عنوان مقاله:

Image Denoising Based on a Mixture of Laplace Distributions in Complex Wavelet Domain

محل انتشار:

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خلاصه مقاله:

Recently, discrete complex wavelet transform has been proposed as a novel analysis tool featuring near shift-invariance and improved directional selectivity compared to the standard wavelet transform. Within this framework, we describe a novel technique for removing noise from digital images. We design a maximum a posteriori (MAP) estimator based on the modeling of wavelet coefficients in each subband with a mixture of Laplace random variables (rvs). Using this relatively new statistical model we are able to better capture the heavy-tailed nature of wavelet coefficients. The simulation results show that our proposed method yields better performance than several published .methods visually and quantitatively

کلمات کلیدی:

MAP estimator, mixture model, complex wavelet transform