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Abstract

This paper proposes a new algorithm to remove Gaussian noise. The new method introduces two filters. The first one is linear filter that modifies the noisy and noisy-free pixels uniformly and regardless of the pixel location. The second one is non-linear filter, a direction-based filter used to re-estimate the first output, particularly the values of the edge pixels. Simulation results indicate that the proposed method restores images corrupted at different degrees of Gaussian noise and demonstrates the best performance compared to other methods, particularly for highly corrupted images in terms of PSNR or visual quality.

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Index Terms

Computer Science

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Keywords

De-noising Gaussian Noise Triangular Filter Non-linear Filter