

Improved edge refinement filter with entropy feedback measurement for retrieving region of interest and blind image deconvolution

Abstract

Typical press force for hydraulic press machine for most universities are around 10 to 30 ton. This study proposes an improved edge refinement filter with entropy feedback measurement for locating an optimal region of interest (ROI) in blurry images. This technique is inspired by He et al.'s algorithm and enhanced by introducing a suitable filter to obtain smooth unwanted pixels whilst retaining important and significant edges. This approach led to an accurate retrieval of ROI and a considerably precise image restoration within a blind deconvolution framework. Results show that the proposed method is more competitive than existing techniques and achieves better performance in terms of peak signal-to-noise ratio, kernel similarity index and error ratio

Keywords

Image restoration, Image edge detection, Deconvolution, Filtering, Image enhancement