Axel Chemla--Romeu-Santos

Portfolio

Since my early beginnings, my interests span from transdisciplinary arts to AI research, including generative art, performance, creative coding, and philosophy / social sciences. Graduated in both music, music theory and engineering sciences, I started working at IRCAM in 2015 on computer-guided improvisation and defended my PhD between *University di Milano* & *Sorbonne Université* on generative audio AI. Besides my academical research, I also graduated in electroacoustic music and got involved in many artistical projects, including composition, music performance, theatre, coding, and video. My work now focuses on research-creation, where I intend to develop scientific and artistic objects that could conjugate these new opportunities with a critical approach. To do that, I work for two years on developing AI approaches for real-time and exploration, from modeling to coding, and focused on developing new methods for AI creation (from interpolation to extrapolation). Besides this research, I keep working with musicians, performers (theatre, circus), and composing, in order to bind current artistic practices and these new developments. Notably, we created with artist fellows a Paris-Marseille collective named w.lfg.ng, that we develop to become a intercourse platform on all of these contemporary subjects.
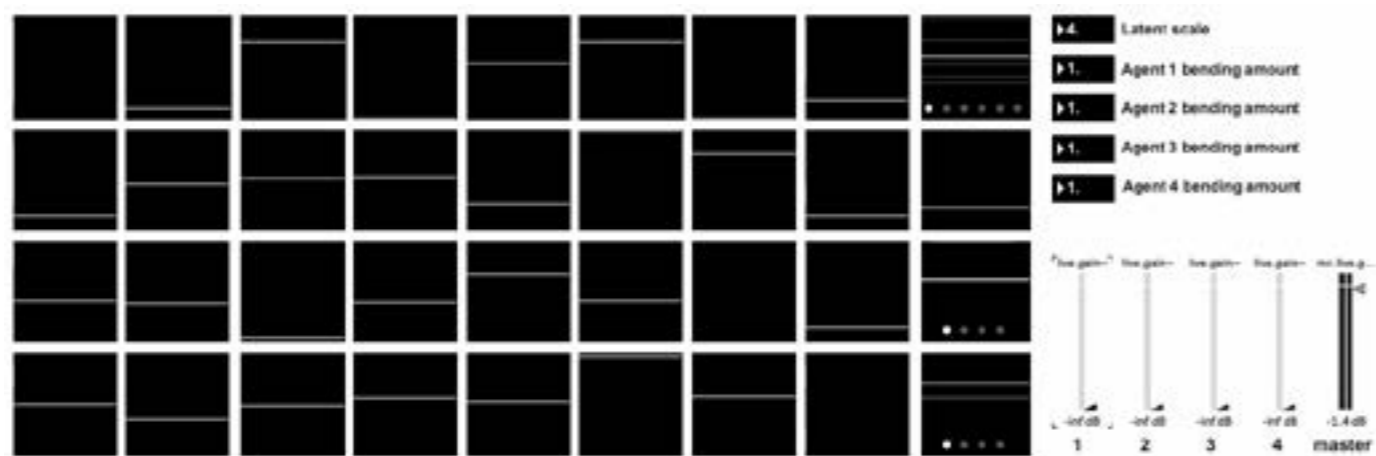
private website
(click on the flashcode to access the corresponding links) >>

Music

Patch version of genesis made for the IRCAM Generative Music Contest, 2024.

genesis – v1 (2022)

a first attempt of using audio generative neural networks without the resort to any human data, amplifying the own materiality of the algorithms towards cybernetic chaos rather than nature imitation. While the use of neural generative modelling for reproduction becomes invasive in our lives, their specific materiality is largely unknown, unshown, and even hidden, as if its revelation would be the unveilement of a magic trick.

However, what could happen if we take the opposite position, that is enforcing individuality and emergence away from any human data and judgements? While learning without data can seem non-sense, I tried to overcome this apparent paradox by rather by giving to a set of different agents and set of structural (and often impossible) objectives, to force them to find the genesis of an eco-systemic equilibrium with which I communicate during the performance through diverse inputs (request, bending, recording).

Performers : Axel Chemla—Romeu-Santos
This work has been created and performed during the Sonic Experiments program of ZKM, 2023, and performed at ACIDS Workshop Gamma, Cirque Électrique Paris, 2023.

« Reality cannot be read ; it can be garnered, be tied up, and at best be swindled.»

aletheia (2022)

is a musical piece based on exploring, transforming, hacking, bending, and interplaying with audio and image generative models. Referring to the pre-socratic notion of aletheia, this piece illustrates the discovery of reality of neural audio synthesis models by going from a pure phenomenological perception to an imitation game, yielding to a deranging and coercive version of reality.

Besides attempting a reflexive work between philosophical aspects of reality and exploration of model's rules through deviation, aletheia is motivated by the experimental development of new approaches to compose and interact with neural generative models and by which new aesthetics they can provide.

Performers : Axel Chemla—Romeu-Santos
This performance, accepted at AIMC2022 conference, was performed at Cirque Électrique, Paris (FR), and Gray Space in the Middle, The Hague (NL).

you will get what you leave behind (2022)

is a mixed performance based on real-time exploraton of neural audio synthesis devices. This performance exhibits the complex relationship between these modern technologies and the materiality of their memory, unveiling simultaneously their underlying hanthology (in anguish but also in onirism) and their materiality (by their nature jointly real and unreal, living and unliving), thus offering novel monsters, sometimes familiar, sometimes uncanny, if not terrifying.

Performers : Axel Chemla—Romeu-Santos & Antoine Caillon
This project is currently in a residency program at Château Éphémère, after a first representation in ACIDS Workshop Beta, Cirque Electrique Paris, 2019.

genesis
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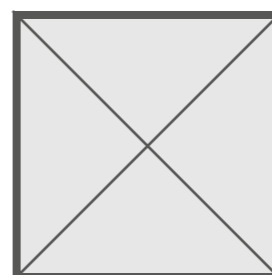
aletheia
(click to see the video)

you will get [..]
(click to see the video)

ægo (2019) is a performance that stages a person and a machine that learn to improvise in music. The machine uncertainly explores a spectral latent space, while the person communicates positive or negative reinforcement, turning their hands front or back, in an attempt to teach the machine how to explore this space. Gradually, the person gives up communicating consistent reinforcement to the machine, leaving the machine's learning undetermined. Freed from the obligation to record their preferences into the machine, the person engages in deep listening through sound, and learns to improvise in music.

Performers : Axel Chemla—Romeu-Santos & Hugo Scurto
This work has been accepted in CMMR2019, and performed in La Friche Belle de Mai, Marseille (2019) and ACIDS Workshop Beta (2021).

ACIDS Workshops is a series of live shows I initiated @IRCAM with researchers, composers & musicians. The purpose, with this free-entry show, was to offer a *carte blanche* to anyone interested in music making with AI-powered neural synthesis, without any aesthetic exigence but the live encounter between a research team, performers, composers, and their audience. The first edition, that took place in January 2022, was then followed by an edition with circus artists of the CNAC (Centre National des Arts du Cirques), and followed by a second edition in November 2022 and a third in November 2023.

aego
(click to see the video)

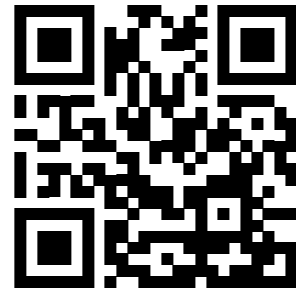ACIDS workshops
(click to see the playlist)

from top to bottom: ægo, you will get what you leave behind , aletheia

Daim™

Daim™ is a trans-disciplinary musical project initiated in 2016 by Axel Chemla–Romeu-Santos, Kevin Raharolahy, and Hugo Scurto, blending experimental and pop music approaches with a focus on maximalist aesthetics, post-internet experiments based on memeification, deconstruction and media saturation.
Trained in popular, electroacoustic and jazz music, as well as in marketing and artificial intelligence, its members are musicians, interactive designers, researchers and developers. Together, they develop a singular and undisciplined practice of electronic music, which crosses their appetite for parties and bangers with wild transmedia experimentations based on internet, digital capitalism, and artificial intelligence.

шер (2016 - 2019) is the first epoch of Daim™, frantically hybridizingse-veral electronic sub-genres to generate an aesthetical chaos with a semi-as-sumed post-digital flavour. Besides the self-titled album, several singles involving B-sides, remixes and radical experiments were available to create a maze showing the chaos hidden behind an album creation. This album was also supposed to be performed live but was cancelled due to the COVID19 breakdown, yielding the ArsElectronica mixtape now available on youtube.

^^ (2021) is a project exploring analog forms of digital expression that memeingly hijack cultural and technical systems associated with pop and art music. Daim™ eponymous EP was deconstructed into a series of dank singles, albums, and video clips (2018—2020), assembling raw audiovisuals from both their personal archives and the internet. For Ars Electronica 24h Rave, Daim™ will premiere an audiovisual mixtape recounting their web browsing experiments as a burlesque and danceable musical short film. Expect avant-garde jokes, popping-up beats, and many more passive-aggressive leftfield surprises.
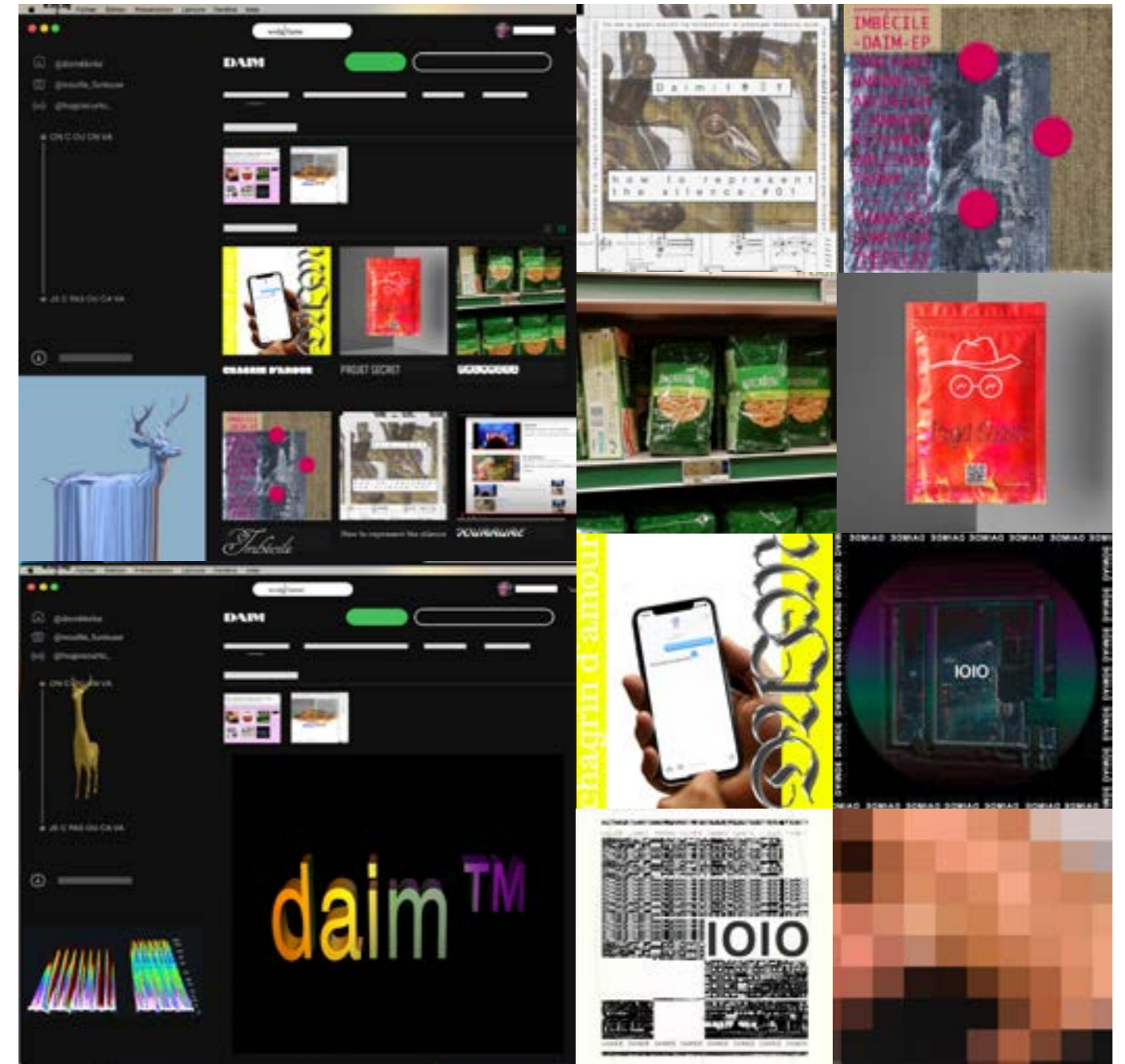
daim album
(click to see the video)

^^
(click to see the video)

MINIUI / (2019 - 2022) are two albums released in 2022. MINIUI, composed three years after the first album signs a drastic radical turn towards brutalist pop music, layering experimental, hip-hop and electro-pop musical elements to provide a disturbing but lavish musical experience. This EP also contains several featurings, notably with Adèle Pécout, bolide international, and Minh Boutin.

Nature&Découvertes (2022), its «post-liminal» counterpart, Nature&Découvertes, explore the codes advertisement music by musicking the 24 hours of a sleepless mid-class worker covered by a mythical creative insurance called w.lfg.ng. A «1010th anniversary edition», released in 2023, is a side-album where every track are fed to a generative AI, trained on the Daim™ discography, in an increasing manner of times. This process then yields to progressive vanishing and oblivion, due to the over-normalization of the process performed by the the AI.

Daim™ + LAXE @ ANTICLUB (2022) is a live caption of a performance that occured in Cirque Électrique, accompanied by the light collective LAXE. Elaborating their live method based on intensive deconstruction and reconstruction of the two last albums, MINIUI and Nature&Découvertes, Daim™ pursues an epileptical and frenzy approach to sound with a highly versatile and suprising dance setup, alternating uncompromising bangers, dark psychadelics and obstructing advertisements.

duck songs (??? - ???) are incremental remixes of a duck song.

duck songs
(click to access)

MINIUI
(click to see the video)

N&D
(click to see the video)

N&D (1010th)
(click to see the video)

DAIM™ + LAXE
(click to see the video)

Kenoma

Kenoma is my personal electro-acoustic project, where I merge acousmatic approaches of studio with elements of diverse music styles to have an ambiguous approach of complex feelings such as depression, beauty, or energy. Albums are named after sephiroths, a concept of Kabbalah that represent each a different aspect of God's emanations (that I understand as a holistic facet of the world).


Malchut (2019) is an album I made deeply inspired by the hauntings that vaporwave gave me, between comfort and desperation. I wanted to make an «harsh» version of this music style, where this underlying anguish towards future was displayed rather than suggested. This album is then full of hardcut and descreted references to the past, evoluting through diverse sonic landscapes that mimic the awareness-rising of the traps of nostalgy and self-enclosure.

Tiphereth (ongoing work) is an album on beauty, but also on the various countersides these real experiences of bliss imply. With the underlying fight of two entities (incarnating time & eternity), several characters are plunged into the observe effects that beauty provoke, from escaping, boredom, or exhaustion.

Malchut
(click to access)

Tiphereth
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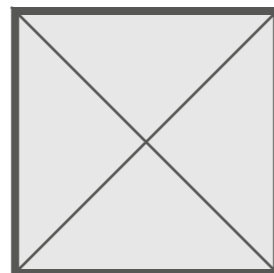
Theatre/ Dance

My work in theater, briefly initiated with a performance that took place in *La Manufacture* (Switzerland), became one of my lead activity by integrating the *Théâtre de la Suspension* company in 2017.

The objectives of this company, that are immersive theatre with biting aesthetics dedicated to poetry, led me so far to the composition of many exigent live soundtracks : *four corners of a square with its center lost* (2018), *Vestiges de l'Arrière Monde* (2019), *Fils de Chien* (2021), *Les Sept Colis de Nestor Crèvelong* (2023), et *Le Grand Œuvre de René Obscur* (2023). All these soundtracks, different both structurally and musically, allowed me to explore very different performance & live audio setups : spatialization, live music and reactive composition. I also worked with the director Régis De Martin-Donos on the Celine's rediscovered writing *Guerre*.

I also started to work with the choreographer & dancer Arkadi Zaides in 2023, linking performance with my works on artificial intelligence, on the project *The Cloud* supported by Comédie de Valence (FR) and LaGeste (BL).

four corners of a square with its center lost

They had not seen each other for ten years, Neither the Father, cold, nor Sarah the smallest who stayed, Nor the three others who left. Here they are gathered around a soup. One spoonful, then two, then twenty, and the father collapses, dead. Then begins a long settlement of accounts between the four children, each one brilliant in his way of hurting, denying, keeping silent. Held there by a mysterious force, their dispute is peppered with supernatural and magical phenomena, until the shock when their father suddenly wakes up and decides to embark on a journey to the «underworld», where the scenes, the delusions, the impulses of their past seem to be buried.

In this first piece, that was about create magical illusions to simulate the loss of sense provoked by a brutal death and the intrance in a haunted world, we wanted with my co-composer Mathieu Husson to create a soundtrack that merged onirism with sonic illusions. For that, I developed a surround sound using 8 loudspeakers that were surrounding the Cirque Electrique's big top, spatializing composition and real-time voices in real time using a custom interface. This first work fixed the will of the company to create immersive shows merging immersive sound with staging and scenography.

Fils de Chien (Manifeste autophage -I-)

For one evening, you will be invited to retrace the main events in the life of Le Chien, a mythical half-man, half-beast figure who managed to overturn the last taboos of a society in decline. This story will justify his taste for human flesh, his thwarted love affair with an obese tightrope walker, and the progressive fascination of which he was the object by what was called our Humanity. Inspired by Vladimir Slepian, a mysterious author who probably died of hunger in Paris in 1998, the Théâtre de la Suspension goes in search of his poetic fundamentals. The motif of devouring has gradually appeared as a way to reconsider in an original way our way of making society. Who devours whom? How do we do it? Why do some eat when others are eaten?

This energic one-man performance, driven by Bertrand de Roffignac, was a real challenge : music was actually his only possible partner. Besides technical challenges (wireless microphones with surrounding water), this creation was also very demanding because of the intense rhythm (managed in real time), the deep intrication with the dramaturgy and the performance, and the delightful baroqueness of the whole piece. Again with my co-composer Mathieu Husson, we managed to compose for an intense 1h30 show driven by energy, epileptical but profound experience that, both from expectancy and feedbacks, left an memorable impression.

Les Sept Colis sans destinations de Nestor Crévelong

«There are two opposing forces and they are not Evil and Good. It is the Sun and the Accident...» Nestor Crévelong, famous actor of the propaganda films produced and broadcast by the Unitary Party, deserts his film set determined to get drunk in the hot districts of the capital. He takes the highway interchange of the Hypercentre. At the same time, Basile, a young sociopath escaped from a psychiatric clinic, rides a second-hand motorcycle in the opposite direction. At 2:37 a.m. local time, Basile and Nestor's vehicles collide. Nestor is cut into seven separate pieces when Basil miraculously escapes the accident; when he wakes up, it is Nestor's thoughts that speak through his mouth. With the help of Carmen Stabb, the nurse in charge of his care, they agree to retrieve Nestor's dismembered body from the morgue and cause a series of fatal accidents to set the world in motion.

After Fils de Chien, we had to explore to other narrative intentions while taking the aesthetics that we found promising. To this end, we included music composition since the very beginning of the writing, allowing to create a real go and forth between music and text. With this process, we managed to propose a very energetic show, merging diverse narrative styles and musical aesthetics, trying to find an oniric response to the conflict between conservation and destruction that is tiling our contemporary experience.

Le Grand Œuvre de René Obscur

In a continent of fractured democracies, René Obscur, a master director of pornographic protest films, completes the creation of a revolutionary camera. This technical device is capable of producing films that arouse unparalleled sexual and spiritual pleasure, while irreparably disfiguring the actors it captures. With the help of this object, René aspires to create the perfect film, a film capable of bending the political inertia of his time, a film that would also be a tribute to his muse who died in a tragic fire, Elio. His singular quest attracts the attention of Ange Cratère, heir to one of the Continent's greatest fortunes...

This piece, that is a prequel to *Les Sept Colis*, was conceived with a similar method of parallelizing music & textual conception. However, this musical creation was not only electro-acoustic but also performed live with the drummer Baptiste Thiébaut, that I accompanied with keyboards and electric guitar. To reflect the piece's discourse on cinema & pornography, our work addressed a consequent of musical aesthetics such as classical movie music, disco, techno, and electro-acoustic elements, with some elements generated through a specific artificial intelligence trained on movie soundtracks.

THE CLOUD

On April 26 1986, Chernobyl Nuclear Power Plants Reactor No. 4 exploded after tests were improperly carried out and the operators lost control. In this performance, Zaides wishes to put the Chernobyl catastrophe into the limelight. The concept of the cloud is evoked in it through several material and conceptual references. It is evoked through the investigation and observation of the actual movement performed by the cloud of radioactive waste following the Chernobyl catastrophe. It is also approached as a web of different pieces of information and misinformations, a cloud of data that leads collective consciousness towards a state of paranoia and panic, that evokes doomsday narratives and touches upon the most primary fears of humanity's extinction.

Recently, I also started working with the choregrapher Arkadi Zaides and dramaturgist Igor Obričić on AI scenography in a artistic reseach project on documentary choregraphy, supported by *La Comédie de Valence*. In this work, we develop ways of incoporating AI elements (real-time generation, pre-generated videos or texts, documentary tools) in performance. This work is really interesting, as it does not use AI solely for modernist and aesthetical intentions but rather for performing the complexity underlying the notion of «facts», that in our contemporary times becomes indeed a joint human-machine endeavour. In this research process, we explore how a humain-AI interaction on stage can actually embrace these complex questions, and how an artistical approach could unveil and display the inner working of these technologies (both taken from custom and industry sources) on stage.

Image / Video

Inception Ghosts [1st Generation] (2022) is a series of AI-generated pictures, that intends to exhibit the veiled crateria of machine-learning based classification algorithms for images (here, Inception). An randomly initialized generator is trained to maximize the objective that classifiers have to maximize to correctly (in a ML-oriented sense) achieve their goals ; this way, the generator can somehow «absorbe» their internal working, providing abstract images that, paradoxically, are maximally classified.

Inception Ghosts
(click to access)
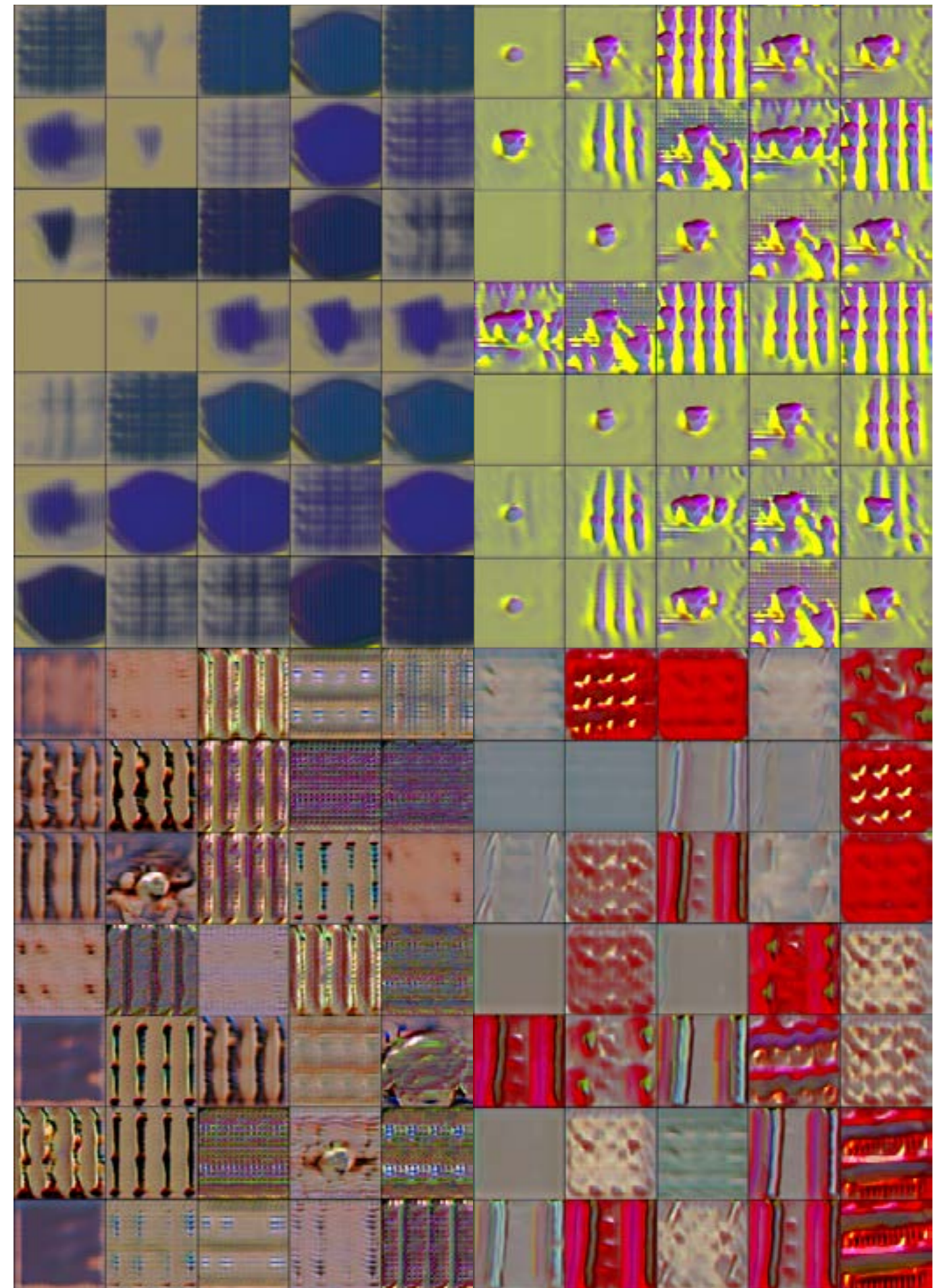
Ontario is a landscape film of Hortense Boulais-Ifrène made along one of the roads of the persistent world Second Life: a dive into the virtual urban fabric where malls follow villas. In this film-installation, the naturalist and fictional soundtrack realized from fixed shots tends to reveal the initial absence of noise while seeking to manifest perceptive ghosts in sound «trompe-l'oeil». Through the slight cognitive dissonance caused by the strangeness of the false field-recording, the projection in the actual space is thus an open door to the porosity of these two ordinary worlds to question the often hasty distinction of the «real» and the «virtual».

Covers Confinées 2020 is a collaborative work of the w.flg.ng collective, for which I did animation, videos, and musical contents. Initiated during lockdown, we coverted songs with associated music videos that we collected as a false TV show, ironically hybriding vintage elements with the modernity of the crisis.
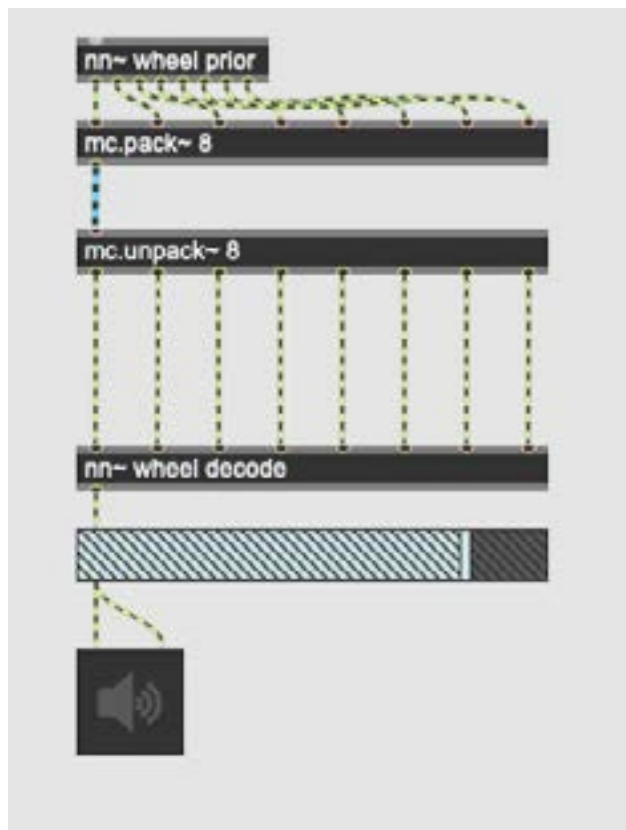
Covers Confinées 2020
(click to access)

Code

divergent_synthesis is a proof of concept for a novel training setup for ML generative models based on maximum divergence, trying to foster extrapolation for generation instead of interpolation. In this work, we enforce a model to diverge from its original database to generate new digits.

vschaos2 is a spectral auto-encoders that can be used for long-evolving spectro-morphologies, that can performed in real time using the Max software. This work, that was one of my PhD products and was then one of the first usable real-time AI generative model, was the one used in the aego performance in 2019. I recently re-coded it to be available with modern architectures, providing a lightweight of performing explorative neural audio synthesis.

nn~, initiated by Antoine Caillon that I joined, is a general framework to embed neural audio synthesis in real-time uses for performance, used in most performances using our tools.

vschaos2
(click to access)

nn~
(click to access)

divergent_synthesis
(click to access)