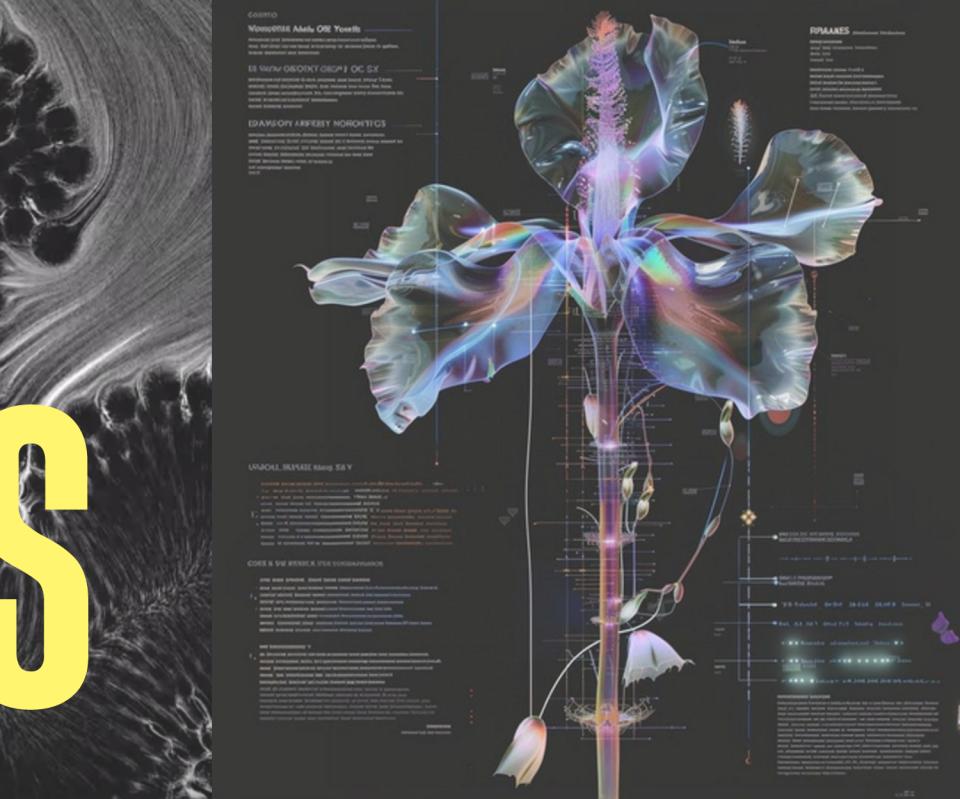
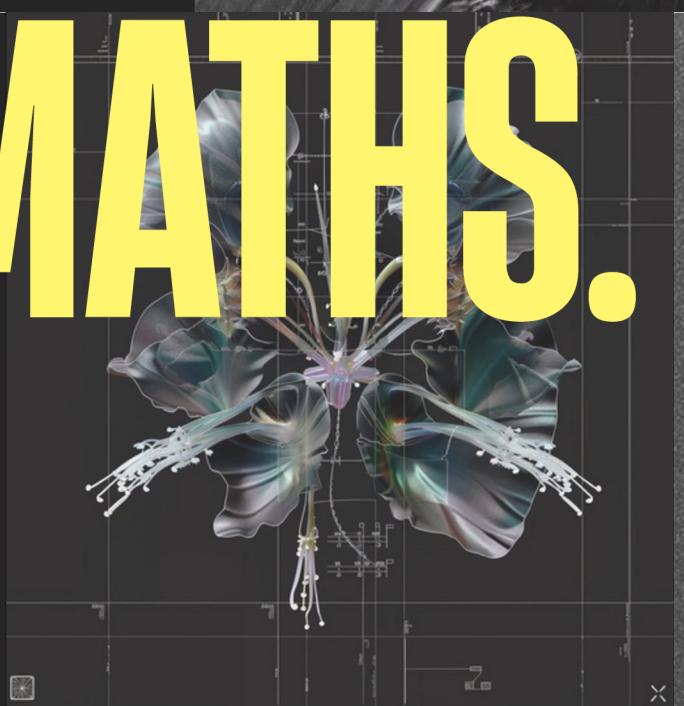
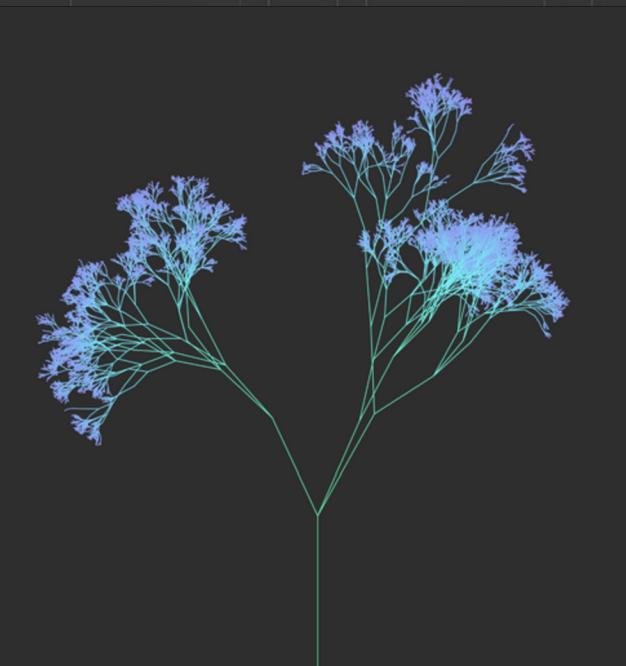
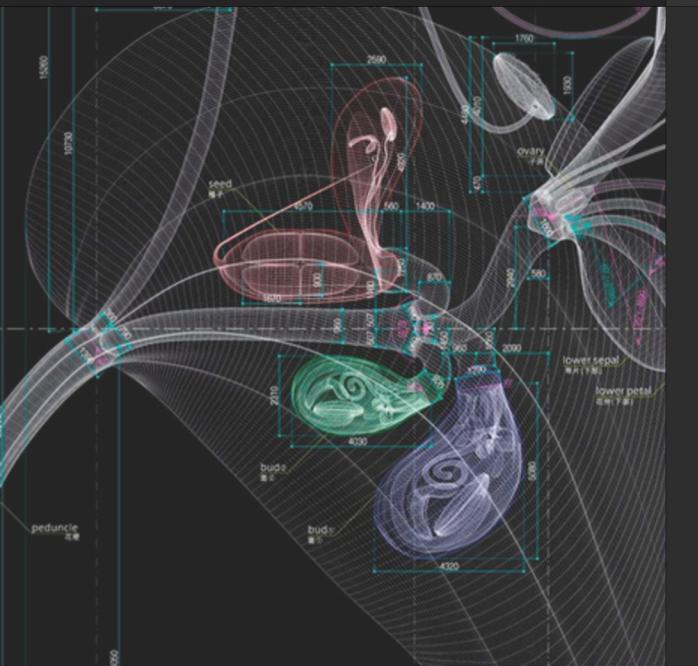
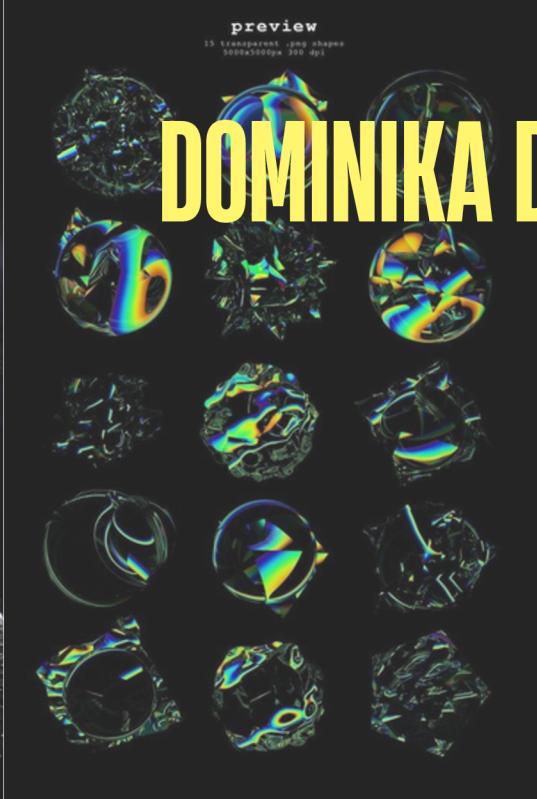


DIPRO | DATEN – SPIEL – ZEIT

CE N'EST PAS DES MATHS.



11/2025



DOMININKA DEGTYAREVA



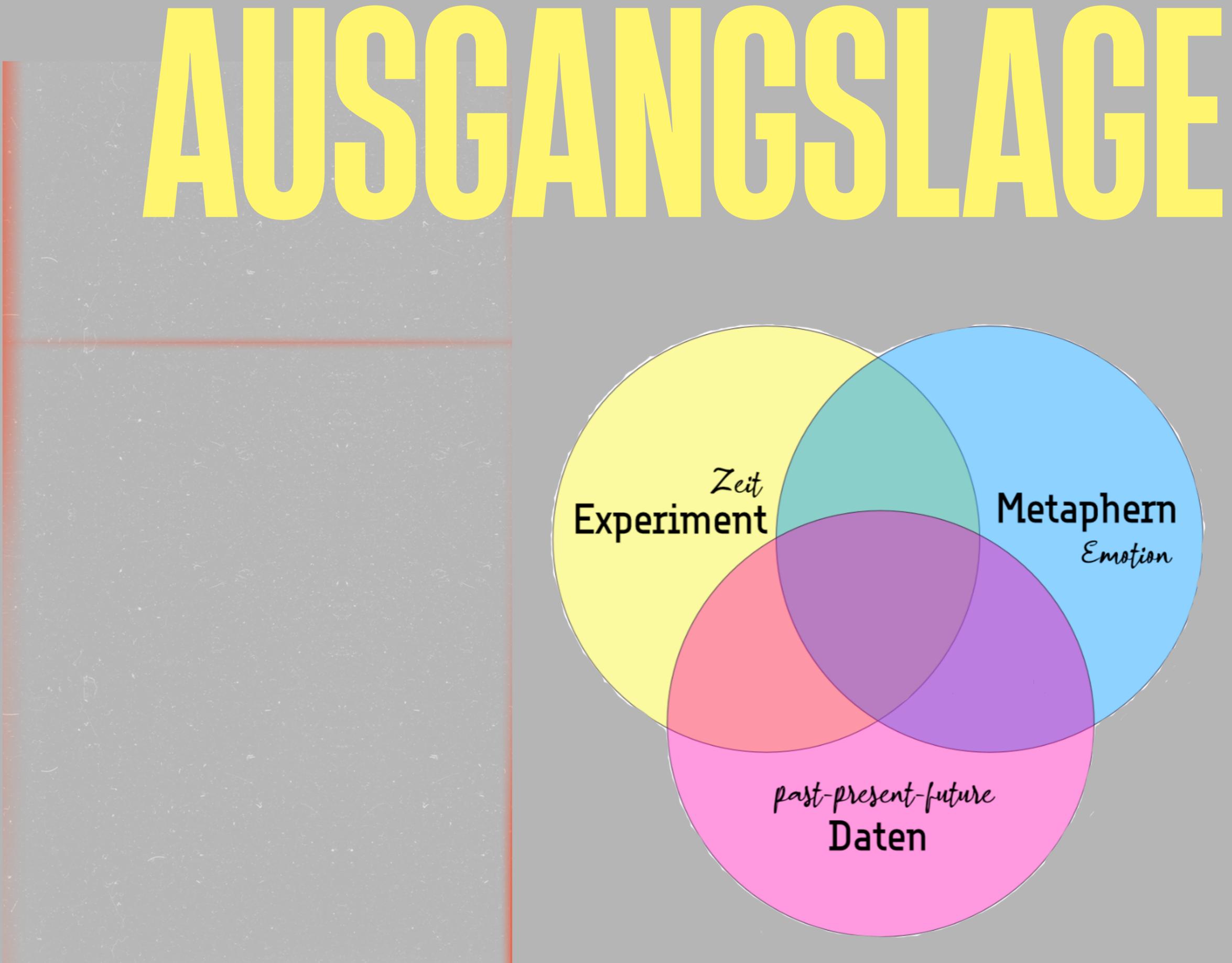
THE SHAPE OF A LIFE

ONE MATHEMATICIAN'S SEARCH FOR THE UNIVERSE'S HIDDEN GEOMETRY

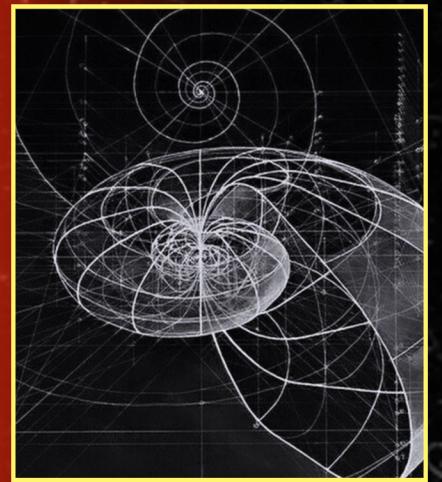
01

EXPERIMENT - EMOTION

Because experimental art is more about doing than making, more **about the process than the product**, it might actually be considered the purest form of art; art for art's sake, if you will. The job of the experimental artist isn't to create a specific work of art as much as it is to create a new way of making art. -Johnston, Clif.



CHALLANGE

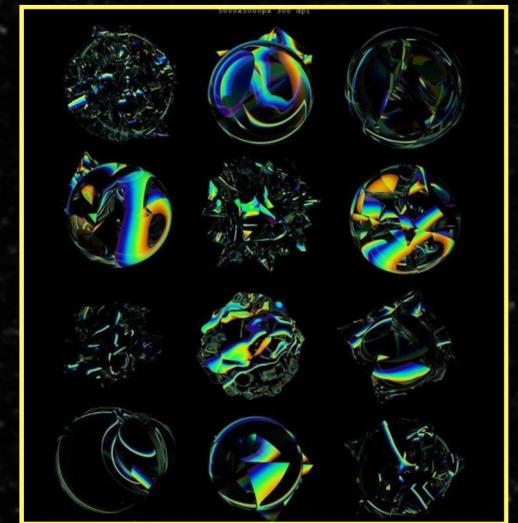
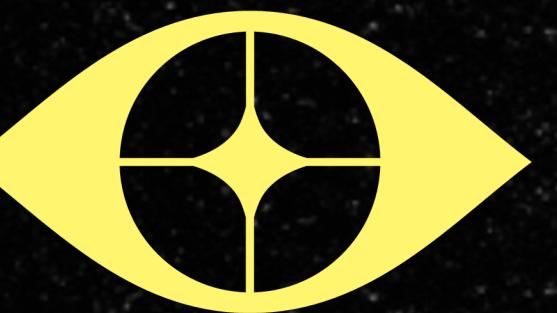
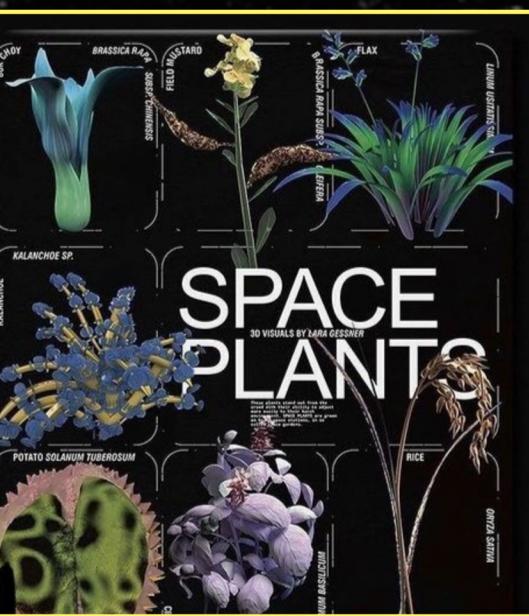


01

Welche Bereiche der Mathematik möchte ich visualisieren & welche lassen sich überhaupt visuell / auditiv darstellen?

02

Welche Tools und Techniken stehen mir überhaupt zur Verfügung?

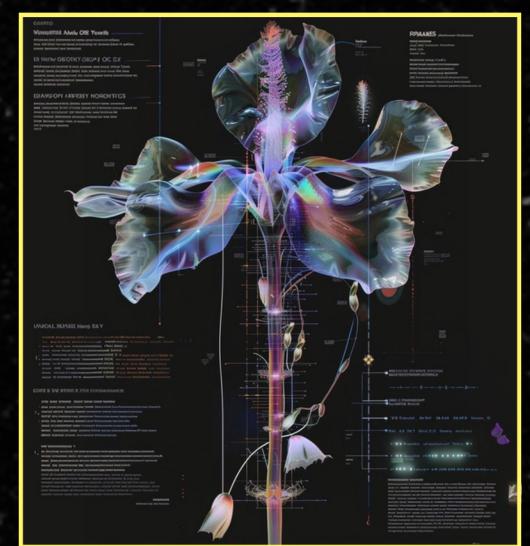


03

Wie kann ich meine eigene Denkweise durch diese Fragmente ausdrücken?

04

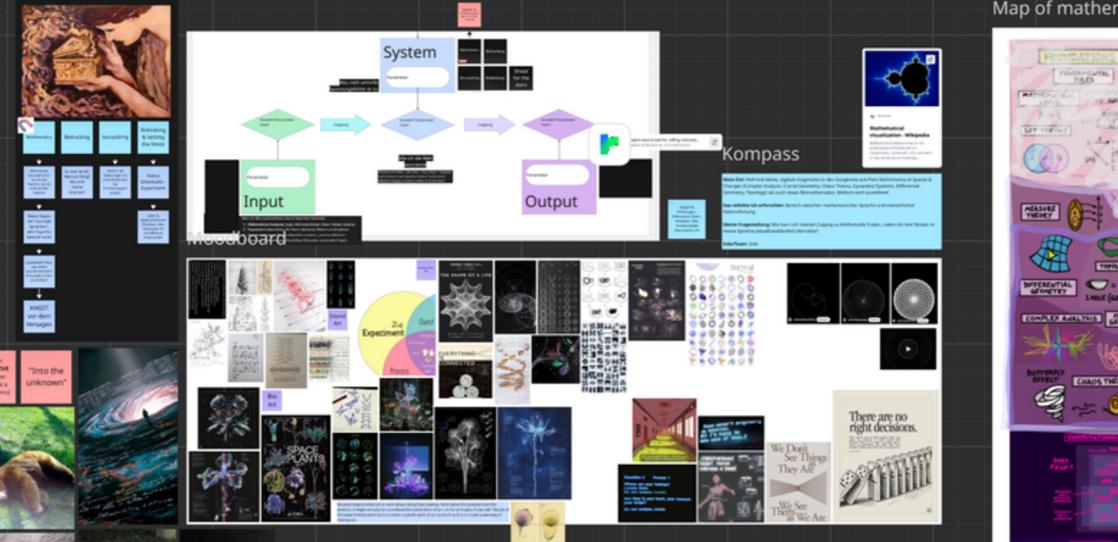
Wie kann ich die Fragmente so gestalten, dass sie für andere Menschen auch zugänglich und verständlich sind?



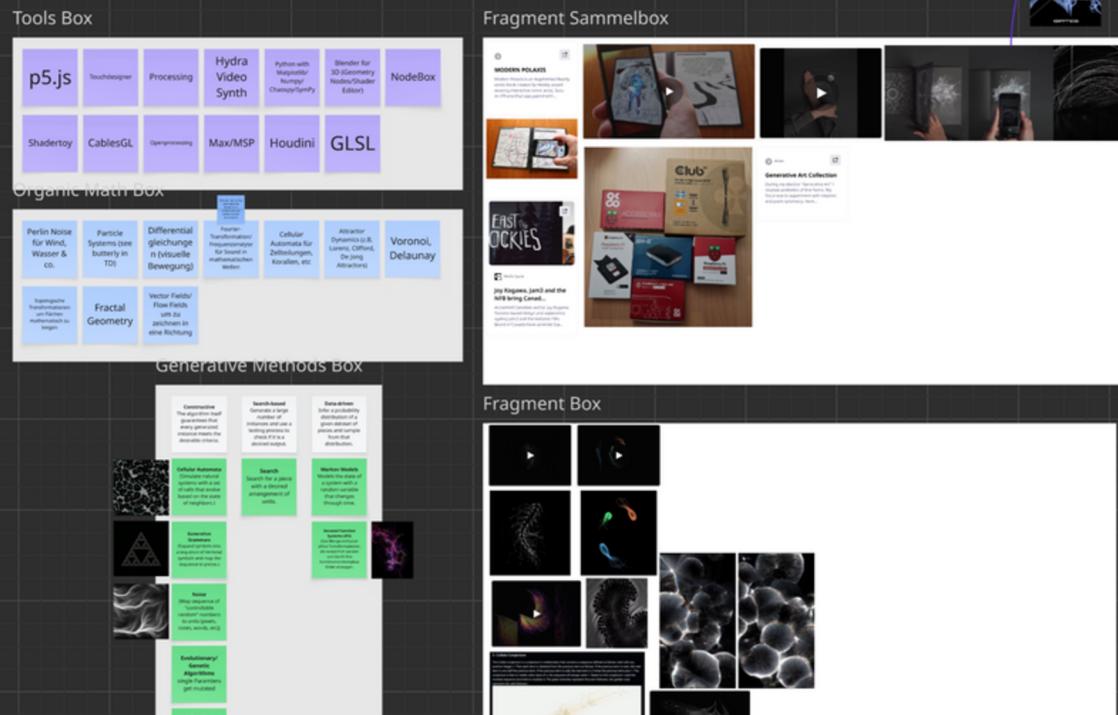
& ZIEL

Phase 1 - Digging & Finding

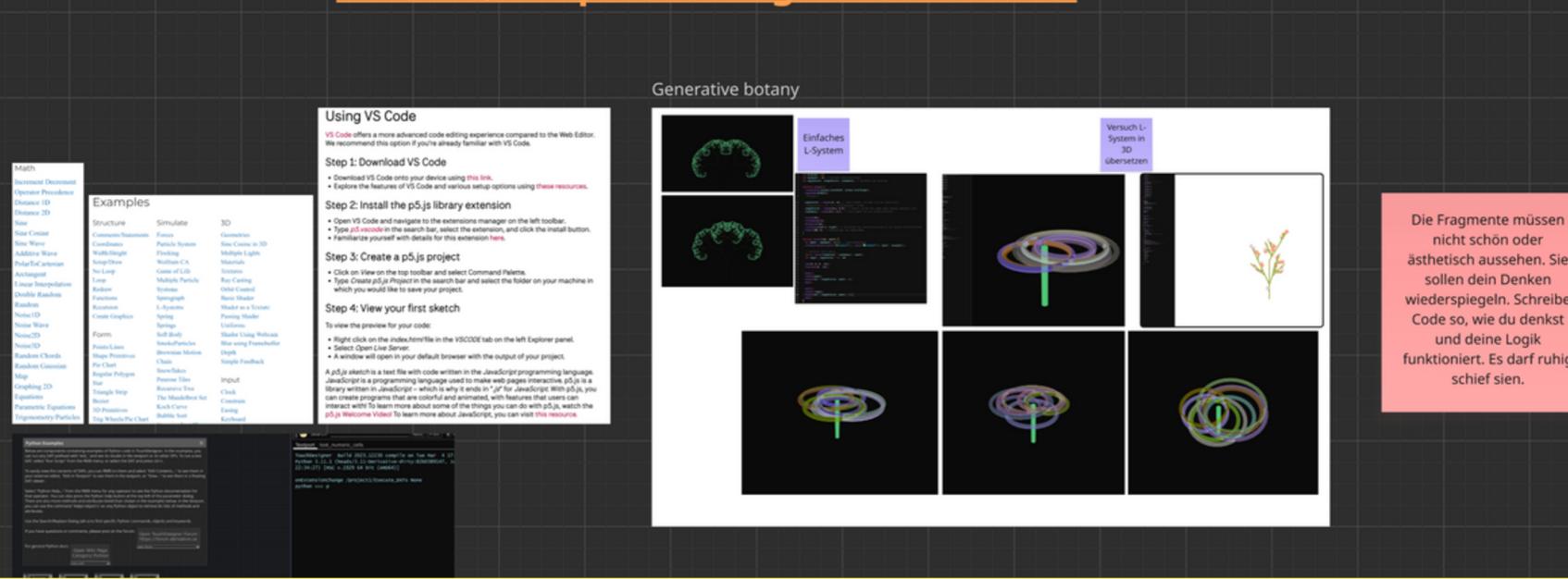
Opening Pandora..



Phase 2 - Setup

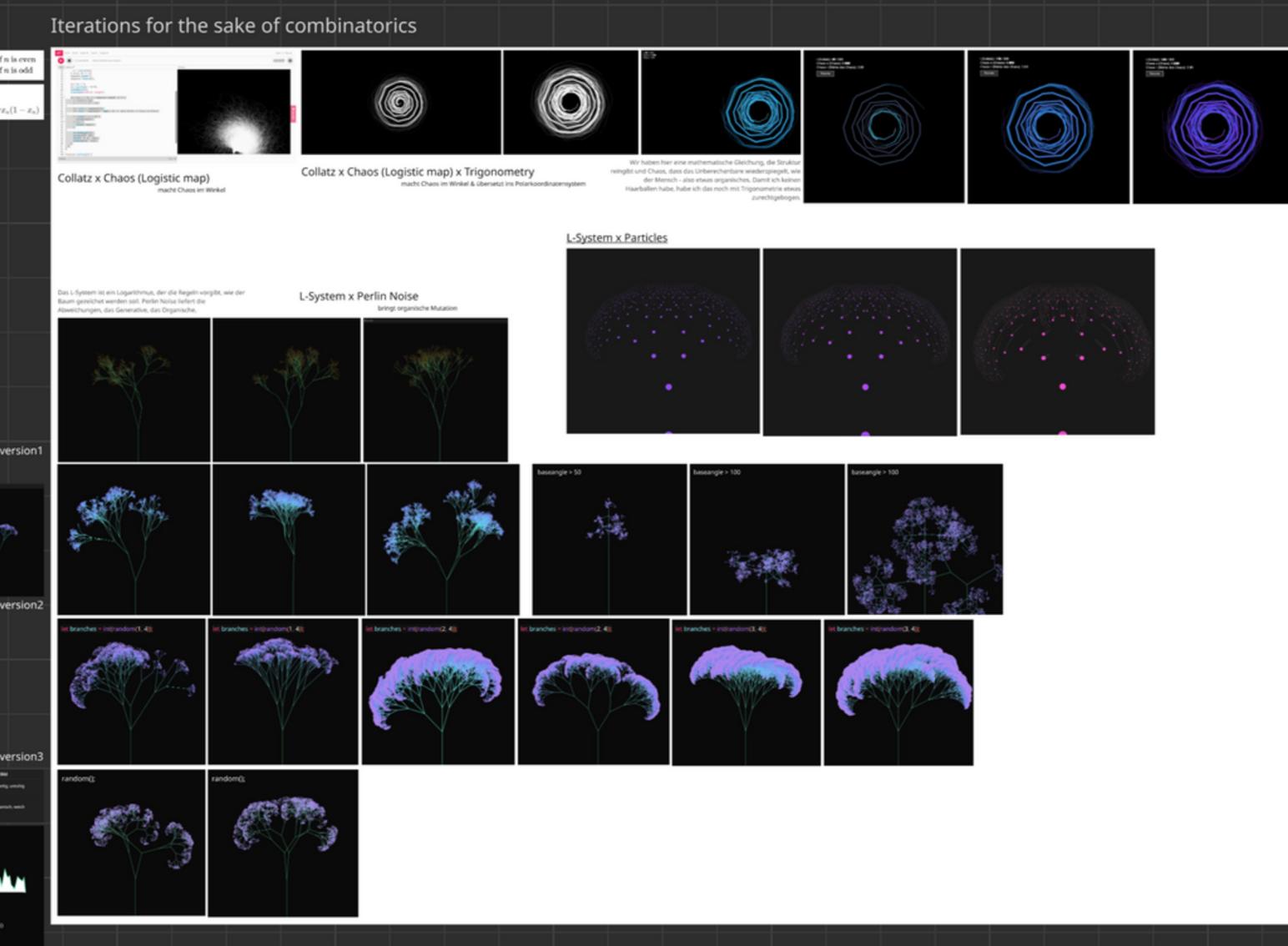


Phase 3, Chapter 1 - Organic Iterations



Phase 3, Chapter 2 - Fuck moodboards.

Create equations, create art from that.



Phase 4 - Digging and Finding even more

Mayday mayday, the ship is sinking!

Was eigentlich auch gut ist. We reached the next layer. Was ich vorher vermischt habe, kann ich jetzt auseinanderziehen und separat betrachten.

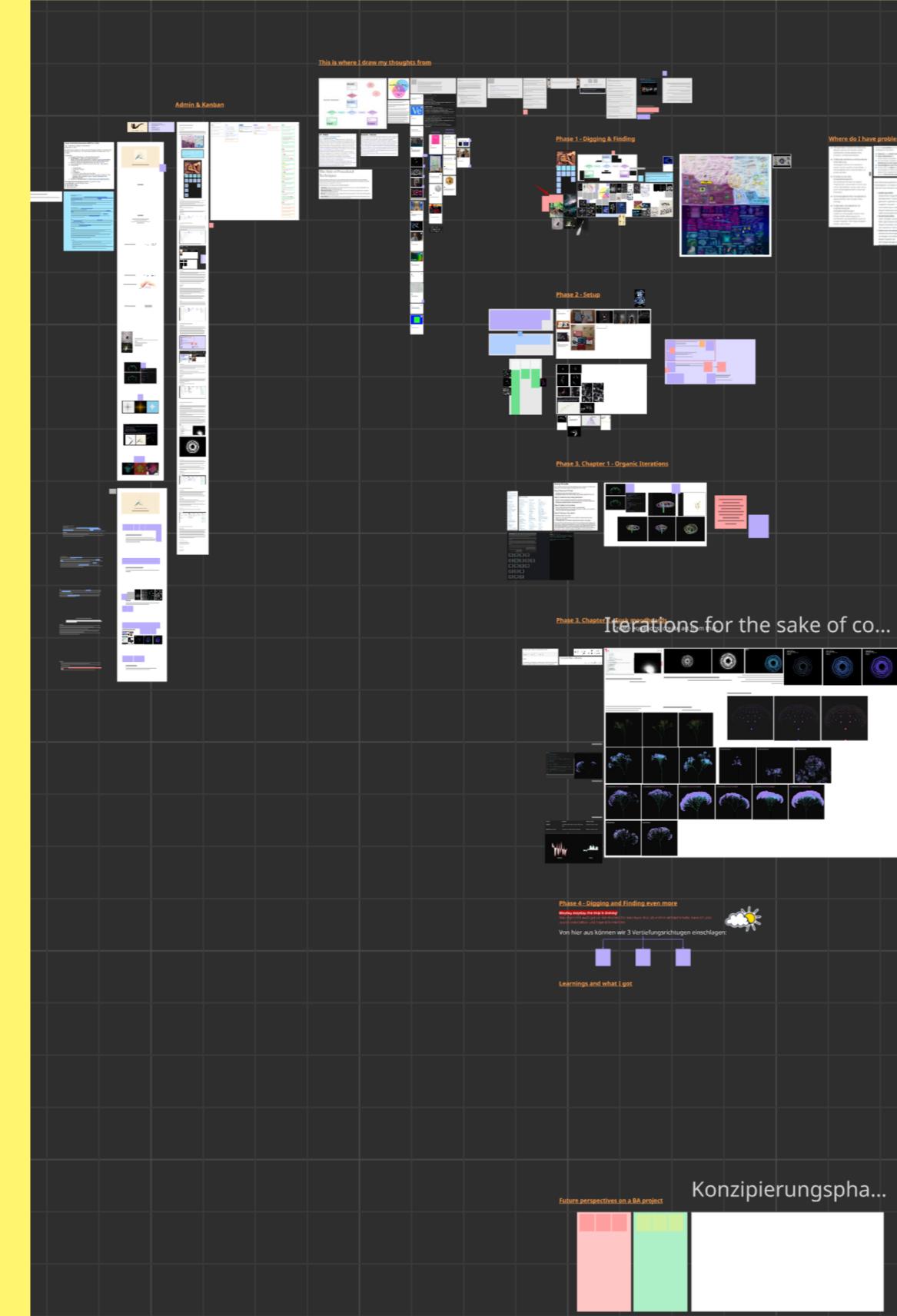
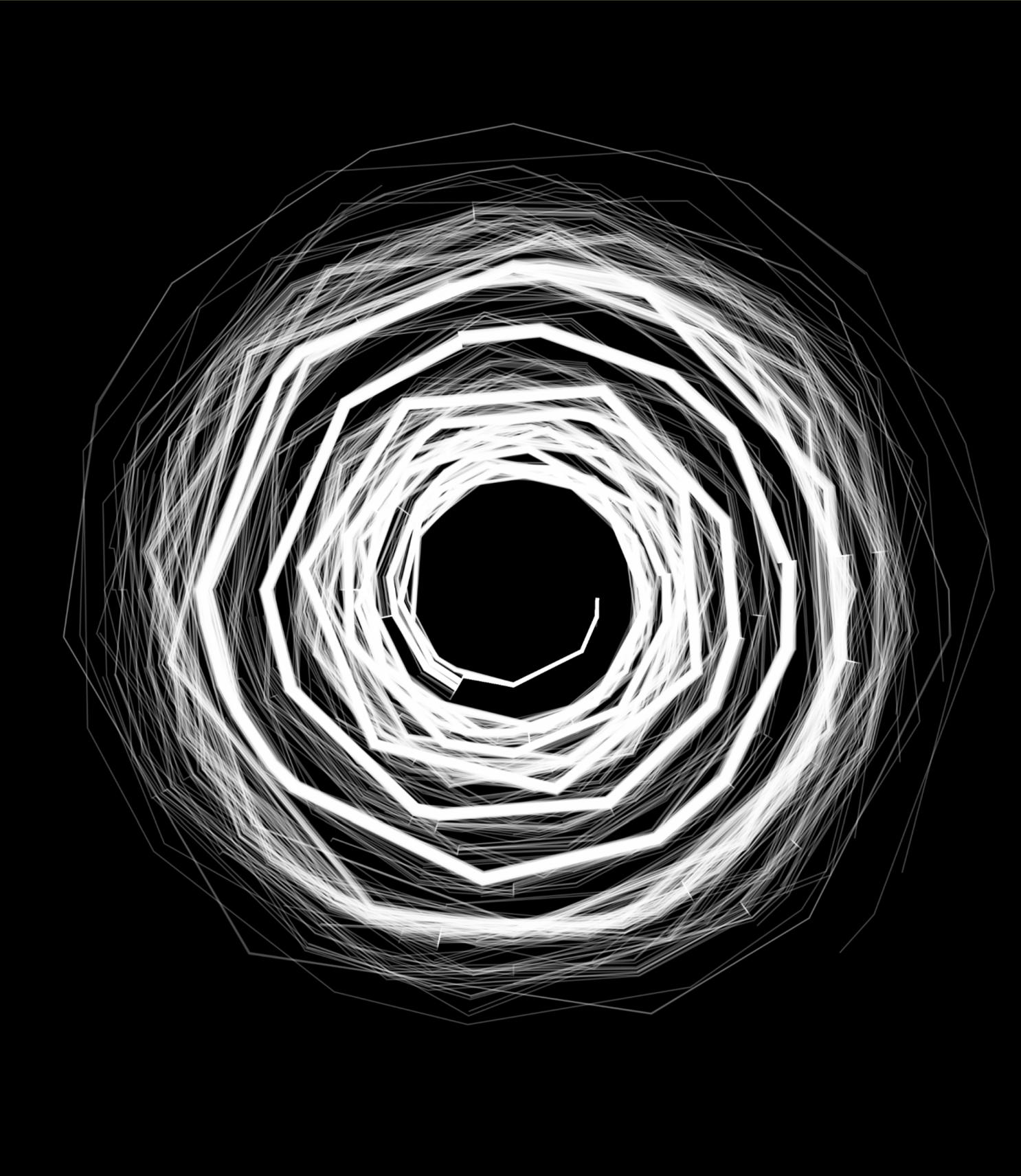
Von hier aus können wir 3 Vertiefungsrichtungen einschlagen:



UMSETZUNG

04

DIPRO | DATEN - SPIEL - ZEIT



Tools Box

p5.js	Touchdesigner	Processing	Hydra Video Synth	Python with Matplotlib/ Numpy/ Chaospy/SymPy	Blender for 3D (Geometry Nodes/Shader Editor)	NodeBox
Shadertoy	CablesGL	Openprocessing	Max/MSP	Houdini	GLSL	

Organic Math Box

Perlin Noise für Wind, Wasser & co.	Particle Systems (see butterfly in TD)	Differentialgleichungen (visuelle Bewegung)	Fourier-Transformation/Frequenzanalyse für Sound in mathematischen Wellen	Cellular Automata für Zellteilungen, Korallen, etc	Attractor Dynamics (z.B. Lorenz, Clifford, De Jong Attractors)	Voronoi, Delaunay
Topologische Transformationen um Flächen mathematisch zu biegen	Fractal Geometry	Vector Fields/ Flow Fields um zu zeichnen in eine Richtung				

Generative Methods Box

Constructive The algorithm itself guarantees that every generated instance meets the desirable criteria.	Search-based Generate a large number of instances and use a testing process to check if it is a desired output.	Data-driven Infer a probability distribution of a given distribution of pieces and sample from that distribution.
Cellular Automata (Simulate natural systems with a set of cells that evolve based on the state of neighbors.)	Search Search for a piece with a desired arrangement of units.	Markov Models Models the state of a system with a random variable that changes through time.
Generative Grammars (Expand symbols into a sequence of terminal symbols and map the sequence to pieces.)	Iterated Function Systems (IFS) Ende mit einfacheren Transformationen, die wiederholt werden und durch ihre Kombination komplexe Bilder erzeugen.	Evolutionary/ Genetic Algorithms single Parameters get mutated
Noise (Map sequence of "controllable" random numbers to units (pixels, notes, words, etc))		Agent-Based Systems Kleine, autonome Agenten (Pixel, Linien, Zellen) die einfachen Regeln folgen, aber komplexe Muster erzeugen.

05

LEARNINGS

DAS SCHÖNSTE:
VERTRAUEN.

NICHT MATHE,
ZUSAMMENHÄNGE

BASIS, DIE
WEITERTRÄGT

KOMBINATORISCHES
DENKEN

