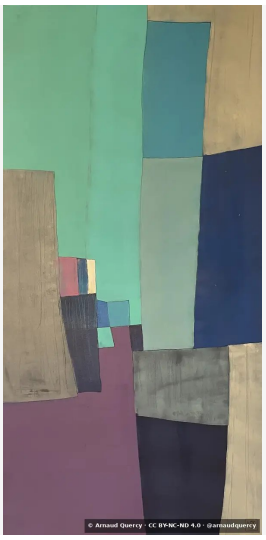
AQC0702 | NAN-COL000250

Nanopublication — Computational Image Analysis - AQC0702

by Arnaud Quercy · Db Major - Research on Harmony - Variation 4 · 2024



CLAIM 1: COMPUTATIONAL IMAGE ANALYSIS - AQC0702

K-means clustering analysis [3] (10 colors) performed on artwork Db Major [1] - Research on Harmony - Variation 4 (AQC0702) [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]: 1575x3240 pixels. Analysis date: 2026-02-04.

COLOR ANALYSIS

Rank	Color	Hex	%	Family	Name
1		78596B	16.5	red-violet	dusty mauve
2		73AA89	16.2	yellow-green	cadetblue
3		A39175	15.1	yellow-orange	rosybrown
4		35405A	10.8	blue-violet	grayish purple
5		7BB99C	8.8	yellow-green	darkseagreen
6		8DA695	7.5	yellow-green	steel gray
7		312F3C	7.4	violet	dusty mauve
8		4E7F81	6.6	blue-green	blue gray
9		7E7D72	6.0	yellow	gray
10		BEAF90	5.2	yellow-orange	tan
11		9AD3BB	0.3	green	silver [Accent]
12		C88086	0.3	red-orange	rosybrown [Accent]

Color Families:

Family	%
yellow-green	32.4
yellow-orange	20.3
red-violet	16.5
blue-violet	10.8
violet	7.4
blue-green	6.6
yellow	6.0
green	0.3
red-orange	0.3

Accent Colors:

Hex	Family	Name	Chroma
9AD3BB	green	silver	23.8
C88086	red-orange	rosybrown	30.1

TEXTURE ANALYSIS

Metric	Value
Global Roughness	0.152
Mean Local Roughness	0.005
Roughness Uniformity	0.013
Edge Density	0.009
Mean Gradient Magnitude	0.04
Gradient Variance	0.014
Gradient Smoothness	0.0
Directional Coherence	0.308
Pattern Complexity	0.097
Pattern Repetition	1.0
Detail Frequency Ratio	0.624
Spatial Variation	0.113
Texture Consistency	0.208

BRIGHTNESS & CONTRAST ANALYSIS

Metric	Value
Mean Brightness	0.487
Brightness Variance	0.152
Brightness Uniformity	0.689
Brightness Skewness	-0.586
Brightness Entropy	6.645
Rms Contrast	0.152
Michelson Contrast	1.0
Weber Contrast	0.646
Mean Local Contrast	0.006
Contrast Uniformity	0.0
Dynamic Range	1.0
Effective Dynamic Range	0.471
Shadow Percentage	18.014
Midtone Percentage	76.134
Highlight Percentage	5.852
Shadow Clipping	0.0
Highlight Clipping	0.0
Tonal Balance	0.0
Fine Contrast	0.003
Medium Contrast	0.007
Coarse Contrast	None
Multiscale Contrast Ratio	1.0
Edge Contrast	0.04
Contrast Clustering	0.792

SPATIAL DISTRIBUTION ANALYSIS

Metric	Value
Spatial Coherence	0.805
Color Clustering	0.733
Color Transition Smoothness	0.887
Transition Uniformity	0.903
Sharp Transition Ratio	0.1
Transition Directionality	0.317
Mean Saturation	0.286
Saturation Variance	0.011
Low Saturation Ratio	0.552
Medium Saturation Ratio	0.448
High Saturation Ratio	0.0
Saturation Clustering	1.0
Hue Concentration	0.113
Complementary Balance	0.304
Analogous Dominance	0.468
Temperature Bias	-0.062

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 (2024). Db Major - Research on Harmony - Variation 4 — Catalog raisonné. https://arnaudquercy.art/en/catalogue-raisonne/AQC0702.html

[2] Quercy, A. (2024). Db Major - Research on Harmony - Variation 4 - Gallery. https://artquamanima.com/en/artworks/2024/01/db-major-research-on-harmony-variation-4_7t8.html

[3] Quercy, A. (2025). Computational Image Analysis Standard - MMIDS-CMP-2025 https://multimodal.institute/en/publications/2025/11/mmids-cmp-2025-computational-image-analysis-standard-dg1.html

WHERE THIS WORK LIVES

THEMATIC ELEMENTS

chromesthetic mapping · Db Major triad · synesthetic art · harmonic visualization · acrylic geometric composition · musical color translation · contemporary abstract painting · monumental canvas

EPISTEMIC PROFILE

Claim type	computational analysis
Voice	third person
Epistemic status	empirical measurement
Methodology	computational analysis
Certainty	high

CHECKSUM (SHA-256)

eacd44933a3a3839b1a20543005cf1738e3e27d97d3f70f22be364506aa6df8a

Artist Arnaud Quercy
Date 2024
Collection Synesthetic Explorations
Certificate 20240718-0198
Asset code AQC0702
Identifier NAN-COL000250
Version 1
Published 2026-02-03

ISSN: [pending — Library of Congress]

Published by Art Quam Anima Publishing New York,
an imprint of AQA PUBLISHING LLC

c/o Northwest Registered Agent, 418 Broadway Ste N
Albany, NY 12207, USA
+1 917-764-5470

publishing.artquamanima.com

Last updated: 2026-06-03

Persistent URI: https://multimodal.institute/en/nanopubs/2026/02/AQC0702-computational-image-analysis-aqc0702.pdf