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Color Image Enhancement Using Multiscale Retinex and Image Fusion Techniques

Authors : Chang-Hsing Lee, Cheng-Chang Lien, Chin-Chuan Han

Abstract : In this paper, an edge-strength guided multiscale retinex (EGMSR) approach will be proposed for color image contrast enhancement. In EGMSR, the pixel-dependent weight associated with each pixel in the single scale retinex output image is computed according to the edge strength around this pixel in order to prevent from over-enhancing the noises contained in the smooth dark/bright regions. Further, by fusing together the enhanced results of EGMSR and adaptive multiscale retinex (AMSR), we can get a natural fused image having high contrast and proper tonal rendition. Experimental results on several low-contrast images have shown that our proposed approach can produce natural and appealing enhanced images.

Keywords : image enhancement, multiscale retinex, image fusion, EGMSR
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