

MARCO

Fact sheet · Christo Allegra's software for programmatic painting

MARCO (Mark-making AR Code & Output) is custom software, written in Processing, that analyzes a source image and projects its color and shape data onto canvas or paper while Allegra draws and paints. An on-screen interface and a MIDI controller set what is projected: which colors, which tonal range, how large the blocks, how fast the marks arrive. The result is a feedback loop between computer, artist, canvas and medium.

What it does: samples images by hue, saturation and brightness; projects targets for each pass; works with depth data, layered passes, and an audio-reactive mode. **What it does not do:** generate images, make decisions or replace the hand.

MARCO NXT, a new browser-based version, is available now for desktop browsers at eschatological.services/MARCO. MARCO is built on open source and made for sharing.

Timeline

Year	Milestone
2006	Begins writing Processing programs to project and paint
2008	<i>Morphogenesis</i> at UCLA: 100 drawings of 1,000 lines each, traced from a ϕ algorithm, then given away
2014	At the School for Poetic Computation, a reviewer suggests, "There should be knobs"
2016	Writes a program to load images as data and paint them, first with other images, then with digitized marks
2017	Projects the program's output and tunes it for drawing and painting in physical media: MARCO begins
2018–19	Hundreds of pictures across media; adds depth data and a physical controller
2020	Presents MARCO at the School for Poetic Computation's seven-year anniversary show at Westbeth Gallery; paints with Banyan Fierer over Zoom; writes the <i>MARCO</i> book
2021	Refactors the codebase; adds an audio-reactive mode
2022	<i>MARCO</i> monograph published (The Light of the Forest Press); code shared online
2023	Builds MARCO Plein Air, a battery-powered field version, at DesignInquiry's <i>Around Work</i> residency on Vinalhaven, Maine; zine shown at the SFPC Artists Fair, Pioneer Works
2025–26	<i>Schizoplicity</i> , nine paintings made with MARCO

Year	Milestone
2026	MARCO NXT launches with <i>Everything* so far</i> at Gallery 198

In the artist's words

"I made MARCO because I wanted to understand how a computer could help me learn to paint. MARCO says where. And my mind says 'huh,' then the hand decides how, over and over again."
(2026)

"I now think of myself as a painter who writes code." (*MARCO Plein Air*, 2023)

"As cool and popular as plotters and expensive robot arms are, I'd rather use my own arms."
(*MARCO Plein Air*, 2023)

"The idea expanded when I realized that painting is a time-based medium. Each mark is part of a narrative sequence, and that sequence is at least as important as the X and Y grid that defines it."
(*MARCO*, video, 2020)

"It's almost like I'm using this as a layer, or a paint by numbers, but I get to control the numbers. The numbers are in the computer, and I get to decide which numbers I'm actually going to use." (drawing tutorial, 2021)

"There's a bit of gamification in this painting technique, and I'm less afraid of the blank canvas."
(*MARCO*, video, 2020)

More

PUBLICATIONS

MARCO (2022), monograph, The Light of the Forest Press

MARCO Plein Air (2023), zine, included in this folder

VIDEO

Title	Year	Length	Link
<i>MARCO</i>	2020	about 2 min	vimeo.com/472697049
<i>MARCO Plein Air</i>	2023	about 2 min	vimeo.com/christoallegra/marcopleinair
Drawing with MARCO (tutorial)	2021	about 37 min	vimeo.com/520723227
Programmatic Drawing (Timelapse)	2021	about 4 min	vimeo.com/521229660

ONLINE

MARCO NXT: eschatological.services/MARCO

christoallegra.com