Building Perceived Colour Images

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Abstract:

Chromatic induction depends, among others, on the frequential content of the observed region. As it is shown in Ref. [7], the two chromatic induction effects, i.e. chromatic contrast and assimilation, can be computationally simulated by blurring and sharpening operators, respectively. In this paper, we present a first unified approach to both effects using a wavelet decomposition approach. We propose a weighting function that modulates the multiresolution wavelet coefficients of any image point to perform either assimilation or contrast at every frequential level of the image. The recovered image present similar properties to a perceived colour image.