

Two-Phase Methods for Deblurring Images Corrupted by Impulse Plus Gaussian Noise

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Abstract:

We consider the problem of restoring blurred images which are corrupted by impulse noise and possibly Gaussian noise. We solve the problem in two phases. In the first phase, median-type filters are applied to locate the pixels which are likely to be corrupted by impulse noise. In the second phase, we solve an inverse problem from incomplete data by a variational method. Our scheme can restore blurred images corrupted by 90% salt-and-pepper noise or 50% random-valued impulse noise.