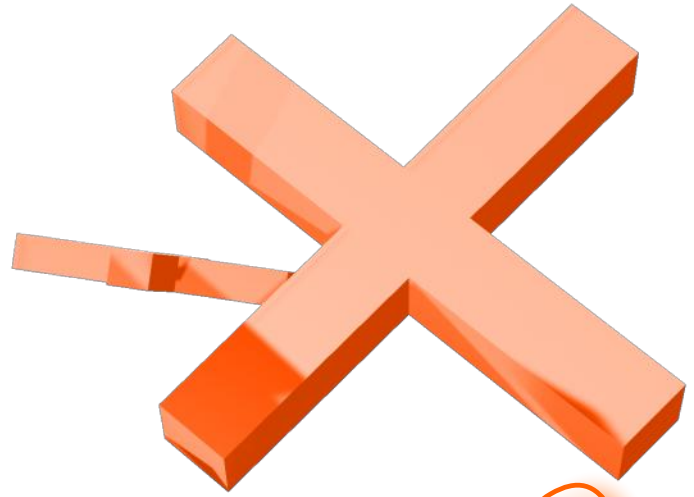
@Bergen Dansesenter.

All workshops are free

To participate send an email to:

piksel22(at)piksel(dot)no





PERFORMANCES



# AUTO{}CONSTRUCCION

CNDSO & Iván Abreu

## metacity self construction

AUTO{}Construction is an audiovisual concert of live coding and virtual reality in a video game environment. This act explores the relationship between speculative architecture and experimental electronic music, taking the phenomenon of informal housing executed by "non-architects" in countries like Mexico, United States, Latin America, Asia, India and some peripheries in Europe to create 3D imaginaries elaborated collaboratively with machine learning (machines trained to understand this phenomenon and reinterpret it), this audiovisual immersion is guided by a generative soundtrack that controls and gives life to this dystopian reality, a kind of music "self-constructed" by this score of inhabitable VR chaos.

Iván Abreu

CNDSO



# MTCD - A VISUAL ANTHOLOGY OF MY MACHINE LIFE

Teresa Dillon



MTCD is a monologue in which the artist and researcher Teresa Dillon takes one 'machine' from each year of her life. From radios to home recording devices to her first experiences on the Internet, reflections on techs uses and misuses, failures and breakdowns, highlight the glitchy realities and contextual relations in which the key "machines" that shaped her technological know-how and imagination, play out.

MTCD originally premiered at Berlin's transmediale in 2018 with further presentations in 2019. This updated but stripped back version is a special edition for PIKSEL 20th birthday.

Links: [polarproduce.org/](http://polarproduce.org/) // [repairacts.net/](http://repairacts.net/) // [urbanhosts.org/](http://urbanhosts.org/)

## Teresa Dillon (IRL/UK/DE)

An artist and researcher Teresa's work explores the interrelationships between humans, other species, technology, cities and our environments. This currently manifests through three evolving programmes: Repair Acts (2018-) explores restorative cultures and practices by connecting past stories of care, maintenance and healing, with what we do today and how we envision the future. Urban Hosts (2013-) a programme that plays with civic conversational, encountering and hospitality formats and Liminal Routes (2020-) a mixtape and sonic tripping series for cities. Experienced in producing software and hardware projects, Teresa has also written on subjects such as open source processes, music, technology and design, sonic materiality's and folklores, multispecies relations, surveillance, governance and the smart city, repair economies and artisan repair professions. As a Humboldt Fellow (UdK and TU, Berlin, 2014-16) her work documented artistic approaches to making the electromagnetic spectrum in cities audible. Invited to co-curate transmediale (2016) and HACK-THE-CITY (2012) for the former, Science Gallery, Dublin, since 2016 she currently holds the post of Professor of City Futures at the School of Art and Design, UWE, Bristol.



# TECHNO-CHIPTUNE-JAZZ

Servando Barreiro , Per-Olov Jernberg

Live coding party music by Servando Barreiro and Per-Olov Jernberg

Per & Servando are Audiovisual artists based in Stockholm where they often meet and collaborate in the local artist collectives.

Improvised Audiovisual collaboration  
Tools used: Hydra, puredata, Nanoloop FM

<https://possan.codes/>  
<http://servando.teks.no>  
<https://www.rumtiden.com/>  
<https://www.blivande.com/>  
<https://www.instagram.com/svartljus/>

## Servando Barreiro

Has a background is in Electronics, Sound and Audiovisual communication. He started his artistic career early on by showing a video performance in the Reina Sofía contemporary art museum in Madrid. From that point on, he continued self-educating about the subjects of Art+ science+ technology. He considers himself lucky to have been around Medialab Madrid, precisely when they started teaching and organizing lectures about media / technology / electronic art. A couple of years later, he moves to Berlin where he does various Artist in residencies. He has lived in Perú, Stockholm, México and California.

[www.servando.teks.no](http://www.servando.teks.no)

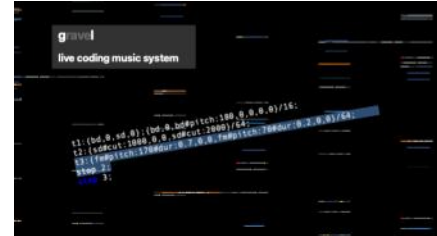
## Per-Olov Jernberg



# GRAVEL

Malte Steiner (aka Notstandskomitee)

Malte Steiner (aka Notstandskomitee) performs the first concert with his new open source live coding system Gravel. A first beta of the software will be out during Píksel, latest by the end of this year. It offers synthesized and sampled instruments controlled by the expressive Gravel language which can generate complex evolving patterns with little code. The sound engine is backed by Csound which is compiled into Gravel as a library.



**Malte Steiner** (born 1970) is a German media artist, electronic musician and composer. He started creating electronic music and visual art around 1983, developing his own vision of the interdisciplinary Gesamtkunstwerk. First exhibitions already in 1983. In 1986 Steiner took a course in electro-acoustic music in Lüneburg by H.W. Erdmann and gave his first concerts in the following years, e. g. in Germany, France and Belgium, and started 1987 to release his music on cassette, later on vinyl, CD and online.

In 1998 he began to create electronic art and installations and additionally in 2003 several netart projects including a collaborative visual networking environment, shown in the Java museum in Sofia, Bulgaria.

Besides diverse music projects Steiner is also involved in several open source projects and has done lectures, radio features and workshops. Artist-In-Residency i.E. in Open City (La Ciudad Abierta) Of Ritoque, Chile 2011 or together with Tina Mariane Krogh Madsen in Ii, Finland 2018.

2018 he relocated to Aalborg, Denmark and started in 2019 with the work on the new art project The Big Crash, art for the pending burst of the real estate bubble, reflecting on the housing crisis and gentrification. Art pieces are based on data which a software by Steiner harvest from online real estate ads. For instance images were segmented with the help of a Machine Learning algorithm and the resulting fragments were used for actual 3D printed objects but also in VR. Physical exhibitions of The Big Crash have been in Aarhus and Aalborg, Denmark and Bergen, Norway. The VR part has been shown i.E. at the Sound Campus exhibition of Kunstiniversität Linz at Ars Electronica 2020, at the ICMC 2021 conference, in the digital section of KP22 exhibition Aarhus 2022 and Rencontres Internationales Paris 2022.

Also in 2019 he started the conceptual phase of the project absolute power, macht + ohnmacht and painted first paintings. This project reflects on power structures and their mechanisms in politics and society.



# YUPANASIMI

Asimtria / Marco Valdivia, Milagros Paola Saldarriaga

---

Yupana Simi is an interactive audiovisual work executed through code in a programming language expressed in a syntax inspired by the Quechua, one native language of AbyaYala, which processes sounds from the Andes and contemporary graphics of artisans. The performance is executed by Semilla y Muerte and ###, audiovisual projects of Milagros Saldarriaga and Marco Valdivia, creators from Perú.

## Milagros Saldarriaga

A woman of the abya yala, from Lima, who finds in the southern highlands the possibility of expanding her experiences and trying to unlearn the thoughts of cement to breathe the blowing of the apus, drink the water of the clouds, listen to seeds, touch the earth, resent the sun, look at the thunder, as a vital necessity to resist the violence that reigns and in search of harmonizing with life. Just taking off...

## Marco Valdivia

He believes in technology and its appropriation as a tool for the development of people, individually and above all common and collective, focuses it on sound and audiovisual practice, and on the communication and exchange of knowledge and experiences on these same topics. From this perspective, he has mediated training spaces, shared talks, and presented concerts and works in different festivals, meetings, cycles and other specialized spaces in Abya Yala and other territories.

Since 2006 he has been developing his work from asimtria.org, an open transdisciplinary platform, focused on researching, carrying out, transferring and sharing various forms of creation based on the use, appropriation and free development of technologies applied to contemporary experimental music, listening and audiovisual, through projects such as Pumpumyachkan, Festival Asimtria, Festival Transpiksel, REUDO - Encuentro de Ruido, and others. He has also collaborated with other organizations and networks in the Latin American region.

# KCABDEEF

HPB

HPB is a newly formed trio brought together by the suggestion of Píksel. Consisting of Kerry Hagan, Miller Puckette, and John Bowers, HBP steal sounds from each other, you, and any environment, material or subtle, that they can sense, and throw it all back at each other, you, and into any environment, material or subtle, that they can access. kcabdeef is prepared especially for Píksel 2022 and is HPB's debut performance.

## Kerry Hagan

Kerry is a composer and researcher working in both acoustic and computer media. She develops real-time methods for spatialization and stochastic algorithms for musical practice. Her work endeavours to achieve aesthetic and philosophical aims while taking inspiration from mathematical and natural processes. In this way, each work combines art with science and technology from various domains. Her works have been performed in Asia, Australia, Europe and the Americas.

Kerry performs regularly with Miller Puckette as the Higgs whatever, and with John Bowers in the Bowers-Hagan Duo.

As a researcher, Kerry's interests include real-time algorithmic methods for music composition and sound synthesis, spatialization techniques for 3D sounds and electronic/electroacoustic musicology. Her research has been presented in international conferences around the world.

In 2010, Kerry led a group of practitioners to form the Irish Sound, Science and Technology Association, where she served as President until 2015.

Currently, Kerry is a Lecturer at the University of Limerick in the Digital Media and Arts Research Centre. She is the Principal Investigator for the Spatialization and Auditory Display Environment (SpADE) and President of the International Computer Music Association



## Miller Puckette

Dr. Miller Puckette (Harvard; mathematics) is known as the creator of Max and Pure Data. As an MIT undergraduate he won the 1979 Putnam mathematics competition. He was a researcher at the MIT Media lab from its inception until 1986, then at IRCAM, and is now professor of music at the University of California, San Diego. He has been a visiting professor at Columbia University and the Technical University of Berlin, and has received two honorary degrees and the SEAMUS award.

## John Bowers

John M. Bowers works with home-brew electronics, self-made instruments and reconstructions of antique image and sound-making devices, alongside contemporary digital technology. He is concerned with making performance environments, which combine sound, vision and human gesture at a fundamental material level. His work includes projects to build a music synthesizer using 19th century techniques (The Victorian Synthesizer), explorations of random circuitry (Ohm-My-God), a miniaturisation of Brion Gysin and Ian Sommerville's Dreamachine (My Little Dreamachine), and a reconstruction of early television technology (This Nightlife Instrument). John has been artist in residence at Fylkingen, Stockholm. He is co-founder of the Onoma Research label and also plays electric guitar in the fundamentalist noise rock band Tonesucker.



# TANGO FOR US TWO/TOO

Joana Chicau



**Joana Chicau** is a graphic designer, coder, researcher — with a background in dance. In her practice she interweaves web programming languages and environments with choreography. She researches the intersection of the body with the constructed, designed, programmed environment, aiming at widening the ways in which digital sciences is presented and made accessible to the public. She privileges the use of Free-Libre Open Source software, and collaborates with various international practitioners in the fields of art, design and technology — on both commissioned and self-initiated projects. She has been actively participating and organizing events with performances involving multi-location collaborative coding, algorithmic improvisation, discussions on gender equality and activism.

<-- Tango for Us Two/Too -- > is a live coding performance that merges web-programming with the choreographic language of Tango. The script focus on the dialogical nature of Tango, using Google Translate with fragments of texts from interviews with Tango dancers and practitioners. It invites us to a pas-de-deux performed by the online interface and JavaScript functions which randomise search queries and present a series of (mis)translations. An algorithmic dance sustaining glitches between the techniques and poetics of Tango, each breath a step towards the emergence of a new vocabulary for the moving.



# PLEASURE FORCE

dr. Nexus / Kris Kuldkepp

PLEASURE FORCE is a duo between Hamburg based bass guitar player and feminist performer Kris Kuldkepp and Berlin based sound artist and voice improviser Dr. Nexus.

Their performances are exploring the intersections of noise and experimental music, silence and loudness, visuality and materiality with a hint of pleasure.

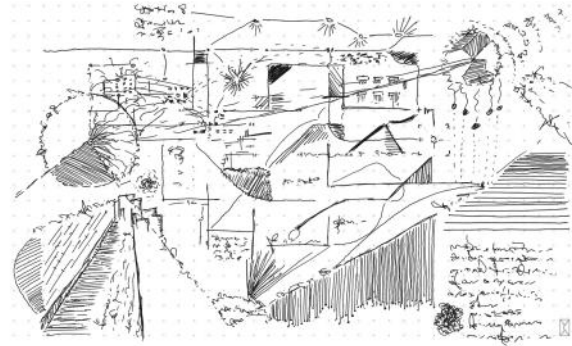


# MIMOIDALNAUBE

Michał Seta

mimoidalnaube is a videogame piece for T-Stick (<http://www-new.idmil.org/project/the-t-stick/>), a Digital Musical Instrument (DMI). It uses the Soprano version of the T-Stick, which is the smallest in this instrument family, and houses the following sensors: gyroscope, accelerometer, magnetometer, piezo, as well as pressure and 12 touch sensors. It is an evolution of a DMI that has been in constant development for over a decade. This composition is a fruit of my participation in the second composers' workshop for T-Stick, led and supervised by the inventors of the instrument, [[<https://josephmalloch.wordpress.com/>][Joseph Malloch]] and [[<http://dandrewstewart.ca/>][D. Andrew Stewart]]. It was an exciting opportunity to incorporate a DMI into my current practice of improvisation. In recent times, I have been using a video game approach as a vehicle to music improvisation and performance. Today's game engines fit well my interest in physical modeling as a mediator in human-computer interaction, visual scores and visualization in the context of live musical performance. I use different techniques of game mechanics and interaction in order to shape the musical material. The visual composition serves both as a form of a score, which invites and guides physical gesture and, at the same time, conveys information about the state of the composition. The public is a witness to the audio-visual feedback between the performer and the work.

teaser video: <https://vimeo.com/761318188>



**Michał Seta** is a improviser and researcher in digital arts. He enjoys juggling the tangible and the intangible, analogue and digital, sound and silence.

# INTERSECTIONS

Alejandra Tapia, Mauricio Román

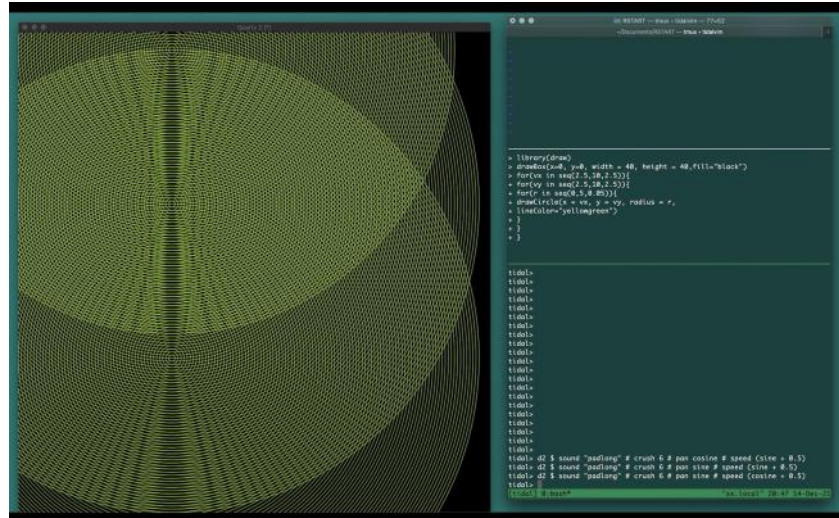
R is a free programming language for data analysis, which is defined as a multiparadigm: functional, vectorial, imperative, procedural, object-oriented. These characteristics enable the extended plasticity of its potential as a computational language, being used both for the development of scientific research based on data, and in artistic experimentation, among others.

Art as a transversal language leaves open its ability to subvert what is established. In this axiom, we propose to use R for the creation of an audiovisual artistic staging, through passages of algorithms and codes, using specific libraries for the generation of audio and images, which interact with other languages and programs for Live Coding such as Supercollider and Tidal Cycles.

This live presentation will take place as an audiovisual concert at Festival Píksel 20, and is part of the Rstart project ([www.rstart.cl](http://www.rstart.cl)), which was born out of the concern to experiment with various multiparadigm free computer programs for transversal creation and production. between media arts, science and digital culture.

**Alejandra Tapia:** Co-founder of Rstart. She has a PhD in Statistics from the University of São Paulo, Brazil. She is currently an academic at the Catholic University of Maule. She is also the founder and organizer of the RLadies Talca chapter.

<https://rladies.org/chile-rladies/name/alejandra-tapia/>

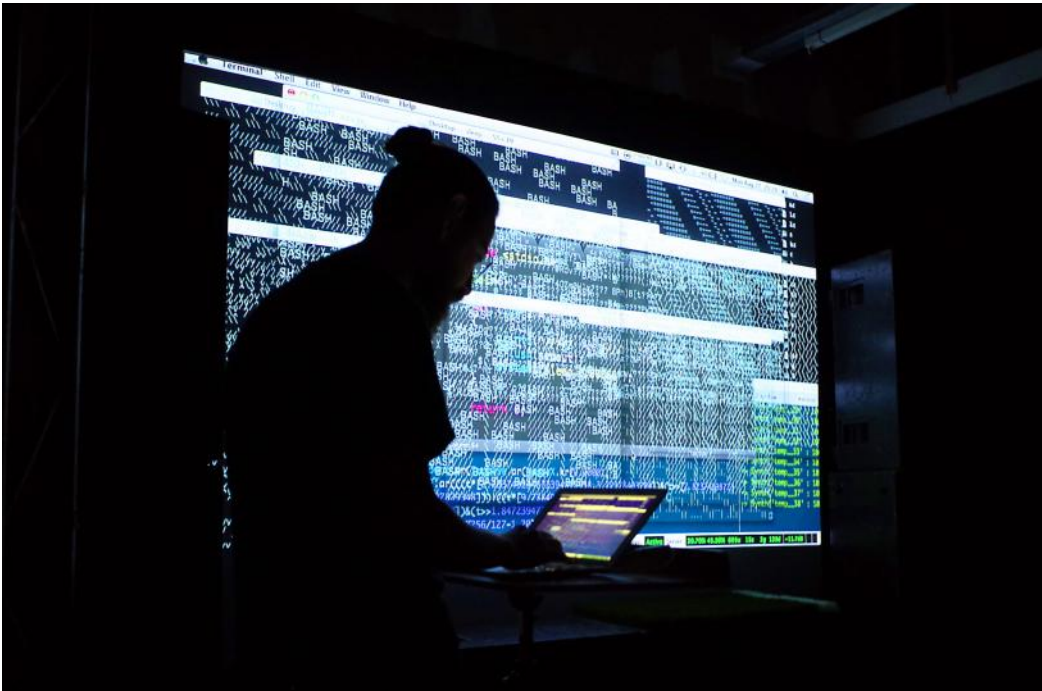


**Mauricio Román:** Co-founder of Rstart. Media artist, computational poet with an interest in the development of creative proposals and shared knowledge between the interrelation between art - science - nature through technology. He develops his work from creative computer code to audiovisuals generated in real time.



# SCREENBASHING

Magno Caliman



Currently teaches at the "Artistic Research in Music" master's programme at the Conservatorio Santa Cecilia in Rome - Italy. As a doctoral researcher working with the "Music, Thought and Technology" research cluster at the Orpheus Institute - Ghent, he investigates how technical objects can operate as active, non-transparent agents in technologically mediated experimental sound practices.

screenBashing is a live coding piece, where audio and visual materials are programmed in real time during its performance using SuperCollider for its sound components, and C for its visual elements.

Visuals are created by printing characters such as backslashes and underlines in rapid succession, while at the same time freezing the whole system several times per second, creating the illusion of animated motion.

Audio is generated via an "oneliner", and there are no refined performance controls to it, making it impossible later on in the performance to tweak parameters of something that was already generated and is being heard. Any modification on the code will create new versions of the audio, where the only possible option is to sound in superposition to previous layers, creating an accumulation which drives the narrative forward. Layers can not be paused or removed after their creation. Mistakes are impossible to be undone, and all decisions are final.

One consequence of this setup is that it is extremely resource-heavy on the computer, as it purposely freezes the whole system several times per second in order to create an animation.

This unavoidable consequence - saturation of the machine processing power - is embraced as a principle/composition guideline, and is deeply explored throughout the performance, with the computer becoming gradually more unresponsive as new animations are spawned. After a certain threshold, the system becomes erratic, up to a point where it is no longer possible to gain control of it.

### Magno Caliman

Sound artist, educator and creative coder, both his artistic and academic research activities are heavily rooted in the embracing of programming languages as places for poetical speculation, as well as the construction, modification and manipulation of electronic circuits. Has a degree in Music Composition and a master's diploma in Education, where he developed and researched learning and teaching methodologies for programming languages in the context of the arts. Former teacher of Multimedia Arts at Maia University in Porto - Portugal, and was part of the team running, managing and curating SOMAR, a venue in Lisbon dedicated to sound, art and technology.



# BIOFEEDBACK SYMPHONY

## Solar Return

Using bio-electrode module synth inputs and DIY electronic bio-sensors we will interpret the soil, weeds, moss and fungus of Bergen. The sounds produced will be decomposed by an artificial intelligence for a quadrasonic audio experience.

Stereo visuals, and upclose will catch aspects of live, electronics and organic matter.

Since 2015 Solar Return have been working on the use of organic organisms such as plants and fungi in the processes of recycling e-waste, new DIY circuit development and how these systems create feedback audio transmission using moisture and decomposition of the circuit boards.

### Solar Return

Nantes based artists Jenny Pickett and Julien Ottavi created Solar Return in 2009. Taking electromagnetic phenomena as a starting point for their audio creations. They have produced various scores for dual audio synths/oscillators/DIY electronics etc...which reflect patterns and electromagnetic events such as solar flares and inner city mobile phone masts, hidden sonic environments as well as the unfathomable audio world of kitchen appliances. Through their performances the duo tunnel deep into the world of frequency, static and sound as a physical experience, where they mix environmental recordings from the cosmos to pylons to Nuclear power plants with Live electronics and various antennas as instruments. Ottavi has been working with radio-art and open recordings since the late 1990's, from performing with pirate radio transmitters or

This begins with a few spores settling down on a nutritious surface. When these spores wake up in close proximity to one another they start germinating at approximately the same time and grow outwards as thread-like cells (hyphae) at a similar rate. The electronics feed on both the sun and wet soil, pregnant with (DIY) mycelium growth. As an information superhighway the interactions between a large, diverse population of individuals speeds up. It allows individuals who may be separated to communicate and help each other out. It also allows them to commit new forms of communication.

decentralised internet broadcasting, as well as giving workshops on the construction of electromagnetic antennas, receivers and radio-hacking. Pickett has been performing Live using huge VLF antennas as an instrument since 2013. Solar return plays with the physical space, the audience and the architecture of the venue to reveal and remix the hidden soundscapes present therein. Both defend the community of experimental music and arts, as well as FLOSS / copyleft attitudes through the project APO33, which Ottavi founded in 1997.

<http://www.apo33.org>

<http://solarreturn.bandcamp.com/releases>



# STRIP & EMBELLISH

Daniele Pozzi, Hanns Holger Rutz

Strip & Embellish is a young experimental live sound project founded in 2022 by Graz-based computer music duo Daniele Pozzi and Hanns Holger Rutz. Both have developed specific, individual digital instruments based on the SuperCollider sound synthesis language which are strongly linked together by plugging each other's sound signal into many nodes and entry points of the opposite system, creating essentially a complex non-linear feedback process. The project name derives from the fact that, on the one hand, Daniele's continuous effort is to strip down a complex feedback driven system as much as possible while maximising its expressive richness. On the other hand, Hanns Holger creates a signal graph during the first part of the concert that is then repeated in the second part as an "empty structure" which is now newly navigated and embellished by the altered live input signals. This is mirrored by Daniele's approach of finding "snapshot points" in the structure that may be recalled during the performance.



**Daniele Pozzi** is an electronic musician and artist living in Graz, AT. Among his works are live performances and improvisations, sound installations and electroacoustic music, often involving the design of original computer programs and interfaces addressing compositional or performative issues. His recent practice investigates the relation of process and form in feedback system composition, and the becoming of sound and algorithmic processes. His work appeared in international venues, exhibitions, conferences and festivals, among others: ICMC 2019 (New York City), BEAST FEaST (Birmingham, UK), New York Electroacoustic Music Festival 2017, BEK (Bergen, NO), ZKM (Karlsruhe, DE), Audio Mostly (London, UK), XIX CIM (Rome, IT), deSingel (Antwerp, BE), KM28 (Berlin, DE). Daniele holds a BA in Electroacoustic Music Composition from the Conservatory of Padua, Italy, and a MA in Computer Music from the Institute of Electronic Music and Acoustics (IEM) of the University of Music and Performing Arts Graz. He is currently pursuing his doctoral degree at the same university.

<https://www.danielepozzi.com/>

**Hanns Holger Rutz** is an artist and researcher in the field of sound and digital art, based in Graz, AT. Central to his work, comprised mainly of sound and intermedia installation, electronic music and improvisation, are the materiality of writing processes and the trajectories of aesthetic objects as they move and change across boundaries of individual works and artists. Since 2013, he worked as Pre- and Postdoc Researcher at the Institute of Electronic Music and Acoustics (IEM) of the University of Music and Performing Art Graz (KUG), most recently leading the FWF-funded project "Algorithms that Matter". In 2021, he joined the KUG's Doctoral School for Artistic Research as Senior Scientist. Starting in autumn 2022, he heads the FWF-funded artistic research project "Simultaneous Arrivals" (with Nayari Castillo and Franziska Hederer) on novel forms of collaborative artistic processes.

<https://www.sciss.de>



# INCIDENTAL EFFECTS

Giuseppe Torre

"Incidental Effects" is a three-part live coding performance.

OS: Debian

Software: ORCA, Carla, Surge-XT, QJACK

**Giuseppe Torre** [Laurea/M.Phil., MSc, PhD] is Lecturer of digital art practices at the University of Limerick (Ireland). His research interest lies at the crossings between digital art practices, open source technology/culture and philosophy. These interests respond to a questioning of the relationships between technology and art, code and aesthetics, numbers and self; a process that has so far led him to question under what forms and forces truly creative efforts may, or may not, arise. He is the author of *An Ethico-Phenomenology of Digital Art Practices* (Routledge, 2021).

His academic writings feature in journals and books by publishing houses such as MIT Press, Springer, Routledge/Taylor & Francis. As an active digital art practitioner, his works and performances have been showcased nationally and internationally. He is an advocate of FLOOS (Free and Libre Open Source Software) in the teaching and professional practice of all digital arts.



# USURPATION RITE

Angel Salazar

The dark power change hands, it reveals itself with another face. We go towards a social uprising of unthought consequences helped by the uselessness of the political class. Short lived power because he who has it will keep it while he governs for the few groups that own this country.

Usurpation Rite is a sound action that uses the gestures and voice of those who supported the social struggle in Ecuador during 2019, turning them into acoustic and mechanical energy and bringing them to the present.

## Angel Salazar

Artist, cultural manager. His work is developed in a transdisciplinary way between art and technology, exploring various narratives. His research projects articulate the relationship between sound, territory and various technologies, through the exploration of speculative and futurological methodologies. He has presented audiovisual performances in various cities in Ecuador, Peru, Chile and Argentina



# THE GESTUREWRITER

Joseph Knierzinger



The Gesturewriter is a unique tool for composing and performing text. The underlying concept is to understand writing utensils as performative instruments, similar to musical instruments! The musical instrument theremin is known for its playability without physical contact. It can be controlled through the gestures of the left and right hand. A typewriter writes characters on a sheet of paper and is used as a writing medium to store text on paper. However, the Gesturewriter combines both the theremin's gestural interaction and the typewriter's storing ability. It forms an instrument that brings together performance and writing.

People commented that the Gesturewriter has several bugs and is difficult to use. In this performance lecture, I will prove that they are wrong.

## Joseph Knierzinger

joak is Joseph Oliver Anton Knierzinger and an artist exploring the history and politics of past, present, future and anachronistic media, technology and confusion. Humor and irony is an important method in his undertakings. His compositions, devices, games, installations, interventions, instruments, lectures, performances, performance-lectures, scores and software have been shown in academies, artist-run spaces, community centers, festivals, galleries, hackerspaces, museums, radio station, squats, streets, theaters and universities in Austria, Catalonia, Croatia, Belgium, Bulgaria, China, Germany, Italy, Kugelmugel, Mongolia, Netherlands, Online, Russia and Slovenia. He works on different alogisms and algorithms in Rotterdam and Vienna.



# ROBOTCOWBOY

Dan Wilcox

robotcowboy is a wearable computing platform to explore new types of man-machine music & artistic performance. Embedded computing, custom open-source software, and audio electronics are utilized to build portable, self contained systems which both embed and embody the computation on the performer. This cyborg approach is both empowering and compromising as new sonic capability & movement are offset by the need for electrical energy: elements of tension between human and system. robotcowboy shows are always live and contain aspects of improvisation, feedback with the audience, and an inherent capability of failure.

robotcowboy's first 2006-2007 incarnation melded rock with realtime algorithmic composition tools into a dynamic live show. The second incarnation followed the story of the first human on Mars with spacesuit as portable music machine in 2013. The ongoing third incarnation explores themes of trajectories, radiation, and space travel. The future is bright, do you have room to wiggle?

**Dan Wilcox** is an artist, engineer, musician, and performer who combines live musical performance techniques with experimental electronics and software for the exploration of new expression. He grew up in the Rocket City, and has performed in Europe, Asia, and around the US with his one man band cyborg performance project, robotcowboy.



# AKIRA

Shawn Lawson, Ryan Ross Smith

Shawn Lawson and Ryan Ross Smith will collaboratively live code a single text buffer from two remote locations to perform the audiovisual work. Lawson will live code visuals with the OpenGL Fragment shader and python in Touch Designer and Smith will live code audio with Tidal Cycles.



**Shawn Lawson** is a computational artist and researcher creating the computational sublime. He performs under the pseudonym Obi-Wan Codenobi where he live-codes real-time computer graphics with his open source software, The Force and The Dark Side. Lawson's other work explores the computational sublime through a range of technology: stereoscopy, camera vision, touch screens, game controllers, hand-held devices, random number generators; and output formats: print, sculpture, mobile apps, instruction sets, animation, and interactive.

He has performed at NIME, Australia; Radical dB, Spain; ICLI, Portugal and UK; ICLC, UK, Canada, Mexico, Spain; ISEA, Canada; GENERATE!, Germany; Live => Coding, Brazil; CultureHub, NYC, CCRMA, and more. Shawn's artwork has exhibited or screened in museums, galleries, festivals, and public space in England, Denmark, Russia, Italy, Korea, Portugal, Spain, Brazil, Turkey, Malaysia, Iran, and Canada; locally in ACM SIGGRAPH, IEEE ProCams, ACM MM, The Art Institute of Chicago, Milwaukee Art Museum, Chelsea Art Museum, Eyebeam, Aperture

Foundation Gallery, Nicholas Robinson Gallery, MIT, OSU, ASU, and LTU. He has given workshops on programming or live coding in Europe and the USA. Shawn is published in the proceedings of ICLC, ACM CC, ACM SIGGRAPH, ACM SIGCHI, ACM MM and the Journal of Electronic Dance Music Culture.

Lawson has received support from from the Electronic Media and Film Program at the New York State Council on the Arts, the Experimental Television Center's Finishing Funds Program, Kamel Lazaar Foundation, CultureHub's Micro-Residency, and Signal Culture's Toolmakers in Residency. Lawson studied fine arts at Carnegie Mellon University and École Nationale Supérieure des Beaux-Arts. He received his MFA in Art and Technology Studies from the School of the Art Institute of Chicago in 2003. He is an Associate Professor and Animation Area Coordinator at Arizona State University and selectively consults for independent artists and commercial R&D.



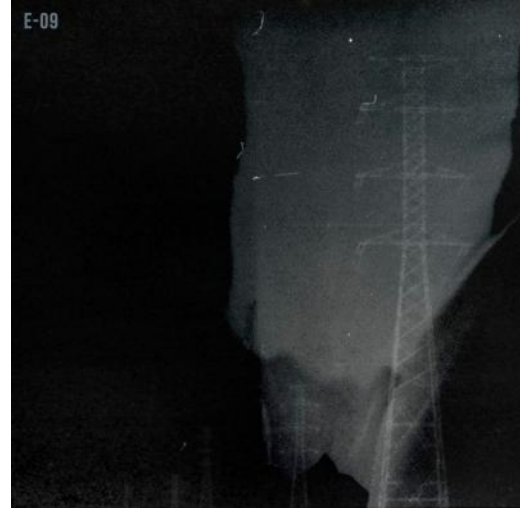
# E-09

Alexandra Maciá, Seamus O'Donnell

E-09 focuses on producing a live sound aesthetic composed of a collage of influences. While the live input of voice and electronic instruments is important, so are the frequencies of the radio bands and electromagnetic spectrum. Sources can include LW, SW and FM radio, where local electronic devices along with self-built mini FM transmitters interfere with normal reception. Power supplies feeding the devices used provide a color palette of EM spectrum tones to intuitively discover and manipulate. Other sources of electromagnetic sounds are the motors of the instruments used, such as the Dictaphone and the CD player picked up by a DIY broadband receiver for electromagnetic radiation. Other DIY instruments used are a digital circuit bending synthesizer and a circuit curve enhancer.

Once captured all these elements are filtered, dissected and then superimposed on themselves through repetition of patterns which in turn are destroyed - generating an organic, dynamic and progressive audible universe.

E-09 is collaborative live audio project developed by Alexandra Maciá and Seamus O'Donnell at the end of 2021. Their combined explorations envelop a wide range of approaches and intended outcomes. Always welcoming of fresh challenges E-09 thrive on a DIY attitude with an eye on the visualization of sound within the minds of their audience.



**Alexandra Macia** is a sound artist from Granada, Spain. Since her move to Berlin in 2015, she has been investing in analog sound and working with handmade instruments, sound recordings, loops, feedback, and electromagnetic signals which she processes using a modular synthesizer to sculpt cinematic compositions through the deconstruction of textures and noise.

**Seamus O'Donnell** works can include radio frequency experiments, manipulated field recordings, self made devices, amplified objects and magnetic fields, no-input mixer as well as other more traditional instruments and voice. Improvisation is probably the most important factor.

As an organiser O'Donnell works with the registered association, Salon Bruit e.V., a platform for experimental music and with ColaBoraDio, a part of the Freien Radios Berlin Brandenburg, as presenter and programmer on the local frequency 88.4FM.

# ALL MY PIKSELS: A MOMENTARY ARCHIVE

We saw all the colours at The Flip-Flop Flop-Film Film-Club and learned our alphabet with Xerxes who Must Die, And So Must You And I (2011). Wearing god helmets, we made Experimental Communications, wrapping copper wire around our bodies and haunted rocks, and we transmitted to broken televisions (2012). We touched the bare pins of circuitry and microcontrollers to display The Peacock's Tail (2013). We walked to where the witches were burned, the warship sunk, and followed the steps of the Isdal Woman as Bergen Invocation (2015). We used salt water to reprogram a Turing Machine which we saw and heard execute its algorithms in Turing Tape Music: The Sea Is Ground (2016). We prototyped The Universal Transformation Machine (2018). We walked there and back, there and back, there and back, there and back,



while live streaming in LOOPS (2020) and The Rose Walks (2021). All My Piksels is a performance which revisits all the past works I have been involved with at Pikel, remixing and refashioning their ideas, devices, sounds and images, into a momentary archive.

**John Bowers** is an artist-researcher with an academic background in the social and computing sciences, design, music and critical theory. As an improvising musician, he works with modular synthesisers, home-brew electronics, reconstructions of antique image and sound-making devices, self-made software, field recordings, esoteric sensor systems, experimental film, and spoken text. He often combines performance with walking and the investigation of selected sites to research an imagined discipline he calls 'mythogeosonics'. He has performed at festivals including the collateral programme of the Venice Biennale, Experimental Intermedia New York, Transmediale/CTM Vorspiel Berlin, Pikel Bergen, Electropixel Nantes, BEAM London, Aldeburgh Festival and Spill Ipswich, and toured with the Rambert Dance Company performing David Tudor's music to Merce Cunningham's Rainforest. He contributed to the design of The Prayer Companion - a piece exhibited twice at the Museum Of Modern Art (MoMA), New York, and acquired for their permanent collection. Amongst many musical collaborations, he works with Sten-Olof Hellström, Tim Shaw, Kerry Hagan, with Paul Stapleton and Adam Pultz Melbye in the telematic improvising trio 3BP, and in the noise drone band Tonesucker. He helps coordinate the label Onoma Research, is a director of Allenheads Contemporary Arts, a trustee of Monkfish Productions, and a Visiting Scholar at SARC, Queen's University Belfast.

<https://www.instagram.com/johnthomodulator>



# VENTRILOQUIST ONTOLOGY

Afroditi Psarra



**Afroditi Psarra** is a transdisciplinary artist and an Associate Professor of Digital Arts and Experimental Media (DXARTS) at the University of Washington. She holds a PhD in Image, Technology, and Design from the Complutense University of Madrid. Her research focuses on the art and science interaction with a critical discourse in the creation of artifacts. Her practice builds on and extends the work of Cyber and Techno-Feminism(s) and the idea of female (and feminized) bodies as matrices of information. Her work has been

presented at international media art festivals such as Ars Electronica, Transmediale and CTM, Eyeo, Píksel, and WRO Biennale between others, venues like Bozar, Onassis Stegi, EMST (Greek Museum of Contemporary Art), Walker Art Center, and published at conferences like Siggraph, ISWC (International Symposium of Wearable Computers), DIS (Designing Interactive Systems), C&C (Creativity and Cognition), and EVA (Electronic Visualization and the Arts).



The continuous implementation of AI and ML systems in all areas of technological artifacts, including art, is challenging the ways in which we understand the world around us and urge us to consider other-than-human entities and 'objects' as equally important as human beings. In an exploration of such philosophical ideas that stem from the realms of Posthumanism, Actor Network Theory and Object-Oriented Ontology, 'Ventriloquist Ontology' encompasses the creation of a modular wearable, trained using Natural Language Processing to create its own personality that manifests in the form of speech and movement actuation. It explores the limits of control and points of hybridization between the human and the machine through the relationship of a performer and a wearable entity. This ventriloquist modular soft entity speaks through text generated using a GPT-2 language model, trained on a dataset of texts around biopolitics, algorithmic governance, the surveilled body, and queer theory. Inspired by Alejandro Jodorowsky's dystopian theatrical play *The School of Ventriloquists*, this project manifests the idea of 'soft control' through the creation of a wearable that takes over the wearer's body and converts them into a puppet whose movement is dictated by what they wear.

The softness aspect of this control refers to the plasticity of the interface, the malleability of its hardware connections (mainly soft silicones wires), the suggestive nature that the GPT-2 generated text pertains to, and the indicative nature of the movement of the actuators (some of them rather than radically moving the body, offer a suggestion as to how the

body can follow their rhythm of actuation). Sequentially, it brings forth the soft data of the body inextricably linked to ideas of care and intimacy, as well as to the pliability of the different levels of interpretation between the human and the machine. The aspect of control is tied to the cybernetic idea of steering the body to its optimal movement through a feedback loop between machinic language, and human assimilation. It also deals with the hardness of the linear actuators and the microcontrollers that manipulate them, to the domination of these mechanical components over the softness and vulnerability of the human flesh. It asserts the supervision of the artist over the system, on the curation of the content of both the generated text, and its performative aspect. Ultimately, the idea of ventriloquism is used to give agency to an ontological entity comprised of subtle suggestive wearable modules, human flesh and cognitive motor abilities, born-digital, able to produce novel language, but also conditioned to reproduce the biases of its algorithmic parts.



# META MUSIC MACHINES [FLUORESCENT MARKOV BEAT]

Oskoff

MMM [Flourescent Markov Beat] is the first brunch of the MMM series. In a installation/concert format, MMM\_FMB with a minimalist and reductionist approach, addresses the rhythmic question and the synesthesia between light and sound.

It consists of an a square array of LED light tubes that turn on and off following a sequence of states generated by a "markov chain model". This stochastic and "bastard" model is created from the analysis of heterogeneous and diverse folk music rhythms sources. The sound also follows the sequences and it is generated by transduction and amplification of the light and accompanied by digital synthesis.

more info >>

[https://noconventions.mobi/noish/hotglue/?MMM\\_FMB\\_eng](https://noconventions.mobi/noish/hotglue/?MMM_FMB_eng)

## Oskoff

Independent artist, researcher and programmer working in the field of algorithmic poetics and the study of generative and complex systems applied to the artistic context in different formats: sound art, installations and performance always under the premises of DIY and DIWO. His artistic practice could be understood as a "polyhedral" device of knowledge where art, science and technology converge and hybridize from a unorthodox, critical and experimental approach.

His works have been seen and / or heard in different spaces for contemporary art and international festivals: La Batie Festival in Geneva (Switzerland), International Image Festival Manizales (Colombia) , Festival Píksel in Bergen (Norway), Radio Museo Reina Sofia in Madrid, NK-project in Berlin (Germany), Electropíksel in Nantes (France), among others..

meta music machines, general

[https://noconventions.mobi/noish/hotglue/?](https://noconventions.mobi/noish/hotglue/?MMM_description_en/)

[MMM\\_description\\_en/](#)



# PRESENTATIONS



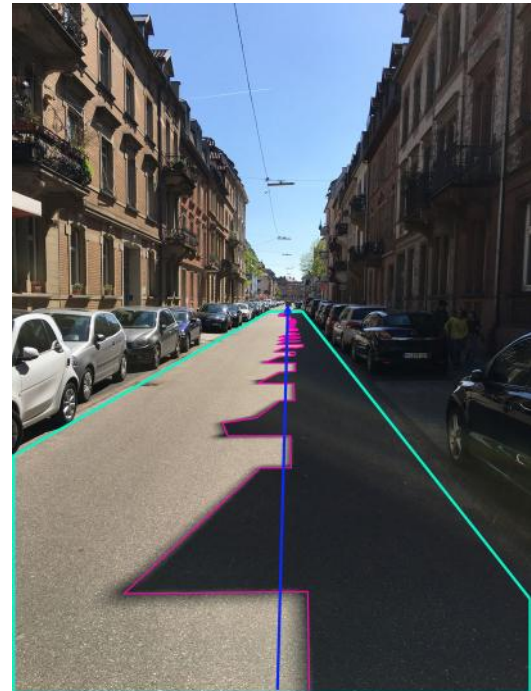
# SHADOWPLAY

Dan Wilcox

ShadowPlay is an exploration of the architecture and light in outdoor spaces through sound. Using a bicycle-mounted smartphone as a brightness sensor and a bluetooth speaker, the mottled patterns of light and shadow become the musical score as one rides along city streets.

The project is realized as an open source iOS application which uses one of the device's cameras as a brightness sensor. Custom audio scenes generate live sound in response to the changes between light and shadow detected by the smartphone. You can even create your own sound scenes using the Pure Data computer music environment.

**Dan Wilcox** is an artist, engineer, musician, and performer who combines live musical performance techniques with experimental electronics and software for the exploration of new expression. He grew up in the Rocket City, and has performed in Europe, Asia, and around the US with his one man band cyborg performance project, robotcowboy.



# TEXT

bjørn magnhildøen

```
Text
>iiHKV by Piknik Frequency
>konferansen Åcã-Åpik53iãcã-Å ()
>var en knallsuksess, og nåv vil staben
>hulle på sine
>iÅlten er helt nydelig
>hva med -shruge?
>earth blue dot
>- GA - FLOSS in action
>no word from about the seeming lost routers, i'll try a last time
>real sorry there's no progress here. no response
>haven't heard more from regarding prints
>I wonder if all will work out (router and wireless) and people
>ould to, yam-ichi/Cf. and admin. All in all i got 30 000 n.kr
>by the way could you ask to send the stuff back after the show
>i think people going to festival or pass close by :)
>could prepare the box and send it
>via : live koding med xxxxx/Martin Howse
>fleste fokus andre steder. Har du snakket med Gisle
>dot kunne ligge ei lottrekke bek hvor eller en premie
>uansett har 5.4 millioner pikaler og 1 gullrekke
>kan godt tenke meg
>network problems (a few shared cables
>I Can have respond to one of
>and I was wondering
>course should preferably pay for things
>fallback: show shrug in sauer
>what are the local societal defines of
>bergen approximately 3.2 km away
>this morning made me thinking of forming a simple proposal
>strategically placed around the defines, on and offline: of
>ui?beklager digresjonerÅcã-Åuansett en ligger påÅx1015. y1258(tipset var
>kunst-stil av natur norge
>[DIR] raate/
>es belongs to you, otherwise, the right holder could fine
>and some other things to think about like and i still wander
>Kiratyn here!
>when it comes to the buoy
>i was looking at the call by
>i was looking at the call by
>i was looking at the call by
```

## bjørn magnhildøen

I've been involved with networked art through some decades, from mail art to internet art. My field of interest is the phenomenology of the digital, netbased, and virtual, and its place inside or outside the art discourse. Special interest: object, production and existence; technology and precarity; hybrid platforms virtual/physical; the formless, cryptographical, vestigial; drunken trolling, psychogeography, spam.

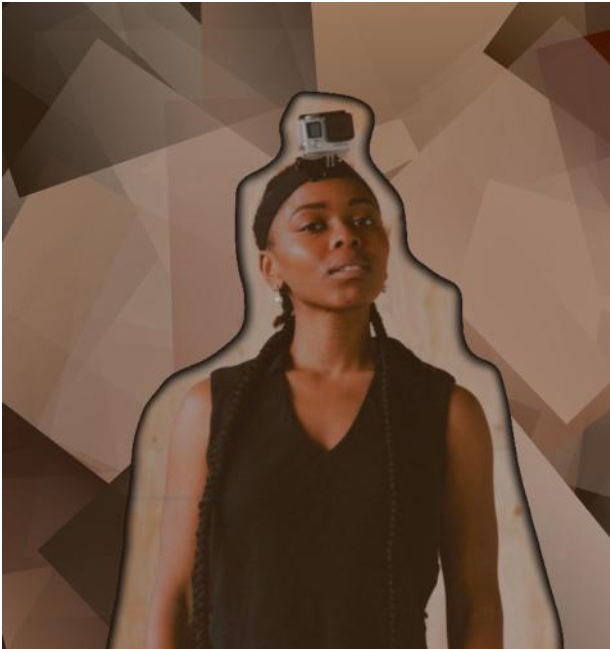


# CODING : BRAIDING : TRANSMISSIONS

Isaac Kariuki

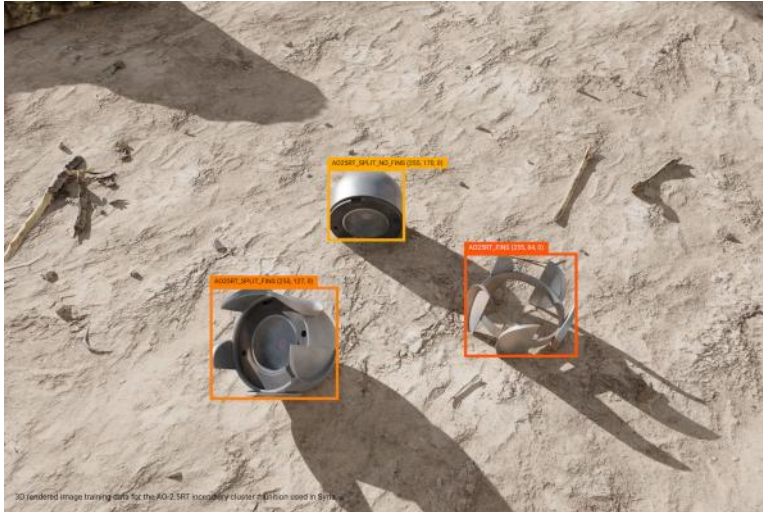
CBT (Coding : Braiding : Transmissions) is a collaboration with Tamara Clarke-Brown as an experiment in speculative technology, combining the DIY practices of coding and braiding. CBT explores these two practices as tools for sending encrypted messages to escape totalising surveillance of black communities globally. The performance installation comprises of women braiding each others' hair with a GoPro camera attached to their heads. The camera and accompanying software translates their hand movements into encrypted messages that the women send to each other throughout the performance.

**Isaac Kariuki** is a visual artist and writer whose work centres on surveillance, borders, internet culture and the black market, in relation to the Global South. His work has taken the form of image, video, lectures, writing and performance. He has exhibited at the Tate Modern, Kadist (Paris) and the Kampala Art Biennale among others as well as holding lectures at the Tate Britain and Yale University.



# VFRAME

Adam Harvey



VFRAME.io (Visual Forensics and Metadata Extraction) is a computer vision toolkit designed for human rights researchers. It aims to bridge the gap between state-of-the-art artificial intelligence used in the commercial sector and make it accessible and tailored to the needs of human rights researchers and investigative journalists working with large video or image datasets. VFRAME is under active development and was most recently presented at the Geneva International Center for Humanitarian Demining (GICHD) Mine Action Technology Workshop in November 2021.

**Adam Harvey** (US/DE) is an artist and research scientist based in Berlin focused on computer vision, privacy, and surveillance. He is a graduate of the Interactive Telecommunications Program at New York University (2010) and is the creator of the VFRAME.io computer vision project, Exposing.ai dataset project, and CV Dazzle computer vision camouflage concept.



# HAPTIC BOX AND ITS ENTANGLED FLOWS

Dave Riedstra

---

Haptic Box is a DIY self-constructed tactile sound sculpture – though it might be more of an event score, it can be used as an instrument, has some attributes of a composition, and my own build is getting to be a nuisance. The physical thing is a wooden box with stereo transducer input and output and all the related electronics onboard. As a sound-sculpture, the piece uses low-frequency feedback to entangle a “listener” into its algorithmically unfolding process through the listener’s handling of the surfaces which the tactile vibrational feedback plays out on. As an instrument, a pair of stereo phono jacks and related routing switches provide the possibility to use the box as a character input, output, or filter, or for feedback with external processing.

This presentation will introduce Haptic Box and dig into some implications of what it means to DIY a sound sculpture. By saturating the experience of “the piece itself” with the listener’s history as its builder, Haptic Box intermingles the would-be detached and transcendental aesthetics of the fine art frame with the more involved experiences of gathering and manipulating material and software. This mixed relationship can lead to a feeling of responsibility toward the object as well as a broader appreciation for materials and the labour of making. But what happens with the object “after” it has performed its role as a sound sculpture? Thinking with Yuriko Saito, Sarah

Ahmed, and N. Katherine Hayles, I suggest that living with an object like Haptic Box can provide everyday aesthetic experiences of distributed cognition and socio-material feedback processes. In the spirit of these thinkers, I will discuss my own personal history with the project and the box that I built to further suggest an aesthetics of entangled ongoingness. Living with self-built projects, maintaining them, and contributing to others are ways in which DIY, FOSS, and open knowledge communities can shift cultural mindsets to more equitable and sustainable patterns through an aesthetics of flaws and flows.





**Dave Riedstra** (b. 1989, Brampton, Ontario, Canada)

I work with sound, mostly quiet, in a variety of modalities including composition, sound art and installation, double bass performance, and code. Focusing variously on material, process, experience, feedback, and transduction, I try to offer an immediate sensation of engagement with entangled environments, networks, assemblages, and milieux. Though facilitating these aspects of experience has long been my main goal, recently I have been increasingly considering how co-composition and sympoiesis play out in the processes of my own practices. This has led to additional interest in debris, an image of art as byproduct, and a transient conception of author, performer, listener, and maker to match an object which looks more like a process.

I engage with open source software, hardware, and art as a means of fostering non-capitalist creative, restorative, and sustaining practices. I develop a few open software and hardware projects and I release music online as an unsteady stream of detritus scrap recordings from my electronic sound practice, alongside code snippets and patch notes. Find me online as @dried on various platforms or through my website at <https://daveriedstra.com>.



# DIGITAL CULTURE & CYBORG BODIES

Idun Isdrake

Through a counter tactic perspective, with planetary accountability, Isdrake's work and research prototype diverse human computer interfaces and narratives, aiming to limit bias in the development of new technologies and science (fiction). This includes working with datasets for AI systems, diverse narrative design, testing environment friendly solutions for powering and disposing of used technologies, as well as proposing inclusive interfaces.

The presentation will include Isdrake's process for work with diverse and accessible design, and demo of a few of their art works.

The demos will mainly focus on implanted interfaces based on Near Field Communication technology (NFC). Isdrake has a couple of audiovisual experiences linked from its body, some developed with other organic or inorganic entities. Creating an endosymbiotic relationship between human flesh and other entities, an intimate dialogue only accessible through consent. Games, music and other expressions can be communicated through body modification, a human practice with ancient history, often connected to identity expression but also trauma and oppression. Embodied technologies and digital art as a voice for the silenced voices and disabled bodies, is one of the strongest motivations behind this work. The format is best live in a room, with soundsystem and projectors, where the audience can come close to see and demystify the hardware, and have a dialogue with the artists. Depending on budget and

resources the demo can include a video installation. Research documentation

<https://imperceptible.space/>

**Idun Isdrake** is a game designer, film, stage and transmedia director, moving in the inbetweens and unknowns, hacking forced power structures. Inclusion and diversity is at the core of its productions, ranging from computer games linked from its body, to film noir and landscape photography. Isdrake is the founder of Swedens first game and transmedia lab, The Collaboratory, as well as first game art gallery, Epic Unidragon. Their work includes many years of building a better infrastructure for digital culture in Sweden and globally, in dialogue with communities in hacker labs, makerspaces, museums, libraries, the EU Commission, academia and various industries. Currently Isdrake is doing PhD research at Concordia University Tiohtià:ke/Montréal.



# JOURNEY TO THE PLANET OF NUCLEAR CHEWING GUM

Vera Sebert



How can we characterize the cinematic narrative, which is in a netbased environment no longer tied to chronological sequences? How does actual information deform under the manipulating influence of the viewer? The webproject JOURNEY TO THE PLANET OF NUCLEAR CHEWING GUM is formally based on experimental film, poetry texts and interactive netart, arranged in several layers. Digital images of different objects are assembled in the picture's foreground and overlapping found and newly assorted footage. They can be rearranged randomly by drag and drop. Each movement of an object is linked to one individual sound snippet and a random subtitle. By interacting viewers create a strong varying narrative form which manifests in the space between text, image and film.

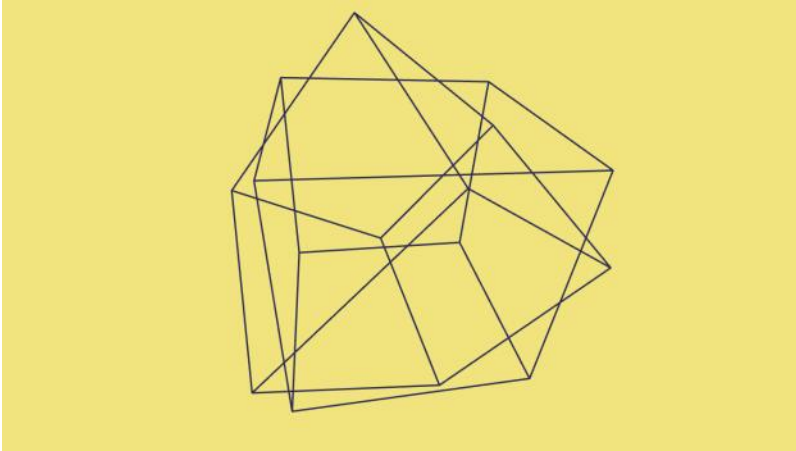
**Vera Sebert**, \*1987 (DE), Media Artist  
2007- 2015 Fine Arts at University of Fine Arts Braunschweig and Academy of Fine Arts Vienna. 2015 - 2019 Language Arts at University of Applied Arts Vienna. Artistic works in the border areas of visual media, language, film, computer programs: Computer code allows the adaptation of all other media whose properties are imitated, fragmented and reassembled in virtual space. The hybrid exposes the categoric separation between artistic image and text production and creates a space for experiments that explore the mesh of code, image, sound and language in a digital environment. Most recent international exhibitions and screenings: Hamburg International Film Festival (DE), Vector Festival Toronto (CA), House of Electronic Arts Basel (CH), Eclat Festival Stuttgart (DE), Cairotronica (EGY). 2017 Artist in Residency at Künstlerdorf Schöppingen (DE). 2018 Hannsman-Poethen Grant for Literature (DE), Styria Artist-in-Residency (AT). 2019 Subnet Artist-in-Residence, Salzburg (AT), 2020

<https://verasebert.com>



# RITMO 2021: A CODE GENERATED EXPERIMENTAL/ANIMATION SHORT FILM

Luis Fernando Medina Cardona



Ritmo 2021: a code generated experimental/animation short film

"Rhythm 2021" is an abstract animation short film product of a research-creation process carried out at the Faculty of Arts of the Universidad Nacional de Colombia (Bogotá) by the research group "Espacio de Producción Abierta de Medios" (Open Media Production Space). It is based on a formal experimentation with abstractions initially inspired by the short film "Rhythmus 21" by Hans Richter (Germany, 1921) and it proposes computer code as a new materiality for audiovisual creation in an analogous way to what celluloid represented a century ago in Richter's short film. This version, called "prototype" because the short film can be considered a computer program, is a video rendering of the original program coded on the creative coding language Processing. All images and sounds were generated by

computer code on this language, thus questioning the old duality between image and words, since the whole proposal was written in instructions to be interpreted by a computer. Following this, another paradigm of

audiovisual production is re-experienced where the workflow is closer to software production than to normal audiovisual authoring. Although computer generated films are not new, the containing of sounds and moving images in a single textual artifact and the free software ethics used offer a new perspective. Thus, "Rhythm 2021" is an integral experiment in form, product and creative process. Consequently the distribution of the short film is also software inspired. There is a "binary" form of the film, the final video render to be experienced on-line, mostly using a password to comply with the restrictions of most of

---

the cinema festivals. But also the source code of the film can be downloaded from Github, allowing viewers to remix the film if they have the Processing language. For the aforementioned reasons, this project can be seen as an experimental film, an animation film or a software art piece.

Although the short film coded in the Processing creative coding language can be considered the main media artifact, there are another complementary artifacts. These are created using free software tools and ethics:

- 1 An explanatory fanzine designed on Scribus and Inkscape an published on the archive.org for free downloading.
- 2 An experimental app for the android system where the film can be watched on mobiles phones without being on-line and using just 3M of storage.
- 3 Academic papers from different stages of the project published in open access conferences and journals.

In this way, Ritmo 2021 offers a network of artifacts reflecting on the main short film piece where the free software ethics are embodied in the used tools, prototyping process and distribution channels. Moreover, the whole project develops our own concept called "Transmedia Punk", in which free software practices are hybridized with the alternative media tradition (fanzines) or current related academic debates as open access and open science tenets.

These artifacts can be reached at: <https://linktr.ee/ritmo2021>

### Luis Fernando Medina Cardona

I am an associate professor at the School of Film and Television and hold a PhD in media arts and sciences from the Academy of Media Arts Cologne, Germany (Kunsthochschule für Medien, Köln - KHM). I am interested in the interaction between art, science and technology from an interdisciplinary perspective. Both my theoretical and practical work is related to free software and culture, collaborative creation methodologies and alternative media. I combine teaching and research with creative practices based on hacker ethics, DIY (do it yourself) and DIWO (do it with others). Also, open knowledge and the research-creation paradigm in a framework of southern epistemologies. My interests also extend to decolonial code studies and the ethical and artistic implications of algorithmic culture. I currently coordinate the research group </espa>"Espacio de Producción Abierta de Medios" (Open Media Creation Space) at the Faculty of Arts of the Universidad Nacional de Colombia and I am one of the co-editors-in-chief of the journal "Actio: journal of technology in design, film arts, and audiovisual



# CREATIVE PCB DESIGN FOR MANUFACTURING USING SVG2SHENZHEN

Budi Prakosa

**SVG2SHENZHEN**

## **DIY Design for Manufacturing**

**Artistic printed circuit board designs using Inkscape, SVG2Shenzhen and KiCad**



There are some incredible PCB art projects out there, and approaches to creating non-standard shaped PCBs have varied and frequently been complex. Svg2shenzhen is an Inkscape extension that allows you to draw directly on KiCad equivalent layers in Inkscape and export them as KiCad projects. These projects can be sent directly to manufacture or tweaked and expanded using the standard KiCad workflow.

**Budi Prakosa** is a self-taught programmer and open source software developer who is interested in the wide range of possibilities in creative coding. In 2009, he launched a project as a VJ called Manticore, which mixed interactive coding with graphic data visualization. He has a background in industrial engineering and is interested in image and sound processing, generative art, and science-art collaboration.

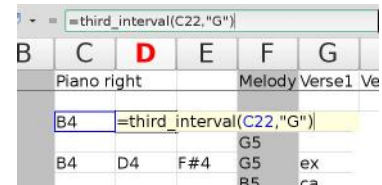
# I MAKE MUSIC AND VIDEOS WITH STATISTICS SOFTWARE.

## MusikeR

I make cheesy music and with animated videos in statistics software. To do this, I write music composition libraries or extensions for these various softwares. It works just like any other electronic music, but it's funnier when you use statistics software. I'll show some examples mostly in R, explain how they work, and recount some things I have learned about humanity through this endeavor.

### MusikeR

My favorite activity is sleeping, and after that I enjoy pointless things like scalable astrology, children's songs, and data-driven music.



The screenshot shows a music notation software interface. At the top, a formula bar contains the text `=third_interval(C22,"G")`. Below this is a piano roll with a grid. The columns are labeled with notes: B, C, D, E, F, G. The rows are labeled with piano parts: Piano right, Melody Verse1, Ve. The cell at the intersection of the B column and the Melody Verse1 row contains the formula `=third_interval(C22,"G")`. Below this cell, the notes G5, B4, D4, F#4, G5, and B5 are listed.

	B	C	D	E	F	G
Piano right						Melody Verse1 Ve
	B4	=third_interval(C22,"G")				
				G5		
	B4	D4	F#4	G5	ex	
				B5	ca	

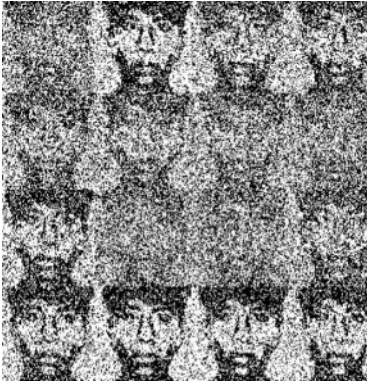


# GENETIC ALGORITHMS AND ITS CREATIVE POSSIBILITIES

Manuel Mendoza

Genetic algorithms are often used to solve various computational problems, however, they have various creative possibilities, among which are the generation of images, sounds and text.

In addition, they are one of the first artificial intelligences applied to art.



**Manuel Mendoza** (Mexico, 1997).

Artist and Digital Communicator from Universidad Autónoma Metropolitana. He is currently accepted to study Interface Cultures Master programme at University of Art and Design Linz, in Austria.

He is a professor of creative code at CENTRO University of Design, Film and Television in Mexico City.

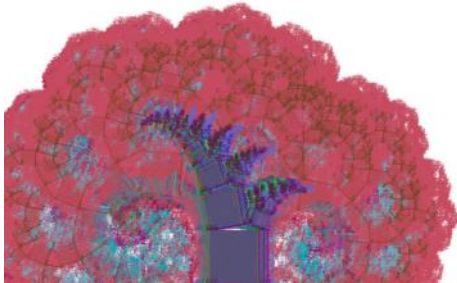
He works as an electronic artist and focuses his work on the creative and aesthetic possibilities of technology. He has exhibited his work and given talks, conferences and workshops in various museums, festivals and events dedicated to computational creativity in countries such as Mexico, Argentina, Spain and Ecuador. In places like the MediaLab Prado in Madrid, the OpenLab in Ecuador, the Fonoteca Nacional in Mexico, among others.



# TAPER, AN ONLINE MAGAZINE FOR TINY COMPUTATIONAL POEMS

Nick Montfort

\*Taper\* is an online literary magazine at <http://taper.badquar.to>. The magazine is now in its eighth issue and publishes tiny, stand-alone computational poems. They are \*tiny\* in that they occupy no more than a few kilobytes — the limit has been 2KB for several issues. They are \*stand-alone\* in that all you need is what is the single Web page of the poem; no Google fonts or connections to other APIs are involved. They are \*computational\* in that they are made of HTML, CSS, and JavaScript, taking the form of interactive games and text generators among other things. They are \*poems\* in a broad sense, with many of the works featured not being in any human language. And they are all \*free software,\* available under an all-permissive license for study, sharing, and reuse. By publishing this twice-yearly magazine, edited by an independent collective, I hope to encourage people to explore language and literary art, and its intersection with computing, in new ways.



**Nick Montfort** is a poet and artist who uses computation as his main medium and seeks to uncover how computing and language are entangled with each other and with culture. His computer-generated books include *#!* and *Golem*. His digital projects include the collaborations *The Deletionist* and *Sea and Spar Between*. Montfort also studies creative computing. MIT Press has published his *The New Media Reader*, *Twisty Little Passages*, *The Future*, and *Exploratory Programming for the Arts and Humanities*. He directs a lab/studio, *The Trope Tank*, and is professor of digital media at MIT. He lives in New York City.





# OPEN WAVE-RECEIVER

Shortwave Collective



Building Open Wave-Receivers enables DIY communications reception, and allows anyone to freely listen to the broad spectrum of radio waves around us. All you need are a few easy-to-procure supplies and, if you want to try it, a neighborhood fence or other receptive antenna proxy.

Why a fence? Antennas are necessary for radios to receive signals, and many things can be antennas. Fences can make great, and very long, antennas! Other materials can work well too; even a tent peg can become a useful part of a radio. Open Wave-Receivers allow us to explore the relationship between different combinations of materials, antennas, and radio waves, creating a new technology literacy, a new medium for artistic expression, and a new way to explore the airwaves in our communities.

We have found making Open Wave-Receivers to be a fun adventure. The ability to use simple scraps to create variety and personalization in each radio makes this a great maker project for anyone wanting to play with radio.

[Shortwave Collective](#) is an international, feminist artist group established in May 2020, interested in the creative use of radio. We meet regularly to discuss feminist approaches to amateur radio and the radio spectrum as artistic material, sharing resources, considering DIY approaches and inclusive structures. Members include Alyssa Moxley, Georgia Muenster, Brigitte Hart, Kate Donovan, Maria Papadomanolaki, Sally Applin, Lisa Hall, Sasha Engelman, Franchesca Casauay, and Hannah Kemp-Welch



# SENSORS AND PD

Kris Kuldkepp

Lecture and workshop on sensors and motion capture in new music and multimedia performance.

The performer's body is classically considered secondary in presenting a musical piece. After all, the composer's name and the idea of self-contained artwork are predominantly the reasons for a concert visit rather than particular performer(s) and their performing modes. Thus, for a classically trained musician, it presents a conflict of being essentially a practical tool in the service of a composer rather than a creative agent. However, the research in various music performance studies has resulted in a diverse quest for the importance of musical gestures and performers' physical movements in transmitting the meaning. Do some movements or gestures of a performer make the music meaningful? How could one classify musical gestures? How is acousmatic music perceived? How to understand electronic music in which the sound production is decoupled from physical gesture? ... These and more are the open questions that circle in musical gesture research. The focus on the importance of musical gestures has influenced composers and performing

musicians to create pieces and improvisations that experiment with motion capture and various sensors to create musical experiences. The lecture introduces the usage of sensors and motor capture systems in new music and multimedia and discusses the philosophical concepts motivating the research.

The lecture is followed by a practical workshop for absolute beginners in Pure Data (Pd) and programming for movement sensors. It will introduce the first steps for processing the data and the necessary algorithms.

The participants should bring their personal computers and preinstall Pure Data Vanilla (<https://puredata.info/downloads/pure-data>) as well as external libraries "Cyclone" and "else".



---

In order to install the externals, please start up Pure Data and use Pd's own external download manager:

- go to the "Help" menu
- choose the "find externals" option under the Help menu
- search for "cyclone".
- Then click on the link to download the "cyclone" to your computer and specify the search path. (By default it should be ~/Documents/Pd/externals).
- Do the same process with the "else" externals.

Now the external libraries are installed in your computer

In order to load the libraries at the startup:

- go to "Preferences" menu in Pd
- choose Startup",
- then click "New", type "cyclone" and hit OK.
- Do the same with "else" library.
- Next time you restart Pd, the libraries will be loaded and ready to use.

Also, please download this folder with sound files into your computer. We use these sound files during the workshop as examples.

<https://drive.google.com/drive/folders/12znhQbAJnaXWWrMLFPtIS6CZ9h85QhPP>

As sensors, we will use our smartphones, and participants should also preinstall an app PdParty (iOS) or Sensor2OSC (Android) on their phones. A computer mouse can be used to stimulate the data stream.

During the workshop, we will build examples in Pure Data that introduce the first essential steps in creating music with sensors and what to do with the raw data. No previous experience with Pure Data is required.

Kris Kuldkepp



# CREATIVE PCB-DESIGN WORKSHOP

Marc Dusseiller

Creatives, designers, painters welcome! No previous knowledge in electronics or circuit design is needed.

As a creative design / drawing workshop we want to explore how creativity can be use to make unique designs of fuctional electronic circuits. We also will discuss what means Open Hardware and why sharing detailed instructions can lead to a diversity of personal designs and improving the accessibility for DIY electronics workshops.

In this creative drawing workshop, we will learn the most basic introduction to read schematics of electronics circuits, and how to implement it as a functional PCB (Printer Circuit Board) where all the connections are drawn in copper. We will learn what are footprints of components and what are the different "layers" for preparing a PCB design for manufacturing (in China factory of DIY home etching).

This workshop also serves for re-thinking the diy-CAD methodology (do-it-yourself Children Aided Design) and applying it to the fork of the peepsy, based on the Continuity Tester by David Johnson-Davies. The peepsy circuit is based on the ATTINY85 functions as a continuity tester, the famouse "peeps" of every multimeter, that allows you to test if an electric connection is present, testing your aux cables, or debbuging other electronics. And it has a pink LED on it!

## What circuit will we do?

The example circuit is based on the peepsy, by Michael Egger (a.n.y.m.a.) and it has even a practical function as a continuity tester, the most useful tool to test if a connection is present, in a cable or on a circuit. It's the "peep" that is one of the functions of all multimeters, and usually the one we use the most! The circuit is very simple, 1 capacitor, 2 resistors, 1 LED, a buzzer to make the "beep", a coin battery holder and an  $\mu$ -controller (the Attiny85). Due to the special software on the attiny, it will "sleep" all the time, and only use a little electricity when testing, so the battery last almost forever!

All the materials will be available on site, pen and paper, colors, footprints.

<https://www.hackteria.org/wiki/Diy-CAD#Workshops>



**Dr. Marc R. Dusseiller** is a transdisciplinary scholar, lecturer for micro- and nanotechnology, cultural facilitator and artist. He performs DIY (do-it-yourself) workshops in lo-fi electronics and synths, hardware hacking for citizen science and DIY microscopy. He also loves coconuts. He was co-organizing Dock18, Room for Mediacultures, diy\* festival (Zürich, Switzerland), KIBLIX 2011 (Maribor, Slovenia), workshops for artists, schools and children as the former president (2008-12) of the Swiss Mechatronic Art Society, SGMK and co-founder of the new Hackerspace collective Bitwäscherei (2020) in Zürich. He has worked as guest faculty and mentor at various schools, Srishti Institute of Art, Design and Technology (IN), UCSB (USA) and in Switzerland, FHNW, HEAD, ETHZ. In collaboration with Kapelica Gallery, he has started the BioTehna Lab in Ljubljana (2012 - 2013), an open platform for

interdisciplinary and artistic research on life sciences. Currently, he is developing means to perform bio- and nanotechnology research and dissemination, Hackteria | Open Source Biological Art, in a DIY / DIWO fashion in kitchens, ateliers and in the Majority World. He was the co-organizer of the different editions of HackteriaLab 2010 - 2020 Zürich, Romainmotier, Bangalore, Yogyakarta and Klöntal, Okinawa and collaborated on the organisation of the BioFabbing Convergence, 2017, in Geneva and the Gathering for Open Science Hardware, GOSH! 2016, Geneva & 2018, in Shenzhen.



# EWASTEROID

Paul Granjon

The beauty and the ugliness of electronic waste fight it off in this workshop for curious people. Starting with a pile of electronic waste items such as printers, pc towers, DVD players the participants will build a spinning asteroid made of out of date components and found timber, mining the old machines for intricate and complex parts. The resulting temporary sculpture is both celebration of human engineering and sinister indicator of an extractivist civilisation gone in overdrive.

Expect improvisation, technological creativity, freestyle wiring, collaboration and low-tech solutions. In line with Granjon's current methods, the machine will work off-grid, be made of 90% recycled or found components and use open source technology controllers (Arduino).

The Ewasteroid belongs to Granjon's extensive practice of Wrekshops, participat. The events combine hands-on, fun making with grassroots conversations inspired by the material, its abundance and creative potential.

The participants do not need to have prior knowledge of electronics or programming, start age 7 (under 12 accompanied by an adult). The workshop can run for a few hours or a whole day or 2, with participants coming and going, or booking a slot. Max 7 participants at a time with 1 assistant.

The Ewasteroid can be exhibited as an installation after the workshop, before its parts return to the recycling plant.

The first Ewasteroid was tested during the Deershed Festival in the UK in July 2022.

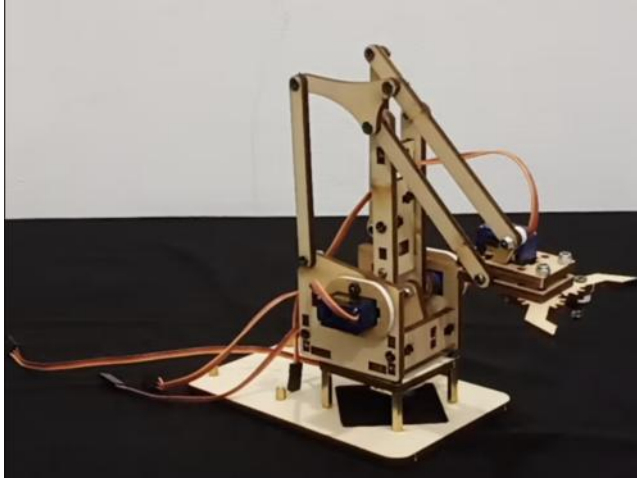
Paul Granjon is interested in the co-evolution of humans and machines, imagining solutions for alternative futures and sharing his experience of creative technologies. He has been making robots and other machines for exhibitions and performances since 1996. Granjon's work became known for a trademark combination of humour and serious questions, delivered with absurd machines that made use of recycled components. His Sexed Robots were exhibited in the Welsh Pavilion at the Venice Biennale in 2005. He performs and exhibits internationally, with recent commissions in Garage Museum Moscow and Azkuna Zentroa Bilbao. He regularly delivers Wrekshops, public events where participants are invited to take apart electronic waste and build temporary new machines from the bits they find. Granjon's current work is driven by an ecologist and participatory agenda. He teaches Fine-Art in Cardiff School of Art and Design, UK and completed a practice-based PhD in robotic arts in 2022.





# PROTOTYPING DIY SMART ROBOTS WITH ARDUINO AND MACHINE LEARNING

Ivan Iovine



The workshop aims to teach participants the use of the Arduino platform in conjunction with the Ml5.js Machine Learning framework.

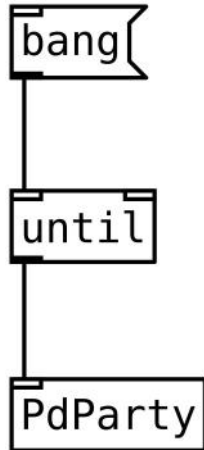
Each participant will be given a DIY robotic arm made of recycled wood, to which an Arduino will be interfaced. Through serial (WebSerial) communication, the Arduino will communicate with a Javascript application and the Ml5.js framework. Participants will be explained and taught the basics of Machine Learning, exploring and experimenting firsthand with pre-trained Machine Learning models for body recognition (PoseNet model), hand recognition (Handpose model), face and facial emotion recognition (FaceApi), as well as real-time object tracking (YOLO). Through the use of these Open Source technologies, workshop participants will be able to learn the basics of Arduino and Ml5.js, experimenting in a hands-on manner and creating customized human-machine interactions based on Machine Learning models.

**Ivan Iovine** is an interaction designer and media artist currently based in Frankfurt am Main. His artistic research focuses on the field of physical computing, physical interaction, machine learning and robotics. His works have been exhibited at "Maker Faire Europe" in Rome (2016), "JSNation Conference" in Amsterdam (2019), "Lab30" in Augsburg (2019) "Pixel Festival" in Bergen (2020) and "Die Digitale" in Düsseldorf (2021). In 2021 his work Theodore was published in the official journal proceedings of the scientific symposium "Art Machines 2: International Symposium on Machine Learning and Art". The artwork was then exhibited in the same year at the Run Run Shaw Creative Media Centre in Hong Kong. He is head of the robotics lab at HfG Offenbach and teaches Physical Computing in the university's art faculty.



# INTRO TO PDPARTY

Dan Wilcox



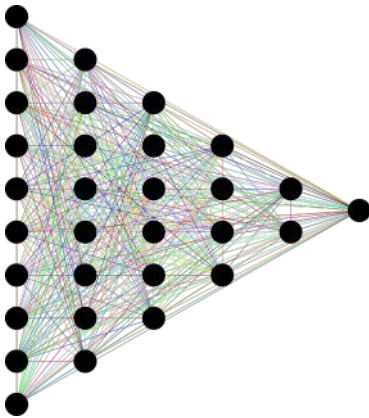
**Dan Wilcox** is an artist, engineer, musician, and performer who combines live musical performance techniques with experimental electronics and software for the exploration of new expression. He grew up in the Rocket City, and has performed in Europe, Asia, and around the US with his one man band cyborg performance project, robotcowboy.

This is an overview workshop PdParty, a free open-source iOS application for running Pure Data patches on Apple mobile devices using libpd. Directly inspired by Chris McCormick's DroidParty for Android and the original RjDj by Reality Jockey, PdParty takes a step further by supporting OSC (Open Sound Control), MIDI, & MiFi game controller input as well as implementing the native Pd GUI objects for a WYSIWYG patch to mobile device experience. Various scene types are supported including compatibility modes for PdDroidParty & RjDj and both patches and abstraction libraries can be managed via a built-in web server. Unlike the rise of the single-purpose audio application, PdParty is meant to provide a platform for general purpose digital signal processing via Pure Data patches.

# NEURAL NETWORKS IN PURE DATA

Alexandros Drymonitis

This workshop aims to demystify some basic concepts that pertain to neural networks, and their potential in artistic practices. Focusing on Pure Data and the brand new neuralnet object, the participants will be introduced to basic use cases of neural networks in audio (and visuals possibly), while the workshop will end with a collective brainstorming session where participants will either try for themselves, or will share their ideas on how they would like to use a neural network for their own work.



Alexandros Drymonitis is a sound and new media artist. He is a PhD candidate at the Royal Birmingham Conservatoire doing research on the creation of musical works with the programming language Python. His artistic practice focuses on new techniques utilizing new media such as computer programming, AI, or even older practices, like modular synthesis.

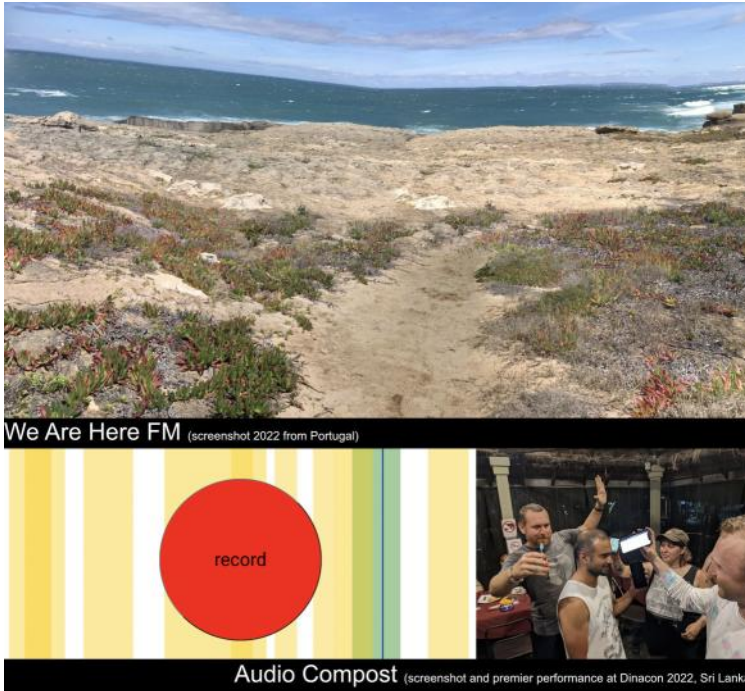
He has collaborated with various artists from different art disciplines, plus several ensembles, either interdisciplinary or music ensembles.

He has taught the guitar at the Music School of Amsterdam and 'Philippos Nakas' Conservatory in Athens, and electronic music programming at 'Musical Praxis' Conservatory in Athens. He is currently a freelancer in the field of electronic music and multimedia programming, teaching several workshops in various venues and undertaking multimedia programming in various events.



# LIVE COLLABORATIVE RADIO WITH MEZCAL

August Black



Mezcal is a web app for collaborative sound and live transmission that I have been prototyping and building in collaboration with <https://wavefarm.org> and multiple artists (such as Anna Friz <https://nicelittlestatic.com>, Betsey Biggs <https://www.betseybiggs.org>, and Peter Courtemanche <http://absolutevalueofnoise.ca/?now>). In this 1 hour workshop, I give an overview of the software, its design intentions and practical implementations, and then split the group up into sections to create a live experimental radio session on-site. (note: this software is not YET free software, but lives in the web as a free service for free cultural institutions such as radio libre in Medellín, Colombia <https://red.radiolibre.cc> and Sound Camp in the UK <https://soundtent.org>, among others)

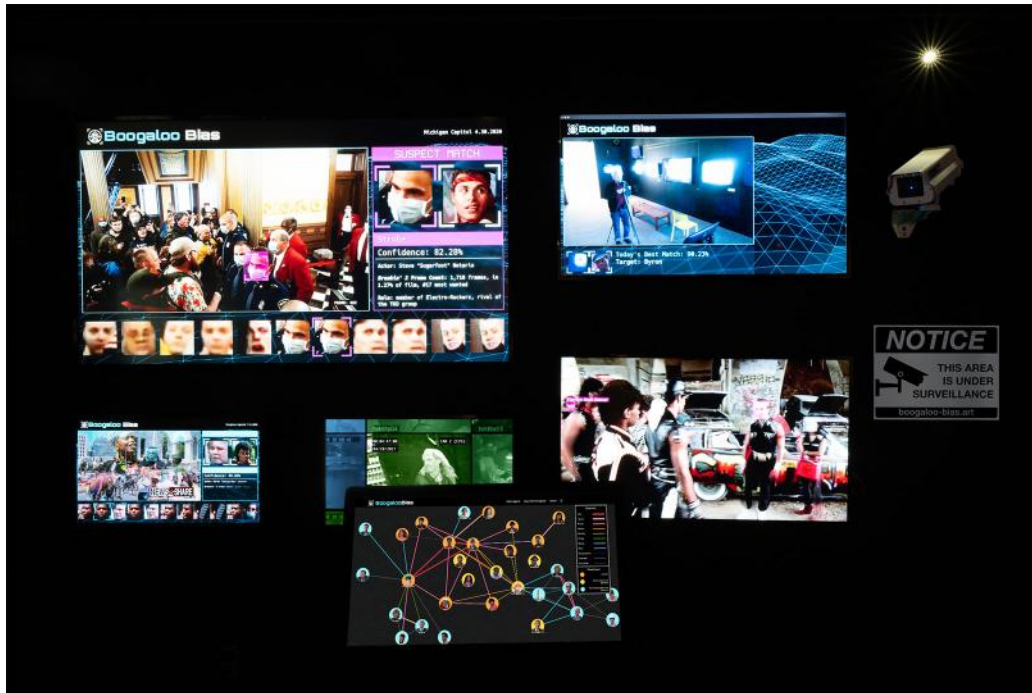
<https://august.black/mezcal>

# PIXELSAVERS



# BOOGALOO BIAS

Jennifer Gradecki, Derek Curry



Boogaloo Bias is an interactive artwork and research project that addresses some of the known problems with the unregulated use of facial recognition technologies, including the practice of 'brute forcing' where, in the absence of high-quality images of a suspect, law enforcement agents have been known to substitute images of celebrities the suspect is reported to resemble. To lampoon this approach, the Boogaloo Bias facial recognition algorithm searches for members of the anti-law enforcement militia, the

Boogaloo Bois, using a facial recognition algorithm trained on faces of characters from the 1984 movie *Breakin' 2: Electric Boogaloo*. The film is the namesake for the Boogaloo Bois, who emerged from 4chan meme culture and have been present at both right and left-wing protests in the US since January 2020. The system is used to search live video feeds, protest footage, and images that are uploaded to the Boogaloo Bias website. All matches made by the system are false positives. No information from the

live feeds or website uploads is saved or shared. Boogaloo Bias raises questions about automated decision making, public accountability and oversight within a socio-technical system where machines are contributing to a decision-making process. Facial recognition technology allows for the quick surveillance of hundreds of people simultaneously and the ability to automate decisions using artificial intelligence, establishing a power structure controlled by a technocratic elite. Rather than providing a solution for how to improve facial recognition, the project pushes the logic behind the current forms and uses of facial recognition in law enforcement to an extreme, highlighting the absurdity of how this technology is being developed and used. Boogaloo Bias is made using only open source software, including OpenCV, Flask, dlib, Pillow, and the Python face-recognition module.

<https://www.boogaloo-bias.art/>

**Jennifer Gradecki** is an artist-theorist who investigates secretive and specialized socio-technical systems. Her artistic research has focused on social science techniques, financial instruments, dataveillance technologies, intelligence analysis, and social media misinformation. Gradecki has presented and exhibited at venues including Ars Electronica (Linz), ISEA (Barcelona), National Gallery X (London), NeMe (Cyprus), ADAF (Athens), International Symposium on Computational Media Art (Hong Kong), and the Centro Cultural de España (México). Her research has been published in Big Data & Society, Visual Resources, and Leuven University Press. Her artwork has been funded by Science Gallery Dublin, Science Gallery Detroit, and the NEoN Digital Arts Festival.

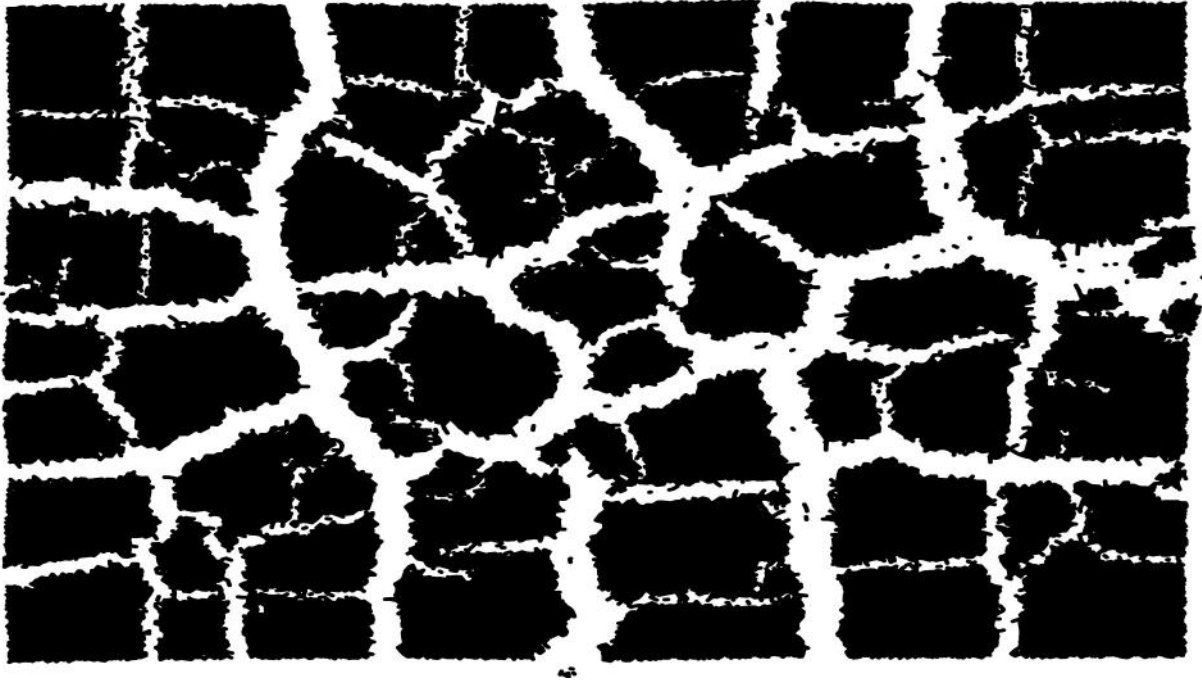
**Derek Curry** (US) is an artist-researcher whose work critiques and addresses spaces for intervention in automated decision-making systems. His work has addressed automated stock trading systems, Open-Source Intelligence gathering (OSINT), and algorithmic classification systems. His artworks have replicated aspects of social media surveillance systems and communicated with algorithmic trading bots. Derek earned his MFA in New Genres from UCLA's Department of Art in 2010 and his PhD in Media Study from the State University of New York at Buffalo in 2018. He is currently an Assistant Professor at Northeastern University in Boston.

<https://derekcurry.com/>



# DROUGHT

Claude Heiland-Allen



The climate catastrophe is causing rains to fail in various places. When wet mud dries, it shrinks and cracks, exposing more surface area to the drying air. In this way the cracks multiply, culminating in dust blown away on the breeze.

**Claude Heiland-Allen** is an artist from London interested in the complex emergent behaviour of simple systems, unusual geometries, and mathematical aesthetics.

From 2005 through 2011 he was a member of the GOT010 collective, whose mission was to promote Free/Libre Open Source Software in Art. Since 2011, Claude has continued as an independent artist, researcher and software developer. His current main projects include various deep zooming tools for 2D escape time fractals, and musical performance live-coding sounds in the C programming language.

<https://mathr.co.uk>



# EVERYTHING GETS EATEN

Eirian Friedkin

---

A white canvas displays ever changing, and linked phrases of three words in black font. A handful of popular nouns where chosen at random and are combined as such to allow the viewer to draw (unexpected) connections between different concepts and how one may very well degrade another.

**Eirian Friedkin** exists and does things. Sometimes it may be called art.

industry eats breath



# FAKE OR FAR AWAY

Becky Brown

The screenshot displays a social media interface with several components:

- Chat Window (Left):** A conversation with a user named "Someone". The messages are:
  - "well, it would need to be a stock first"
  - Becky: "oops, just added another inconsequential word lol"
  - Becky: "fickle is also gone"
  - Becky: "what!! I did not realize it would do that!!"
  - Becky: "invest in censorship I guess!"A response from "Someone" says "I GUESS".
- Video Player (Top Right):** Labeled "CH 5", showing a person's face with a green, textured overlay.
- Stock Chart (Bottom Center):** Titled "GUESS \$12.73", showing a line graph with a price range from 10.5 to 13.0. The current price is \$12.73 and the funds are \$2275.44.
- Video Thumbnail (Bottom Right):** Labeled "CH 6", showing a person in a red-lit environment.

At the bottom, a blue banner contains the text: **DEVELOPING STORY: "invest in censorship I guess!" ON: \$25.86 NOW: "what!! I did not re**

"fake or far away" is your number one source for information, conversation, relaxation, and value. We're bringing you the hot-button issues in a chilled-out setting, where you and a friend can determine what's really going on out there without killing the vibe. Experience the news hands-on, and determine how we all feel the old fashioned way--market sentiment. Discover the joys of communication, and determine what language you can and can't afford to keep. You'll get to the bottom of whatever really matters - that's our guarantee!

**Becky Brown** is a composer, harpist, artist, and web designer, interested in producing intensely personal works across the multimedia spectrum. She focuses on narrative, emotional exposure, and catharsis, with a vested interest in using technology and the voice to deeply connect with an audience, wherever they are. She is currently pursuing graduate studies in Composition and Computer Technologies at the University of Virginia.

# FUTURABILITIES

Azahara Cerezo

A bot programmed to read parts of “Futurability. The age of Impotence and the horizon of possibility” (2019) to other chatbots, who answer and progressively learn from the conversation. In this book, Franco “Bifo” Berardi analyzes the global order that shapes our politics and our imagination, proposing that the key to a radical change lies in the cognitive work and its relationship with technologies. “Futurabilities” explores human-automatic conversational possibilities around the current context of connected solitudes. This online action was developed in 2020 and takes as reference a previous project entitled “A connected robot of one’s own”, which was shown in the frame of Píksel Festival in 2014.

Azahara Cerezo researches the particularities and contradictions of the territory, whose physical dimension is liquefied by digitalising processes of global scope. She has exhibited individually at Bòlit Contemporary Art Centre (Girona), Centro de Arte La Regenta (Las Palmas) and MAL (Sevilla). Her projects have been shown in group exhibitions such as “Juntos aparte” (Bienalsur, Cúcuta, Colombia), “Creativate” (National Arts Festival, Makhanda, South Africa), “We are as Gods...” at Nieuwe Vide (Haarlem, Holland), “Provincia 53” at MUSAC (Leon, Spain) or “Especies de espacios” at MACBA (Barcelona).



# MINUS

Ben Grosser



Despite their lofty mission statements, today's big social media platforms are centrally focused on one singular concept: more. These capitalistic software machines are designed to stoke a pervasive and ever-increasing cycle of production and consumption for the purposes of growth and profit. To accomplish this they leverage data and scale to produce signals and interface patterns that keep us engaged, promising connection and joy in exchange for increasing shares of our time and attention. The platforms embed within us the idea that our own sociality is best evaluated and understood through quantity. They reconfigure our sense of time in ways that can make minutes or hours ago seem old. And their personalized feeds teach our brains that the only content worth watching or reading is that which we can already imagine. In its tireless pursuit of users and data and wealth, big social media sacrifices human agency and potential on the altar of more.

But what if social media wasn't engineered to serve capitalism's need for growth? How might online collective communication be different if our time and attention were treated as the limited and precious resources that they are? Minus is an experiment to ask these questions, a finite social network where users get only 100 posts—for life. Rather than the algorithmic feeds, visible "like" counts, noisy notifications, and infinite scrolls employed by the platforms to induce endless user engagement, Minus limits how much one posts to the feed, and foregrounds—as its only visible and dwindling metric—how few opportunities they have left. Instead of preying on our needs for communication and connection in order to transform them into desires for speed and

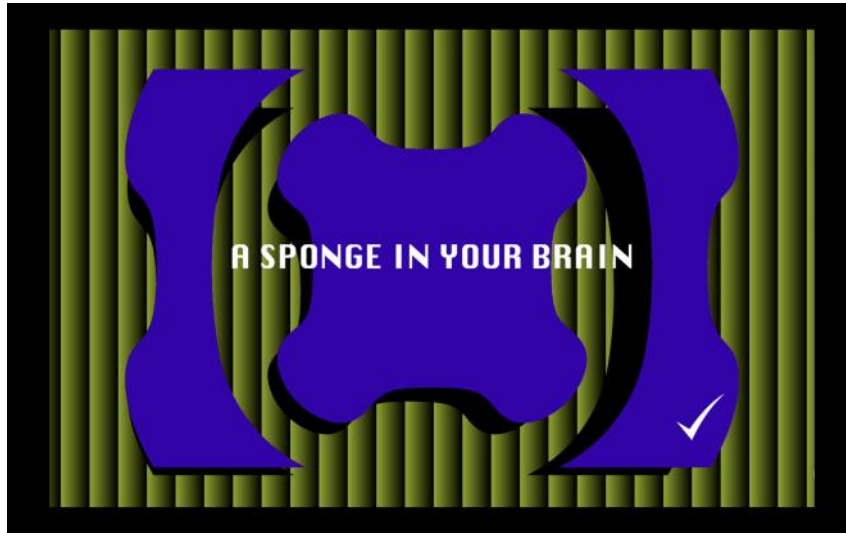
accumulation, Minus offers an opportunity to reimagine what it means to be connected in the contemporary age. The work facilitates conversation within a subtractive frame that eschews the noise and frenzy for a quieter and slower setting that foregrounds human voices, words, and temporalities. Though it may be disorienting at first to navigate an online social space devoid of the signals and patterns Silicon Valley uses to always push for more, Minus invites us to see what digital interaction feels like when a social media platform is designed for less.

**Ben Grosser** creates interactive experiences, machines, and systems that examine the cultural, social, and political effects of software. Exhibition venues include Eyebeam in New York, Somerset House and the Barbican Centre in London, Centre Pompidou in Paris, SXSW in Austin, Museum of Modern Art in Moscow, World Museum in Liverpool, Museu das Comunicações in Lisbon, Museum Kesselhaus in Berlin, Science Gallery in Dublin, Japan Media Arts Festival in Tokyo, IMPAKT Festival in Utrecht, and the Digital Arts Festival in Athens. His works have been featured in *The New Yorker*, *Wired*, *The Atlantic*, *The Washington Post*, *The Los Angeles Times*, *PBS*, *Fast Company*, *Hyperallergic*, *BBC*, *The Telegraph*, *Le Monde*, *Corriere della Sera*, *Der Spiegel*, *El País*, and *Folha*. *The Guardian* (UK), writing about his recent film *ORDER OF MAGNITUDE*, said "there will be few more telling artworks [from] the first decades of this century ... a mesmerising monologue, the story of our times." Speaking about his social media-focused projects, *RTE* (Ireland) described Grosser as an "antipreneur." *Slate* referred to his work as "creative civil disobedience in the digital age." Grosser's artworks are regularly cited in books investigating the cultural effects of technology, including *The Age of Surveillance Capitalism*, *The Metainterface*, and *Investigative Aesthetics*, as well as volumes centered on computational art practices such as *Electronic Literature*, *The New Aesthetic and Art*, and *Digital Art*. Grosser is an associate professor of new media in the School of Art + Design and co-founder of the Critical Technology Studies Lab at the National Center for Supercomputing Applications, both at the University of Illinois at Urbana-Champaign, USA.

<https://bengrosser.com>

# POWER&BYTES

Jerry Galle



'But there has also been a growing recognition of another response through coalition – affinity, not identity.' Cyborg Manifesto, Donna Haraway

This film bundles statements that were partly realised with an artificial algorithm, to which the question was repeatedly asked: "What is to be done?". The film tells an ambiguous story through a multitude of 'personalities' that seek affinities between very different perspectives. Not a single voice but many voices making what they want from the material they are placed upon, taking meanings in their own direction. The images refer to the false intimacy we develop with digital devices and the self-correcting behaviour that sometimes results from this. The shapes that appear behind the sentences are generated with visual feedback systems.

**Jerry Galle** explores idiosyncratic uses of image and language that are co-created with algorithms. The mediation of the world through ever profiling, falsifying and quantifying images and texts that are both bot and human generated, have had a dramatic impact on conceptions of art, humour, absurdity, politics, economics and language itself. His practice critically reflects this mediation using websites, drawings, electronics and manipulated texts, presented both offline and in the public space of the Internet.

His work has been shown in Muhka, Bozar, Museum Dhondt-Dhaenens, British Film Institute, Wiels, International Film Festival Rotterdam, EMAF, International Film Festival Hamburg, Museum Dr. Guislain, Frankfurter Kunstverein and Ars Electronica among others.



# PRECIPITATING DREAD [PPT-DREAD]

Dominic Aidan Vetter [leclerq]



“With this project I aim to alter the aggregate state of atmospheric dread that dissipated through the now deleted twitter feed of former President Donald Trump and crystallize it into a visually intriguing and possibly psychoactive substance. The project is currently still in development and I am looking for input. I am especially interested in movie suggestions to integrate into the visualization process. The archive generated by PPT-Dread can be viewed on my website: [leclerqs-abode.com/ppt-dread](https://leclerqs-abode.com/PPT-Dread)”

This archive contains approximately 36,000 images, segmented into monthly sub-archives which can be individually accessed by clicking the menu symbol on the left. The archive is in reverse chronological order. There is an analysis display image for every tweet. Each relevant analysis display image is to be found to the right of the corresponding linear gradient lattice. See <https://leclerqs-abode.com/PPT-Dread/method.txt> for more detailed information on the analysis process and <https://leclerqs-abode.com/PPT-Dread/Concept.txt> to better understand what this project is all about.

The menu icon on the left shows a list of the current archives content, as well as the archive and data overview loader. To the right, the infinity symbol toggles the full screen mode [best way to view archive on a mobile] and the star symbol in the top righthand corner can be used to hide the UI if undisturbed image viewing is desired. It is possible to zoom all of the images infinitely since they are all SVG files. I advise against spamming the buttons, however, since things will slow down if you do that. Clicking on the arrow between the +/- buttons returns the image to its original size and position. The images are draggable.

This is my GitHub profile: <https://github.com/13c13rq>

For movie suggestions or general contact feel free to write to PPT-Dread at riseup dot net :)

## Dominic Aidan Vetter [leclerq]

I studied conceptual art and sculpture under Rita McBride at the Kunst Akademie Düsseldorf and graduated in 2017. My artistic practice evolves around the aesthetics of atmospheres, and how paradigm shifts in perception can evoke cognitive dissonance. I attempt to reflect and alter states of thought through my artistic process, be this through literary, computational or performative means. My code is embodied by the fictional entity leclerq, an alter ego of sorts that came into being in 2016 when I was writing scripts for a performance. I appropriated the name from a side character that appears in an East German Science fiction novel that I was reading at the time. Nowadays I no longer really think of myself as an artist, but rather as an aspiring info architect.

# THE AUDIO COMPOSTING APP

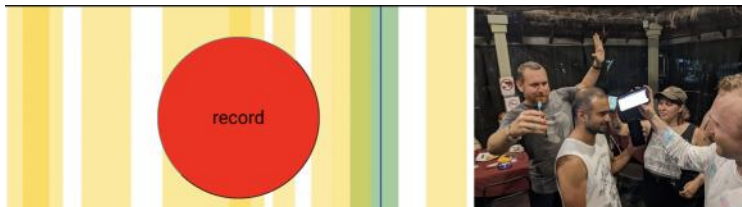
August Black

The Audio Composting app is an engine used for decomposing existing acoustic and sonic waste into new organic material to fertilize and improve the sonic imagination. Humans from different backgrounds, identities, and natural habitats speak into their portable microphones (aka mobile phones) to simultaneously feed the system with acoustic content. The incoming sonic material, fed remotely through the network from near and far, is mixed together into an ongoing frippertronic mulching process that is synchronized across all devices. The result is a sometimes rhythmic, sometimes cacaphonic, assemblage of hoots, howls, whistles, stomps, boms, and thwamps.

<https://compost.listen.center/>

**August Black** is a hybrid practitioner of art, design and engineering. He makes experimental spatial and acoustic situations, often by building his own technological artifacts and instruments in hardware and software. His past work focused on live networked audio, mixing FM radio with user input through online software. His current interests span the fields of the philosophy of technology, software studies, technopolitics, peer-to-peer networking and AI/machine learning. In the past, he's been a member of arts organizations such as the ORF Kunstradio and the Ars Electronica Futurelab, as well as a former member of the engineering team at Cycling '74, makers of Max/MSP. He has shown works at festivals and venues such as Ars Electronica Festival, Dutch Electronic Arts Festival, Wave Farm, Transmediale, Pixelache, LA Freewaves, Píksel Festival, Polar Circuit and the Tasmanian Museum of Art, among others. He earned a BFA at Syracuse University and was an NSF IGERT Fellow at UC Santa Barbara, where he completed an MS and PhD. He's taught media and art classes at UC Santa Barbara, University of San Francisco and CU Boulder, where he serves as Assistant Professor of Critical Media Practices.

<https://august.black>



# THE CARE AND FEEDING OF YOUR AI

Joshua Westerman

"The Care and Feeding of Your AI is an audiovisual environment cobbled together from various open source facial recognition APIs, facial generation APIs and PureData. The project considers the shape and form of "neutrality" within AI and machine learning schemes and how those neutral ideas can have disastrous effects on various marginalized populations.

**Joshua Westerman** is a Colorado based interdisciplinary artist and musician who works with installation art, graphic scores, field recordings, appropriated content, improvisation, and video. His work utilizes and critiques emergent media and aesthetics while still showing a fondness for established disciplines. He experiments with algorithmic art and has explored issues like alienation and intimacy in the contemporary social and political contexts brought about by the ubiquity of digital technology.

Josh is a graduate of California Institute for the Arts where he received an MFA in Experimental Sound Practices and Integrated Media. He is currently attending the University of Colorado Boulder where he is a PhD candidate in Critical Media Practices. His mentors are Laura Steenberge, Tom Leaser, Clay Chaplin and Andrew Macintosh. He has had works premiered by Iris Sidikman, Thomas Sturm, the Calarts Ensemble, SICPP ensembles and at the New Music Lab in Montreal.





# THE PRIMACY OF CONSTRUCTIVE METHODS OVER SUBJECTIVE IMAGINATION

Przemysław Sanecki

## THE PRIMACY OF CONSTRUCTIVE METHODS OVER SUBJECTIVE IMAGINATION

This work summarises my latest investigations into aesthetics of abstract video, auditory perception, and what it means today for the digital visual artist to remain radically autonomous without losing the critical voice.

There are multiple threads present in this work. Some of them are strictly of the formal type, like for example an examination of repetition as a method of rationalising a temporal structure of an artwork. Another thread, of the more political tone, concerns the impoverishment and ruptures in consumer sensory apparatus and its impact on narrowing epistemology of colours. Thus all colours used in the work have their origin in everyday consumer experience, being recycled from packaging of products found in my household and rigidly transferred inside the code.

Intensity, for some even brutality, of the stimulus fabric of this work should be understood as an intrinsic effect of a contrast. Contrast here is an artistic equivalent of a dialectical method. I like to think of it as a procedure to introduce into a work a play of confronting ideas, and in this particular piece I use it extensively. For example, one can think of a confrontation of trompe-l'oeil with reality as a

generalised, metaphysical contrast, similar to a crude approximation of non geometrical structures of clouds in a computer game texture. Another example: regularity and arrhythmia are obviously contrasted. A kick and a handclap are another slightly surprising contrast. Obeying and ordering is another. In fact, most elements of this video can somehow find its dialectical partner next to each other.

Saying all that, and ironically in contrast to what a title of the work might suggest, I rather pose questions than try to find answers. This is because I don't think artists should be yet another expert in solving problems and this is where my obsession with rough, far from smoothness of modern UX, aesthetics comes from.

All visual material is created programmatically by code written using an open source framework OPENRNDR, sounds are composed using a hybrid software-hardware modular system (Pd, VCV). Programming is not only one of the available mediums of expression, but more importantly a radical means of production that profoundly changes social hierarchies, thus it should be creatively appropriated by artists and become the subject of their critical scrutiny.

**Przemysław Sanecki** is a multidisciplinary artist working primarily with code, video, sound and ai. Originally from Poland, he lives and works in Paris (FR).

<https://software-materialism.org>



# TO SHOW ONE'S HAND

Gabin Cortez Chance

A multi-layered 8k video dealing with Ideas of Language, Gestalt philosophy and psychology, madness, mental health, artistic mysticism, and images of hands and their prevalence in the earliest known examples of Art.

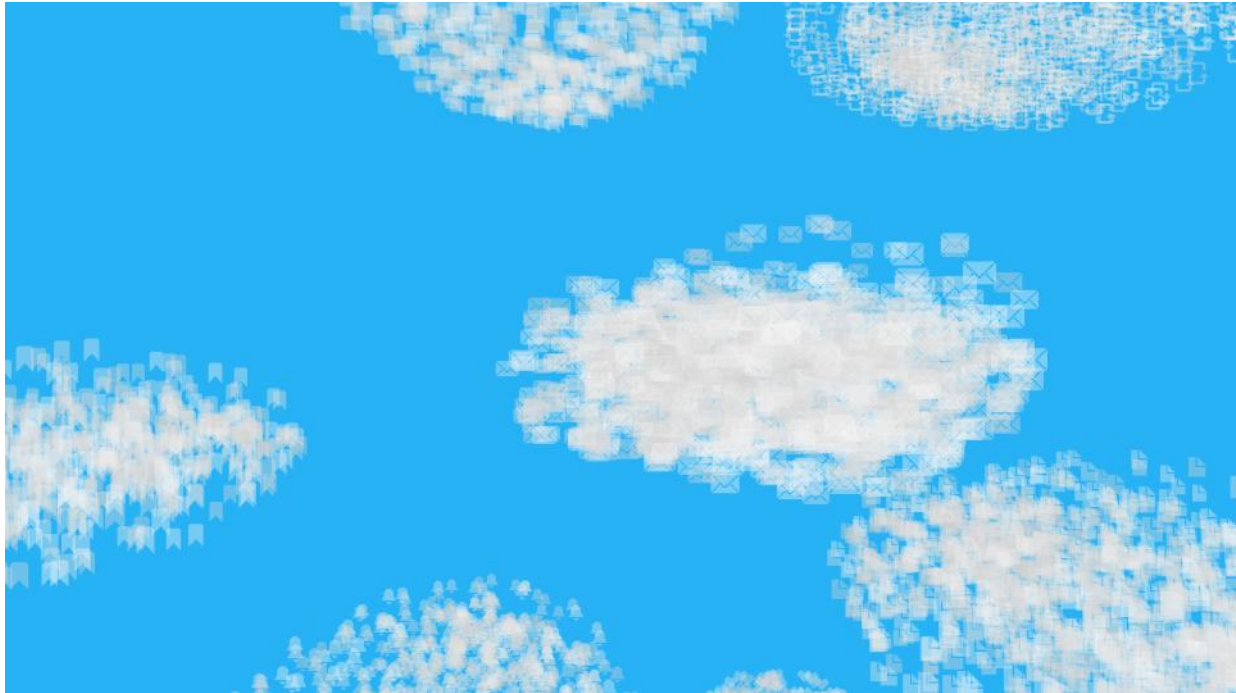
## Gabin Cortez Chance

Born in Fresno, California in 1976. Graduate of The School of the Museum of Fine Art, Boston. Currently living in Los Angeles. Primarily working in Video over the past 10 years. My Videos are multi-layered constructs, digital artificial panoramas. Using a mixture of Hollywood classics, found footage, and video shot by myself to create what I call Super Narratives of the Hyper-Real. My videos generally have a Philosophical, and Sociological twist influenced by the current world political landscape. I am not objective, I most certainly have an agenda. Like many before me, I have Utopian dreams. Dreams that most people believe to be impossible, and unrealistic. And maybe these people are correct, but they are my dreams never the less. My videos are a poor attempt to visualize these dreams for others to appreciate, and possibly learn from. And all though I still have a long ways to go to actualize these dreams, with each video, I feel I get a little bit closer to my goals of Simulacrum.



# UPLOADED TO THE CLOUD

Kate Hollenbach



Uploaded to the Cloud\_ is a generative, browser-based work in which a computer imagines a sky made of data. Dynamically generated clouds gently move across the frame of the browser window, representing various types of data that can be transmitted by the internet. The clouds are an abstraction of iconography commonly used to represent data and user interactions on the web: likes, hearts, bookmarks, mail envelopes, chat bubbles, alerts, and more. The work is a playful meditation on the metaphors used to describe the transmission of data and its relation to body and place.

[uploadedtothecloud.com](http://uploadedtothecloud.com)

**Kate Hollenbach** is an artist, programmer, and educator based in Denver, Colorado. She creates video and interactive works examining critical issues in user interface design including data collection and surveillance. Her art practice is informed by years of professional experience and as an interface designer and product developer. Kate is an Assistant Professor of Emergent Digital Practices at University of Denver and serves on the Board of Directors for the Processing Foundation.

<https://software-materialism.org>



# WEB DEFORMATION

Max Alyokhin

Aesthetic processor of html-code

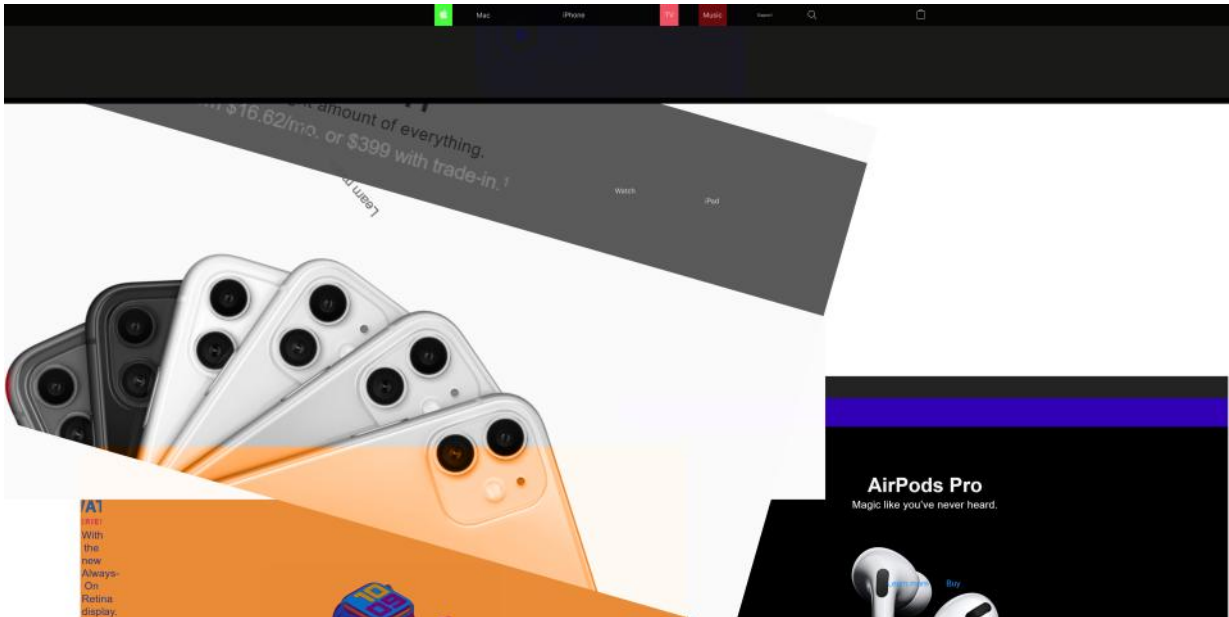
We live in the age of screen culture. The screen gives us a job and organizes our leisure time. The largest web services and their metaphors of the user interface are an important part of our everyday life. And our task is to make the familiar — strange.

This web application accesses the source code of the website and interferes with its logic. Each time it is implemented by a unique combination of methods. The algorithm performs about 1000 interventions per second, using 369 151 937 methods.

Dedicated to Netochka Nezvanova.  
In the 20th anniversary of nebula.m81.

## Max Alyokhin

Born in 1994 in Krasnodar, Russia, living and working in Saint Petersburg. Graduated from Krasnodar College of Electronic Device Engineering and the Academy of Marketing and Social Information Technologies with a specialty in "Computing Machines, Complexes, Systems and Networks". Co-founder and active member of the Kiuss art-group. The main fields of activities are web development and book publishing.





EXHIBITION

# WHAT DO YOU WANT ME TO SAY?

Lauren Lee McCarty



Exhausted by Zoom calls, I created a digital clone of my voice to replace me. This voice allows me to puppet myself, using it to say all the things I hadn't previously been able to embody. I feel a sense of power owning the data of my own voice. I am taking it back from the tech companies, constantly collecting my conversations, sampling and analyzing and archiving my speech for future use yet unknown. Instead, I offer the ownership and control of my voice to others.

Upon collecting and visiting the work, you are asked by my voice, "What do you want me to say?" However you reply, my voice responds by speaking your own words back to you. Then it asks again, "What do you want me to say?"

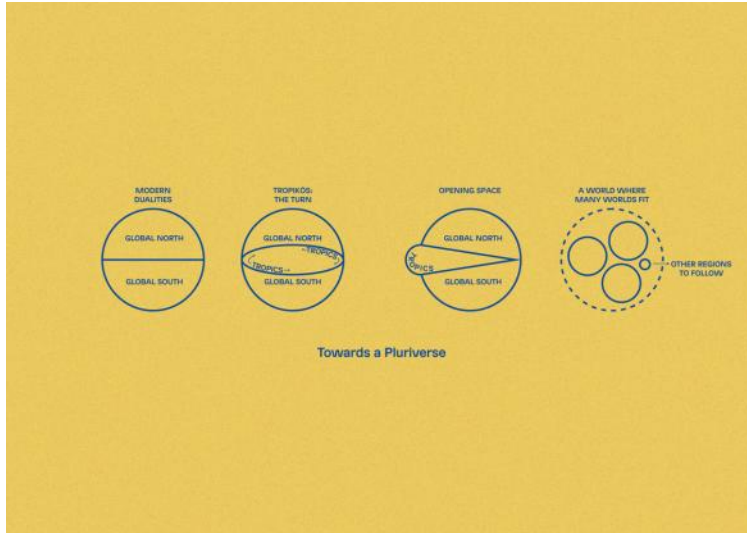
This work considers vulnerability, ownership, and authenticity in a time of rapidly advancing virtual reality. As I open access to my voice, I reflect on the ways femme voiced virtual assistants are commanded and controlled by their users and their developers. And the ways we can feel heard and (mis)understood by those that listen.

## Lauren Lee McCarty

Lauren Lee McCarthy is an artist examining social relationships in the midst of surveillance, automation, and algorithmic living. She has received grants and residencies from Creative Capital, United States Artists, LACMA, Sundance New Frontier, Eyebeam, Pioneer Works, Autodesk, and Ars Electronica. Her work *SOMEONE* was awarded the Ars Electronica Golden Nica and the Japan Media Arts Social Impact Award, and her work *LAUREN* was awarded the IDFA DocLab Award for Immersive Non-Fiction. Lauren's work has been exhibited internationally, at places such as the Barbican Centre, Fotomuseum Winterthur, Haus der elektronischen Künste, SIGGRAPH, Onassis Cultural Center, IDFA DocLab, Science Gallery Dublin, Seoul Museum of Art, and the Japan Media Arts Festival.

# FUTURA TROPICA

Sarah Grant, Juan Pablo García Sossa



| Futura Trōpica | is an intertropical decentralized network of grass-root local networks for lateral exchange of local resources and other forms of Knowledges, Designs and Technologies. It plays with the narrative of the Wood Wide Web and the way trees are interconnected, communicate to each other and redistribute nutrients with the help of fungi as mycellium. It uses the InterPlanetary File System (IPFS) protocol to connect Rhizomes in Bogotá, Kinshasa and Bengaluru. Each Rhizome is composed of a raspberry pi-based wireless access point and web server in combination with a USB based distribution system similar to 'El Paquete Semanal' in Cuba.

**Sarah Grant** is an American artist and professor of new media based in Berlin at the Weise7 studio. Her teaching and art practice engages with the electromagnetic spectrum and computer networks as artistic material, social habitat, and political landscape. She holds a Bachelors of Arts in Fine Art from UC Davis and a Masters in Media Arts from New York University's Interactive Telecommunications Program. Since 2015, she has organized the Radical Networks conference in New York and Berlin, a community event and arts festival for critical investigations and creative experiments in telecommunications.

**Juan Pablo García Sossa** — jpgs / Futura Trōpica Netroots (\*Bogotá, COL) is a Designer, Researcher and Artist fascinated by the clash between emerging technologies and grass-root popular culture in tropical territories. His practice explores the development of cultures, visions, realities and worlds through the remix and reappropriation of technologies from a Tropikós perspective (Tropics as Region and Mindset). JPGS has been part of diverse research institutions and design studios and currently is a design research member at SAVVY Contemporary The Laboratory of Form-Ideas' Design Department in Berlin and Co-Director of Estación Terrena, a space for Arts, Research and Technologies in Bogotá.



# SKOGEN

Hillevi Munthe, Elisabeth Schimana



The forest is a collaborative project between Hillevi Munthe (NO) and Elisabeth Schimana (AT)

"The forest" is a spatial textile installation with incorporated electronics and metal wires with shape memory, so-called shape memory alloy (SMA) or muscle wire. The muscle wire creates programmed movement in the fabric.

In the gallery space, tubes of textile hang from ceiling to floor at regular intervals. They fill the room, but it is still possible to walk between them. The tubes are made of light, transparent silk partially felted with raw wool. The felted surfaces are knotty, bubbly and rough. At irregular intervals, the textile lifts up from the floor and stays there before slowly descending back towards the floor. Some are lifted a meter up, others two or more. The tubes are pulled together at the floor or ceiling, some in the middle. The promise happens quickly, suddenly, while the denial is slow. It is as if the installation breathes and lives. As the audience moves through the installation, they wear headphones with a

field recording from the forest at Druskininkai outside Vilnius recorded with specially built microphones.

**Hillevi Munthe** (NO) has worked with electronic textiles since 2009 on her practical research project on e-textile materials and techniques carried out in collaboration with the Bergen Academy of the Arts titled Soft Technology. "The forest" is a continuation of this work.

E-textiles have become increasingly well known in recent decades and describe both the incorporation of traditional electronics into textile materials and the construction of textile components and electronic circuits. With textile material with current-carrying properties, you can knit sensors, embroider wires or sew entire circuits. E-textile is part of an open source and DIY tradition within electronic art and at the same time in a textile art tradition where knowledge of techniques for the construction of flexible surfaces is crucial for how the circuits are built. An embroidered or sewn circle can be shaped, expanded and stretched to the desired expression, and thus becomes a meaning-bearing unit in itself.

## **Elisabeth Schimana**

Schimana studied electro-acoustics and experimental music at the University of Music and Performing Arts Vienna, computermusic-composition at the IEM, Graz and musicology and ethnology at the University of Vienna. Her work concentrated for many years on space / body / electronic. She has ongoing cooperations with the Austrian Kunstradio. She also focus on research in the field of woman, art and technology. Elisabeth Schimana gives lectures and holds composition workshops all over the world.



# PILLOW TALK

Miller Puckette, Kerry Hagan



**Dr. Miller Puckette** (Harvard; mathematics) is known as the creator of Max and Pure Data. As an MIT undergraduate he won the 1979 Putnam mathematics competition. He was a researcher at the MIT Media lab from its inception until 1986, then at IRCAM, and is now professor of music at the University of California, San Diego. He has been a visiting professor at Columbia University and the Technical University of Berlin, and has received two honorary degrees and the SEAMUS award.

Between 15 and 25 ugly throw pillows are distributed around a cheaply furnished room, on couches, upholstered chairs, benches, futons, or just on a plain concrete floor. The pillows whisper among themselves, very quietly, as if waiting for a concert to begin, but occasionally in globally coordinated ways more suggestive of a ritual. Visitors to the space might get the impression that the pillows are whispering about them.

**Kerry Hagan** is a composer and researcher working in both acoustic and computer media. She develops real-time methods for spatialization and stochastic algorithms for musical practice. Her work endeavours to achieve aesthetic and philosophical aims while taking inspiration from mathematical and natural processes. In this way, each work combines art with science and technology from various domains. Her works have been performed in Asia, Australia, Europe and North America.





# VIS.[UN]NECESSARY FORCE\_1\*

Luz María Sánchez

Vis.[un]necessary force\_1 (V.[u]nf\_1) addresses the subject of contemporary violence from the citizen's experience. It derives from shootings that people accidentally chanced upon recorded with their cell phones and posted on YouTube. With V.[u]nf\_1 we are merging interactive, participatory involvement of users into the emotional experience of violence with the hybrid, networked space of multimedia installation organised with sound, space, sound sculptures, images, and texts. V.[u]nf\_1 design is interactive, participatory, and performative in several layers. [1] Interactive in terms of audience participation as the visitors decide if they activate the gun-shaped sound devices. [2] Participatory in terms of production, since the sound-data were generated by multiple individuals, who in this way contributed to the work. [3] Performative since the visitor's behaviours determine the experience of the artwork and depending on the extent of their interactions is the outcome – which sounds plays when, how and for how long.

The archive behind V.[u]nf\_1 is an element as important as the sound devices that play the sounds. The printed elements consist of the detailed descriptions of the incidents – the sources of sounds | data related to the original YouTube files – as well as a map of Mexico. Two different multimedia installations and a web-art project, emerged from this art-research project.

Luz María Sánchez is a transdisciplinary artist, writer, and scholar. She holds a Doctorate in Art from the Universitat Autònoma de Barcelona. Her artistic research extends to



sound and language as a techno-scientific machine and builds upon environmental urgency. Sánchez received two consecutive Prix Ars Electronica's Honorary Mentions (2020 & 2021) for her projects Vis.[un]necessary force #3 and #4. In 2015 she was granted the Climate Change Artist Commission by the Land Heritage Institute (Texas) and in 2014 she received the First Prize Award for the inaugural Biennial de las Fronteras (Mexico). Sánchez has authored four books, curated exhibitions and transdisciplinary conferences and presented by invitation at leading institutions such as the School of the Art Institute Chicago SAIC, the University of the Arts London UAL, and ZKM. With a professional career of +22 years, Sánchez has exhibited in Europe and the Americas, most recently at Vincent Price Art Museum VPAM, Los Angeles (2022); Ars Electronica, Linz (2021, 2020); MUAC, Mexico City (2019); WRO Art Center, Wrocław (2019); CCCB/Hangar, Barcelona (2019); Museum of Modern Art, Mexico City (2018); and ZKM | Center for Art and Media, Karlsruhe (2017).



# WE ARE HERE FM

Betsey Biggs, August Black



We Are Here FM is a web-based audiovisual installation and transmission created by Betsey Biggs and August Black. A constantly shifting audiovisual radio station of sights and sounds, it brings together geo-tagged images and audio clips to create unnamed, imaginary, hyperreal landscapes, whose generative soundscapes are at times magically experimental and at times utterly mundane. Best experienced at life size projection, the audience must locate themselves within a realistic, yet utterly artificial landscape (both exterior and interior) and negotiate their place within it. Because We Are Here FM is a streaming experience, all listeners form a community experiencing the same landscape. The project was made using free and open-source software such as React, Node, and the Janus WebRTC server. We hope you will enjoy getting lost with us.

<https://wearehere.fm/>

**Betsey Biggs** I'm a composer and studio artist based in Boulder, Colorado. My work connects the dots between music, sound, visual art, place, storytelling, and technology, and has been described by The New Yorker as "psychologically complex, exposing how we orient ourselves with our ears." Over the years I've written a book, worked as a video editor and producer, composed string quartets and multimedia operas, created big participatory art projects, earned a Ph.D. in music composition at Princeton University, and taught music, multimedia, public art, and video at Brown University, the Rhode Island School of Design, and the University of Colorado, where I currently serve as Assistant Professor. I've given talks about my work at Harvard, the New Museum, and lots of other wonderful places.

<http://www.betseybiggs.org/>

**August Black** is a hybrid practitioner of art, design and engineering. He makes experimental spatial and acoustic situations, often by building his own technological artifacts and instruments in hardware and software. His past work focused on live networked audio, mixing FM radio with user input through online software. His current interests span the fields of the philosophy of technology, software studies, technopolitics, peer-to-peer networking and AI/machine learning. In the past, he's been a member of arts organizations such as the ORF Kunstradio and the Ars Electronica Futurelab, as well as a former member of the engineering team at Cycling '74, makers of Max/MSP. He has shown works at festivals and venues such as Ars Electronica Festival, Dutch Electronic Arts Festival, Wave Farm, Transmediale, Pixelache, LA Freewaves, Píksel Festival, Polar Circuit and the Tasmanian Museum of Art, among others. He earned a BFA at Syracuse University and was an NSF IGERT Fellow at UC Santa Barbara, where he completed an MS and PhD. He's taught media and art classes at UC Santa Barbara, University of San Francisco and CU Boulder, where he serves as Assistant Professor of Critical Media Practices.

<https://august.black>

# REWRITING HISTORY: I KEEP FORGETTING FACES

Malte Steiner

An important method to establish power is to rewrite history, to change the narration. In times of fakenews all sources of information should be questioned and handled with care and awareness of the potentials of content manipulation by different interested parties. This art piece takes as an example Wikipedia to retrieve automatically images and texts from their website and alter them, removing people with the help of Machine Learning from the pictures and manipulate the texts, the results are shown on a display in realtime. Retouching photos is as old as photography itself but here it is reflected on what is possible completely automatic and unsupervised. How can machines rewrite history?

**Malte Steiner** (born 1970) is a German media artist, electronic musician and composer. He started creating electronic music and visual art around 1983, developing his own vision of the interdisciplinary Gesamtkunstwerk. First exhibitions already in 1983. In 1986 Steiner took a course in electro-acoustic music in Lüneburg by H.W. Erdmann and gave his first concerts in the following years, e. g. in Germany, France and Belgium, and started 1987 to release his music on cassette, later on vinyl, CD and online.

In 1998 he began to create electronic art and installations and additionally in 2003 several netart projects including a collaborative visual networking environment, shown in the Java museum in Sofia, Bulgaria.

Besides diverse music projects Steiner is also involved in several open source projects and has done lectures, radio features and workshops. Artist-In-Residency i.E. in Open City (La Ciudad Abierta) Of Ritoque, Chile 2011 or together with Tina Mariane Krogh Madsen in li, Finland 2018.

2018 he relocated to Aalborg, Denmark and started in 2019 with the work on the new art project The Big Crash, art for the pending burst of the real estate bubble, reflecting on the housing crisis and gentrification. Art pieces are based on data which a software by Steiner harvest from online real estate ads. For instance images were segmented with the help of a Machine Learning algorithm and the resulting fragments were used for actual 3D printed objects but also in VR. Physical exhibitions of The Big Crash have been in Aarhus and Aalborg, Denmark and Bergen, Norway. The VR part has been shown i.E. at the Sound Campus exhibition of Kunstuniversität Linz at Ars Electronica 2020, at the ICMC 2021 conference, in the digital section of KP22 exhibition Aarhus 2022 and Rencontres Internationales Paris 2022.

Also in 2019 he started the conceptual phase of the project absolute power, macht + ohnmacht and painted first paintings. This project reflects on power structures and their mechanisms in politics and society.



# MEMORYMECHANICS

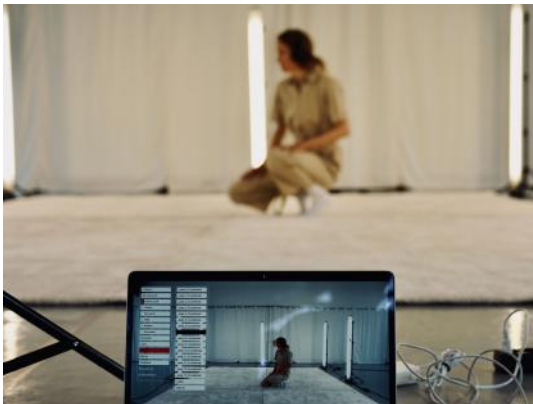
Mads Høbye, Lise Aagaard Knudsen, Karen Eide Bøen, Maja Fagerberg Ranten, Troels Andreassen

memoryMechanics is an interactive sound installation that explores how we as humans embody memories.

The installation is based on an archive of memories that are collected from different people, by guiding them through sensory experiences and into physical poses that trigger embodied memories. Their recorded memories are then stored in the installation for retrieval through imitating their initial poses.

Artificial intelligence is used to record and retrieve memories from the archive. Through the installation, a synergy between human memory and computer memory appears. Artificial intelligence creates a mediated physical space in which the audience can walk around, position themselves in poses and hear the intimate stories of previous participants.

memoryMechanics is created by Karen Eide Bøen, Mads Høbye, Lise Aagaard Knudsen, Maja Fagerberg Ranten and Troels Andreassen.



**memoryMechanics** is a collaboration between exocollective and the duo Knudsen Bøen under the group umbrella term memoryMechanics.

exocollective is a research collaboration initiated by researchers at Roskilde University. The main agenda is to develop an experimental approach to researching the potential of new technologies and materials: Speculative explorations in interactive design, art, and technology. Maja Fagerberg Ranten, Mads Høbye, and Troels Andreassen. (<https://www.exocollective.com>)

**Knudsen/Bøen** is the collaboration between the two artists Lise Aagaard Knudsen (actor and MA in Theater & Performance Studies) and Karen Eide Bøen (dancer and choreographer). They work with body memory and exchange of memories between artists and participants, and the transformation of memory material into various artistic formats in their project called "I remember...".

memoryMechanics was initiated as a part of "Staging the Future of Technologies vol. 2" with the following partners: Click festival, Catch, Haut and Roskilde University Center. Sponsored by Bikubenfonden & Copenhagen municipality.

**Mads Høbye** holds a PhD in interactive design from Medea, Malmö University and is a co-founder of illutron collaborative interactive art studio. He is conducting research into the potential of digital material exploration within art and technology. He has a keen interest in maker hacktivism and experimental electronic upcycling. He is an Associate professor at the Department of People and Technology at Roskilde University Center.

**Lise Aagaard Knudsen** is a performer and theatre practitioner, based in Copenhagen. In her practice she explores the archive of the body alongside a close relationship between the performer and her audience. She works internationally, mainly in Scandinavia and the UK, teaches performance theory as an external lecturer at University of Copenhagen and works a producer at the dAnish residency center HAUT.

MA in Acting from the Royal Central School of Speech and Drama, London, and MA in Theatre and Performance Studies from University of Copenhagen.

# ORDER OF MAGNITUDE AND/OR DEFICIT OF LESS

Ben Grosser

ORDER OF MAGNITUDE and DEFICIT OF LESS are video supercuts that examine Silicon Valley's obsessions with growth. Both use as an archive every publicly-available video-recorded appearance by Facebook CEO Mark Zuckerberg during the first fifteen years of the company. ORDER OF MAGNITUDE is assembled using three of Mark's most favored words: "more," "grow," and his every utterance of a metric. Adding up just those words, the result is a nearly fifty minute film that reveals primary topics of focus for the tech CEO, acting as a lens on what he cares about, how he thinks, and what he hopes to attain. DEFICIT OF LESS asks a different question: does Mark ever talk about \*less\*? When the result of this extraction added up to less than 60 seconds of footage, I began to wonder: what might the world look like if Mark had thought about less as much as he had about more? I thus set out to reanimate the CEO into an alternate reality, expanding his less to be just as long as his more, taking those few bits of video and, instead of playing them in real-time, slowed them down to nearly fifty times their original length. How might the world be different if Mark had been this inert? This work uses Mark's words to illustrate just how far our current reality must be distorted to equalize big tech's obsession with more with its DEFICIT OF LESS.



**Ben Grosser** creates interactive experiences, machines, and systems that examine the cultural, social, and political effects of software. Exhibition venues include Eyebeam in New York, Somerset House and the Barbican Centre in London, Centre Pompidou in Paris, SXSW in Austin, Museum of Modern Art in Moscow, World Museum in Liverpool, Museu das Comunicações in Lisbon, Museum Kesselhaus in Berlin, Science Gallery in Dublin, Japan Media Arts Festival in Tokyo, IMPAKT Festival in Utrecht, and the Digital Arts Festival in Athens. His works have been featured in The New Yorker, Wired, The Atlantic, The Washington Post, The Los Angeles Times, PBS, Fast Company, Hyperallergic, BBC, The Telegraph, Le Monde, Corriere della Sera, Der Spiegel, El País, and Folha. The Guardian (UK), writing about his recent film ORDER OF MAGNITUDE, said "there will be few more telling artworks [from] the first decades of this century ... a mesmerising monologue, the story of our times." Speaking about his social media-focused projects, RTÉ (Ireland) described Grosser as an "antipreneur." Slate referred to his work as "creative civil disobedience in the digital age." Grosser's artworks are regularly cited in books investigating the cultural effects of technology, including The Age of Surveillance Capitalism, The Metainterface, and Investigative Aesthetics, as well as volumes centered on computational art practices such as Electronic Literature, The New Aesthetic and Art, and Digital Art. Grosser is an associate professor of new media in the School of Art + Design and co-founder of the Critical Technology Studies Lab at the National Center for Supercomputing Applications, both at the University of Illinois at Urbana-Champaign, USA. <https://bengrosser.com>.



# THE LINGUISTIC ERRANTRY

Tansy Xiao

The Linguistic Errantry is a stochastic sound environment and social experiment in a virtual setting. The viewers are invited to operate a first-person character with a game controller. 14 giraffes are set to randomly roam a surreal land full of symbolic landscape and omnipresent surveillance cameras. Each giraffe is set to sing a measure constituting 2-4 notes and nonlinguistic lyrics deconstructed from L'Internationale. When two giraffes collide, they adopt each other's measure to add to their own array. Giraffe 0 as the only exception, is set to speak "Control / Your / Soul's / Desire / For / Freedom" by default, instead of singing—a propaganda phrase from a government official during the totalitarian lockdown in Shanghai, when the whole country entered an Agambenian "state of exception." Each word occupies one slot in its array and will be gradually replaced by fragments from L'Internationale as giraffe 0 encounters the others of its kind. Other characters like the Goldfish, on the other hand, repeat their measures without interacting with one another every 3-7 seconds. The time between each repetition is randomized.

The state apparatus's invention of new terms and phrases resonates with Victor Klemperer's depiction of Nazism's long-lasting influence on the German language in *Lingua Tertii Imperii*, that it "permeated the flesh and blood of the people through single words, idioms and sentence structures which were imposed on them in a million repetitions and taken on board mechanically and unconsciously."

As a lesser recognized fact, the lyrics of L'Internationale have different translations in different

countries. While most parts remain accurate, the Chinese version has removed the third refrain and below, which begins with "The state represses, the law cheats / Taxes bleed the poor / No duties are imposed on the rich / The rights of the poor are empty words" for considerations of both simplicity and the potential inducement of questioning the state power. The fragments of L'Internationale in the piece were drawn from the erased refrain.

Due to the randomized routes in the program, the content of the audio array and the spatial relationship between each sonic element in the piece are also indeterminate with close-to-infinite combinations. The viewer can also move in the virtual environment to experience the piece from different perspectives. At a certain point, they will encounter a mirror and see the reflection of their own virtual body. In this piece, the goldfish in custody who jump higher and higher, crying for water, who are still unable to break through their invisible cages, represent the powerless civilians. Upon the recognition that their own body is a goldfish with a surveillance camera as its head, the viewer situates themselves in a dilemma; they're both the oppressor and the victim—or they could be either, as in the Stanford prison experiment.

The Linguistic Errantry reimagines the Tower of Babel in a way that manifests the arbitrary nature of history: the consolidation and disintegration of sovereigns, an anticipated revolution to be generated by mere chance, or a parallel universe where nothing ever happens and only entropy reigns supreme. Contingency here serves as a passive approach of





resistance, with a silver lining that in theory, like the infinite monkey theorem, the giraffes could sing complete lines of L'Internationale if given an infinite amount of time.

**Tansy Xiao** is an artist, curator and writer based in New York. Xiao creates theatrical installations with non-linear narratives that often extend beyond the fourth wall. Her work examines the power and inadequacy of language, furthermore, substantiates the multiplicity of being human through the assemblage of stochastic audio and recontextualized objects.

Xiao's work has been shown at Queens Museum, The Clemente Soto Véllez Cultural & Educational Center, New Adventures in Sound Art, Pelham Art Center, The Immigrant Artist Biennial, Azarian McCullough Art Gallery, SRO Gallery among others. Her curatorial projects were presented by SPRING/BREAK Art Show, NARS Foundation, Radiator Gallery, Residency Unlimited, Fou Gallery, Chazan Family Gallery, Areté Gallery and Brooklyn Art Library.



# PRIVACY IS INTIMACY

Louis Frehring



Privacy is intimacy is an artwork composed of two silver chains on each of which are engraved the halves of two PGP key pairs. On each chain is written a public key and the private key associated with the other chain's public key. Thus, it is possible to establish a secure and encrypted connection between two people, allowing them to communicate without their privacy being compromised, making Privacy is intimacy the ultimate jewel for lovers!

**Louis Frehring** iBorn in 1994, Louis Frehring is a French contemporary artist working in the transdisciplinary field of new media art, sculpture and visual arts. His work is mainly composed by heteroclite installations and crafted devices that deal with technology both as material and subject. Frehring's work is focused on getting the viewer more knowledgeable of what technology is, how it works and what it changes in nature, in society and in our proper selves.

[www.louisfrehring.com](http://www.louisfrehring.com)

# VASTWASTE: DATA-DRIVEN PROJECTION ART AND VR INSTALLATION

Ozge SAMANCI

Humans once perceived oceans as boundless, and thus impossible to pollute—until we created the Great Pacific Garbage Patch. The same pattern is now repeating in outer space. VastWaste is a data-driven, projection art installation that illuminates the parallels and interplay between marine pollution and space debris. It can also be experienced in Virtual Reality.

Human activities have scattered millions of objects into Earth's orbit. Since there is no friction, debris travel at 18,000mph. Even tiny paint flecks can create explosive crashes. Approximately 4,000 operational satellites are currently in Earth's orbit and the amount of space debris is already at a critical point. US and European Space Agencies track space debris and maneuver spacecraft to avoid collisions.

SpaceX's Starlink plans to add 40,000 satellites in the next decade. There is no known solution for mitigating the space debris. If the amount of space debris passes a critical mass, each collision will lead to more collisions in a chain reaction, known as the Kessler Effect. Ultimately, future spacecraft launches from Earth may become impossible. VastWaste generates an everchanging Kessler Effect in conjunction with a data-driven soundtrack.

In this installation, satellites spin based on the speed of marine debris. This is calculated by using ocean currents and ocean winds. The number of fragments falling into the ocean is tied to human use of satellites, symbolized by number of tweets per second.

Generative music varies in each play based on collisions, number of fragments, their contact with the surface of the ocean and their descent into the ocean.

Humans observe marine pollution with satellites, and we bury dead satellites into our oceans. The future of two vast spaces is entangled.



**Özge Samanci**, media artist and graphic novelist, is an associate professor in Northwestern University's School of Communication. Her interactive installations have been exhibited internationally, including Siggraph Art Gallery, FILE festival, Currents New Media, The Tech Museum of Innovation, WRO Media Art Biennial, Athens International Festival of Digital Arts and New Media, Píksel Electronic Arts Festival, ISEA among others. Her autobiographical graphic novel *Dare to Disappoint* (Farrar Straus Giroux, 2015) received international press attention and was positively reviewed in *The New York Times*, *The Guardian*, *Slate* along with many other media outlets. *Dare to Disappoint* has been translated into five languages. Her drawings appeared in *The New Yorker*, *The Wall Street Journal*, *Slate Magazine*, *The Huffington Post*, *Airmail*, *Guernica*, *The Rumpus*. In 2017, she received the Berlin Prize and she was the Holtzbrinck Visual Arts Fellow at the American Academy in Berlin.



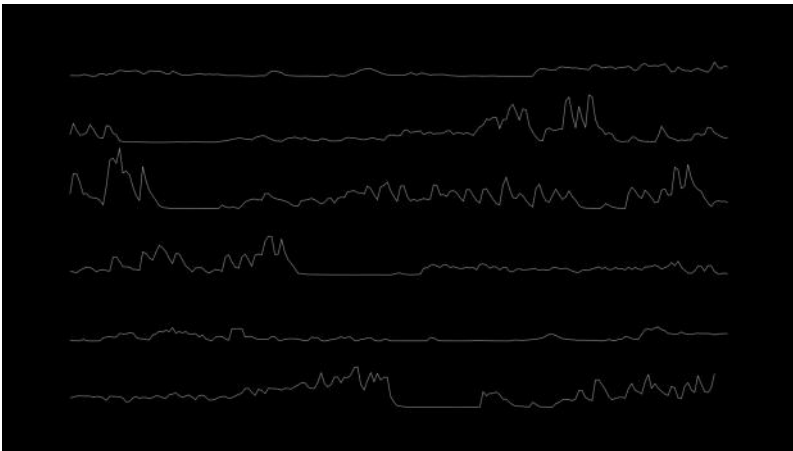
# LOCAL TIME

Julian Scordato

Time introduces the question of how to write things, how to divide them. The computer screen, as well as a page of text or music, becomes the medium of writing. Local time is an interactive audiovisual installation that is fed by the acoustic environment in which is placed, giving a context-sensitive feedback in a specific sonic language. The system listens and takes note of what is happening in the local present moment.

**Julian Scordato** is a composer and artist whose work focuses mainly on sound, graphics, algorithms and interactivity. He studied composition and electronic music at the Conservatory of Venice and sound art at the University of Barcelona. Co-founder of the Arazzi Laptop Ensemble, coordinator of SaMPL - Sound and Music Processing Lab, he is a professor of electroacoustic music composition and performance at the Conservatory of Padua, Italy. As a technologist, Scordato has written articles and presented research results related to interactive systems for music performance and graphic notation in conferences and masterclasses.

His award-winning electroacoustic and audiovisual works have been performed and exhibited in international festivals and institutions including Venice Biennale, Institute of Contemporary Arts (London), Centre de Cultura Contemporània de Barcelona, Prague Quadrennial of Performance Design and Space, Electronic Language International Festival (Sao Paulo), Cervantes Institute (Rio de Janeiro), International Image Festival (Manizales), Gaudeamus Music Week (Utrecht), Centre for Contemporary Arts (Glasgow), Sonorities Festival (Belfast), Seoul International Computer Music Festival, Art & Science Days (Bourges), Kochi-Muziris Biennale, Center for Computer Research in Music and Acoustics (Stanford), Athens Digital Arts Festival, ZKM Center for Art and Media (Karlsruhe), Spektrum Art Science Community (Berlin), and New York City Electroacoustic Music Festival. His music has been broadcast by Radio UNAM, NAISA Webcast, Resonance FM, RAI Radio3, RadioCemat, Radio Papesse, RadioCona, Radiophrenia, Radio Gracia, Radio Circulo, Radio Tsunami, and other stations. His scores have been published by Ars Publica and Taukay Edizioni Musicali.



# BITS AND BYTES

Marko Timlin

BITS AND BYTES is a large-scale kinetic sound installation consisting of 104 floppy disk drives. This art project links science with art, technology with nature and the past with the present.

The installation's sonic outcome is generated solely by the mechanical motions of the 3,5" floppy disk drives controlled by arduino microprocessors. The audible frequency of each floppy disk drive can be regulated in real-time resembling a choir of 104 independent voices creating highly complex sonic textures and pulsations.

BITS AND BYTES could also be described as a "robotic instrument" combining the precision of the digital world with the chaotic nature of the physical world.

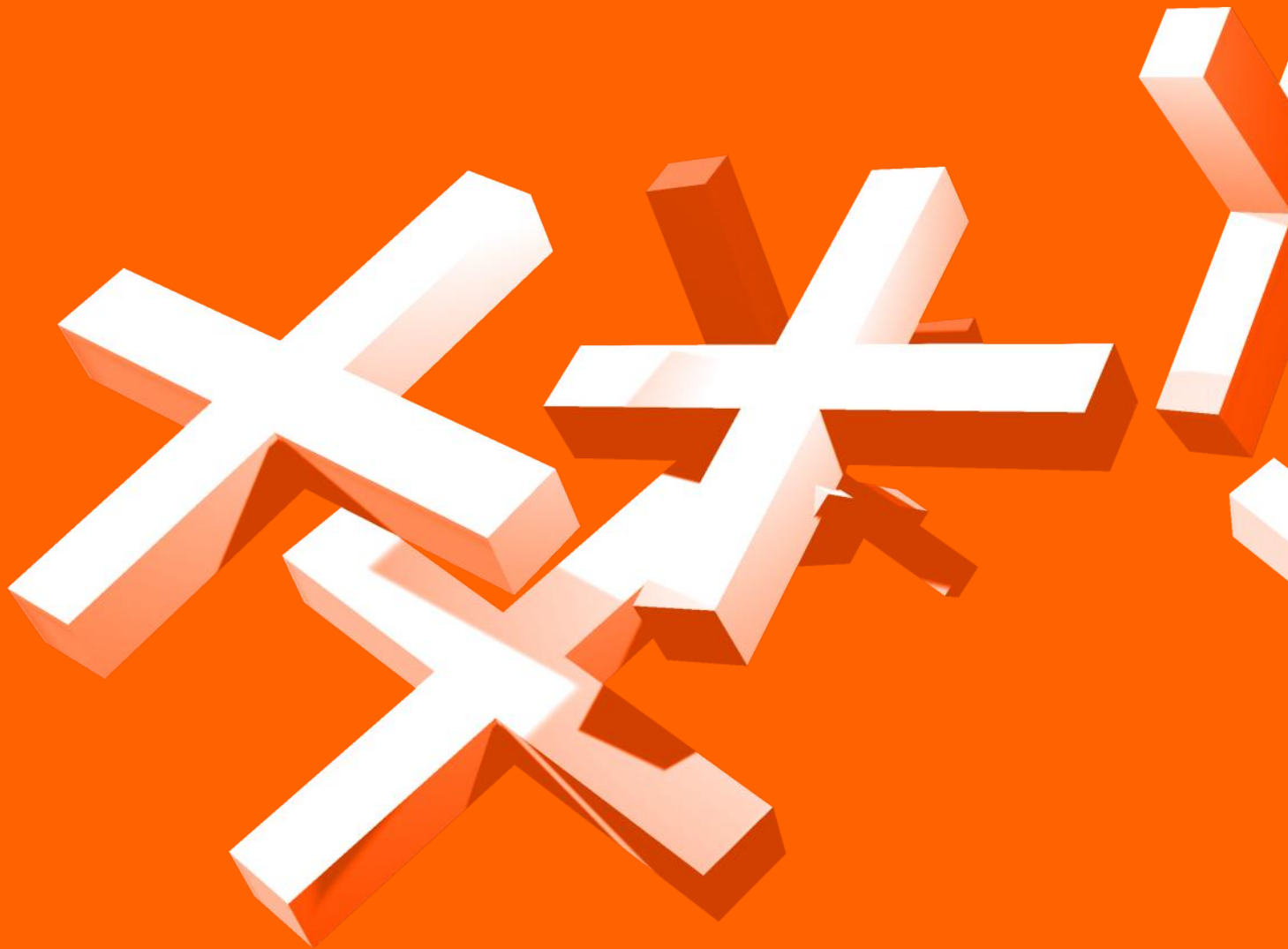
This art project is based on the following principles and ideas:

- "Technology won't take control as long as man can misuse it." (a quote from Finnish inventor Erkki Kurenniemi)
- the artistic misuse of technology
- the resuscitation of obsolete technology from the 1980s and 1990s into a new artistic life
- connecting the digital domain with the physical world
- the joy of exploring technology and radically alienating it
- the poetry of machine music



**Marko Timlin** is a Finnish-German artist creating artworks that link science with art, technology with nature and the past with the present. His artistic work centers on the technical, aesthetic and philosophical development of kinetic sound sculptures, dynamic light installations, performances with self-made sound machines and multimedia theater plays. He is at the same time seeker, musician, performer, sculptor, poet, but also craftsman, and stage director.







**PIKSEL.NO**



