

Arteritz – A Creation by Zo0000Z Roland Zulehner

About the Character: Arteritz Arteritz is a unique and imaginative figure born from the creative mind of artist and author Zo0000Z Roland Zulehner. Described as “**Die Kunst, die aus der Erde wächst**” (the art that grows from the earth), Arteritz embodies a living fusion of nature, creativity, and vibrant expression. This character represents the organic emergence of art — rooted in the ground, reaching toward color and life, intertwining image and text into a single, breathing entity.

Arteritz is not merely a static figure but a symbolic presence: a growing, evolving form that reflects Zulehner’s philosophy that art needs no reason — it simply dances, blooms, and leaves traces for others to follow.

About the Author: Zo0000Z Roland Zulehner Zo0000Z Roland Zulehner (born January 11, 1974, in Neresheim, Germany) is a contemporary German artist, painter, designer, and author known for his explosive use of color, abstract expressionism, and playful, emotional storytelling. Working primarily in acrylics on canvas, he creates vibrant, dynamic works that blend abstraction, portraiture, fantasy, and everyday inspiration.

Under his artistic alias **Zo0000Z**, he has built an international presence with a signature style that celebrates “**Dancing Colours**” and the belief that “**Art never needs a Reason.**” His motto — “*Leave a trace I can follow*” — runs through both his visual art and written work.

Roland Zulehner lives and works in Heidenheim, Germany, often collaborating artistically with Mumzy Maria (forming the duo Mumzy & Zo0000Z). His paintings have been featured in exhibitions, online galleries (such as TRiCERA, Loupe Art, Fine Art America), and publications.

In addition to his visual art, Zulehner is an **author** who writes poetry, short texts, reflections, and experimental books — often intertwining words and images. His writing echoes the same vivid, free-spirited energy found in his canvases.

Artistic & Literary Philosophy

For Zo0000Z Roland Zulehner, art and writing are inseparable ways of living colorfully and consciously. Whether through brushstrokes or words, he invites viewers and readers to discover beauty in chaos, emotion in movement, and meaning without explanation. Arteritz is one of his most poetic manifestations — a figure that grows, transforms, and reminds us that creativity is alive, rooted, and unstoppable.

Connect with Zo0000Z Roland Zulehner

- Instagram: [@roland_zulehner](#)
- Official Website: www.zo0000z.de
- Facebook: Roland Zulehner / Zulehner
- Other platforms: Fine Art America, TRiCERA, ArtMajeur

“Art is at the heart of everything — from the way we move to how we prepare a meal.”
— **Zo0000Z Roland Zulehner**

Fractal Art

Fractal Art

Fractal art is a form of algorithmic art created by calculating fractal objects and representing the calculation results as still digital images, animations, and other media. Fractal art developed from the mid-1980s onwards, often associated with the advent of personal computers that enabled the visualization of complex mathematical patterns. It is characterized by self-similarity, where patterns repeat at different scales, mimicking natural phenomena like coastlines, clouds, and ferns. Today, fractal art continues to evolve with advancements in computing power, integrating into digital art, installations, and even influencing other fields like design and architecture. While distinct from AI-generated art, fractal art shares some computational roots but differs in methodology and output.

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History

The concept of fractals has roots in the 17th century with Gottfried Leibniz's ideas on self-similarity, but the term "fractal" was coined by mathematician Benoit Mandelbrot in 1975. Mandelbrot's work, facilitated by emerging computer graphics at IBM, popularized fractal geometry by revealing patterns that mimicked natural irregularities. Early fractal art emerged in the 1970s and 1980s as computers allowed for the generation of complex images, such as those from the Mandelbrot set.

Exhibitions like "Frontiers of Chaos" in 1985 showcased computer-generated fractals, and artists like Roman Verostko began exploring algorithmic art incorporating fractals. In the 1990s, the intersection of chaos theory and home computing led to a fractal art movement, with contributions from figures like Mandelbrot advocating for its recognition as "art for the sake of science." Retrospective analyses have identified fractal-like patterns in earlier artworks, such as Jackson Pollock's drip paintings from the 1940s and 1950s, Hokusai's "The Great Wave" (1830), and Leonardo da Vinci's studies of turbulence (1500), suggesting an intuitive use of fractal aesthetics in traditional art.

Contemporary Fractal Art

As of 2026, fractal art remains a vibrant field within digital and generative art. Artists like Adam Hoffman blend engineering precision with fractal patterns to create intricate digital works, while installations such as Vincent Leroy's "Fractal Swarm" in Tanzania demonstrate kinetic applications, where modular fractal frameworks interact with environmental elements like wind and light. Fractal motifs appear in calendars, prints, and immersive experiences, reflecting ongoing interest in their mesmerizing, self-similar structures. Contemporary trends include integration with 3D printing and chaoticism painting, as seen in works by artists like Honglu Han, who incorporate fractal-like

elements into oil compositions. Online communities and platforms continue to share fractal creations, with events and exhibitions planned for 2026 highlighting both traditional 2D fractals and evolving 3D explorations.

Fractal Generators

Numerous software tools enable the creation of fractal art, ranging from free open-source options to commercial programs. Popular generators include:

Mandelbulb 3D: A free tool for creating 3D fractal objects, supporting complex rendering and animations.

Ultra Fractal: A commercial software for 2D fractals, known for layering, transformations, and high-resolution output, compatible with Windows and macOS.

FractInt: One of the oldest and most respected free fractal generators, used educationally to explore Mandelbrot and Julia sets.

ChaosPro: Free software supporting 2D and 3D fractals, animations, and true color rendering.

Mandelbulber: An open-source 3D fractal renderer, popular for its updates and features like perturbation techniques.

GNU XaoS: A real-time interactive fractal zoomer, allowing deep exploration of various fractal types. **DeepDrill:** Focuses on ultra-deep zooming into the Mandelbrot set using advanced algorithms like perturbation and series approximation.

These tools vary in complexity, from beginner-friendly interfaces to advanced options for mathematical customization.

Famous Fractals Often Used

Fractal art often draws from a variety of well-known fractal structures, each with unique properties and visual appeal. These fractals are frequently used in digital art, illustrations, and educational contexts due to their infinite complexity and aesthetic qualities. Below is a list of some prominent examples:

- **"Mandelbrot Set":** Discovered by Benoit Mandelbrot, this set is defined in the complex plane and exhibits intricate boundary details that reveal self-similar patterns upon magnification. It is one of the most iconic fractals, often rendered in vibrant colors based on escape time algorithms.
- **"Julia Sets":** Related to the Mandelbrot set, Julia sets are generated by iterating a similar quadratic function but with a fixed complex constant. Different constants produce varied shapes, from connected "fat" sets to disconnected "dust" patterns, offering artists a wide range of forms.
- **"Sierpinski Triangle":** A simple geometric fractal created by recursively removing triangles from an equilateral triangle. It demonstrates self-similarity and is often used in introductory fractal explorations, appearing in art as triangular patterns with infinite holes.
- **"Koch Snowflake":** Constructed by iteratively adding smaller equilateral triangles to the sides of an initial triangle, resulting in a curve with infinite length but finite area. Its boundary resembles a snowflake and is popular in designs emphasizing perimeter complexity.
- **"Lyapunov Fractals":** Based on the Lyapunov exponent from chaos theory, these fractals visualize stability in dynamical systems, producing images with regions of chaos and order, often resembling organic forms like flames or bacteria.

These fractals serve as foundational elements in fractal generators, allowing artists to explore mathematical beauty through computation.

Apfelmännchen

The "Apfelmännchen" (German for "little apple man") is the colloquial name for the Mandelbrot set in German-speaking regions, reflecting its apple-like shape with a humanoid figure. Coined after Benoit Mandelbrot's discovery in 1980, it became popular through early computer visualizations that highlighted its bulbous core and intricate appendages. The set is defined as the collection of complex numbers "c" for which the sequence $z_{n+1} = z_n^2 + c$ (starting with $z_0 = 0$) remains bounded. Points inside the set are typically colored black, while exterior points are shaded based on how quickly they escape to infinity, creating colorful, infinitely detailed boundaries.

The Apfelmännchen has influenced popular culture, appearing in art, music, and literature as a symbol of complexity emerging from simplicity. In contemporary fractal art, it remains a staple, often zoomed into deeply to reveal minibrots—miniature copies of the main set—using high-precision software.

GW-BASIC Code Example

Early personal computers like the IBM PC allowed enthusiasts to generate the Apfelmännchen using languages such as GW-BASIC. Below is a working example of GW-BASIC code that renders a low-resolution version of the Mandelbrot set in CGA mode (SCREEN 1). This code uses a simple escape-time algorithm with a maximum of 32 iterations and mirrors the image for symmetry.

```
<syntaxhighlight lang="basic">
10 SCREEN 1 : ZEROX = 160 : ZEROY = 100 : SCALE# = 1/60 : MAXIT = 32
20 FOR X = 0 TO 2*ZEROX-1
30 CR# = (X-ZEROX)*SCALE#
40 FOR Y = 0 TO ZEROY
50 CI# = (ZEROY-Y)*SCALE#
60 ZR# = 0 : ZI# = 0
70 FOR I = 1 TO MAXIT
80 BR# = CR# + ZR#*ZR# - ZI#*ZI#
90 ZI# = CI# + 2*ZR#*ZI#
100 ZR# = BR#
110 IF ZR#*ZR# + ZI#*ZI# > 4 THEN GOTO 170
120 NEXT I
130 COLOR 0
140 GOTO 180
150 170 COLOR 1 + (I MOD 3)
160 180 PSET (X, Y)
170 PSET (X, 2*ZEROY-Y)
180 NEXT Y 190 NEXT X
200 A$$ =INPUT $(1)
</syntaxhighlight>
```

This code initializes the screen, loops over pixel coordinates, performs the iteration, and colors points based on escape iterations. It can be run in a GW-BASIC emulator for modern systems.

Difference from AI-Generated Art

Fractal art and AI-generated art both utilize computational methods but differ fundamentally in process and foundation. Fractal art is based on mathematical algorithms and iterative functions that produce self-similar, infinitely zoomable patterns without relying on external datasets. It is deterministic—the same inputs yield identical outputs—and emphasizes artist-defined parameters to explore geometric complexity. In contrast, AI-generated art employs machine learning models trained on vast datasets of existing images, synthesizing new content through probabilistic processes like neural networks.

AI outputs are typically flat, non-zoomable images that amalgamate learned styles and elements, often requiring human prompts but lacking the inherent mathematical repetition of fractals. While some debate whether fractal art qualifies as "true" art due to its algorithmic nature, it is generally seen as distinct from AI, which raises concerns about originality and data sourcing. Hybrid approaches exist, where AI manipulates fractal patterns, but pure fractal art remains rooted in mathematics rather than data-driven learning.

See also

[Mandelbrot set](#) [Generative art](#) [Algorithmic art](#) [Benoit Mandelbrot](#)

References