



Fractal analysis tools for characterizing the colorimetric organization of digital image

Submitted by Emmanuel Lemoine on Thu, 01/30/2014 - 15:31

Titre	Fractal analysis tools for characterizing the colorimetric organization of digital image
Type de publication	Communication
Type	Communication avec actes dans un congrès
Année	2010
Langue	Anglais
Date du colloque	2010
Titre du colloque	International Conference on Computer Vision Theory and Applications, VISAPP 2010
Titre des actes ou de la revue	Proceedings VISAPP 2010
Volume	2
Pagination	245 - 248
Auteur	Chauveau, Julien [1], Rousseau, David [2], Richard, Paul [3], Chapeau-Blondeau, François [4]
Pays	France
Ville	Angers
Mots-clés	capacity dimension [5], color histogram [6], color image [7], correlation dimension [8], feature extraction and analysis [9], Fractal [10], image modeling [11], pair correlation integral [12], self-similarity [13], virtual reality [14], vision [15]
Résumé en anglais	<p>The colorimetric organization of RGB color images is analyzed through the computation of algorithms which can characterize fractal organizations in the support and population of their three-dimensional color histogram. These algorithms have shown that complex organizations across scales exist in the colorimetric domain for natural images with often non-integer fractal dimension over a certain range of scale. In this paper, we apply this method of colorimetric characterization to synthetic images produced by rendering techniques of increasing sophistication. We show that the fractal or scale invariant signatures are more pronounced when the realism of the synthetic images increases. Such results could have interesting applications to improve the colorimetric realism of synthetic images. This also may contribute to progress in classification and vision, in using fractal colorimetric properties to differentiate natural and synthetic images.</p>
Notes	Date du colloque : 05/2010
URL de la notice	http://okina.univ-angers.fr/publications/ua1753 [16]
Lien vers le document en ligne	http://193.49.146.171/~chapeau/papers/congres/visapp10.pdf [17]

Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=1970](http://okina.univ-angers.fr/publications?f[author]=1970)
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=1901](http://okina.univ-angers.fr/publications?f[author]=1901)
- [3] <http://okina.univ-angers.fr/paul.richard/publications>
- [4] <http://okina.univ-angers.fr/f.chapeau/publications>
- [5] [http://okina.univ-angers.fr/publications?f\[keyword\]=6735](http://okina.univ-angers.fr/publications?f[keyword]=6735)
- [6] [http://okina.univ-angers.fr/publications?f\[keyword\]=6736](http://okina.univ-angers.fr/publications?f[keyword]=6736)
- [7] [http://okina.univ-angers.fr/publications?f\[keyword\]=6511](http://okina.univ-angers.fr/publications?f[keyword]=6511)
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=6737](http://okina.univ-angers.fr/publications?f[keyword]=6737)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=6738](http://okina.univ-angers.fr/publications?f[keyword]=6738)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=3517](http://okina.univ-angers.fr/publications?f[keyword]=3517)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=6739](http://okina.univ-angers.fr/publications?f[keyword]=6739)
- [12] [http://okina.univ-angers.fr/publications?f\[keyword\]=6740](http://okina.univ-angers.fr/publications?f[keyword]=6740)
- [13] [http://okina.univ-angers.fr/publications?f\[keyword\]=4306](http://okina.univ-angers.fr/publications?f[keyword]=4306)
- [14] [http://okina.univ-angers.fr/publications?f\[keyword\]=5857](http://okina.univ-angers.fr/publications?f[keyword]=5857)
- [15] [http://okina.univ-angers.fr/publications?f\[keyword\]=4307](http://okina.univ-angers.fr/publications?f[keyword]=4307)
- [16] <http://okina.univ-angers.fr/publications/ua1753>
- [17] <http://193.49.146.171/~chapeau/papers/congres/visapp10.pdf>

Publié sur *Okina* (<http://okina.univ-angers.fr>)