Superresolution and blind deconvolution of video

In many real applications traditional superresolution methods fail to provide high-resolution images due to objectionable blur and inaccurate registration of input low-resolution images. In this paper, we present a method of superresolution and blind deconvolution of video sequences and address problems of misregistration, local motion and change of illumination. The method processes the video by applying temporal windows, masking out regions of misregistration, and minimizing a regularized energy function with respect to the high-resolution frame and blurs, where regularization is carried out in both the image and blur domains. Experiments on real video sequences illustrate robustness of the method.

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