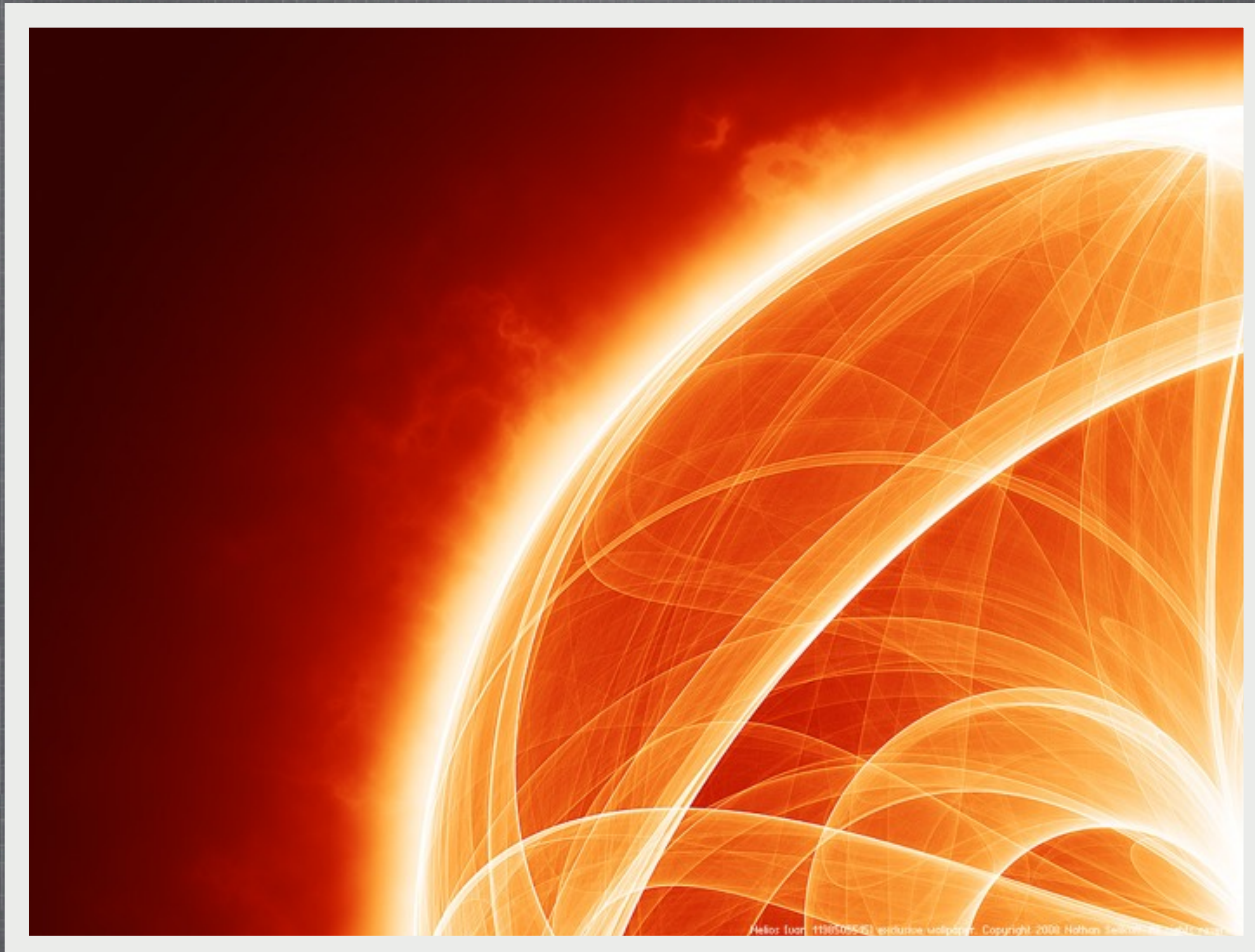


THE ART OF NATHAN SELIKOFF

Aesthetic Explorations of Algorithmic Space

www.nathanselikoff.com

United Arts OF CENTRAL FLORIDA

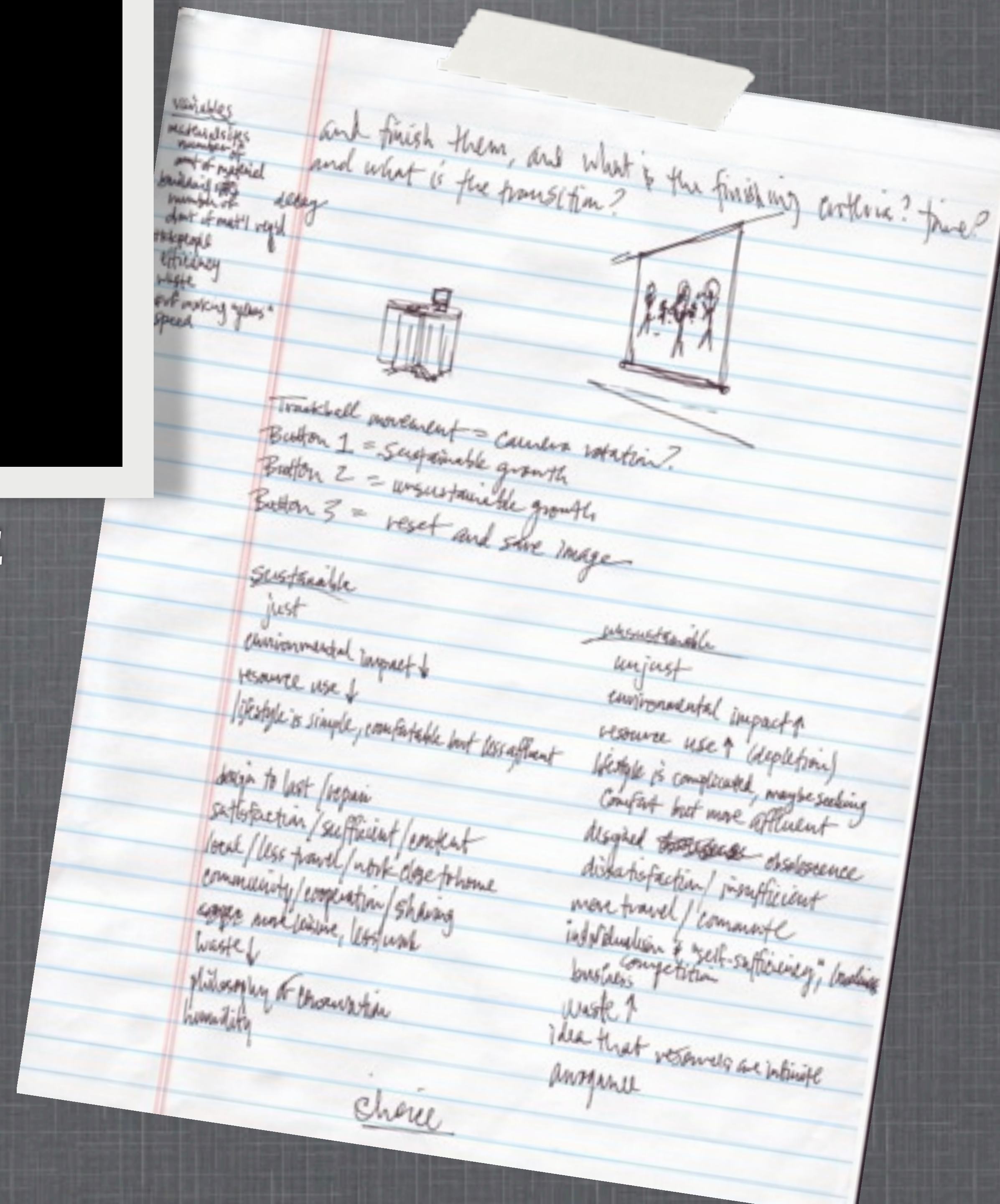
FLORIDA ARTS AND CULTURE • DIVISION OF CULTURAL AFFAIRS •

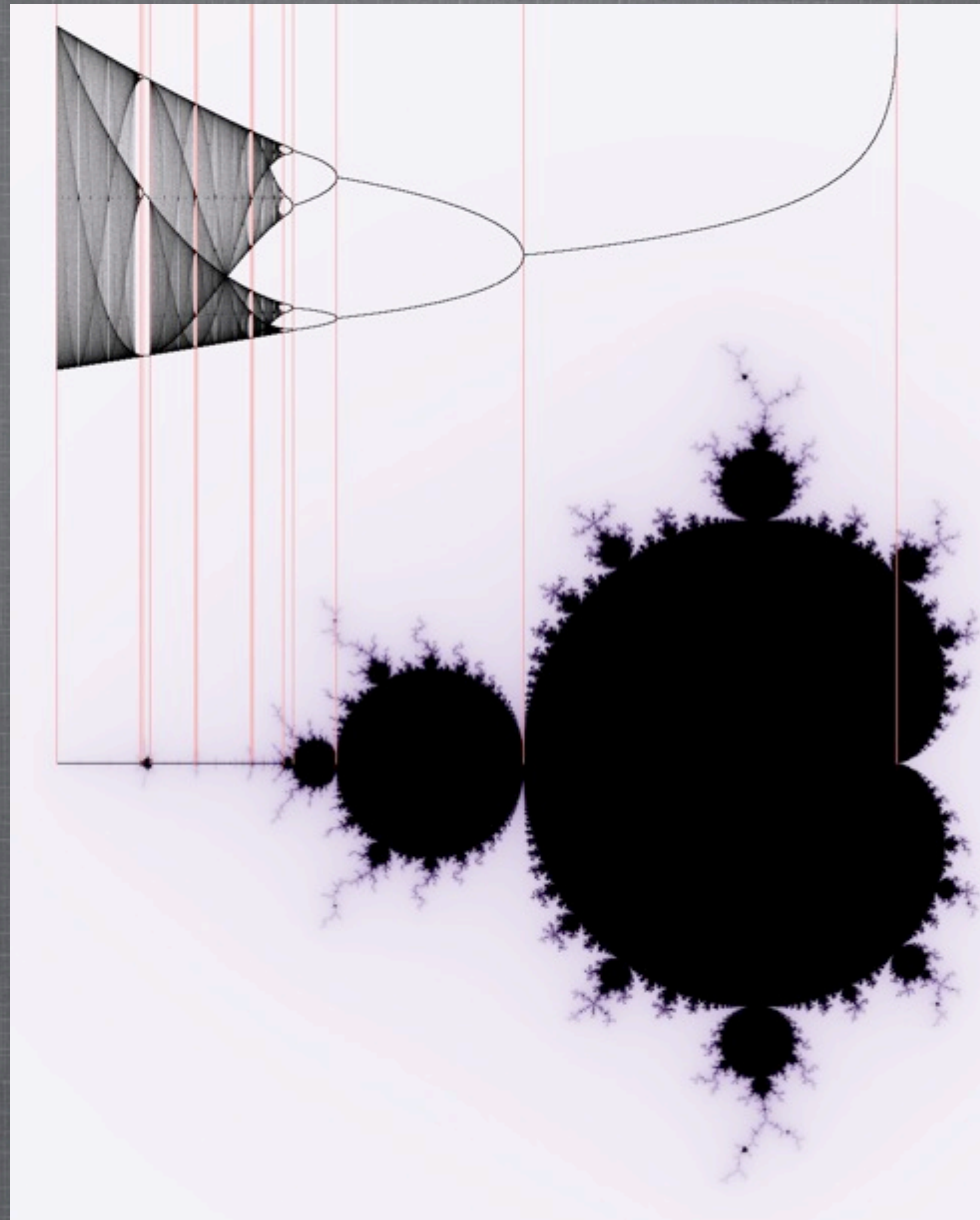
A SOCIETY OF STICKPEOPLE

REAL-TIME INTERACTIVE SOFTWARE DEMO

A SOCIETY OF STICKPEOPLE

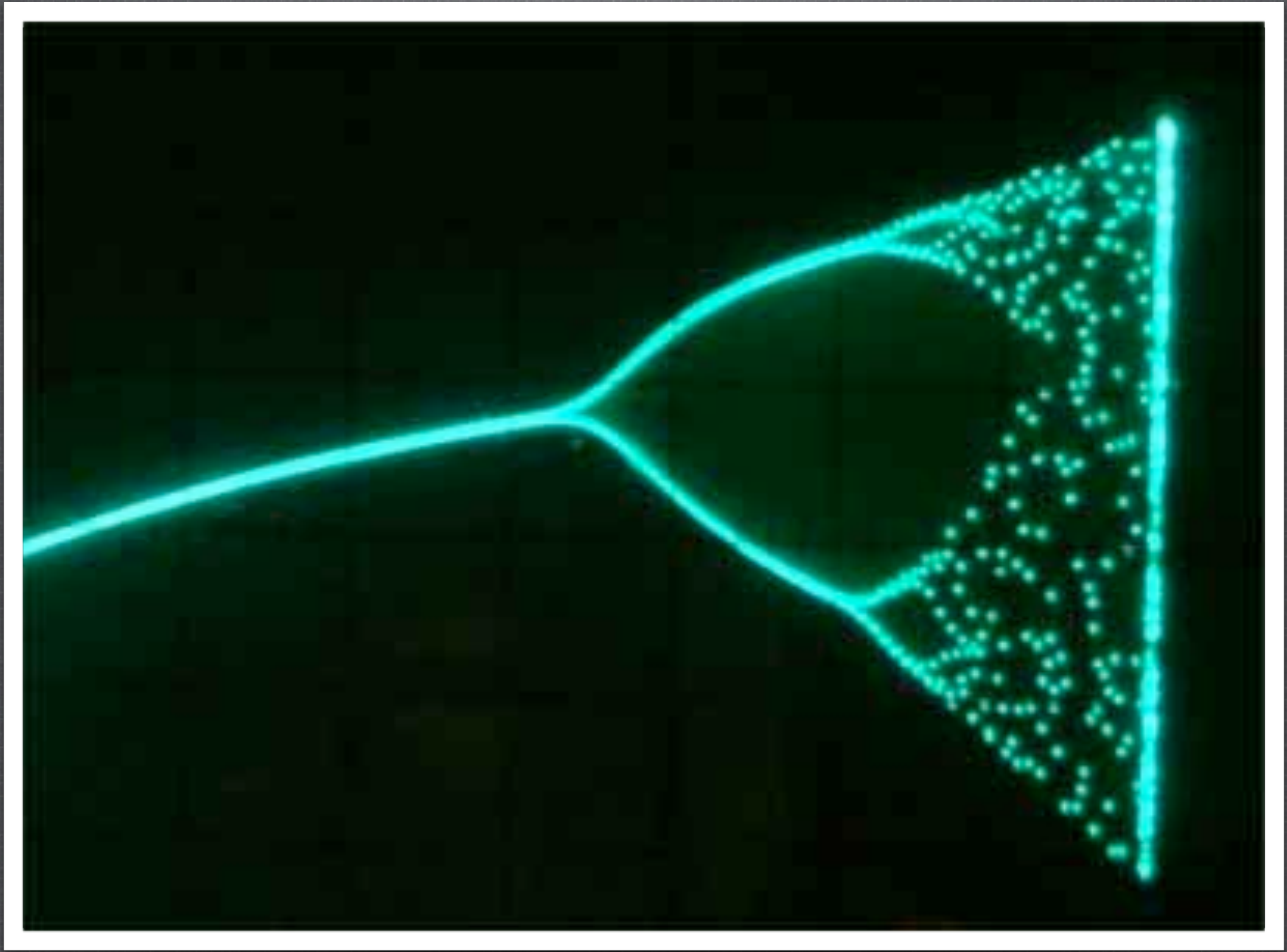
REAL-TIME INTERACTIVE SOFTWARE DEMO





BACKGROUND

Logistic map & Mandlebrot set



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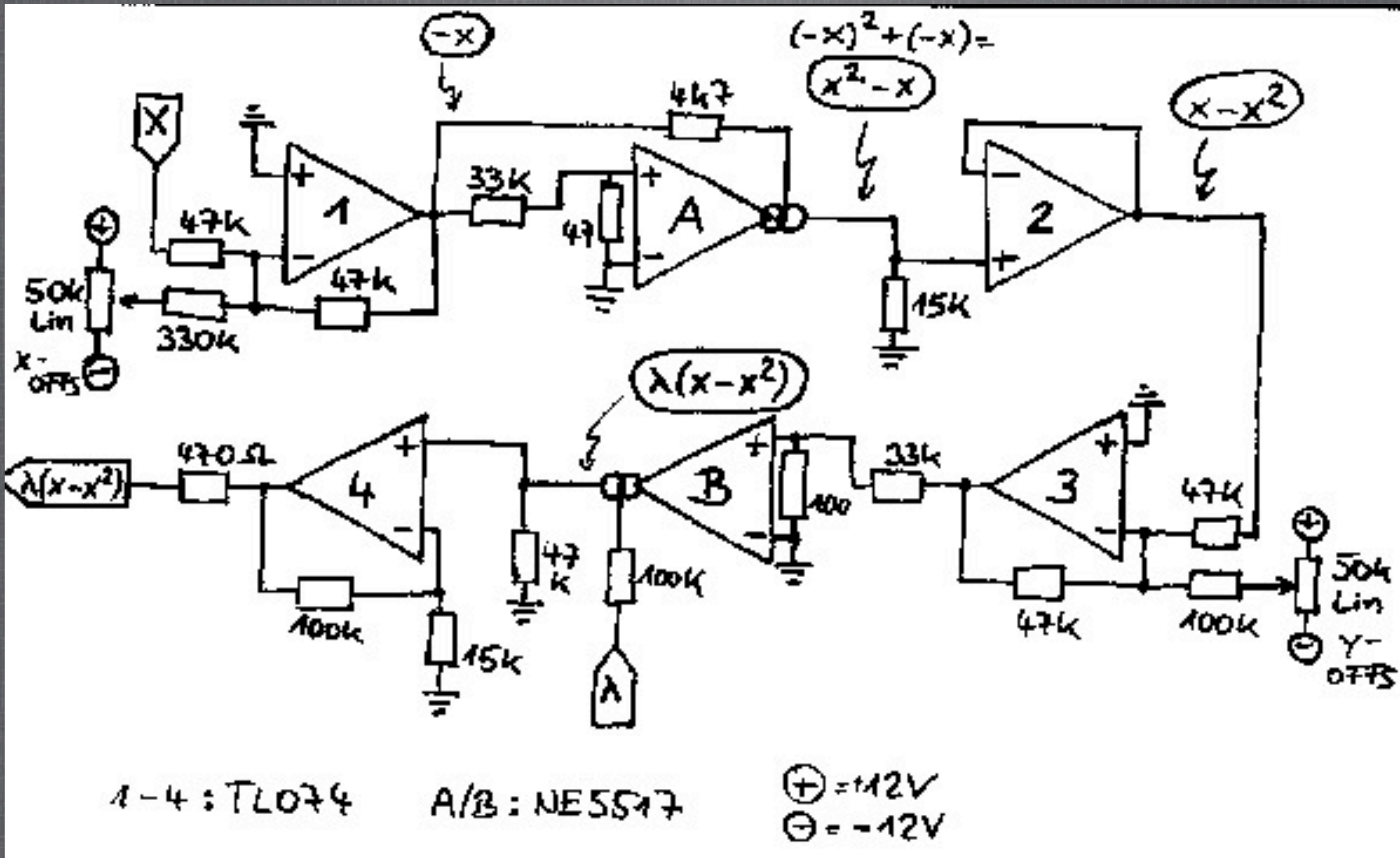

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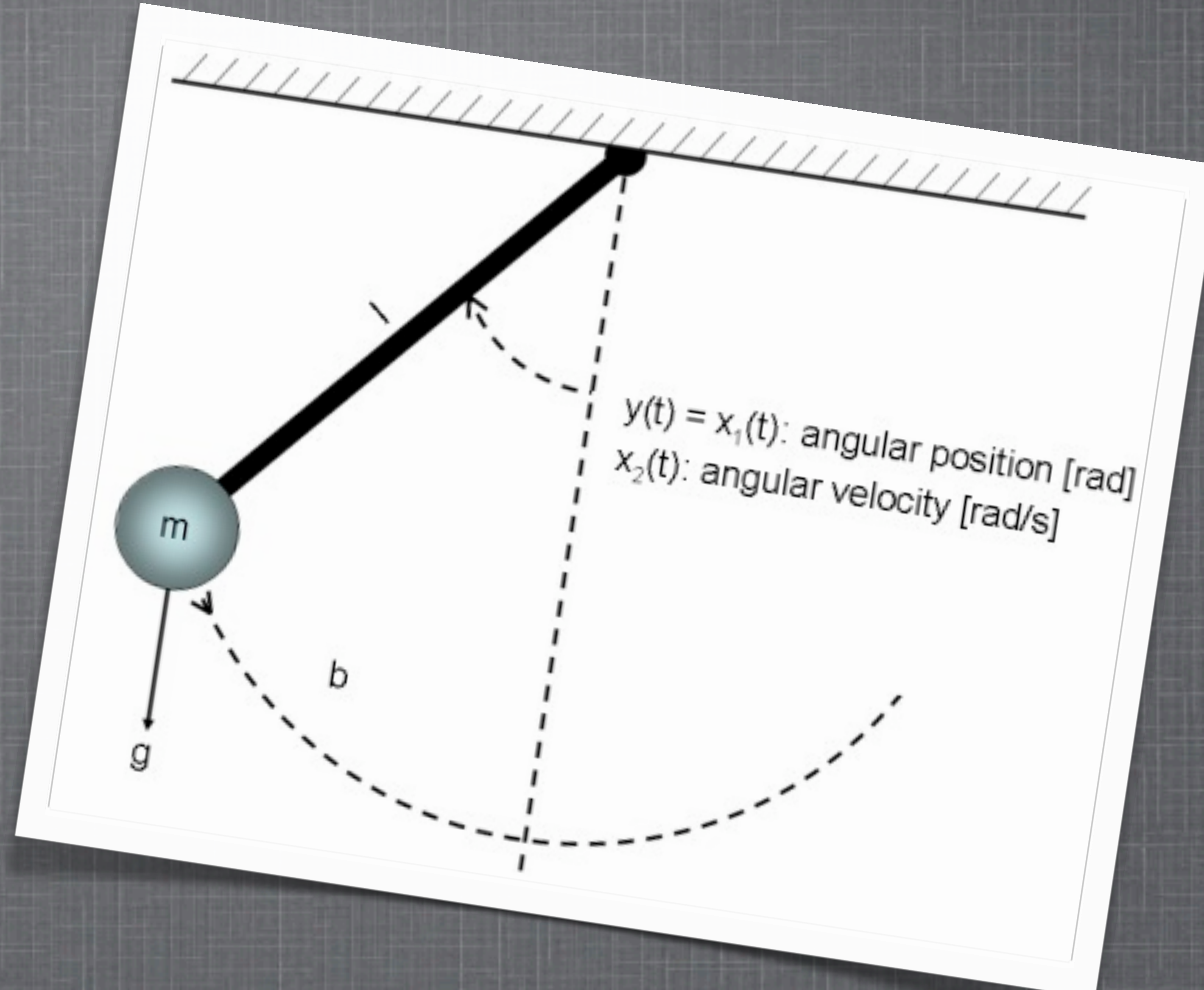
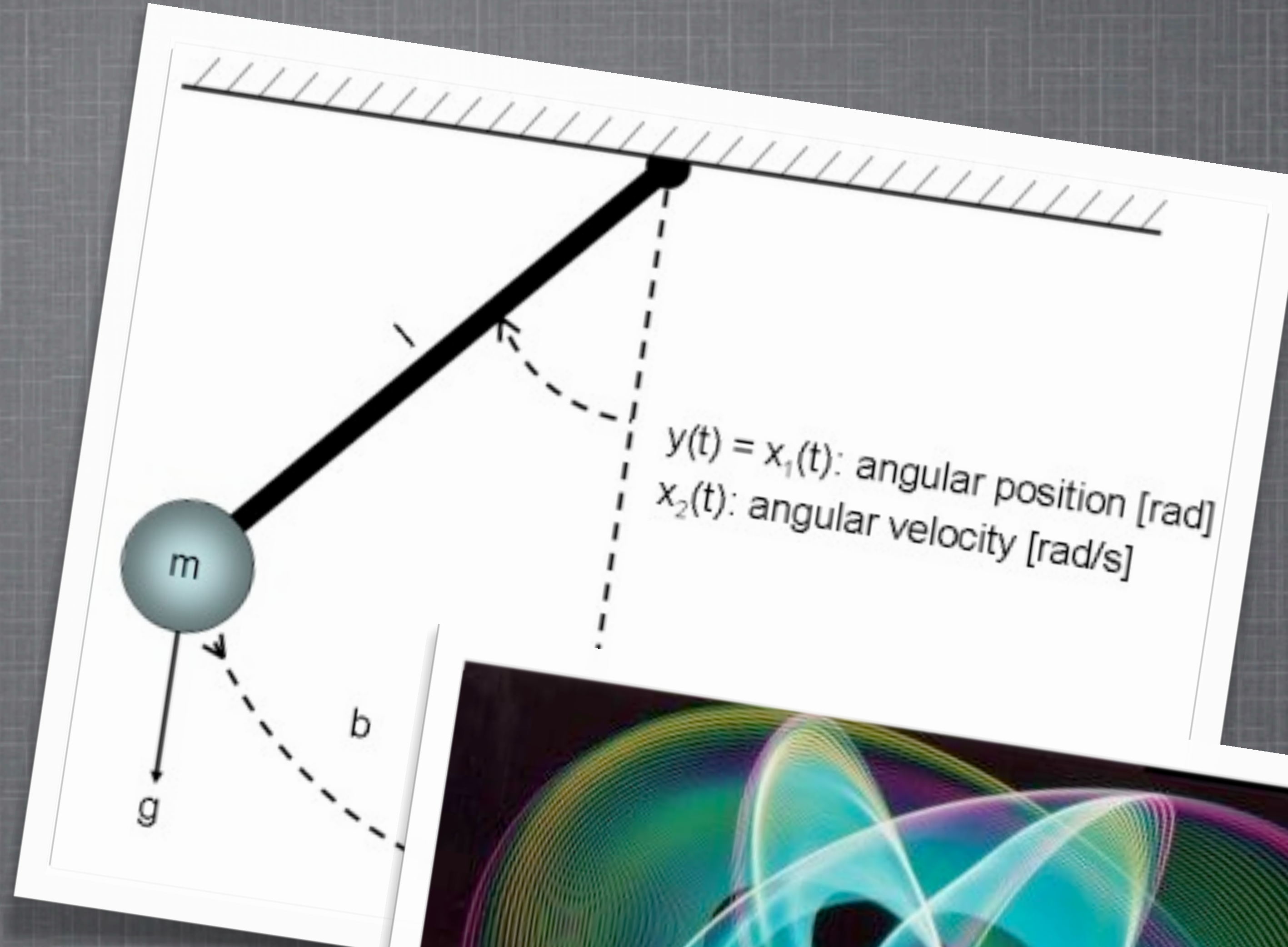


BACKGROUND

Pendula



BACKGROUND

Pendula

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BACKGROUND

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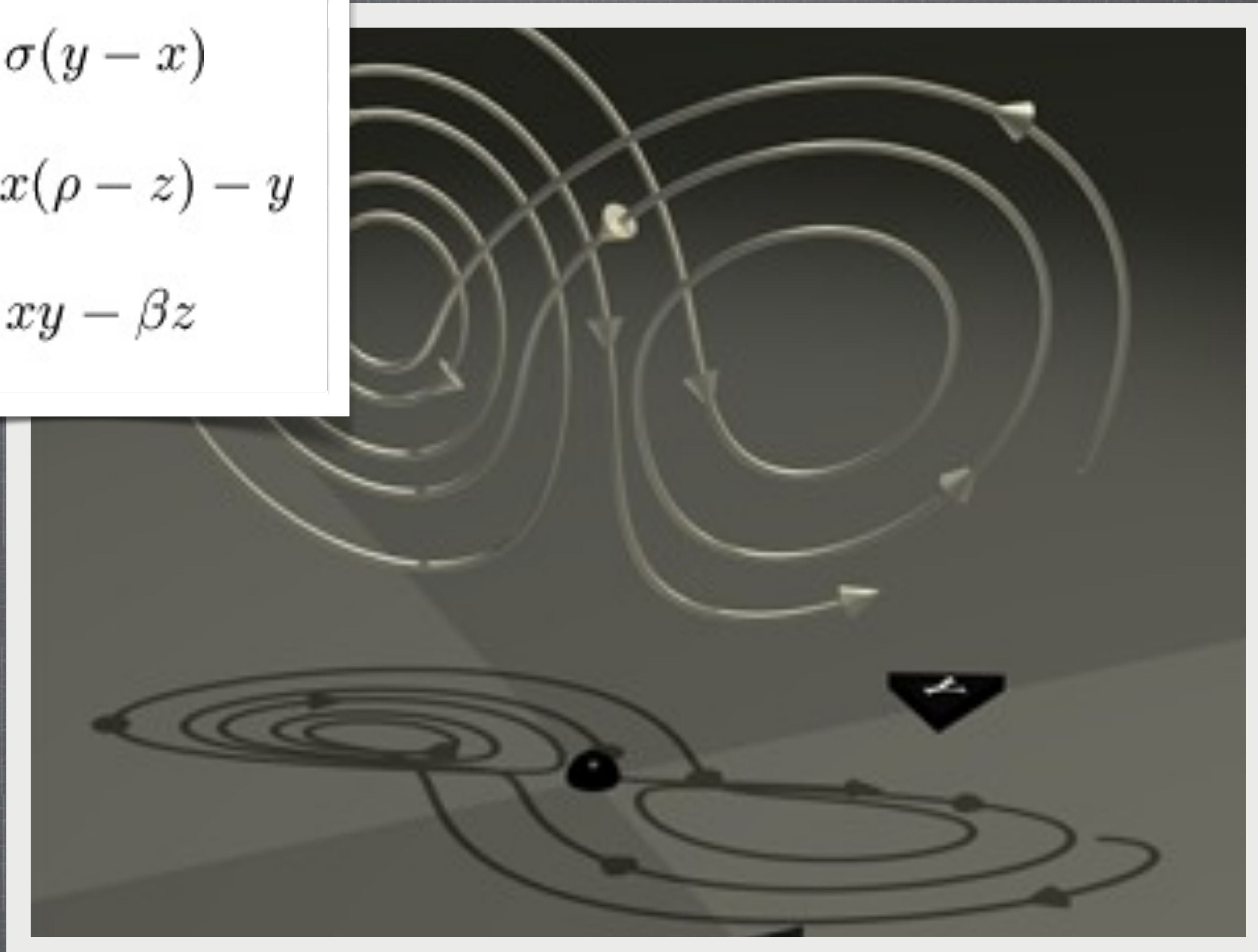
BACKGROUND

Lorenz

$$\frac{dx}{dt} = \sigma(y - x)$$
$$\frac{dy}{dt} = x(\rho - z) - y$$
$$\frac{dz}{dt} = xy - \beta z$$



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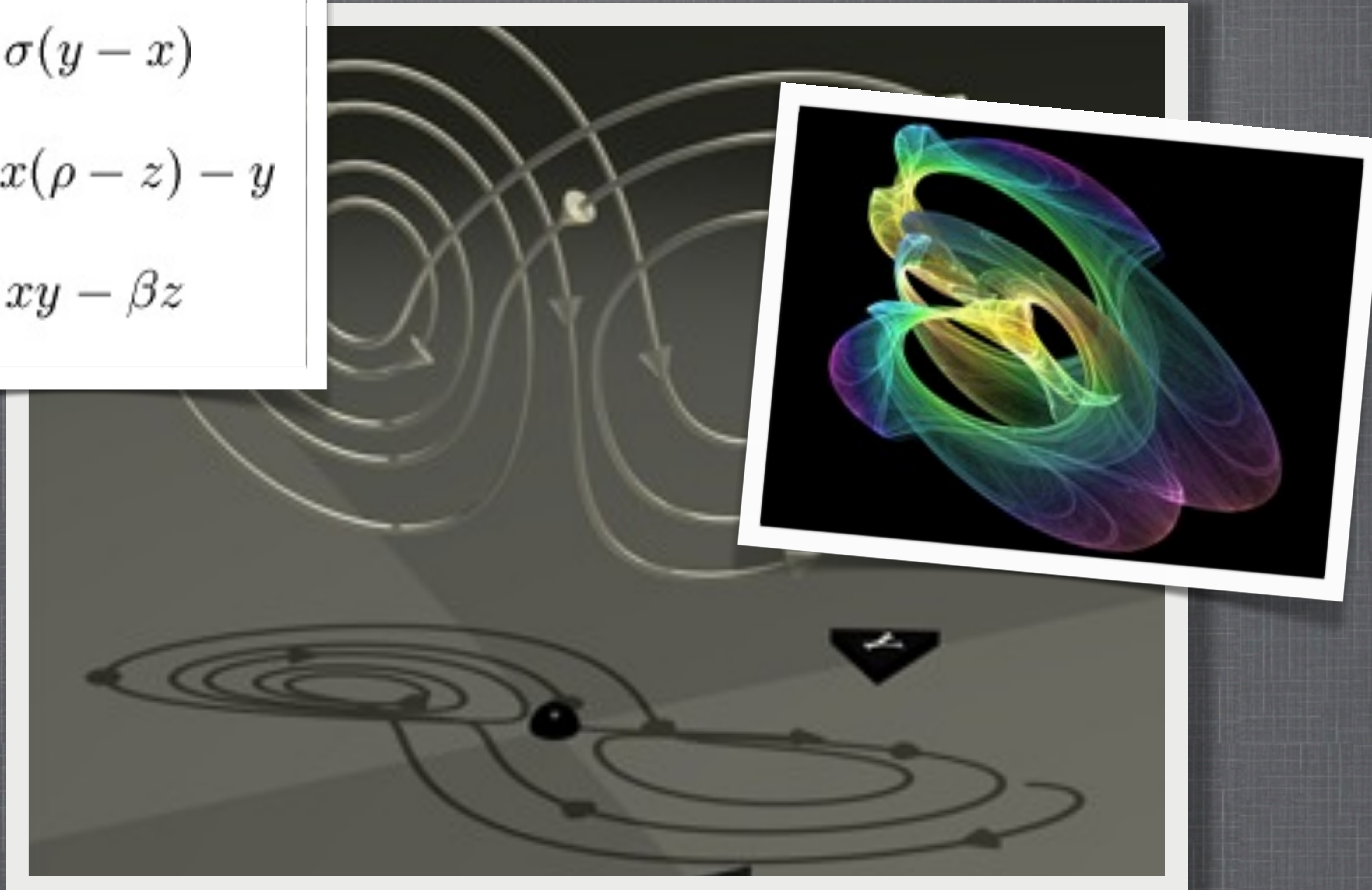

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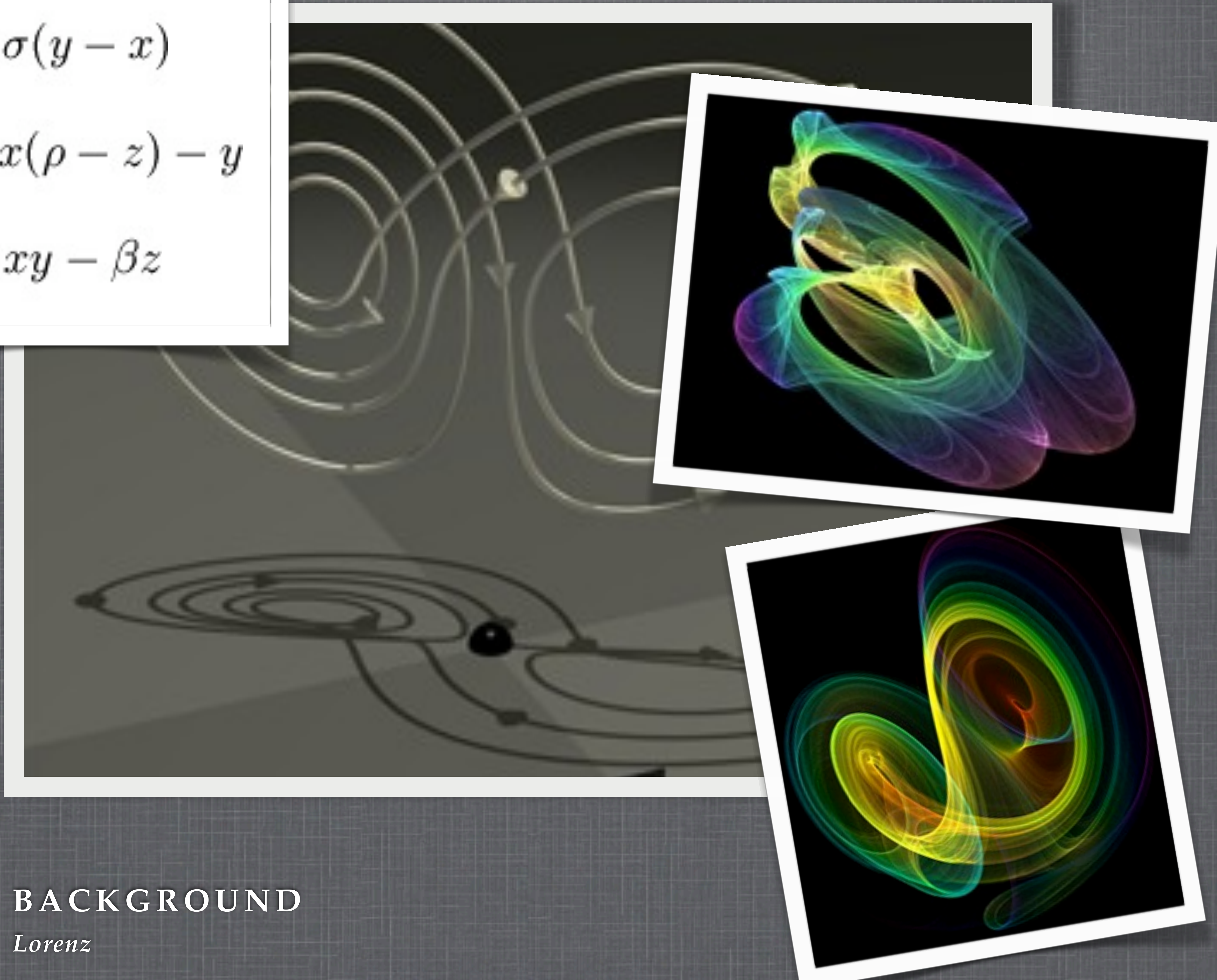

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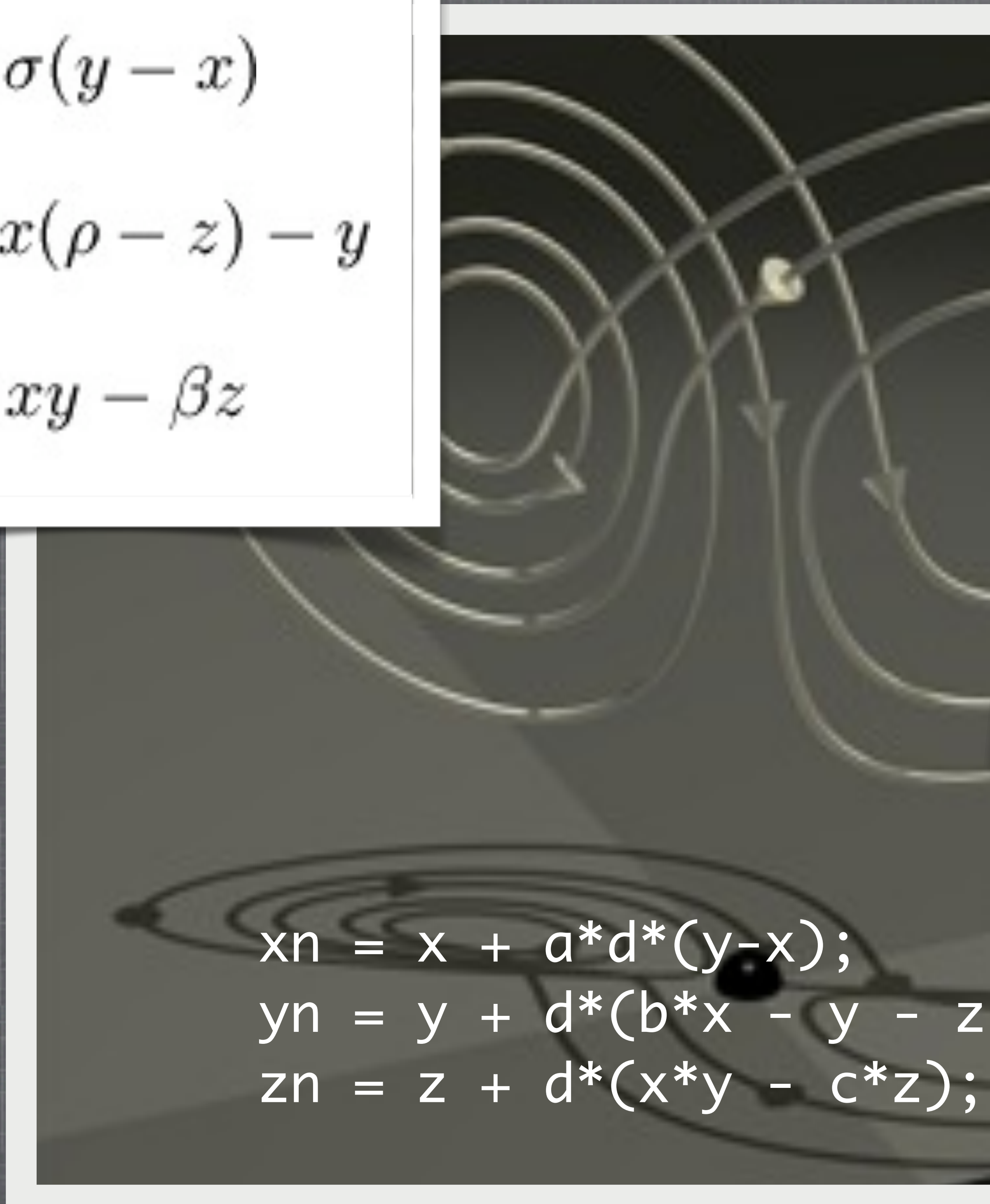
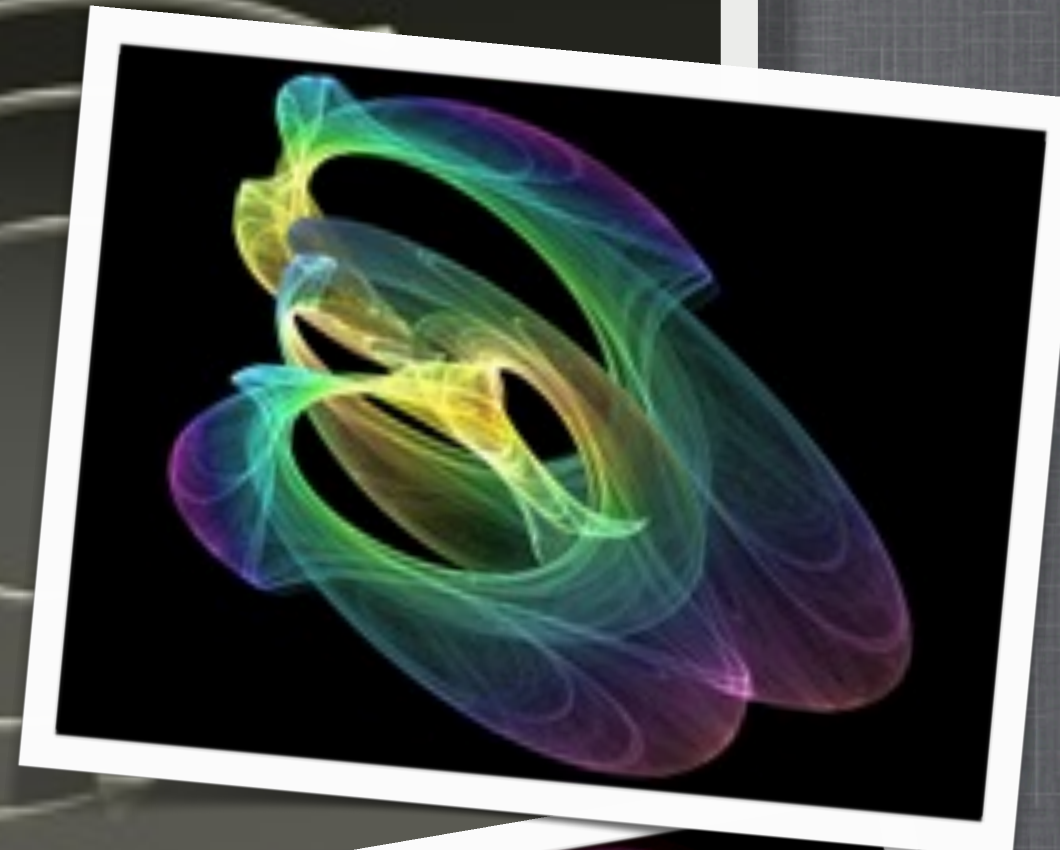


```
xn = x + a*d*(y-x);
yn = y + d*(b*x - y - z*x);
zn = z + d*(x*y - c*z);
```



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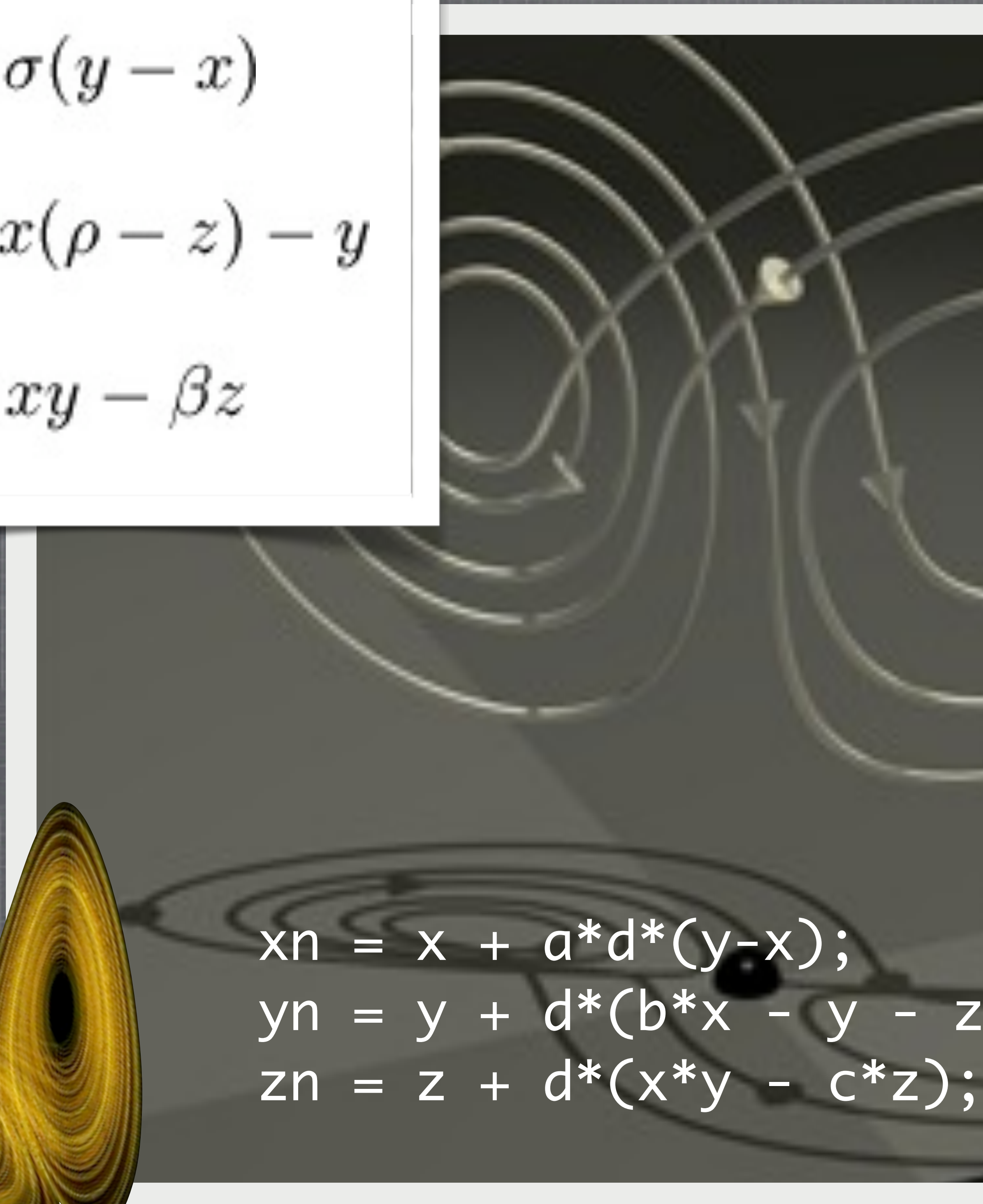

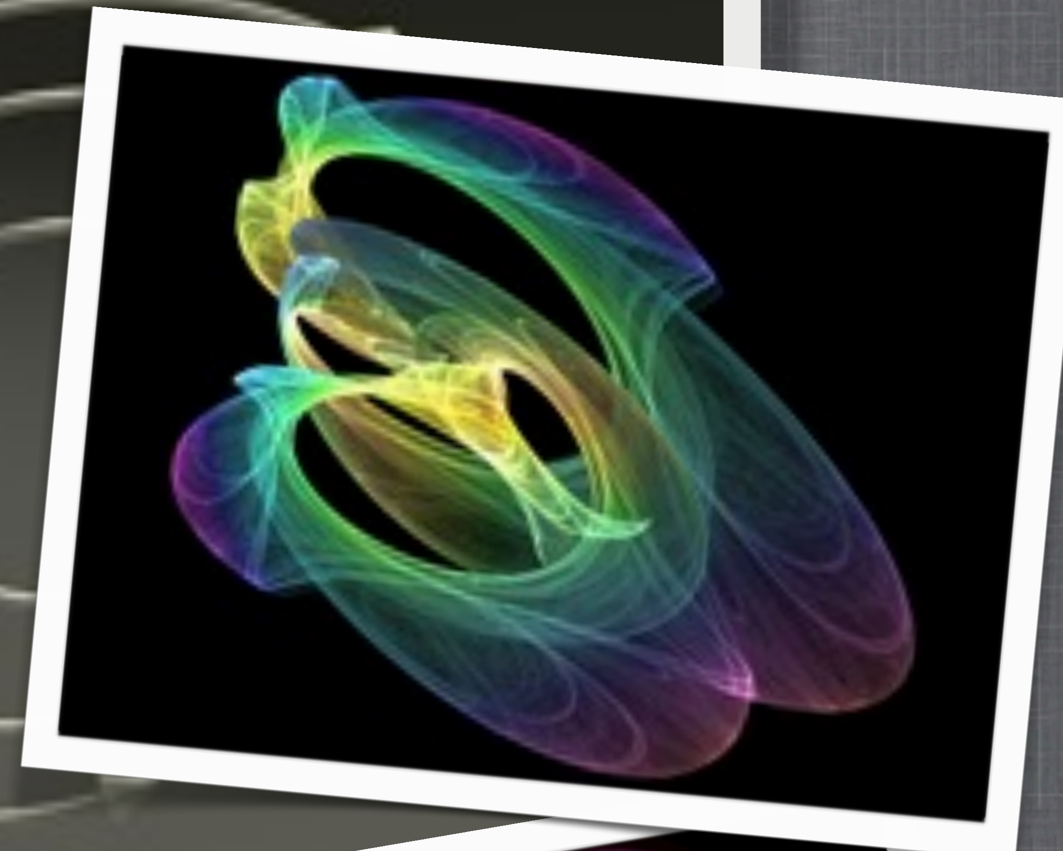

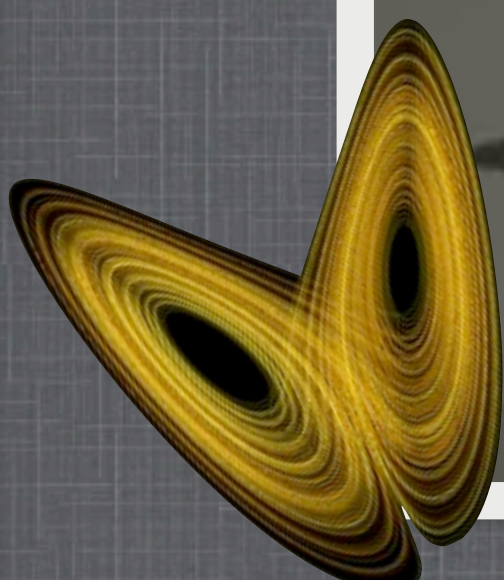

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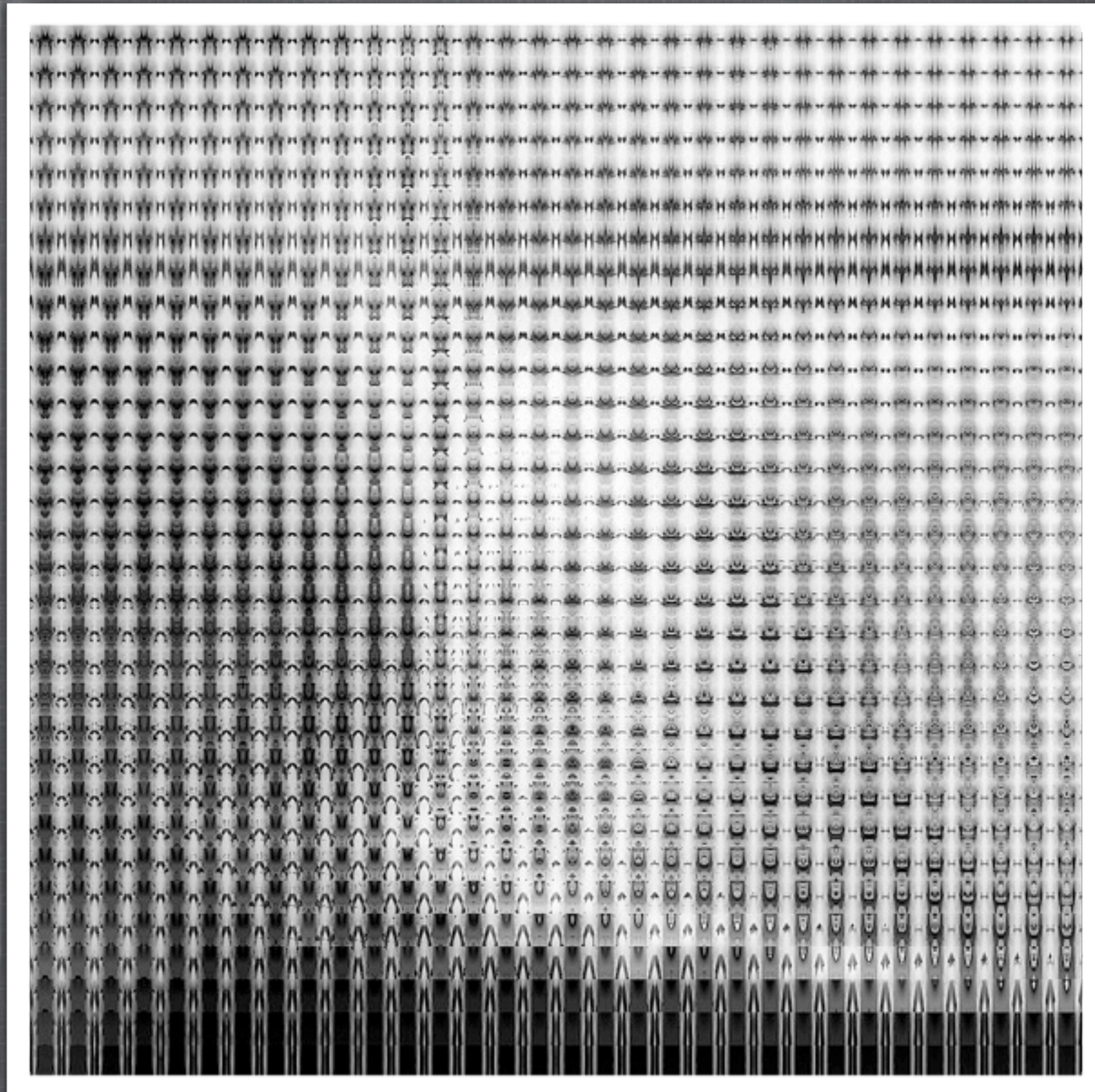
Lorenz

ÆXPLORATION

Real-time Interactive Software Demo



EXPLORING & CHARACTERIZING THE SYSTEM

Lyapunov Exponent, Faces of Chaos

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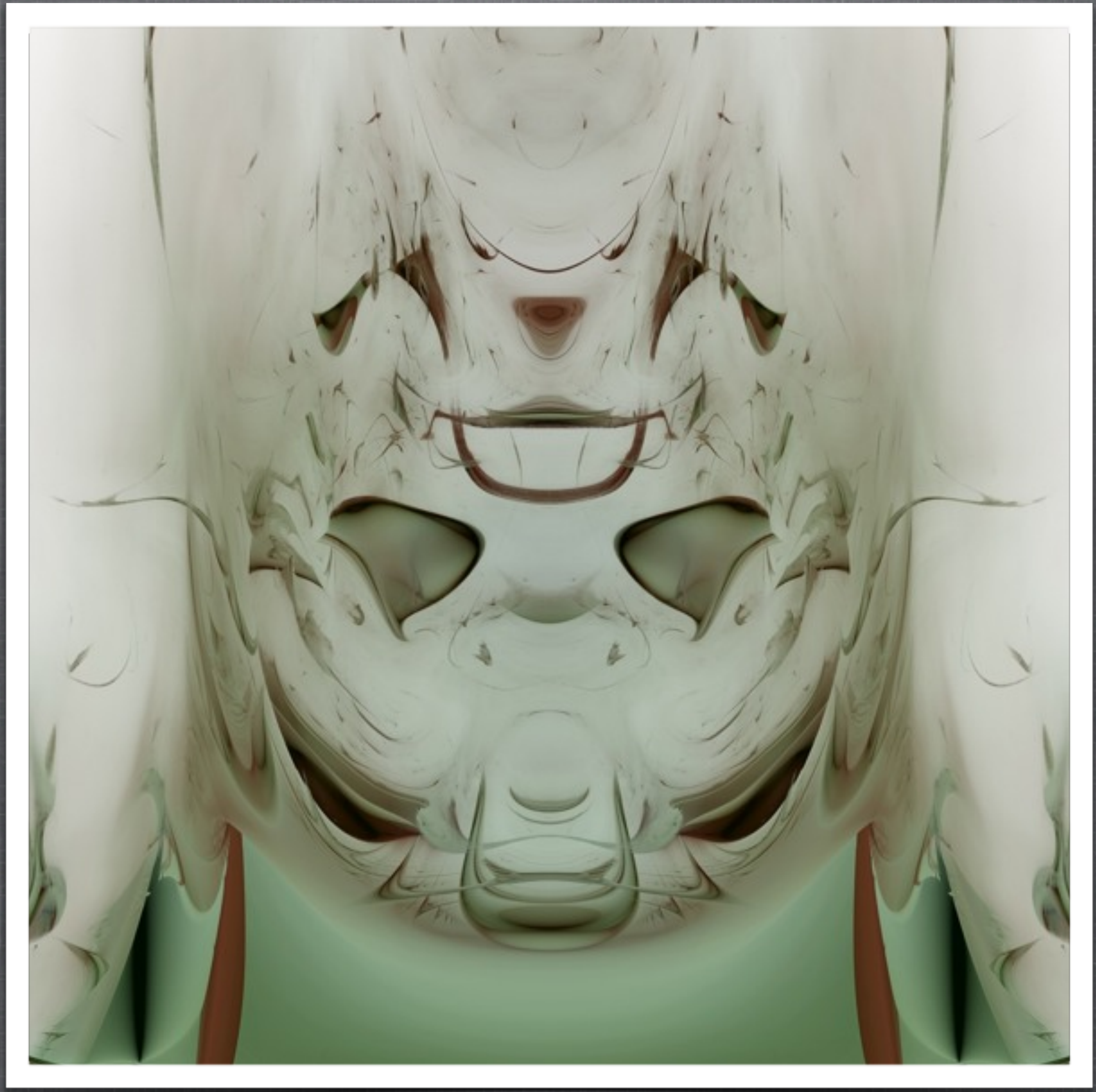

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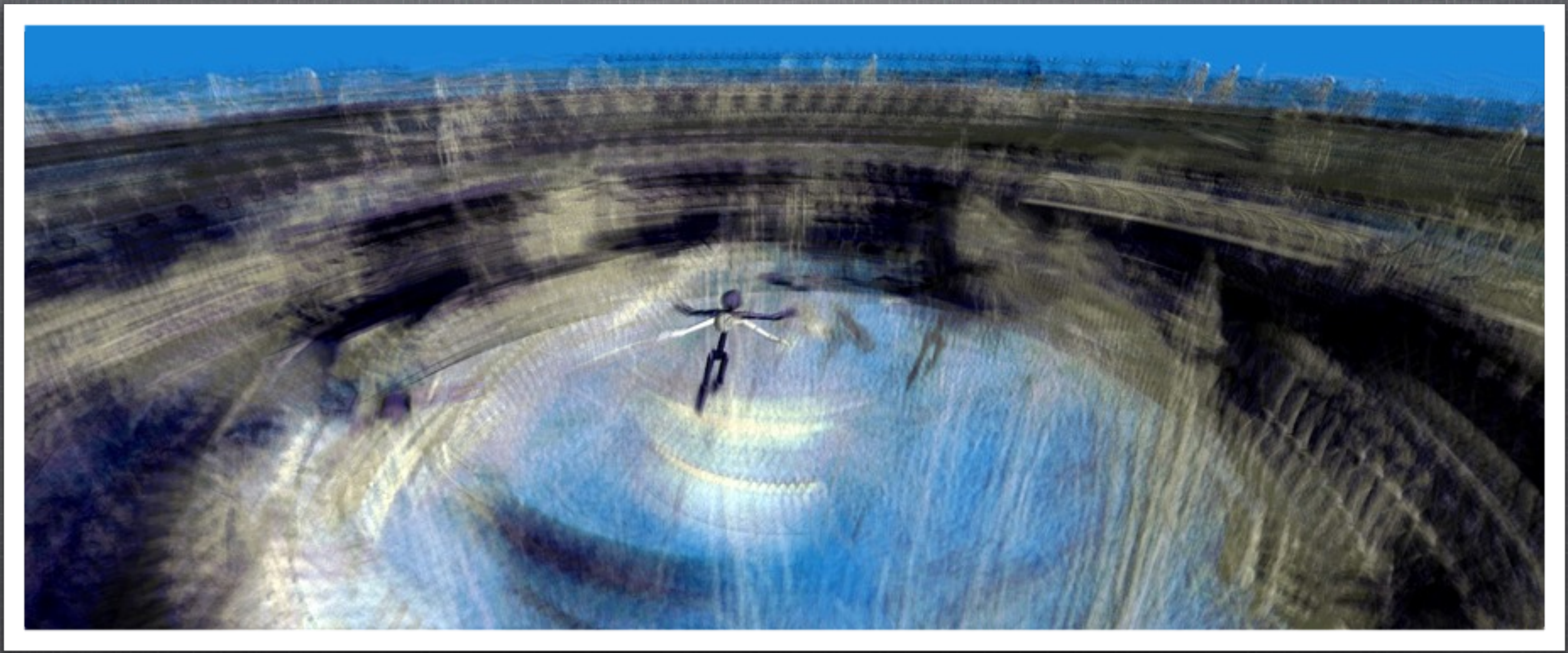

DIGITAL CHRONOPHOTOGRAPHY

A Society of Stickpeople

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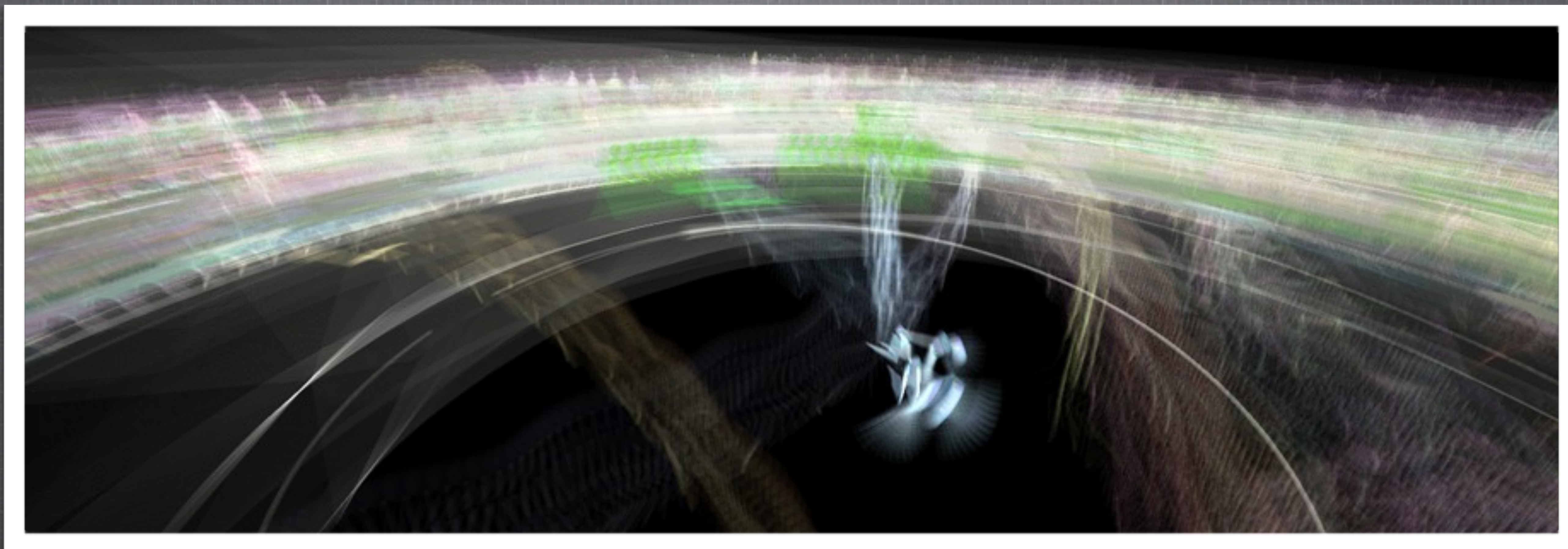

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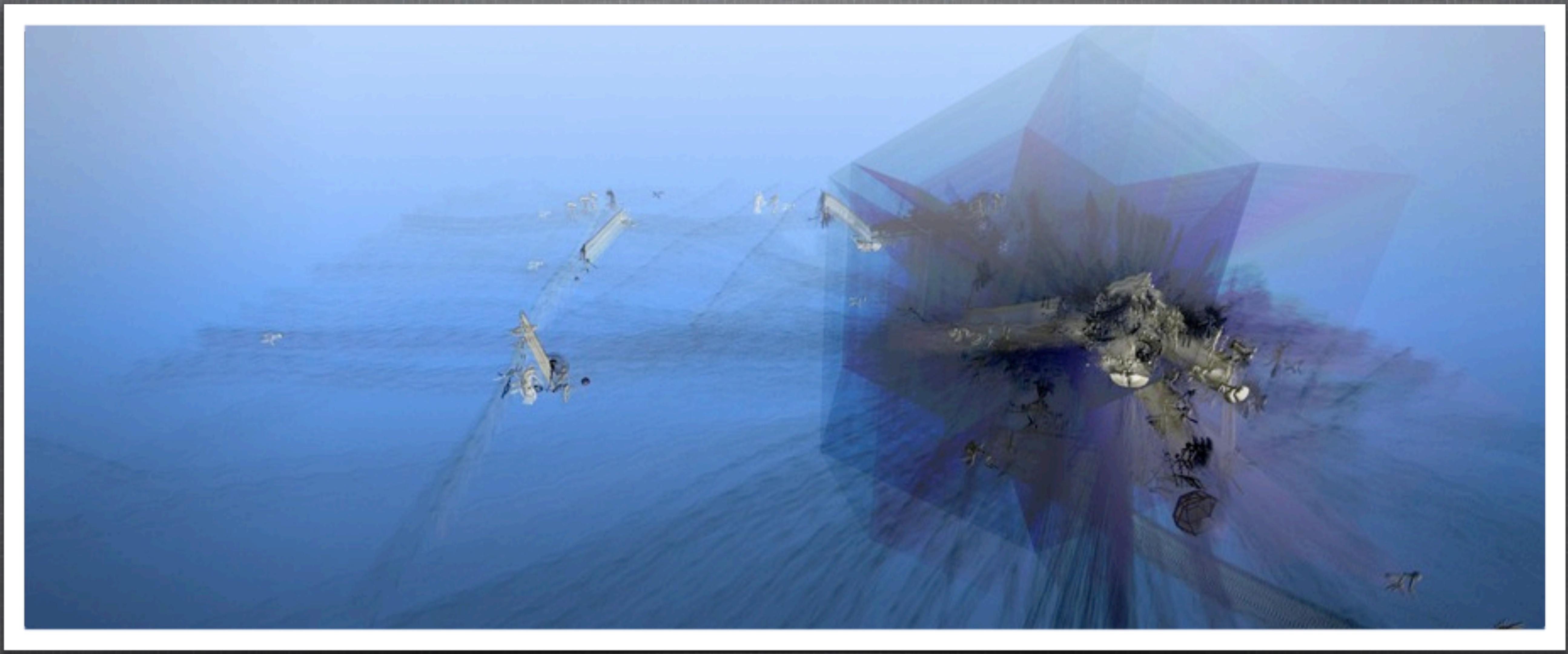

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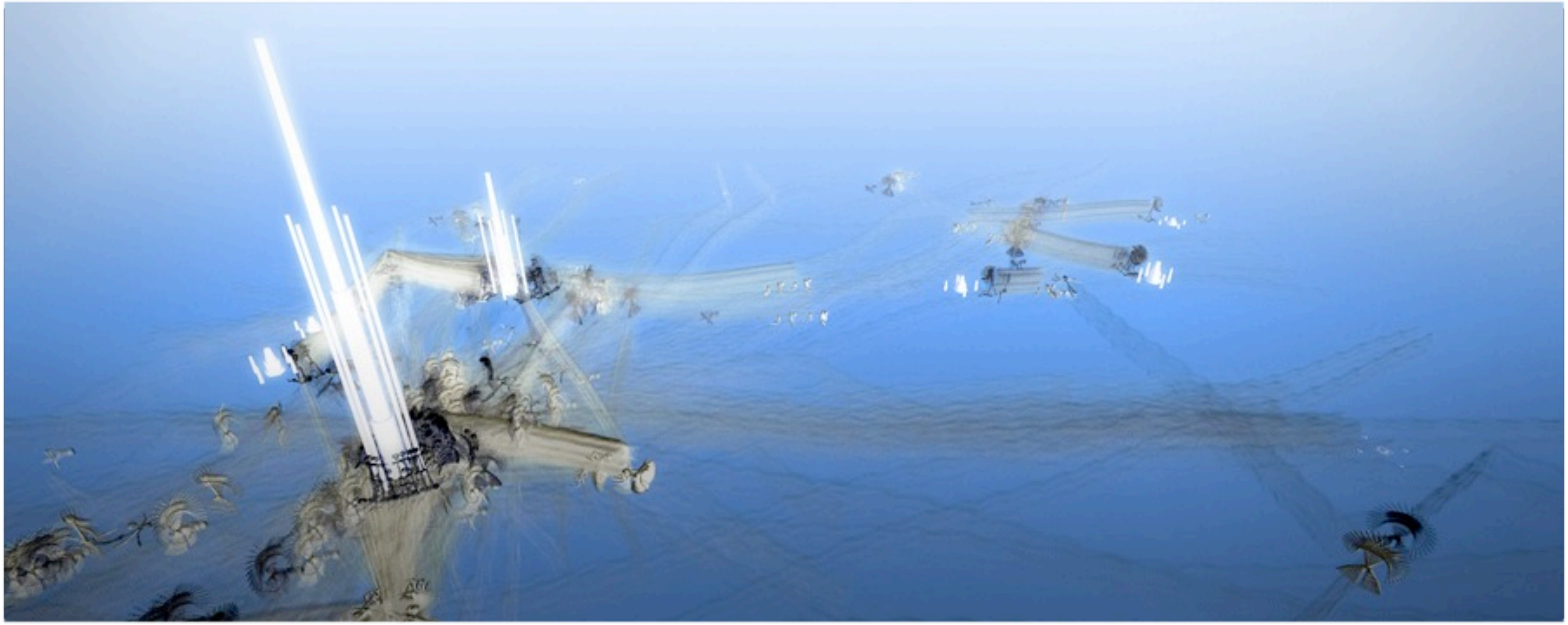

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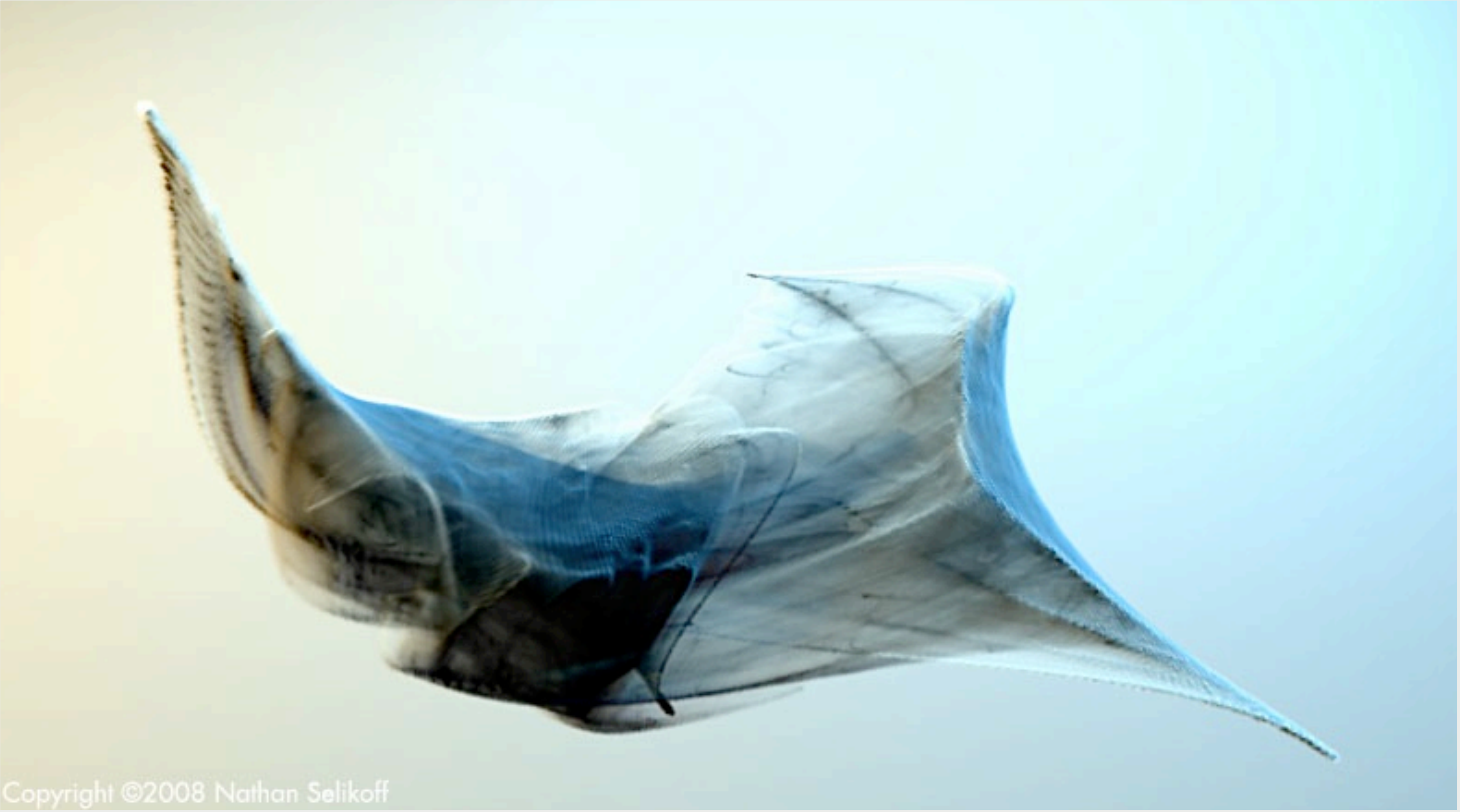
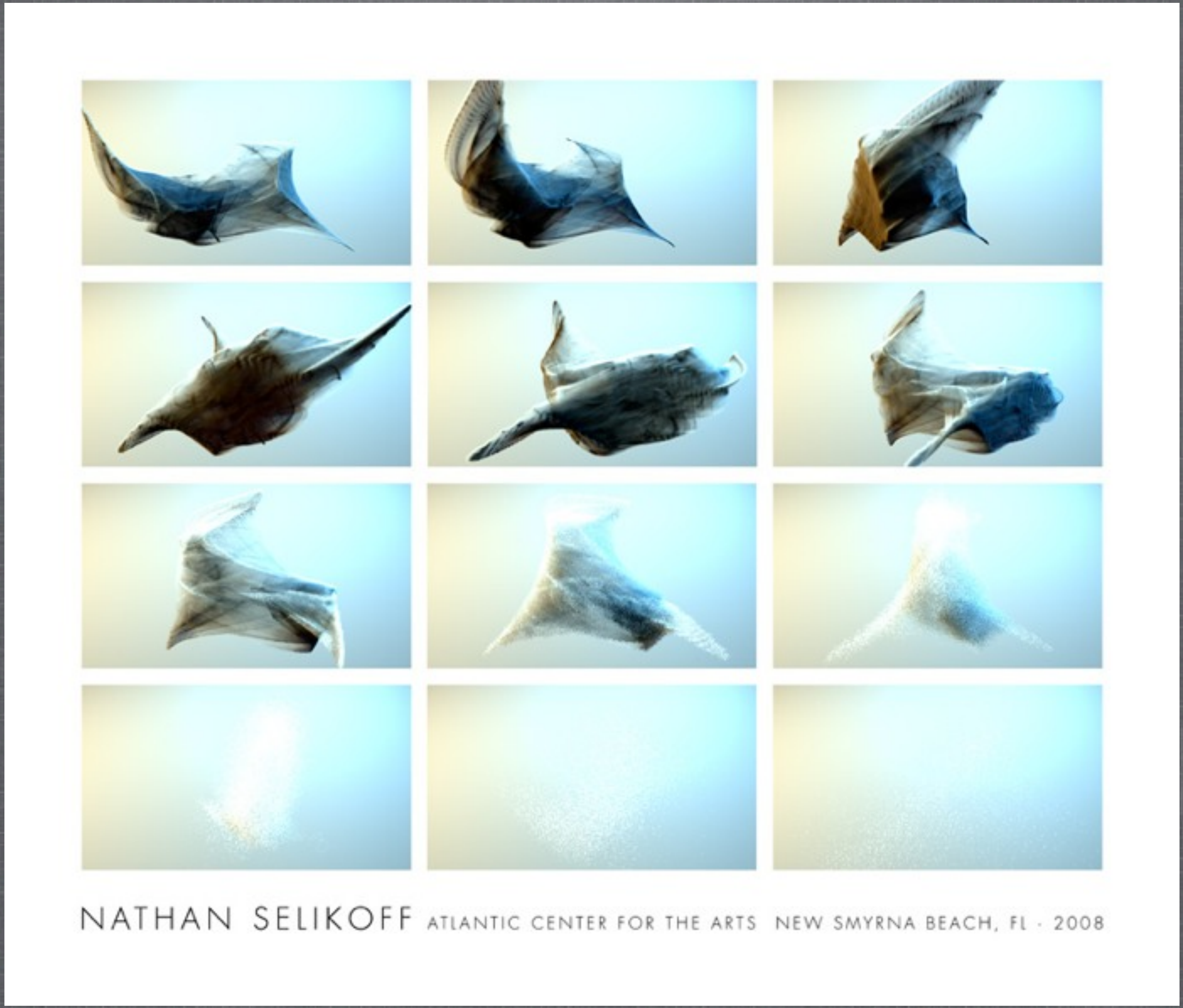
A Society of Stickpeople



EXPLORING FORM

Volumetric Rendering Techniques



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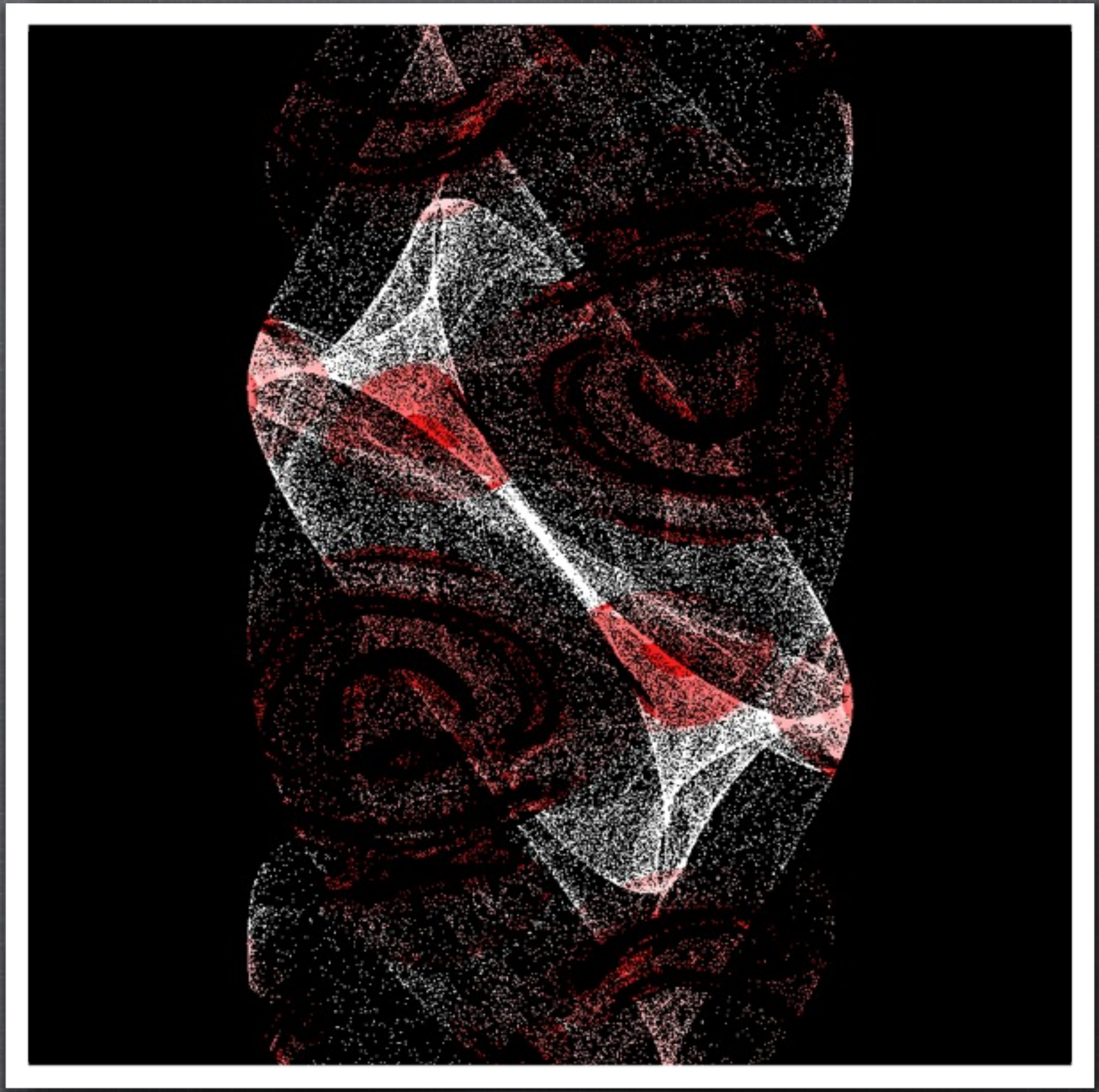
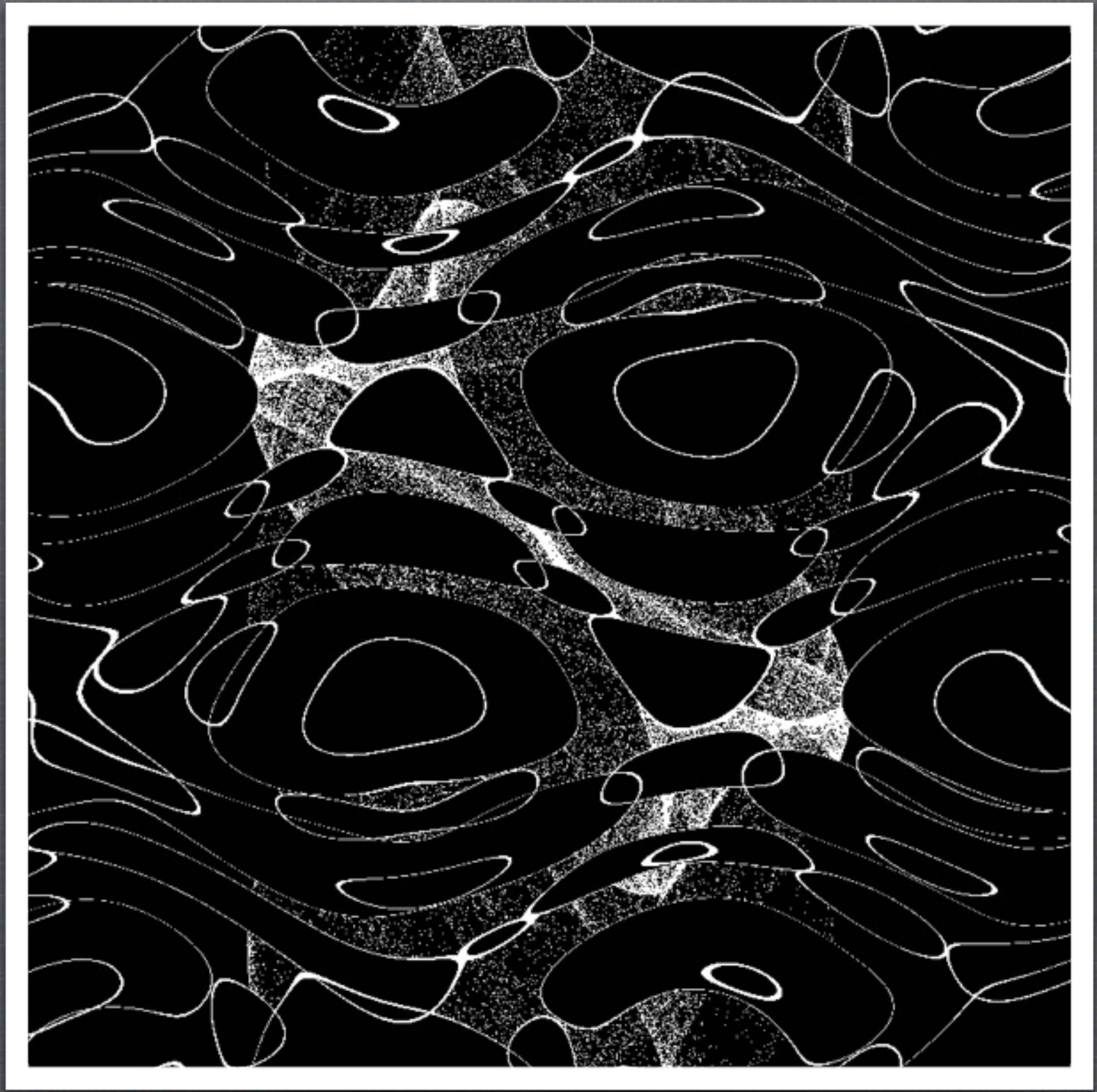


FILLING SPACE & QUESTIONING RELATIONSHIPS



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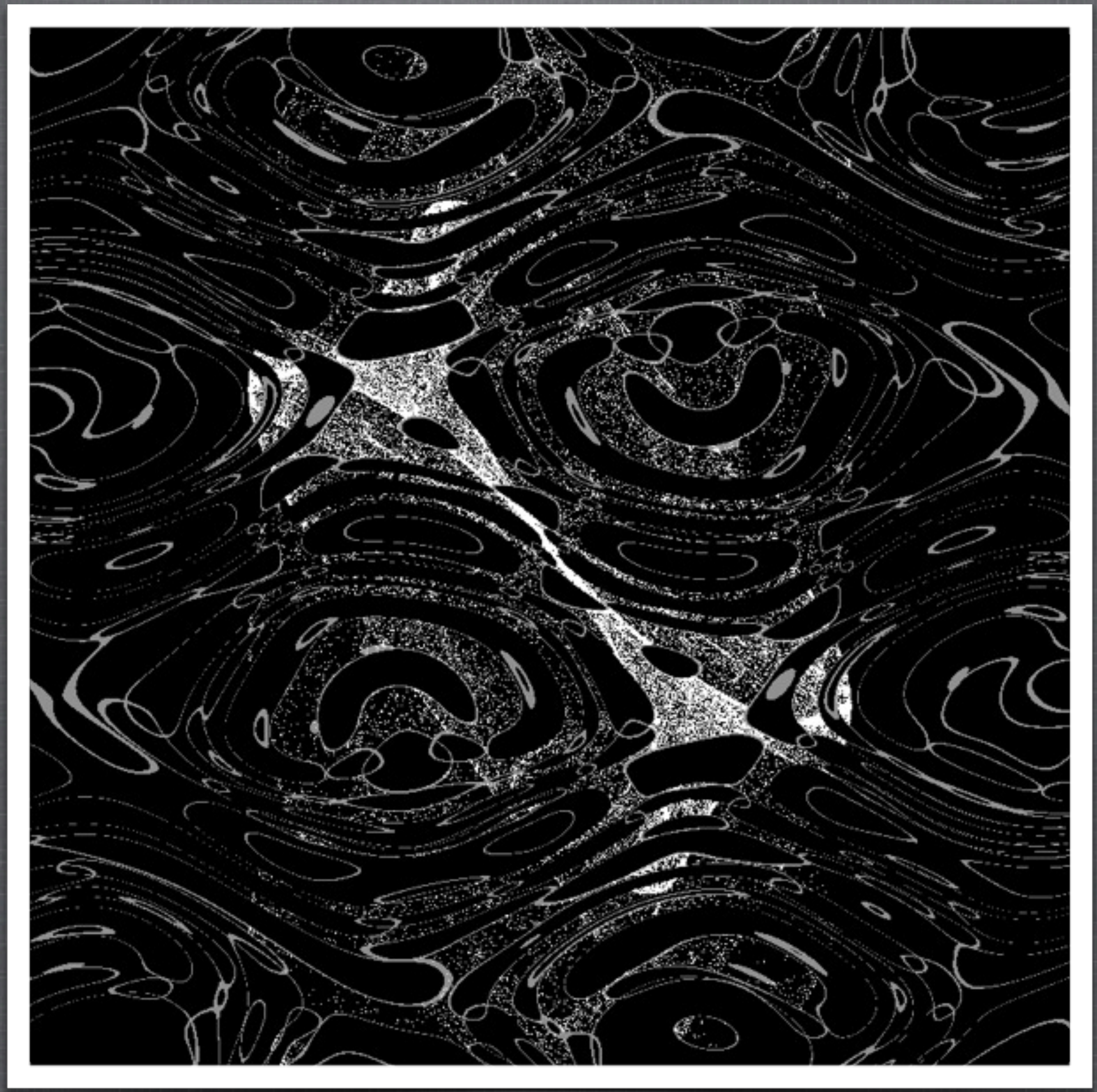

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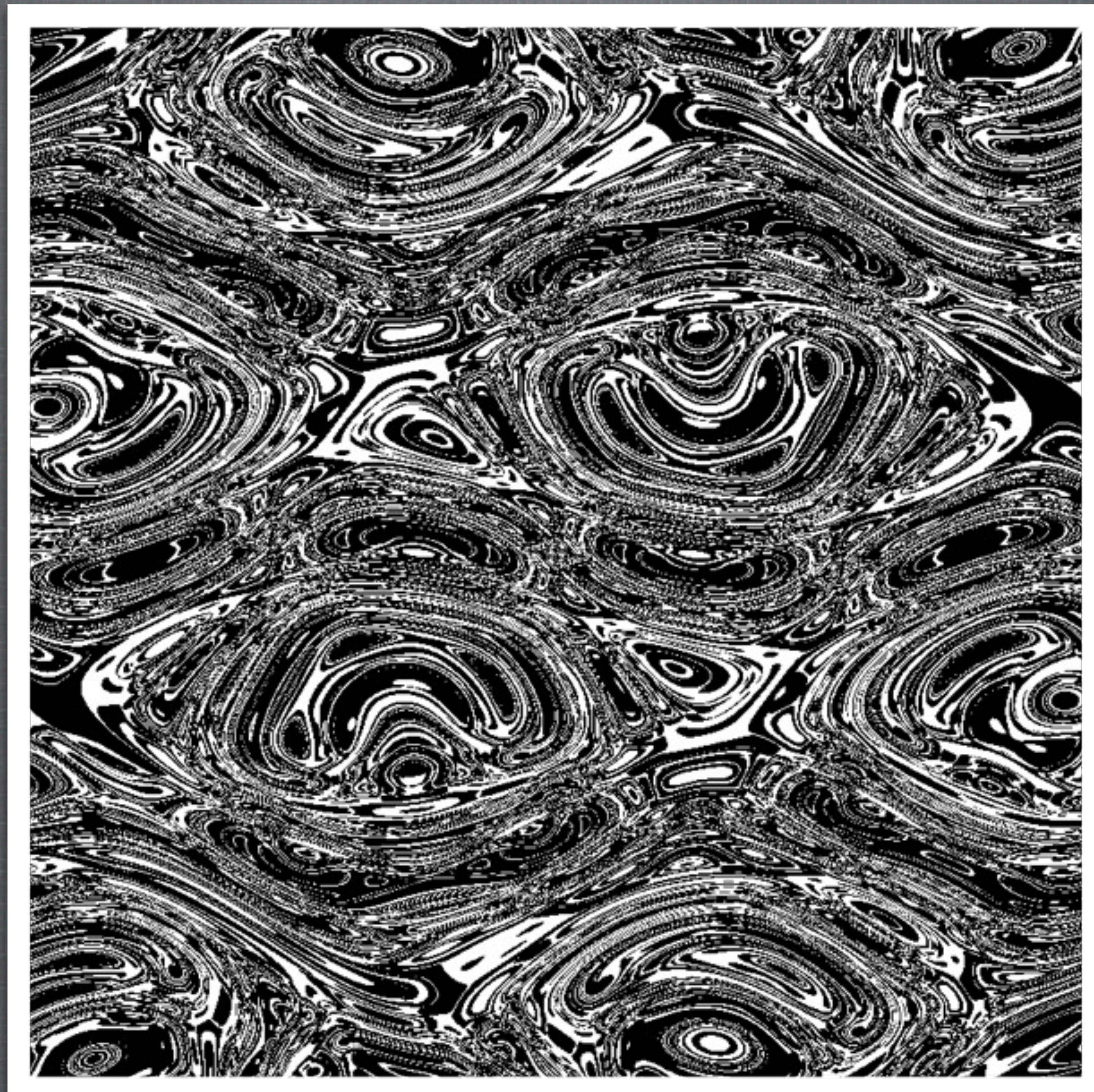

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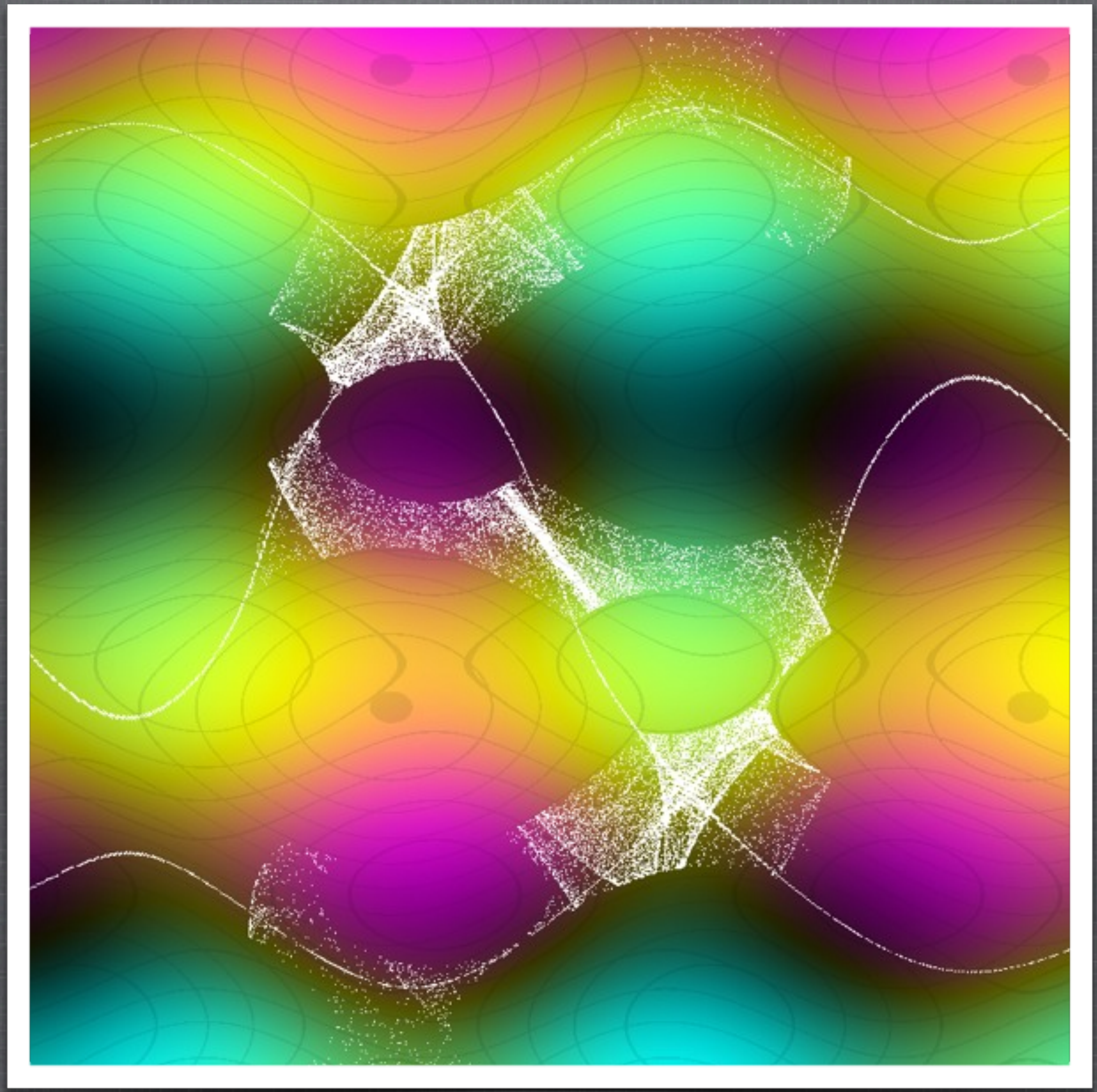

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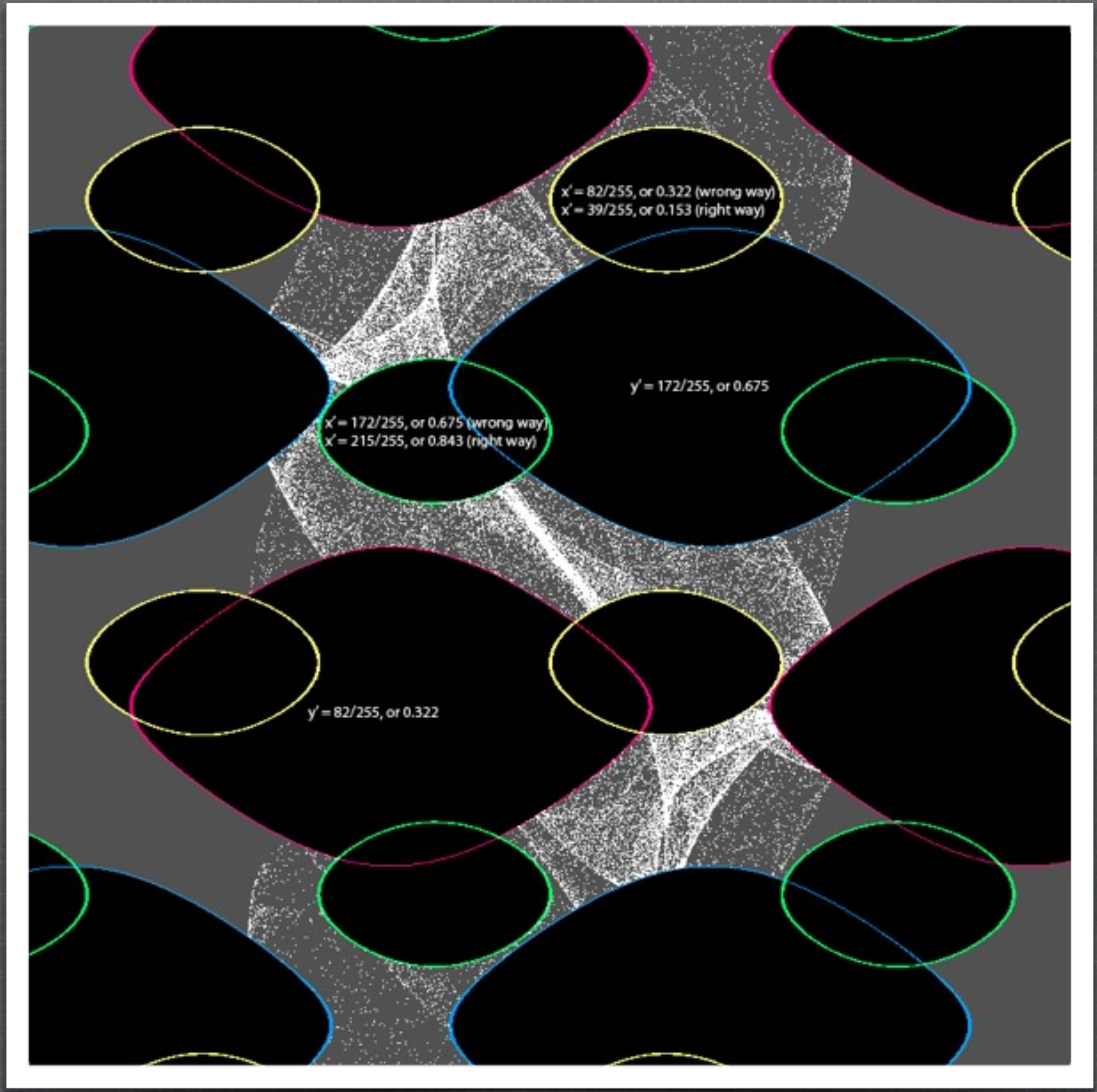

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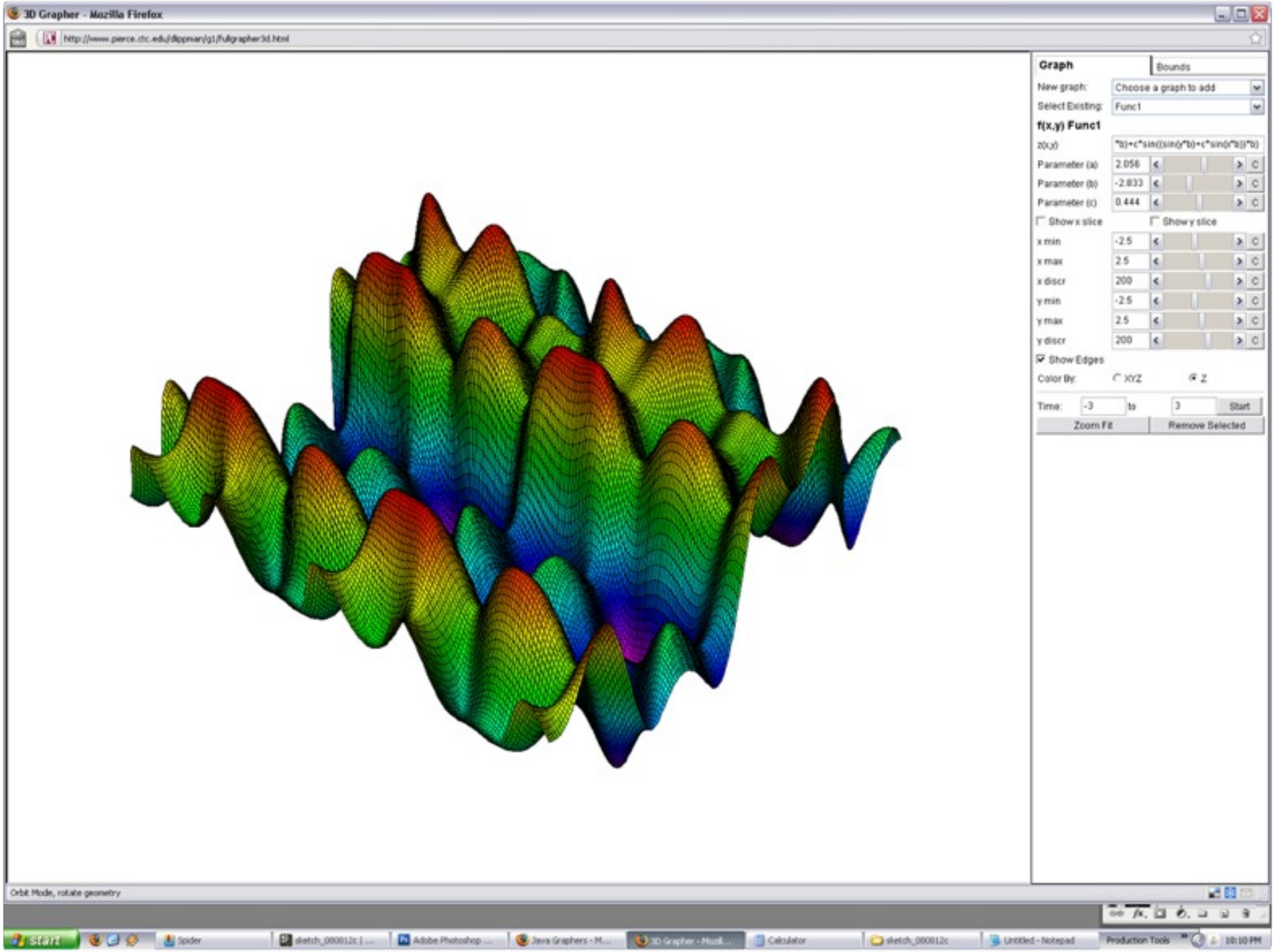

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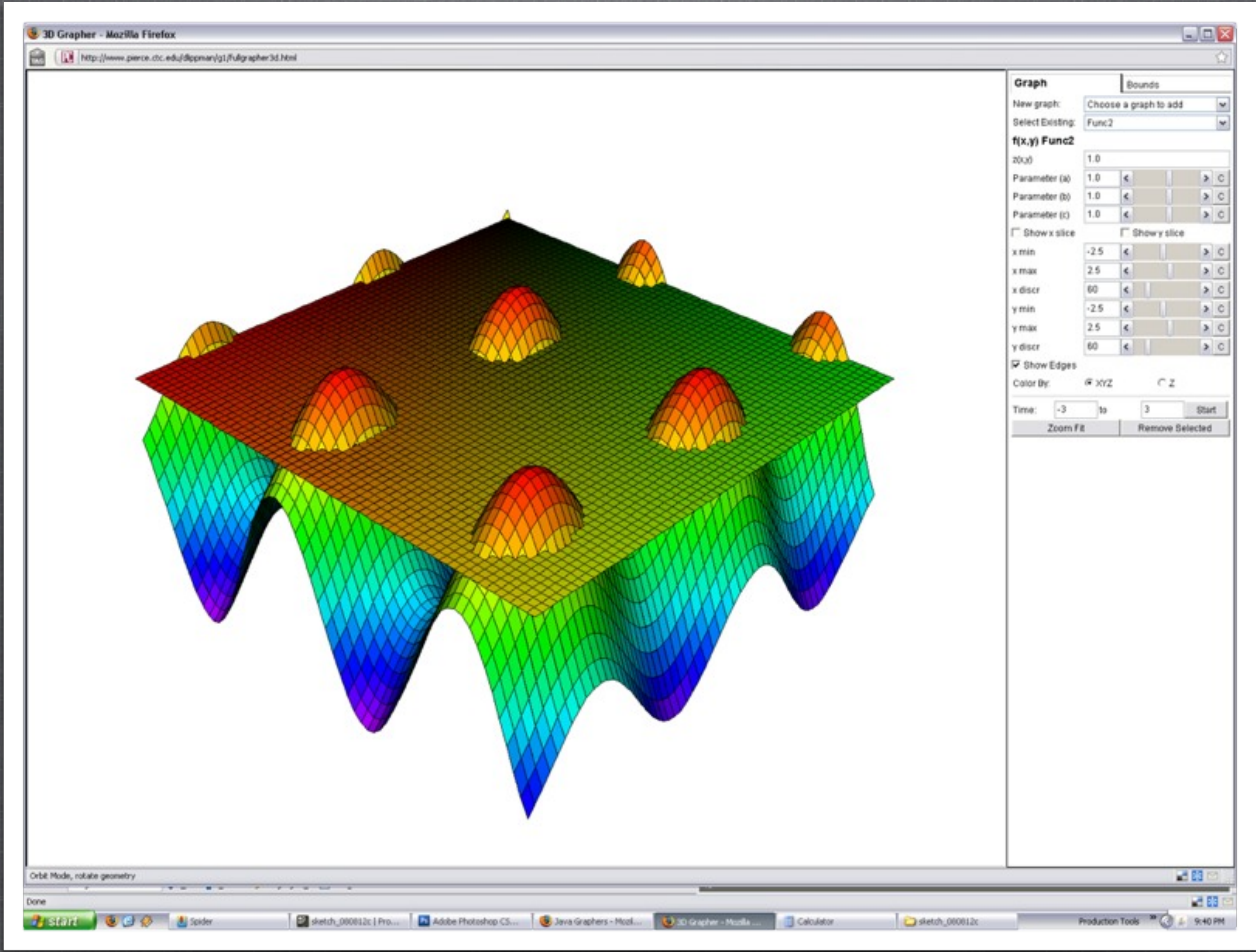

FILLING SPACE & QUESTIONING RELATIONSHIPS

GOING BACKWARDS

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- Original Equations
  - $x' = (\sin(y*b)+c*\sin(x*b))$
  - $y' = (\sin(x*a)+d*\sin(y*a))$

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  - $x' = (\sin(y*b)+c*\sin(x*b))$
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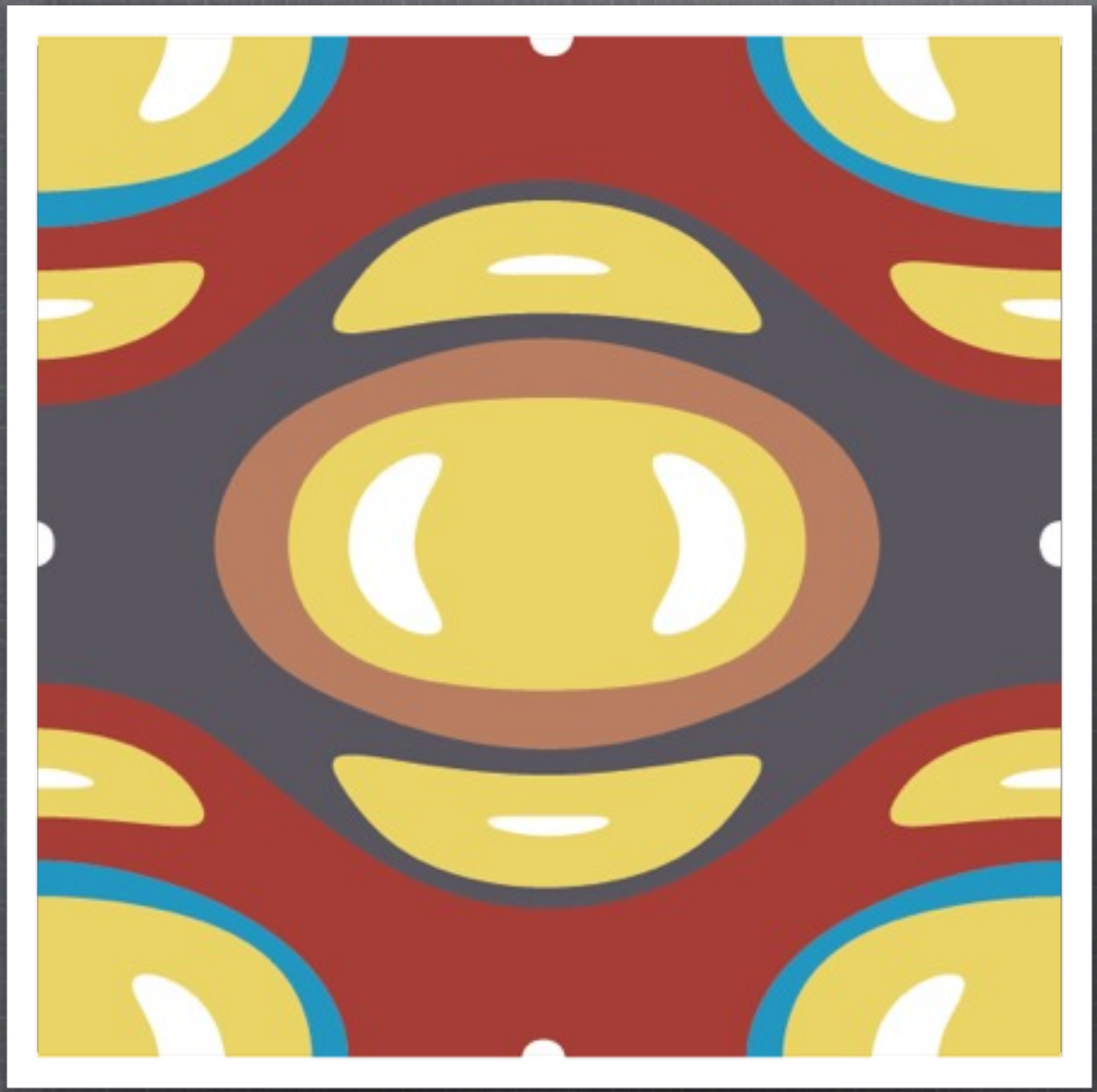
- One Recursion
  - $x' = \sin((\sin(x*a)+d*\sin(y*a))*b)+c*\sin((\sin(y*b)+c*\sin(x*b))*b)$
  - $y' = \sin((\sin(y*b)+c*\sin(x*b))*a)+d*\sin((\sin(x*a)+d*\sin(y*a))*a)$

GOING BACKWARDS

- Original Equations
  - x' = (sin(y*b)+c*sin(x*b))
  - y' = (sin(x*a)+d*sin(y*a))
- One Recursion
  - x' = sin((sin(x*a)+d*sin(y*a))*b)+c*sin((sin(y*b)+c*sin(x*b))*b)
  - y' = sin((sin(y*b)+c*sin(x*b))*a)+d*sin((sin(x*a)+d*sin(y*a))*a)
- Two Recursions
  - x' = sin((sin((sin(y*b)+c*sin(x*b))*a)+d*sin((sin(x*a)+d*sin(y*a))*a))*b)
    +c*sin((sin((sin(x*a)+d*sin(y*a))*b)+c*sin((sin(y*b)+c*sin(x*b))*b))*b)
  - y' = sin((sin((sin(x*a)+d*sin(y*a))*b)+c*sin((sin(y*b)+c*sin(x*b))*b))*a)
    +d*sin((sin((sin(y*b)+c*sin(x*b))*a)+d*sin((sin(x*a)+d*sin(y*a))*a))*a)



TEST PATTERN

SOURCES

- http://www.nathanselikoff.com
- http://bugman123.com/Fractals/Fractals.html
- http://www.magnetnerd.com/Neodymium%20Magnets/art.htm
- http://bulbphotography.com/pendulum/gallery.php
- http://math-art.net/2007/12/02/lorenz-attractor-a-3d-render/
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