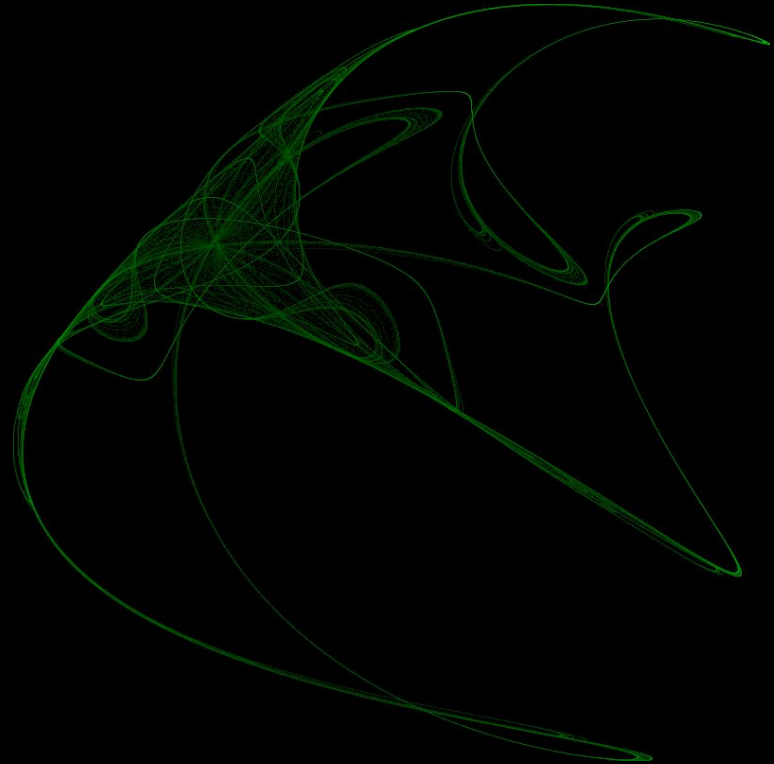
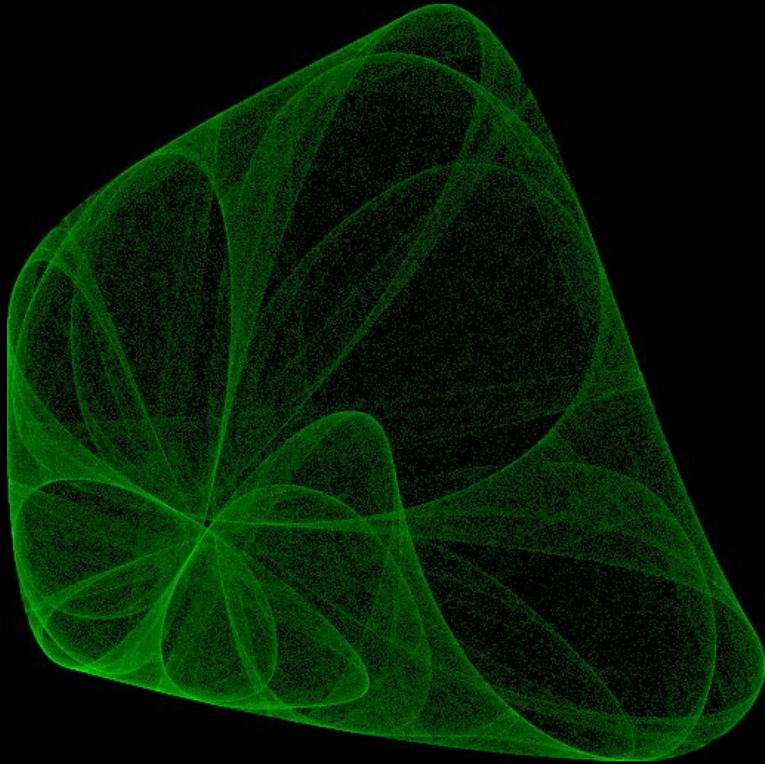


DADA Science: Machine Ignorance



<https://github.com/augeas/quadrat> augeas@eleusis.social

Automatic Generation of Strange Attractors

J.C. Sprott Comput. & Graphics 17, 325-332 (1993)
<https://sprott.physics.wisc.edu/pubs/PAPER203.HTM>

$$x_{n+1} = a_1 + a_2x_n + a_3x_n^2 + a_4x_ny_n + a_5y_n + a_6y_n^2$$

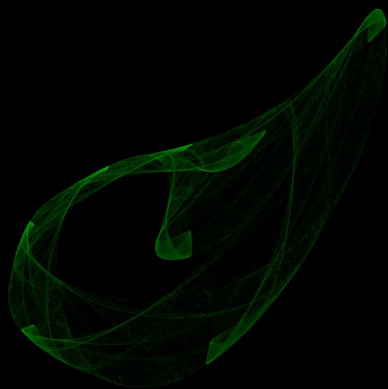
$$y_{n+1} = a_7 + a_8x_n + a_9x_n^2 + a_{10}x_ny_n + a_{11}y_n + a_{12}y_n^2$$

<https://github.com/augeas/quadrat> augeas@eleusis.social

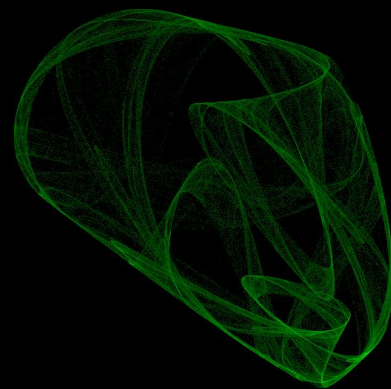
To Iterate is Human, to Vectorize is Divine

$$P_{n+1} = B + CV_n$$

$$P_{n+1} = \begin{bmatrix} x_n + 1 \\ y_n + 1 \end{bmatrix}, B = \begin{bmatrix} a_1 \\ a_7 \end{bmatrix}, C = \begin{bmatrix} a_2 & a_3 & a_4 & a_5 & a_6 \\ a_8 & a_9 & a_{10} & a_{11} & a_{12} \end{bmatrix}$$



$$V_n = \begin{bmatrix} x_n \\ x_n^2 \\ x_n y_n \\ y_n \\ y_n^2 \end{bmatrix}$$



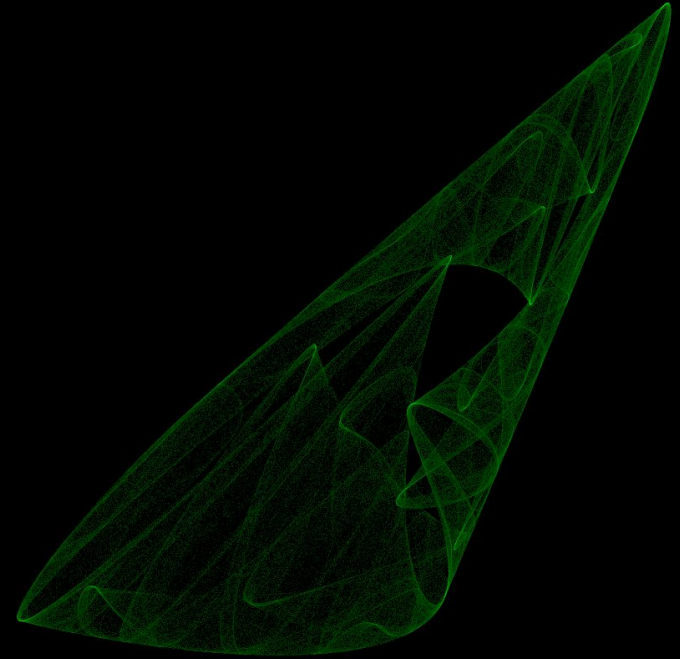
<https://github.com/augeas/quadrat> augeas@eleusis.social

What's in a name?

26 possible values of the coefficients, -1.2 to 1.2 in intervals of 0.1.

Random coefficients evaluated by:

- * Lyapunov exponent
- * Correlation dimension



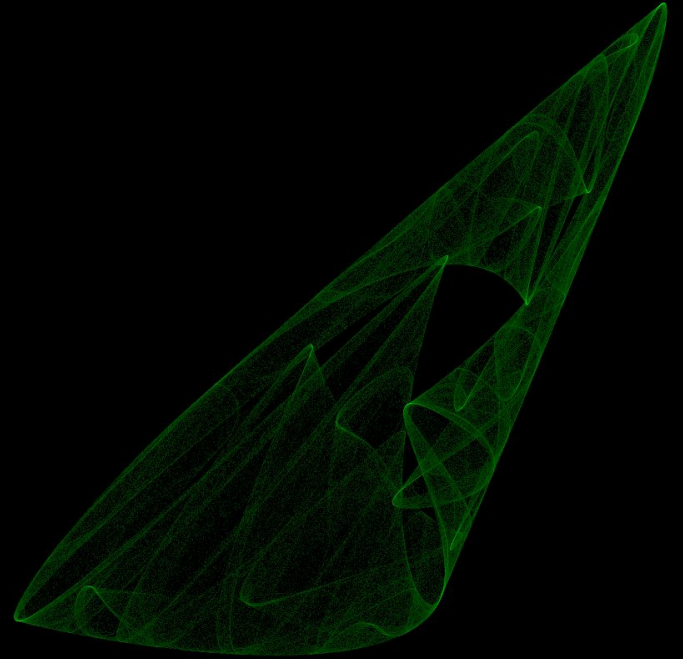
LHBEMDKADEVA

<https://github.com/augeas/quadrat> augeas@eleusis.social

As They Should Sound

For each point in the attractor:

- * row \rightarrow real part of spectrum
- * column \rightarrow imaginary part of spectrum
(other way round in the other channel)
- * Inverse Short-Time Fourier Transform
- * Multiply signal by a window function
- * Overlap segments and sum them.



LHBEMDKADEVA

<https://github.com/augeas/quadrat> augeas@eleusis.social

Got to teach and everything you learn

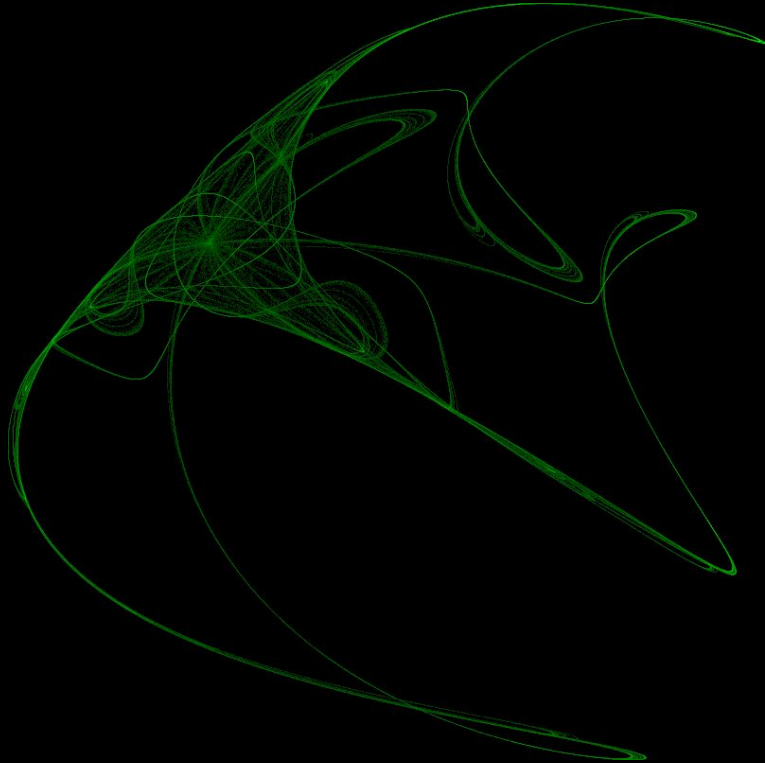
The sound of each point in time is determined by the distribution of all the other points, as if they already existed.



Will point to the fact that time is eternal

<https://youtu.be/HDsCeC6f0zc?si=EW0L16UeBuXfRgcY>

Can I move? I'm better when I move.



(IJGVCSOXLHJT)

Animating the attractors:

Choose three coefficients.

Rotate them around a random axis.

Are the images still aesthetic?

If not, try again.

Rotate full-circle, create a loop.

<https://www.youtube.com/shorts/yEmxSySZnWg>