A nonlinear color image model discriminating geometric and chromatic features.

Pantaleón Romero Sanchez[1] and Vicente Candela[2]

[1]Universidad CEU Cardenal Herrera
[2]University of Valencia

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Abstract

An alternative system to the well known RGB, based on a decomposition into luminance and chrominance of the image, is introduced. This system, which we call LME is obtained from spherical-like change of coordinates. A theoretical analysis of LME system shows it robustness and overcomes some of the usual objections which appear in literature about this kind of nonlinear systems. An algorithm for color deconvolution based on LME decomposition is introduced in order to verify the quality of this model.

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`LME_V1.pdf` available at https://authorea.com/users/463443/articles/558534-a-nonlinear-color-image-model-discriminating-geometric-and-chromatic-features