

IMAGE DENOISING METHOD BASED ON LOW RANK MINIMIZATION

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ABSTRACT

This study proposes a method for image denoising based on low rank minimization. Low rank minimization using weighted nuclear norm minimization(WNNM) provides excellent denoising performance. We provide a new measurement to estimate the similarity of local data features. In particular, we apply the gradient information on measurement by obtaining the moving least square(MLS) methods. Considering the difference of both pixel intensities and gradient vectors, the proposed method can choose the similar patches better than the WNNM. On the other hand, we propose a data adaptive strategy using edge information in order to keep edge features during denoising process. Experimental results are presented and compared to WNNM method and other denoising methods. The comparison is made visually and numerically.

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