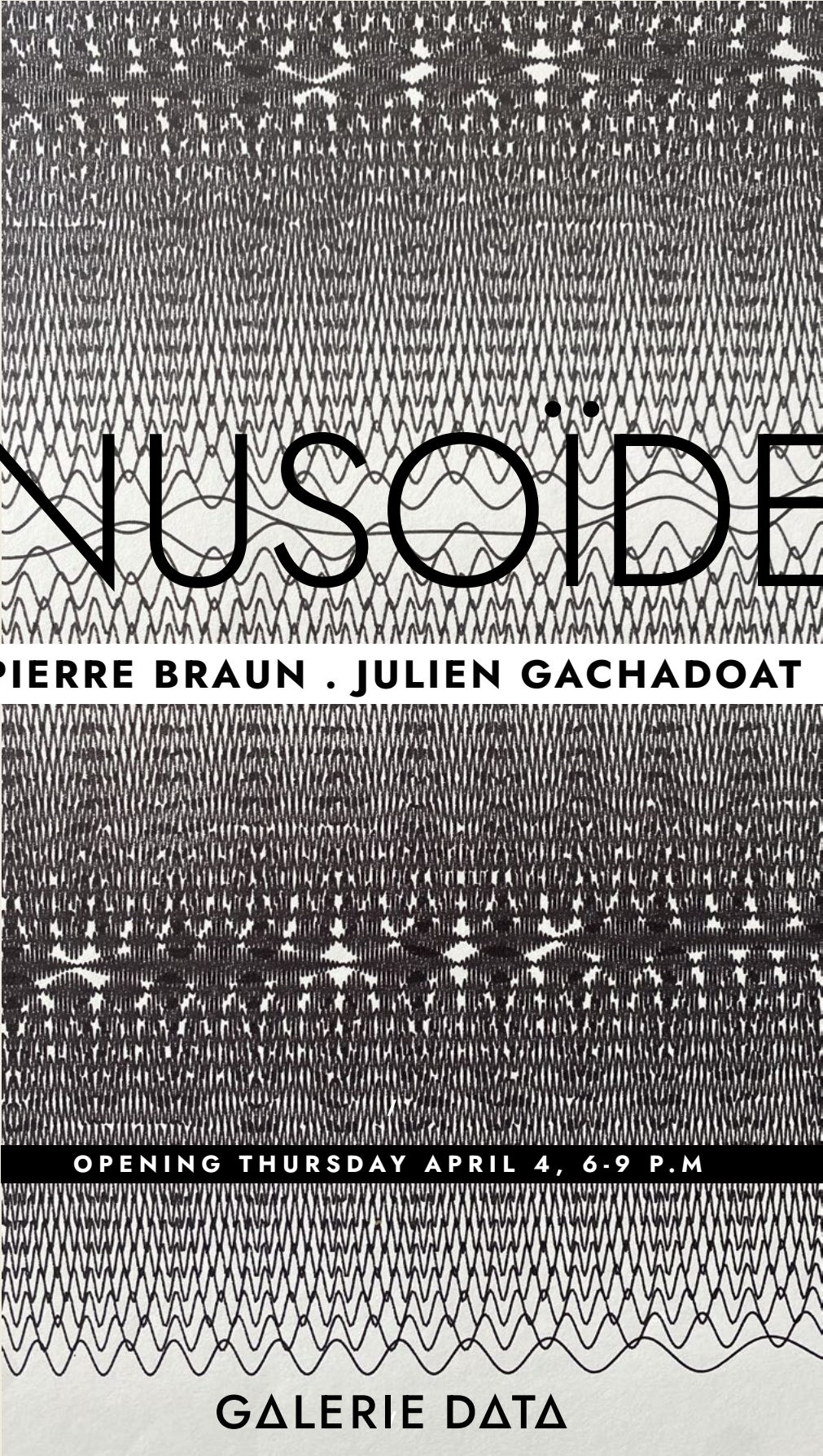


04.04.24
27.04.24



SINUSOÏDES

PIERRE BRAUN . JULIEN GACHADOAT

OPENING THURSDAY APRIL 4, 6-9 P.M

GALERIE DATA

26, BOULEVARD JULES FERRY 75011 PARIS

THURSDAY-SATURDAY / 14H-20H

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SINUSOÏDES

from April 4 to 26
with Pierre Braun et Julien Gachadoat

Opening Thursday APRIL 4, 6-9 p.m

The SINUSOÏDES exhibition compares the practice of code and plotter drawing by two generations of artists 40 years apart, Pierre Braun and Julien Gachadoat.

Pierre Braun was born in Paris in 1961. A visual artist, teacher and researcher with a doctorate in Art Sciences, he has been practicing computer-programmed drawing since the 1980s. Taking a stand against the pioneering idealism of the Computer Art of the 60s and 70s, his creations question the impact of machine time on our sensibility, on the way we write or draw.

He belongs to the second generation of artists who pioneered artistic exploration through code, experimenting with the emerging world of programming to transcend the traditional boundaries of drawing, establishing an innovative dialogue with the machine.

From 1981 onwards, Pierre Braun practiced programmed drawing at Jussieu (IREM), before joining François Molnar's psychophysiology of perception laboratory at the Saint Charles-Paris 1 center in 1982. He subsequently met Vera Molnar, with whom he collaborated free of charge between 1984 and 1986, while continuing his research with François Molnar.

In this context, he explores the possibilities of drawing through programming, reassessing the possibilities of graphic production and questioning the creative process. His approach involves algorithms and graphics that call into question the individual mastery of creation. By examining the effects of code manipulation and the materiality of data in generative drawing with a plotter, Pierre Braun explores the limits of the process of graphic emancipation and its aesthetic potential.

Galerie Data
26, boulevard Jules Ferry Paris 11
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Contact Press & Gallery
Gabrielle Debeuret
+33 (6) 18 52 26 86

The singularity of the drawing executed with a plotter on paper creates concrete micro-spaces, establishing a tangible link between the ancestral writing of signs and digital code, bearing witness to an era of transition to a world shaped by digitalization.

By taking a critical look at the visualization of data in the design and production process of machine drawing, Pierre Braun questions the way in which code and graphic lines can combine to generate new forms of expression, highlighting the aesthetic radicality of generative drawing, based on line and programmed in black and white.

Julien Gachadoat was born in 1975, and grew up in the demomaking culture of the late 90s, an avant-garde scene of visual creation generated by computer code. Since then, he has used programming languages as a tool for artistic creation. And he has worked to democratize tools such as Processing and p5.js by teaching programming.

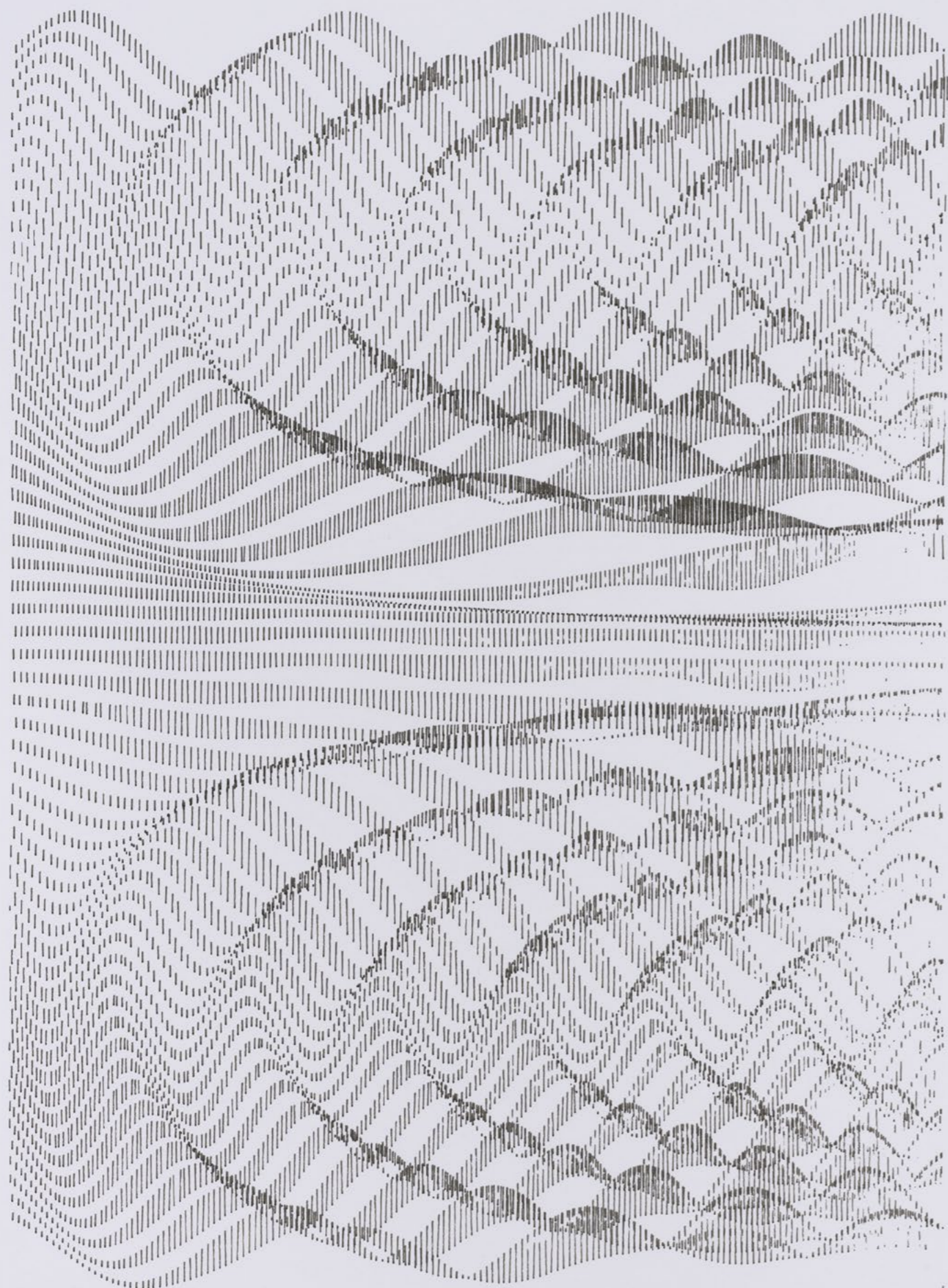
A contemporary of the digital revolution, he has seized on technology to explore its creative possibilities, through the practice of algorithmic drawing. Using simple graphic rules, he brings abstract forms to life by combining geometric elements and manipulating principles of spatial repetition. These creations take the form of series with multiple iterations, introducing the unpredictable through the use of random number sequences.

The two artists' practices converge in their work around line, with a shared aesthetic of purity and monochrome. As the exercise of code has its own syntactical rules and specific constraints, their creativity is simulated, prompting them to find ways of visualizing abstract ideas within these limits.

The overall theme of the exhibition highlights specific research into the principles of sinusoidal repetition. By exploring data such as frequency, amplitude, phase and periodicity, which enable the infinite creation of compositions, they embody them in tangible form through the use of tracers.

Although they share common methods, their approaches to line work are marked by specificities. In his explorations, Pierre Braun seeks to give an organic aspect to the line by, for example, reducing the number of points on a curve. This aesthetic bias reflects his desire to distance himself from the idealism of historical Computer art, which tended to seek a perfect digital form, far removed from manual tracing.

This approach is very different from that of Julien Gachadoat, who uses a filling algorithm to produce calculated results. In this case, tracing is carried out with maximum functional economy. The machine is then seen as an «outstanding executor» - a paraphrase of Vera Molnar - to produce patterns with the utmost precision.



111 v3ga

12/2020

JULIEN GACHADOAT

<https://www.v3ga.net/>

Born in 1975, lives and works in Bordeaux.

For several years now, Julien Gachadoat (v3ga) has been exploring the possibilities of generative drawing, creating unique works produced by algorithms. Combining monochrome geometric elements and playing on spatial repetition, he works on the emergence of abstract forms by introducing an element of unpredictability using sequences of random numbers.

Developing his own creative tools from simple graphic rules, Julien Gachadoat uses the computer - «this peerless executor» (Vera Molnár) - to navigate the field of possible motifs. He first freezes these unique shapes on paper with a plotter, creating a link between writing and code. «Leaving a unique, physical and palpable trace of art, not in spite of digital technology, but thanks to it»: this is the Bordeaux artist's philosophy. He thus «unites» on paper the computer and the pencil, the rigor of computer code and the poetry of art, moved by its errors, its irregularities, its share of the improbable.

Always on the lookout for new «encounters» and formats, he is developing new projects in the field of crypto-art, eager to set his works in motion, and to pursue his experiments in a field that also enables him to enhance the uniqueness of each digital creation, while unveiling new possibilities.

In May 2021, he was selected by the ArtBlocks platform, presenting his first project with them in July of the same year. In November 2021, Casey Reas invites him to take part in the -GRAPH exhibition on the Feral File platform alongside other international artists. In 2022, he exhibits in Milan (Italy) at the Cortesi gallery and takes part in the tribute to Herbert W. Franke. In 2023, the Structures project, combining NFTs and plotter drawings, is presented on the Plottables platform. He exhibits in London at the Verse gallery for the «Pathways» project. At the end of the year, he again takes part in the +GRAPH exhibition on Feral File and has the great good fortune to meet Vera Molnar.

Exhibitions

- 2023** +GRAPH, Online exhibition on Feral File, curated by Casey Reas
- 2023** Pathways. Exhibition and publication with Vetro editions, Verse works, London
- 2023** Structures. Online exhibition on the Plottables.io platform
- 2022** Tribute to Herbert W. Franke, Galerie Cortesi, Italy
- 2021** Radiance. Online exhibition on ArtBlocks
- 2021** BIOMORPH, Galerie Data
- 2021** GRAPH on Feral File. Curation by Casey Reas
- 2020** GENERATIVE, Galerie Data
- 2020** Lignes - Metavilla - Bordeaux
- 2020** Graphics waves - Didam - Bayonne
- 2020** Algorithmes - La conciergerie - La Motte Servolex

Prizes & awards

In 2010, he won the Liedts Meesen Foundation's New Technological Art Award (jury and public prize) for the digital work «Gravity».

Curious Paths of Thought (extracts)

text by Mark Webster, Pathways book Vetro editions 2024

« It is the physical qualities of an image that not only help define the technique of the artwork, but also play on our overall perception of it. To call these works “drawings” may well be read as a contradiction in terms, when one considers that they have been made by a machine. Drawing, by definition and tradition, contains the idea of a gesture; a movement that utilises tools, marking the medium through bodily expression. To draw using a machine – or rather, to have the machine draw – raises eyebrows. It challenges our views on what drawing is, and makes us reevaluate the role of technology in artistic expression – a partnership that has in fact existed since the dawn of mechanisation. Doing this today and with the aid of the computer opens the discipline up to an exciting range of possibilities that have only just begun.

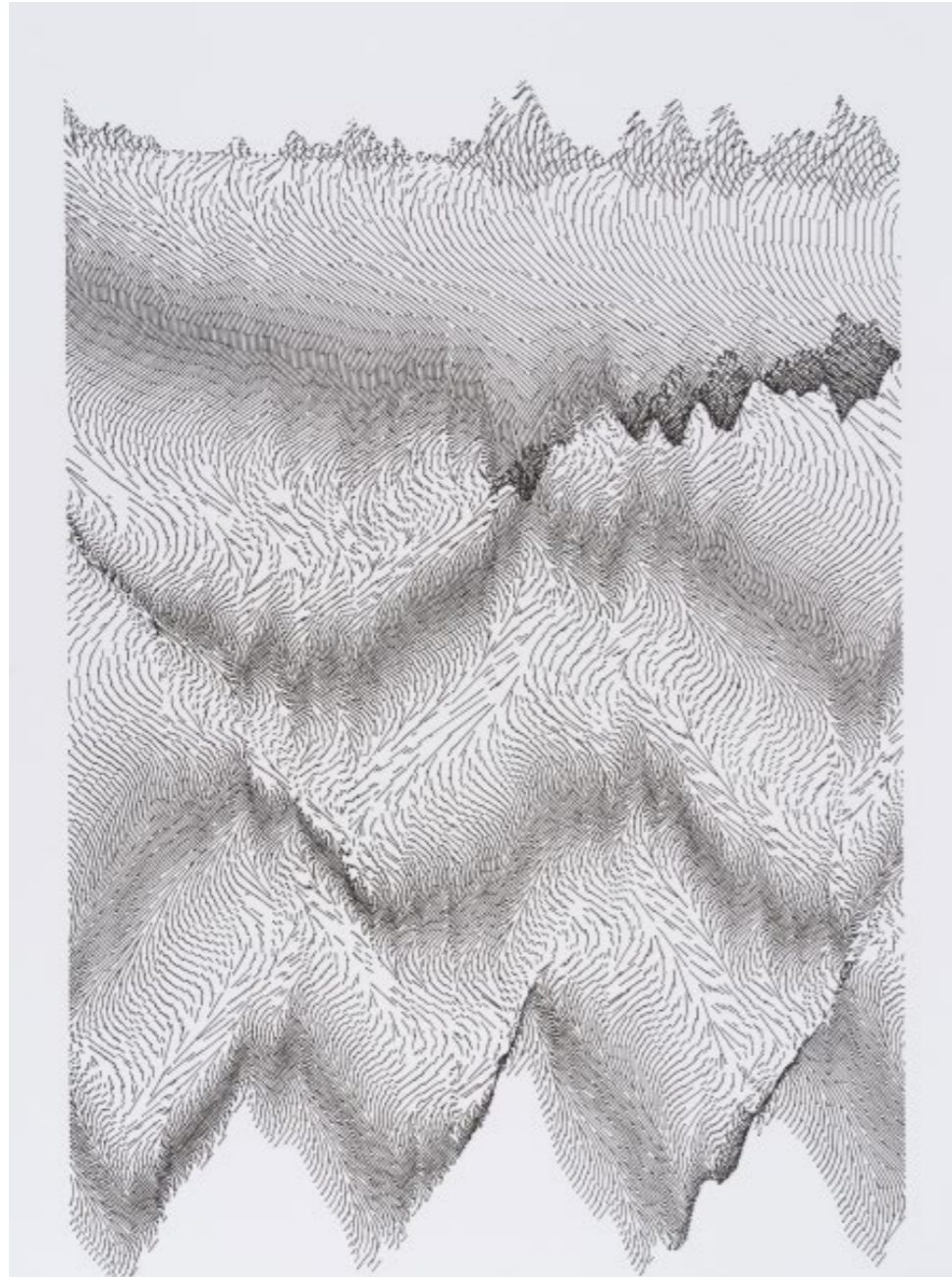
Back in the 1960s, computers had no user interface. The only way to get something done on a computer was to either load a programme onto its memory, or write one yourself. Furthermore, there was no immediate means to visualise your programme’s output. For that, one had to print it – and more often than not, this was done using a plotter. It was at this point that a few fortunate engineers foresaw an artistic use for it and started feeding the machine with programmes that would output visuals.

The heydays of the pen plotter in the 70s and 80s were followed by their total obsolescence with the advent of faster printing technologies. However, in the early 2000s, on the wave of DIY CNCs and 3D printing machines, many people’s curiosity and fascination brought them back – including in one project I worked on. In 2014 I collaborated with one of my students to create a drawing machine. We named the machine SAM and a few years later it was invited to be featured in a workshop and installation organised by Julien in Bordeaux. It was here that I had the opportunity to experience the beginnings of Julien’s own interest in plotters. Little did I realise at the time that his curiosity would become the stirrings necessary for him to embark upon a long and successful artistic journey devoted to drawing with the machine. (...)

References can be pinpointed in Julien’s work to a long artistic tradition that began with the constructivists, became refined with the almost minimal work of the conceptualists, before finding a path with the computer artists of the 1960s. His work is constructed within this visual field of geometric abstraction. Julien is an avid reader of this history, sensitive to the rich yet relatively short cultural heritage of programmed art. I see the influence of Vera Molnar’s *Interruptions* (1968-69) or *Hypertransformations* (1975-76). Both series demonstrate underlying concepts that can be observed in his work, where simple graphic elements are laid out on a grid and randomness is used as a strategy to vary a number of parameters, such as position, size, orientation, or line length.

I could also draw a comparison to the plotter drawings that emerged from Manfred Mohr’s seminal exhibition in Paris in 1971, *Une Esthétique Programmée*. There is perhaps a connection here with the concept of the “étude”, a series of visual studies. When I look at what Mohr had produced for that exhibition, I see visual research – an artist attempting to express the possibilities of the algorithm and the drawing machine. Similarly, when I look at Julien’s extensive body of work, I also see the researcher at hand, seeking with each series the admiration of an algorithm and using a structured method. »





Julien Gachadoat, Forgotten Cascade, 2023

Generative drawing created with an AxiDraw robot plotter using a 0.5 mm black uni-pin fine line felt-tip pen on Fabriano bristol 250g paper unique piece, 29.7 x 42 cm



Julien Gachadoat, Falling, 2020

Generative drawing created with an AxiDraw plotter using a black 0.5 mm uni-pin fine line felt-tip pen on Fabriano bristol 250g paper unique piece, 21 x 29.7 cm

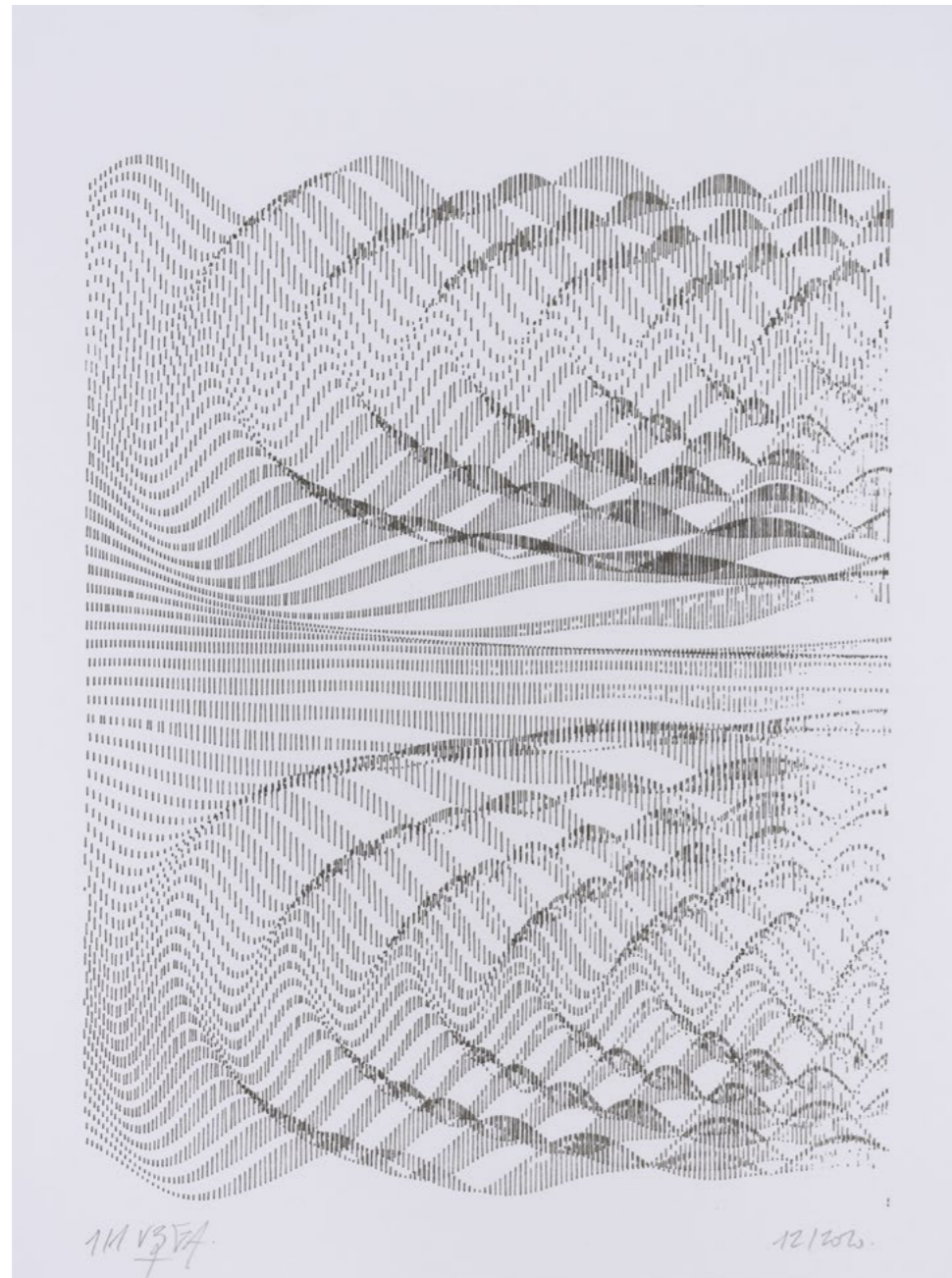
Julien Gachadot, Cascades

The Cascades algorithm uses a set of vertically modulated sinusoidal waves whose amplitude and frequency vary as you navigate from the top to the bottom of the drawing space.

The interstices between two sinusoids are then filled with vertical stripes, whose orientation and density depend on certain spatial rules, but also on random numbers that introduce irregularities and break zones, resulting in designs that may evoke mountainous reliefs.

The sinusoids are superimposed with modulations in pitch, creating a palpable difference in oscillation between peaks and troughs. Each carries its own signature of frequency and amplitude, a matter emerging from this mathematical organization.

To enrich this texture, the artist introduced micro-variations, added by noise functions, bringing subtle nuances to the overall organization of the form. By bringing the random factor into play, the spaces between the strokes are deliberately irregular in a disorderly distribution, creating a unique rhythm playing on compression and dilation.



Julien Gachadoat, Double, 2020
Generative drawing created with an AxiDraw robot plotter using a 0.5 mm black uni-pin fine line felt-tip pen on Fabriano bristol 250g paper unique piece, 29.7 x 42 cm

Julien Gachadoat, Double

This drawing features a sinusoid that moves up and down in a regular pattern, and is influenced by a non-linear function, so the waves don't follow a predictable trajectory. A sinusoidal function is applied to modulate the frequency of the oscillations, adding further complexity to the pattern. The filling function used is light, creating a dense, airy surface material.



Julien Gachadoat, Slate, 2020
Generative drawing created with an AxiDraw robot plotter using a 0.5 mm black uni-pin fine line felt-tip pen on Fabriano bristol 250g paper unique piece, 29.7 x 42 cm

Julien Gachadoat, Slate

The overall structure of this design is based on a sinusoidal function with no internal shape filling. The spacing between the lines and the covering with perpendicular lines gives the impression of a grid, or honeycomb structure, reminiscent of natural structures.

PIERRE BRAUN

<https://pierre-braun.fr/>

Born in 1961, lives and works in St Malo.

Since 1994, Pierre Braun has been a lecturer and researcher in art at the University of Rennes 2, where he holds a doctorate in arts and art sciences, which he defended under the supervision of François Molnar in 1992. From 1998 to 2000, he headed the Department of Visual Arts at the University of Rennes 2. After initiating the department's digital art courses in the 90s, he created the digital multimedia and graphic design in 2003, and the masters programs at Rennes in 2017. He is responsible for the publishing house Présent Composé (Rennes) and maintains a research log on the academic platform hypotheses (computerdrawing.hypotheses.org).

Pierre Braun publishes articles on the historical and pioneering forms of computer art (Kenneth Knowlton, Manfred Mohr, Véra Molnar...) and net art (Jodi, Vuk Cosic, Nicolas Frespech, Christophe Bruno...). He published "Recollection", the eponymous work for the exhibition of his work at Lara Vincy Gallery in 2014, and "L'ensauvagement graphique du code" in 2019. He directs several collective publications on Vito Acconci, Vera Molnar, Hubert Renard, "Libérez les machines. L'imaginaire technologique à l'épreuve de l'art" in 2014 as well as "Digital Klee Esquisses Pédagogiques in 2020."

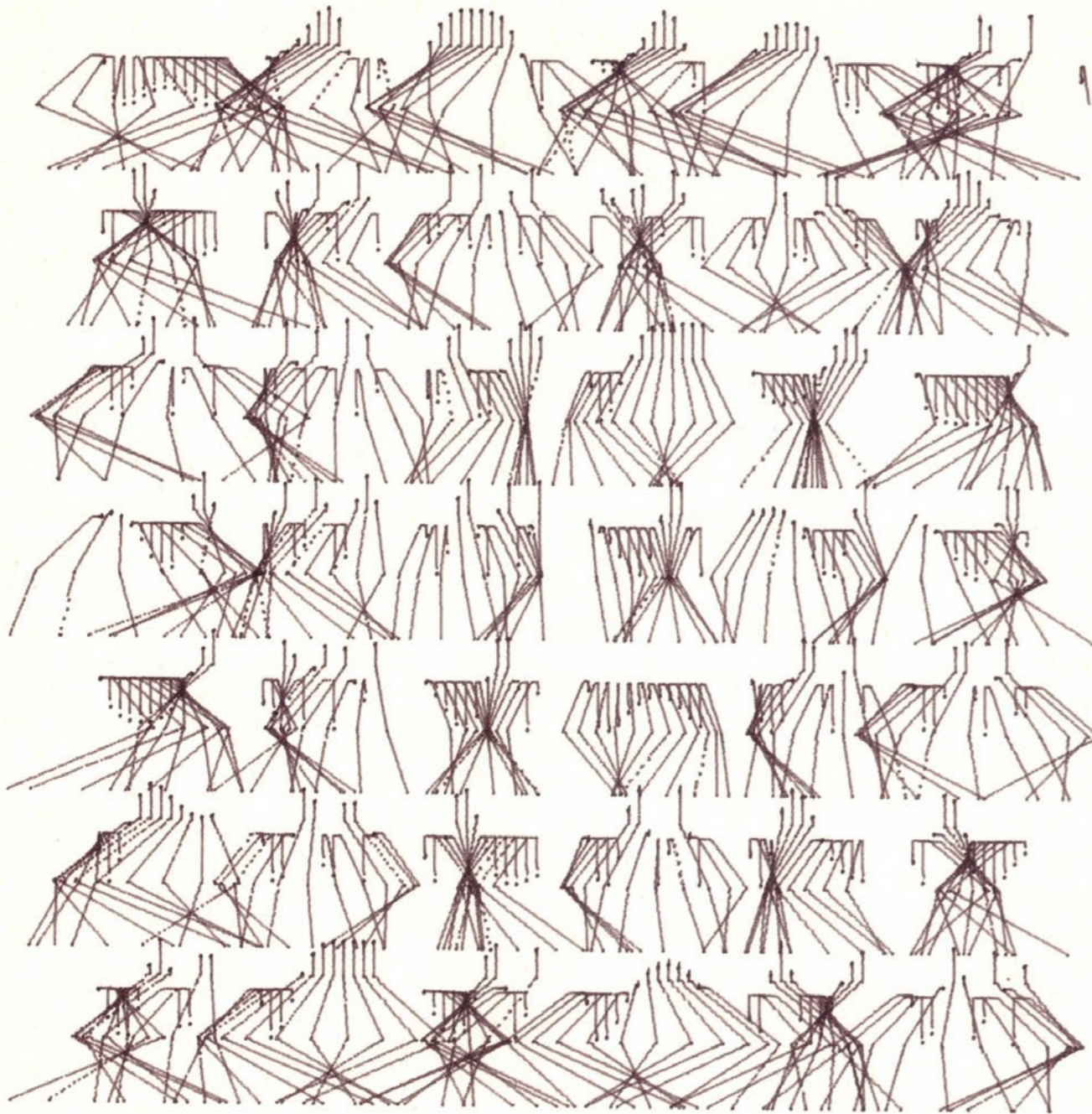
From 1981, Pierre Braun practiced programmed drawing at Jussieu (IREM), then in 1982 joined François Molnar's psychophysiology of perception laboratory at the Saint Charles-Paris 1 center. He met Véra Molnar, with whom he collaborated free of charge between 1984 and 1986, while continuing his research with François Molnar.

After the pioneering plotter experiments of computer art in the 60s and 70s, Pierre Braun's creations question the relevance of vectorial and generative tracings in an artistic research process falsely condemned to obsolescence by so-called «synthesized» raster images. Interrogating the modernist motifs of the grid, the module and systematic repetition, his graphic research on the sinusoid, which he initiated in 1981 (and which was the subject of a Master's thesis in Plastic Arts in 1984, under the direction of François Molnar), provides him with the opportunity to extend graphic programming to rhythmic and harmonic forms on the scale of the line.

In his 2D and 3D compositions (his DEA in plastic arts, co-directed by Pierre Baqué, Bernard Teyssède and François Molnar, focused on the design of 3D software), he has no hesitation in extending the generative graphic composition approach of pioneering artists, multiplying the typologies of graphic compositions without ever exhausting the subject of algorithms. He suspends the tracings to take them up again elsewhere, giving pride of place to the spirit of play, graphic study and improvisation, generating heterogeneity and multiplying the quality of the tracings of machines at work. The graphic paths executed on the sheet of paper by the plotter act as the production of micro-spaces that emancipate the tangible link between the ancestral writing of signs and the digital code that now encrypts the world's affairs.

Links

- Artist Blog <https://pierre-braun.fr/>
- Research Blog <https://computerdrawing.hypotheses.org/>
- Academic Cv <https://perso.univ-rennes2.fr/pierre.braun>
- Social Media <https://www.instagram.com/pier.braun/>



SmArt Tech

Pierre Braun
Bill Fontana
Marie Geneviève Havel
Jonathan McIntosh
Nissim Merkado

Galerie Natkin-Berta
124, rue Vieille du Temple
75003 Paris Tél. 42.74.42.16

24 Juin 10 Juillet
Vernissage le 24 Juin 1992
de 18 h à 21 h



Education

1992 Doctorate in New Arts and Art Sciences: "Seeing and undertaking color: Digital treatments applied to art sciences": under the direction of François Molnar, Paris 1 Saint-Charles

1985 DEA in Plastic Arts "Approach to modes of representation of three-dimensional objects on B.F.M.186".
Under the direction of M. Bacqué, M. Teysseire and M. Molnar, Paris 1 Saint-Charles

1984 Master of Plastic Arts "Programmed graphic organizations", with François Molnar as Research Director, Paris 1 Saint-Charles

Expositions personnelles

2014 "Recollection", Lara Vincy

2011 "De la vitrine à l'échographe. Petits arrangements entre images", espace M, Rennes 2

1999 "Un éclair...puis la nuit. Territoires mobiles et coïncidences", Lara Vincy

Group Show (selection)

2015 "Peindre #3", Le Volume, Vern sur Seiche

2011 "Table en quarte". Generative Drawings, installation, grande salle des pas perdus, Festival "Ébruitez vous", Parlement de Bretagne, Rennes

2007 "Parasite" exposition offline/online, Pierre Braun/Denis Briand/Pascale Borrel, Éditions Présent composé & revue En l'état, Rennes

2001 "22", galerie Satellite

2001 "Quand les images remontent... ", 12'30, DV Pal. Rencontres internationales Paris/Berlin

2000 "21" Galerie Satellite, Paris

2000 "Variétés" Galerie L'engage, Rennes

1999 Denise Aubertin, Ben, Pierre Braun, Raymond Hains, Rolf Julius, Peter Vögel, Galerie Lara Vincy

1995 "Hommage à Picabia", salon de Montrouge

1995 "Pur / impur", curated by Charles Dreyfus. Collectif Aixois d'Art Contemporain

1995 Le temps de l'ailleurs » Anniversary exhibition with Pierre Restany et Alex Mlinarcik, Galerie Lara Vincy, Paris

1995 "Digital Konkret 1", Exhibition with Wolfgang Kiwus, Vera Molnar, Georg Nees, Horst Rave, Erwin Steller. Gesellschaft für Kunst und Gestaltung, Bonn

1994 Salon de musique. dernière suite ». Galerie Lara Vincy

1992 "SmartTech ", Programmed Graphism. Mixed médias. Installation (générateur graphique programmé, animations). Avec Nissim Merkado, Bill Fontana, Galerie Natkin Berta, Paris

1985 "CAAO" (Conception Artistique Assistée par Ordinateur), Vera Molnar, Denis Pigny, Pierre Braun. Curated by François Molnar, Chapelle de la Sorbonne, Paris

Publications

2020 Pierre Braun, *Digital Klee – Esquisses pédagogiques – Enquête sur le futur de la forme*, les presses du reel

2019 Pierre Braun, *L'ensauvagement graphique du code*, les presses du reel

2014 Pierre Braun, *Recollection*, les presses du reel

2013 Pierre Braun, *Libérez les machines ! – L'imaginaire technologique à l'épreuve de l'art*, les presses du reel

Pierre Braun, Undulations/oscillations

Pierre Braun creates graphic compositions programmed via algorithms using data derived from the sinusoidal function. Well known to sound artists, the rhythmic parameters of the sinusoidal wave in terms of frequency, amplitude, phase and periodicity also allow infinitely spatialized assemblages and graphic combinations.

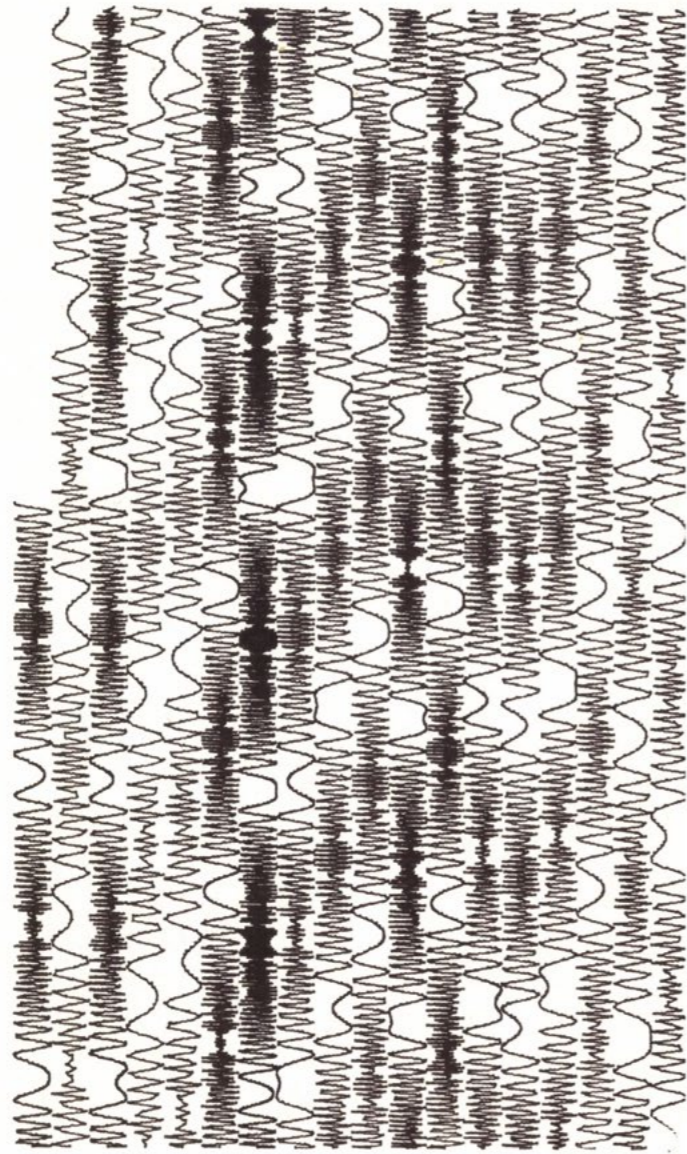
The works are produced using a plotter (or plotter), a computer printing device for graphics in line mode, with digital motors controlling their mechanical movement.

The quality of the graphic reproduction depends on the digital drive step of the plotter motor, influencing the fineness of resolution and the thresholds of perception of the plot. The representation of a sinusoid varies depending on the number of points used, impacting the visual rendering.

In the case of a straight vector, the motors move the traced tip continuously between two points. On the other hand, for a sinusoid, the number of points needed to represent the curve over a given distance can lead to very different results, even for the same period. And the representation of the curve also depends on the restitution scale factor, influencing the physical reality and the final appearance of the layout.

This notion is crucial for understanding the specific constraints of drawing with a plotter. The drawing of a sinusoidal line can be impeccable or simplified depending on the number of points, and the creation of the graphic path can be compared to Paul Klee's «active line», modeled today by the tracing step of machines. The graphic frequency is also determined by the number of movement steps, influencing the oscillation and aesthetics of the line.

Choosing a high number of points to trace can “trap” the machine by forcing it to stand still, generating “engineering of lost time” where the route seems to get lost, giving rise to a cinematic dance with hazards specific.



Pierre Braun, Sinusoides 1982/1984, variante de la section sin_1, 1981
Generative drawing made with a Texas Instruments plotter, ink on paper,
unique piece, 21 x 29.7 cm

Beyond or below the image

In the 1980s, around a decade after the advent of Computer Art, and the seminal 1968 exhibition *Cybernetic Serendipity* curated by Jasia Reichardt, Pierre Braun explored automated composition and code-influenced experimental form.

Although these drawings were considered obsolete in the face of the emergence of computer-generated images and realistic 3D, integrated into the film and cultural industries, they continue to captivate because of their distinct aesthetic. Abstract, created with simple graphic means and far removed from standardized photographic reproductions, these productions provoke questioning through the attraction they exert on us in an age of sophisticated contemporary reproduction devices.

These drawings require time, which confronts them with the physical constraints of their production. Their economy of visibility differs from the flow of instantaneous, omnipresent images. Whereas the technology of the '80s and '90s sought hyper-realistic restitution, plotter drawings maintain a simplicity that underlines the need to apprehend their specific supports and their materialization process. The polyphonic minimalism of these graphic structures, evoking organic imaginings, invites the viewer to deconstruct the plots and experiment with «rational beauty», offering an alternative to the current infatuation with mass-media images and recalling the legacy of the pioneers of Computer Art.

The exhibition plotter drawings were produced by Pierre Braun as part of his Maîtrise d'Art Plastiques «Programmed graphic organizations» between 1982 and 1984, at Paris 1 Saint-Charles, with research director François Molnar.

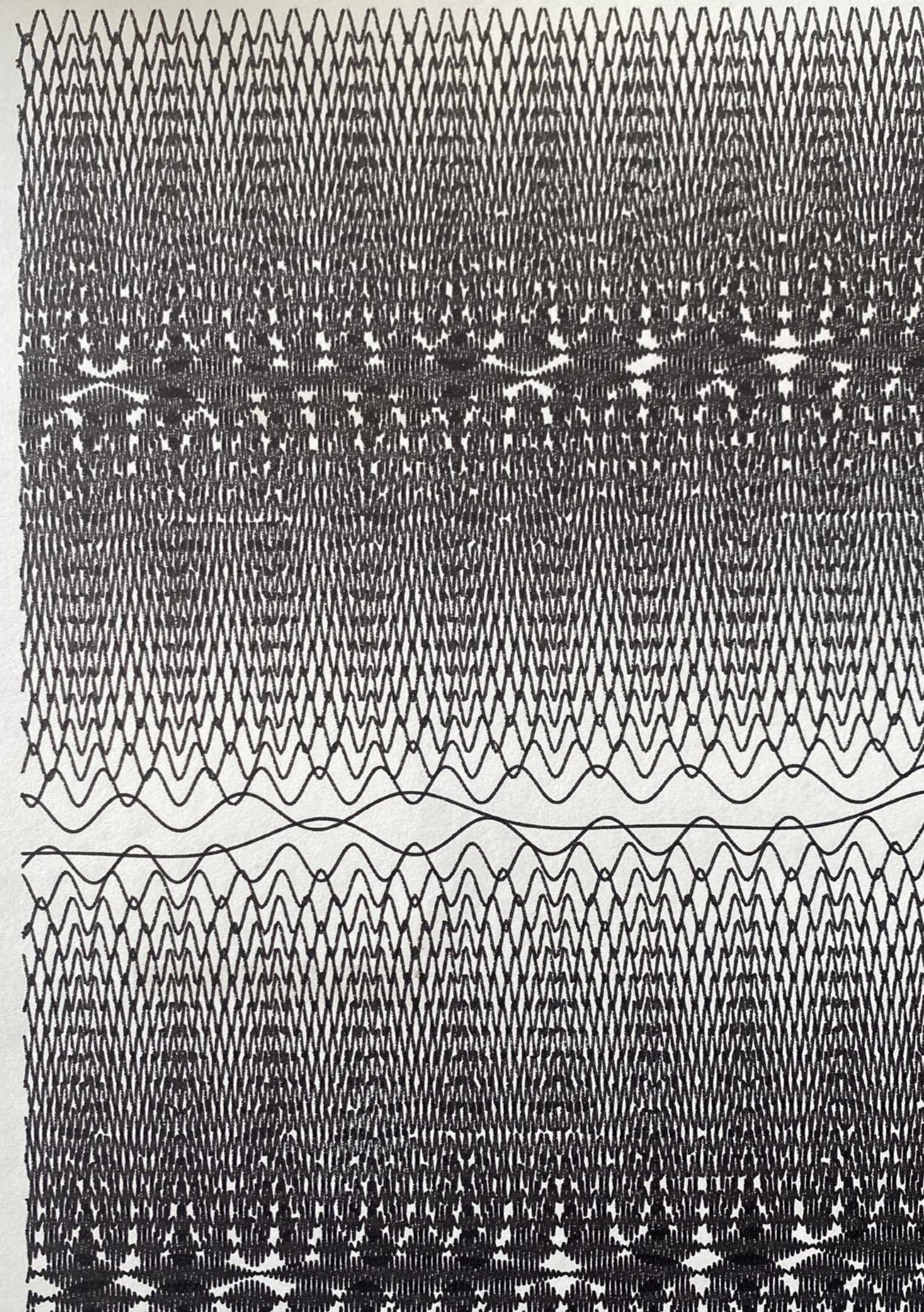
The A3 format plots were programmed and produced at the Research Institute on the Teaching of Mathematics (IREM) on the Jussieu campus from 1981-82.

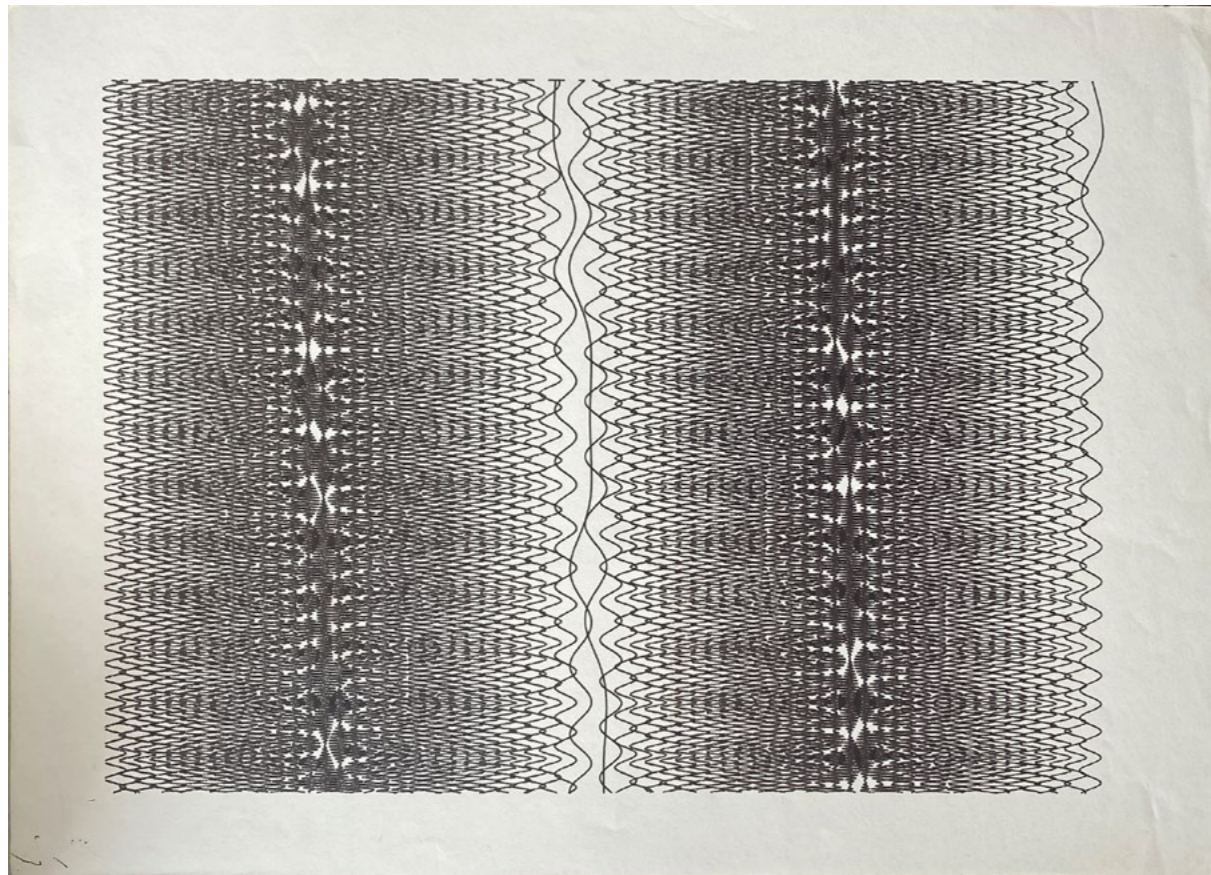
This work is among the first carried out on the transcoding of the sinusoidal function after Pierre Braun was fascinated by the graphic rhythms of the pioneering artists discovered in the *Leonardo* magazine; in particular the works of Manfred Mohr, and the 3 "N" (George Nees, Frieder Nake et Michael Noll), but also Vera Molnar and especially the incredible works of Charles and Colette Bangert. Georges Charbonnier, stationed at the university, will bring to the attention of students number 13 (1975) of the *IBM* magazine and the work of Abraham Moles "Art et Ordinateur"...

The following year François Molnar welcomed Pierre Braun into his laboratory to use, in the context of specific plastic arts workshops, an A4 plotter which remained unused most of the time. From 1982 to 1984, it was this plotter controlled by an Apple 2 which was mainly used. This equipment remained rudimentary. You had to press on the motherboard to start the machine...

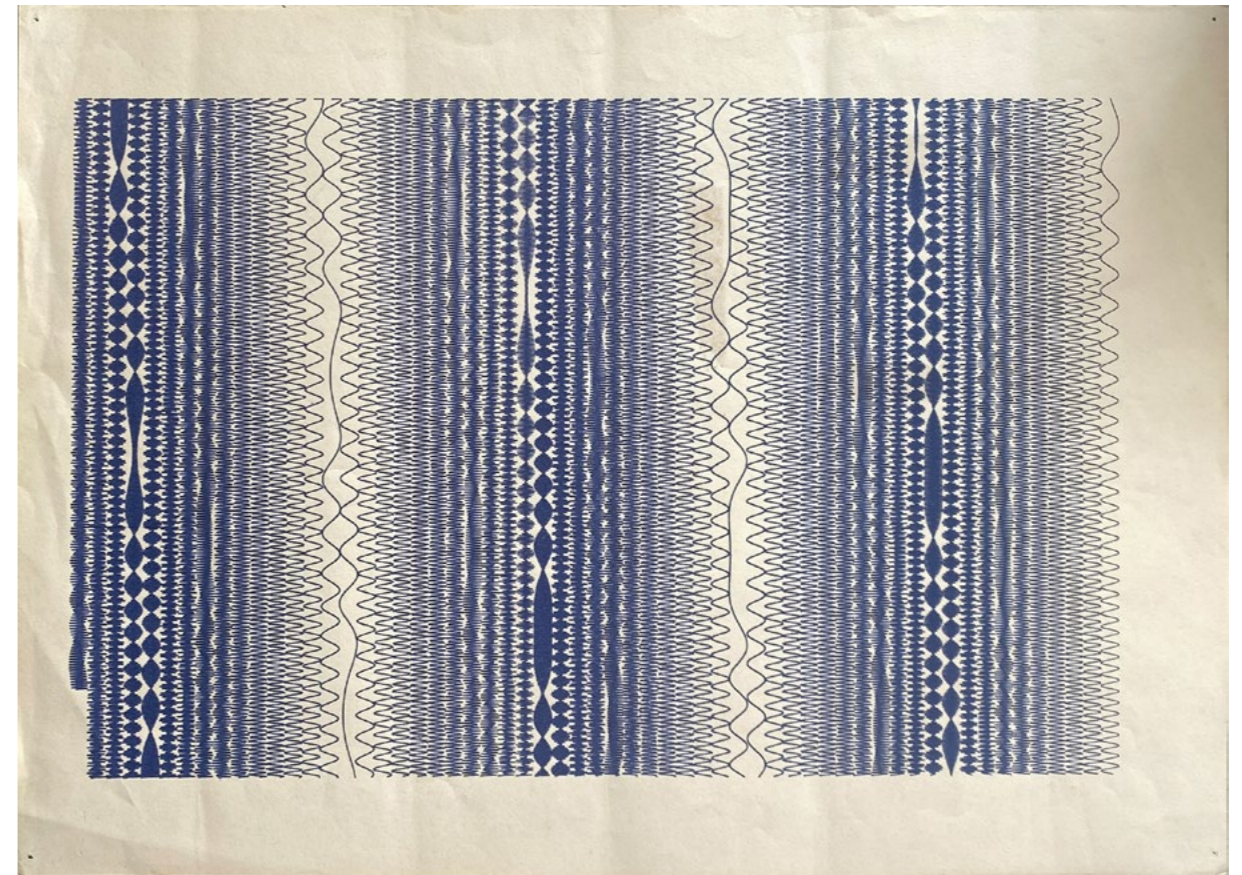
Between 1982 and 1984 the "Basic Applesoft" language was used for the plots presented in this exhibition. Each plot required a series of exploratory studies, improvisations and specific graphic adjustments of the research process in plastic arts to achieve refined exposed lines. The algorithms necessary for producing the plots remain rudimentary and are based on the different parameters of the sinusoidal function associated with the software possibilities of procedural programming.

The graphic code plays on sequence loops which here favor graphic modularity and the frame, sometimes the use of random functions, variations on the tracing steps and the frequencies of repetition of graphic elements to manage the types of densities...).





Pierre Braun, Sinusoides 1981/1982, section sin1_81_3
Generative drawing made with a Hewlett Packard plotter, ink on paper,
unique piece, 43 x 28 cm



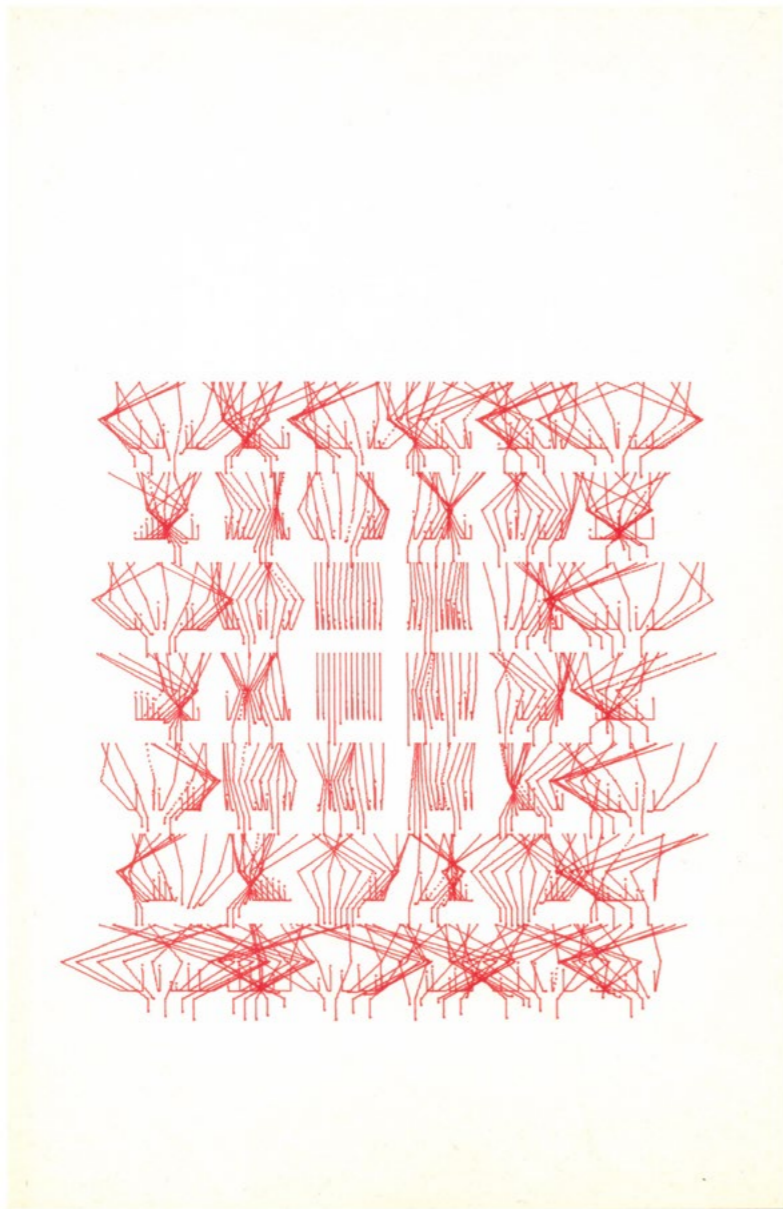
Pierre Braun, Sinusoides 1981/1982, section sin1_81_1
Generative drawing made with a Hewlett Packard plotter, ink on paper,
unique piece, 43 x 28 cm

«Step by step, that's the way»

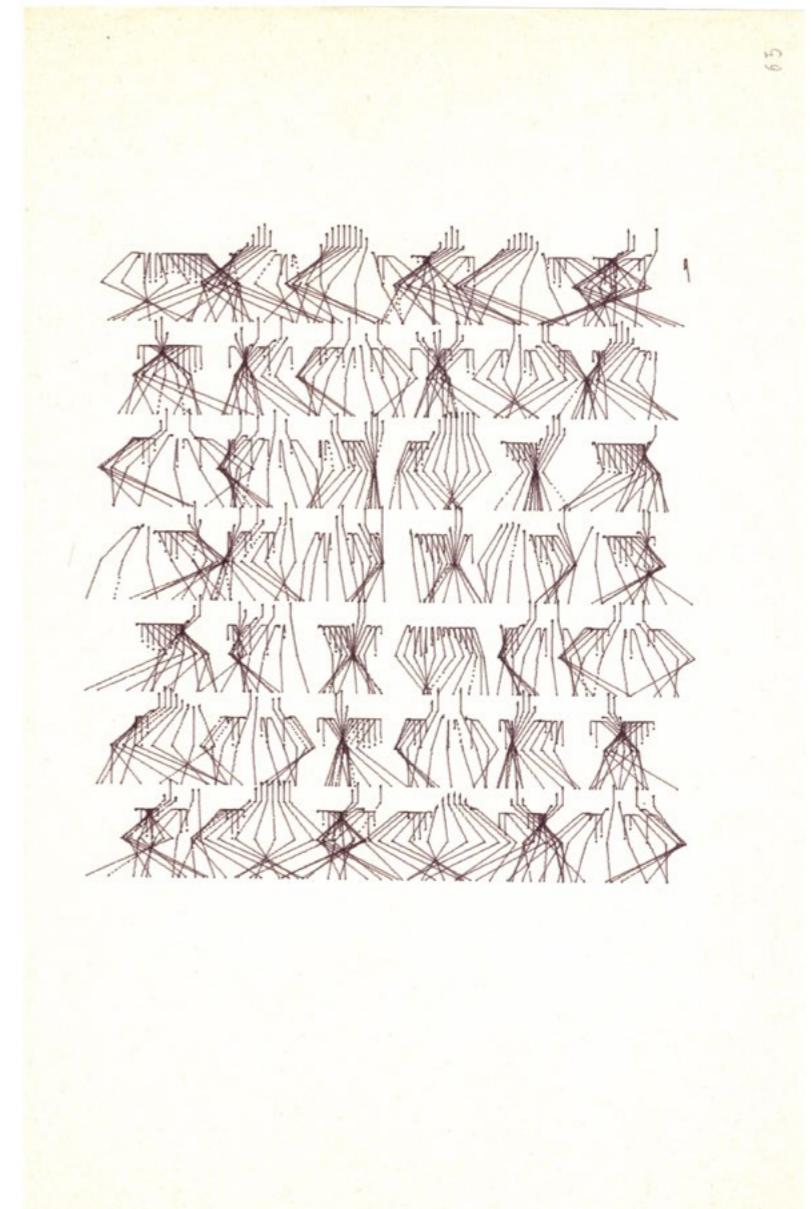
Pierre Braun, sinusoides 1981/1982

This series depicts sine waves of continuously increasing frequency. They are represented graphically by a division into sections of identical size, aligned at a common point of origin on the x axis. The assembly of these waves forms a rectangular grid, creating a surface animation with graphic densities varying with frequency. In all three compositions, we note that beyond a certain frequency, the machine struggles to follow and establish a correspondence between the calculated value of the point to be reached and its interpolated trajectory, thus becoming anachronistic.

The frequency exceeds the resolution of the plotting step, causing the point to go back and forth to reach the next coordinates. This creates a graphic and memorial resonance effect, with the lines going back and forth, producing secondary «ghost» figures and interrogating the data captured by the visualization in the graphic programming process. The aesthetics of these compositions lie in the way aesthetic information emerges in time and matter, mediated singularly by the mechanical process of tracing.



Pierre Braun, Spirales Carrées 1982/1984, section sin_b3,
Generative drawing made with a Texas Instruments plotter, ink on paper,
unique piece, 21 x 29,7 cm



Pierre Braun, Spirales Carrées 1982/1984, section sin_b2,
Generative drawing made with a Texas Instruments plotter, ink on paper,
unique piece, 21 x 29,7 cm

«Starting in the middle»

Pierre Braun, spirales carrées 1982/1984

In these compositions, various interactions are at work, involving sinusoidal calculations to create graphic modulations. The lines do not follow a linear development, but rather a square spiral progression, starting in the center of the composition and moving towards the periphery. The amplitude of each line increases progressively from module to module, from the center to the periphery, creating a restless organic character with shattering effects. Despite the visual differences, the sinusoid remains the driving force behind all the layouts, even if the fill calculation differs significantly from the conventional approach.

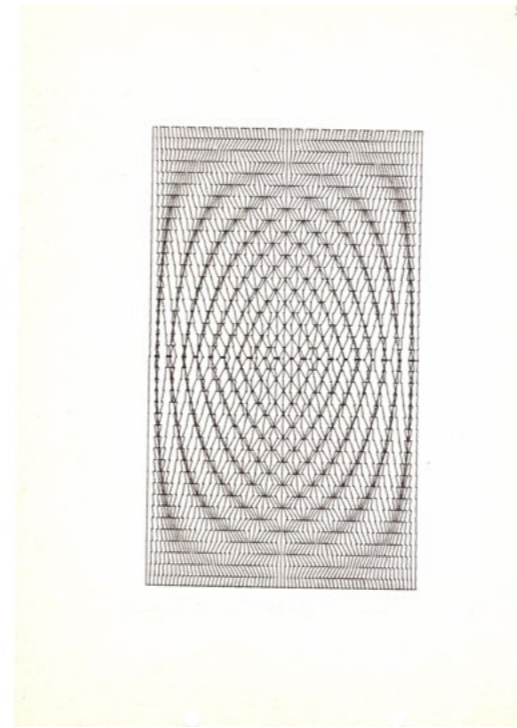
Each line is seen as an element added to the whole, made up of strands and segments of sinusoidal lines that are organized by calculations and transfers onto surfaces. The complexity lies in the grouping of lines into graphic modules, each module consisting of a dozen sinusoids with a limited number of calculation points to obtain broken lines. What's more, each module line is calculated relative to a point of origin that periodically evolves as a function of another sinusoid, making each line unique.

«Rhythms and harmonic spatial frequencies»

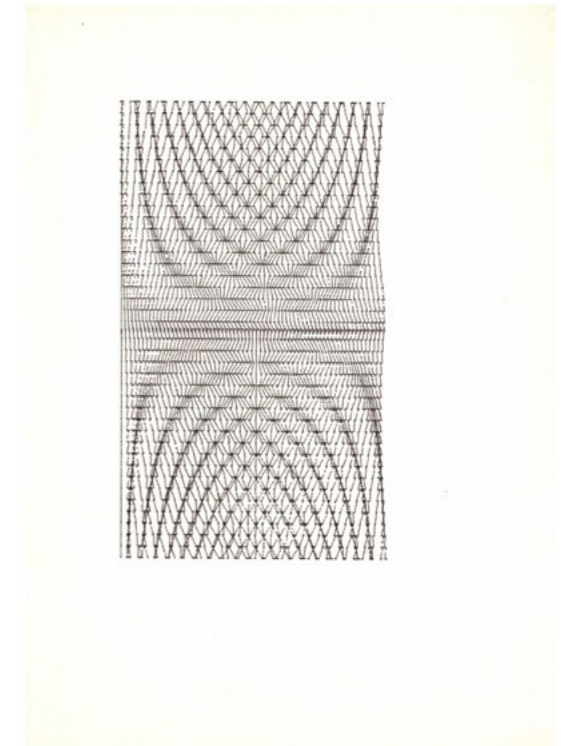
Pierre Braun, *sinusoïdes* 1982/1984

The following compositions play on line assemblages to achieve surface effects. The interweaving of lines creates visual illusions produced by the graphic repetitions and interferences of the skeins. These optical phenomena, obtained through iridescent and moiré effects, can evoke various natural physical manifestations, such as patterns on the surface of water...

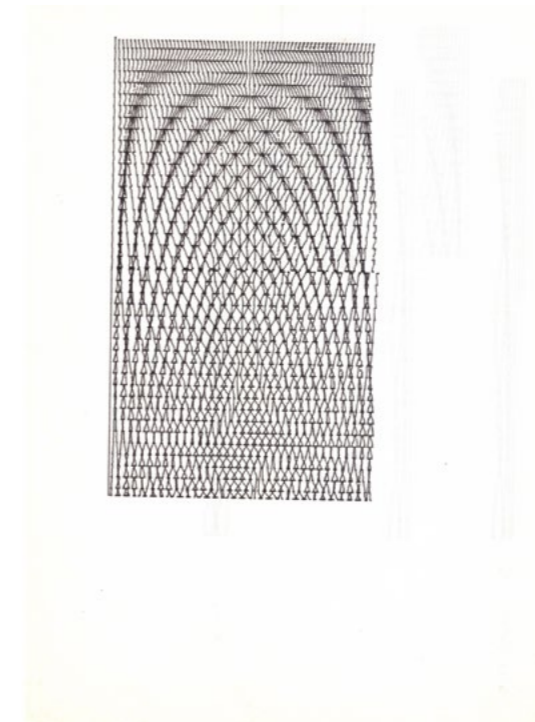
These modular graphic sequences are drawn line by line and brought together by a play of false axial symmetries to unify the composition. Line frequency remains constant, changing only when a line is passed. The calculation involves a progression of frequency, evolving according to its sign (positive or negative) to achieve growth or decay.



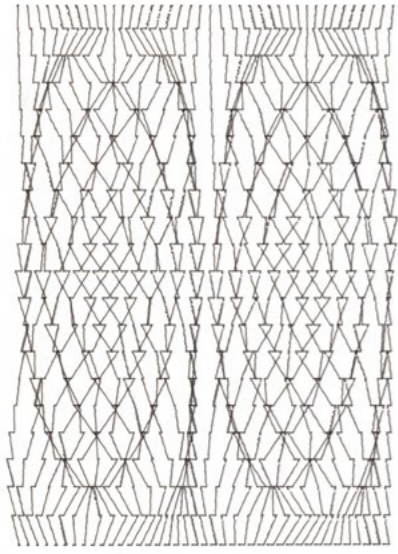
Pierre Braun, *Sinusoides* 1982/1984, section sin32_a,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm



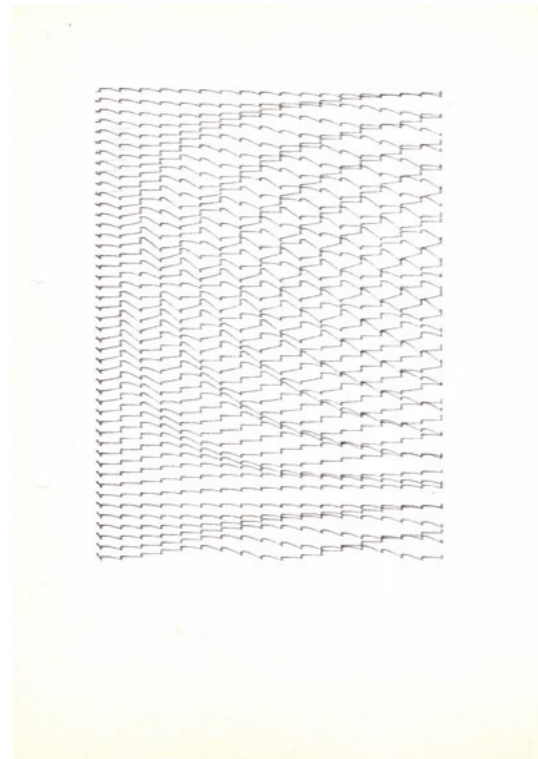
Pierre Braun, *Sinusoides* 1982/1984, section sin32_b,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm



Pierre Braun, *Sinusoides* 1982/1984, section sin32_c,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm

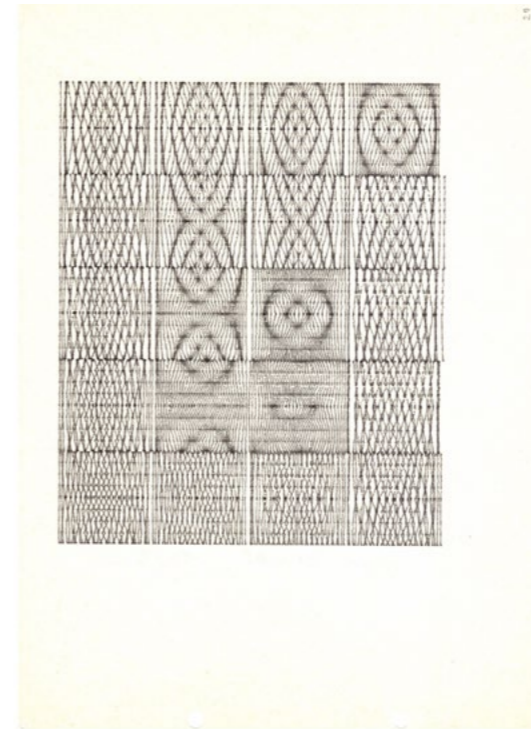


Pierre Braun, Sinusoides 1982/1984, section a6,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm



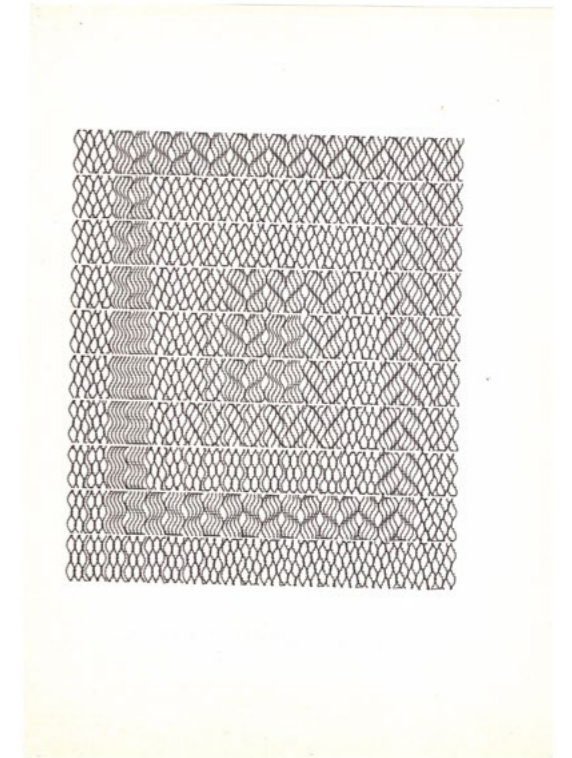
Pierre Braun, Sinusoides 1982/1984, section a5,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm

This series uses the same line-entanglement algorithm to create surface effects. Here, Pierre Braun plays with different tracing steps, in particular by causing «jumps» with each new point calculation. This grid is made up of some twenty lines, each designed from 20 coordinate points, and together they generate two interferential wave effects of increasing frequency and constant amplitude. The visual modulations are obtained by an evolution of the frequency speed, both in the calculation of a line and in the composition as a whole.

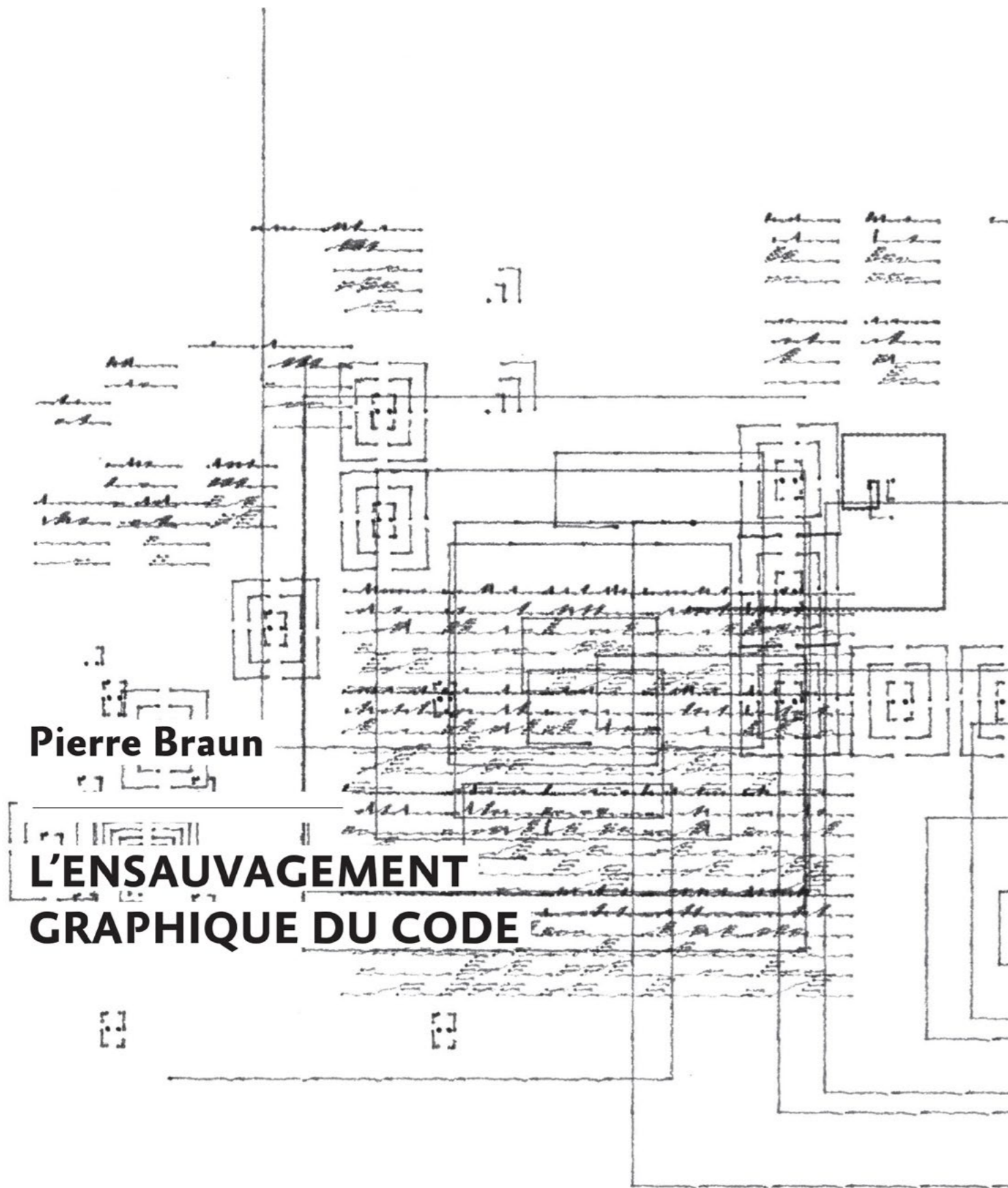


Pierre Braun, Spirales Carrées 1982/1984, sin_d1,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique piece, 21 x 29,7 cm

These compositions question the effects of phase changes in the calculation of each coordinate point of origin of each curve strand. The first design features 20 modules, initiated from the center and spiraling out towards the periphery. The second design features a considerable number of smaller modules, maintaining a constant frequency with midway inversions to create symmetry. The phase progression is gradual for each module, consisting of around a dozen strands.



Pierre Braun, Spirales Carrées 1982/1984, sin_d4,
Generative drawing made with a Texas Instruments plotter,
ink on paper, unique pièce, 21 x 29,7 cm



Pierre Braun

L'ENSAUVAGEMENT GRAPHIQUE DU CODE

Pierre Braun, Coding to draw

« Coding to draw means choosing to re-examine current graphic production possibilities. When and why bring a graphics project to fruition? How do you draw a program? When and why take back control? The graphic and algorithmic design approach puts the individual mastery of graphic creation into perspective. You have to draw with data, crunch and mend code, give in to the intoxication of numbers and their unforeseen events, and accept that the program can be left to calculate or crash when the result traps you. In the end, however, this form of creation questions the limits of the graphic emancipation process and those of its aesthetic reception by the public.

Well publicized in Europe and the United States (museum institutions and foundations are dedicated to them), the graphic productions of generative drawing are not exhibited and unfortunately remain in France mostly at the gimmick stage. They lack visibility and cultural, artistic and heritage recognition, even though they are part of an identifiable lineage, starting with Computer Art which, from the 60s and 70s onwards, renewed experimental approaches to form and color with the irruption of the computer into the artistic creation process.

The book "L'ensauvagement graphique du code" retraces a journey and a series of studies, graphic creations and texts leading to a process of drawing research in a digital environment. The effects of code and the materiality of data in the generative drawing produced with a plotter manifest the symptom of an era of transition, of an unresolved form. The singularity of the drawing executed with the plotter on the sheet of paper acts as the production of concrete micro-spaces that maintain the tangible link between the ancestral writing of signs and the digital code that now encrypts the world's affairs.

Taking a critical look at the transition from drawing to graphic pathways and its computational logics, I investigate the aesthetic interest of computer tracing by questioning it from the crossroads I've been following since the early 80s. In a devious way, I interrogate the data captured by visualization in the process of design and manufacture from drawing to machine. How can code and graphics work together to produce new forms of emancipation? The aesthetic radicalism of generative, programmed, black-and-white drawing plays with standards and goes beyond them, deliberately producing almost nothing on the scale of a world in the throes of digitalization.

GALERIE DATA has been located **at République in Paris**, since 2022. Its programming focuses on Generative Art, with a particular interest in work, from the digital to the tangible (drawing with a plotter, prints, installations...).

The gallery aims to show work from transdisciplinary fields of application, which explore the frontiers between art and technology.

The artists exhibited in the gallery experiment with generative forms ; using software and code, creating their own automated tools, exploiting data...

The artists' creations are inspired by geometry, mathematics and biology... They exploited technologies and use innovative practices, to express a critical and poetic point of view.

Founded in 2020 by Gabrielle Debeuret, Web & Social Media Artistic Director, with a professional Master's degree in art market (IESA).

The gallery organizes exhibitions by deploying active partnerships with art market actors and influencers from the digital world.

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