

# Nanopublication — Computational Image Analysis - AQC0262

by Arnaud Quercy · Dancing with the colibri · 2021
















## Claim 1: Computational Image Analysis - AQC0262

K-means clustering analysis [3] (10 colors) performed on artwork Dancing [1] with the colibri (AQC0262) [2] by Arnaud Quercy [2] on 2026-02-04. Documentation includes: color families, texture roughness, brightness distribution, spatial coherence.

### CONTEXT

Analysis performed according to MMIDS-CMP-2025 [3] includes four metric categories: (1) Color distribution via k-means (10 colors), (2) Texture analysis using Haralick features, (3) Brightness and contrast measurements, (4) Spatial pattern characterization. Source image [5]: 1536x2048 pixels. Analysis date: 2026-02-04.

### COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		1D1922	12.7	red-violet	very dark gray
2		5294BB	11.9	blue	steelblue
3		2B6599	11.2	blue-violet	grayish purple
4		223F66	10.9	blue-violet	grayish purple
5		8FB2C0	10.5	blue	steel gray
6		B0A679	9.7	yellow	ochre
7		678188	9.4	blue-green	blue gray
8		936F56	8.1	orange	dimgray
9		653D35	8.0	red-orange	dark brown
10		D0D3CB	7.4	white	lightgray
11		F4EBD7	0.3	yellow-orange	antiquewhite [Accent]
12		F2F3E2	0.3	yellow-green	white [Accent]
13		001053	0.3	violet	very dark purple [Accent]
14		C07D93	0.3	red	rosybrown [Accent]
15		E6F4EE	0.3	green	white [Accent]

### Color Families:

Family	%
blue	22.4
blue-violet	22.2
red-violet	12.7
yellow	9.7
blue-green	9.4
orange	8.1
red-orange	8.0
white	7.4
yellow-orange	0.3
yellow-green	0.3

Family	%
violet	0.3
red	0.3
green	0.3

### Accent Colors:

Hex	Family	Name	Chroma
F4EBD7	yellow-orange	antiquewhite	11.0
F2F3E2	yellow-green	white	8.5
001053	violet	very dark purple	47.5
C07D93	red	rosybrown	29.0
E6F4EE	green	white	6.1

### TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.216
Mean Local Roughness	0.043
Roughness Uniformity	0.027
Edge Density	0.251
Mean Gradient Magnitude	0.333
Gradient Variance	0.102
Gradient Smoothness	0.042
Directional Coherence	0.01
Pattern Complexity	0.12
Pattern Repetition	1.0
Detail Frequency Ratio	0.634
Spatial Variation	0.086
Texture Consistency	0.877

### BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.442
Brightness Variance	0.216
Brightness Uniformity	0.511
Brightness Skewness	0.04
Brightness Entropy	7.751
Rms Contrast	0.216
Michelson Contrast	1.0
Weber Contrast	0.804
Mean Local Contrast	0.044
Contrast Uniformity	0.401
Dynamic Range	1.0
Effective Dynamic Range	0.706
Shadow Percentage	33.22
Midtone Percentage	50.241
Highlight Percentage	16.539
Shadow Clipping	0.012
Highlight Clipping	0.014

Metric	Value
Tonal Balance	0.469
Fine Contrast	0.025
Medium Contrast	0.055
Coarse Contrast	0.077
Multiscale Contrast Ratio	0.326
Edge Contrast	0.333
Contrast Clustering	0.123

## SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.678
Color Clustering	0.714
Color Transition Smoothness	0.125
Transition Uniformity	0.318
Sharp Transition Ratio	0.1
Transition Directionality	0.007
Mean Saturation	0.469
Saturation Variance	0.055
Low Saturation Ratio	0.261
Medium Saturation Ratio	0.564
High Saturation Ratio	0.176
Saturation Clustering	0.997
Hue Concentration	0.311
Complementary Balance	0.274
Analogous Dominance	0.598
Temperature Bias	-0.323

## Methodology

This analysis employs standardized computational methods for objective image characterization. Color extraction uses k-means clustering algorithm. Texture analysis applies Haralick feature

extraction. Brightness metrics include mean, variance, and distribution analysis. Spatial patterns are characterized through coherence and clustering measurements. All methods are deterministic and reproducible. Analysis performed by Multimodal Institute's computational imaging systems.

## REFERENCES

- [1] Arnaud Quercy (2021). Dancing with the colibri — Catalog raisonné. <https://arnaudquercy.art/en/catalogue-raisonne/AQC0262.html>
- [2] Quercy, A. (2025). Untitled - Gallery. [https://artquamanima.com/en/artworks/2021/01/dancing-with-the-colibri\\_324.html](https://artquamanima.com/en/artworks/2021/01/dancing-with-the-colibri_324.html)
- [3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 h <https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html>

## EPISTEMIC PROFILE

<b>Claim type</b>	computational analysis
<b>Voice</b>	third person
<b>Epistemic status</b>	empirical measurement
<b>Methodology</b>	computational analysis
<b>Certainty</b>	high

## CHECKSUM (SHA-256)

03f10fe5e11691053bb65009dbcf5f44f15235bc0d-b2a2be121080f58c80580c

<b>Artist</b>	Arnaud Quercy
<b>Date</b>	2021
<b>Collection</b>	Nature in the city
<b>Certificate</b>	20211231-0069
<b>Asset code</b>	AQC0262
<b>Version</b>	1
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