

A new method for blind image deblurring is proposed that relies on a smoothed-NUV (normal with unknown variance) prior for images, which promotes piecewise smooth images with crisp edges. The proposed method can use multiple blurred versions of the same image. The variational representation of the prior allows the joint estimation of the image and the blurring kernel(s) to be decomposed into descent steps in reweighted least-squares problems and nonlinear scalar updates of the individual variances of the prior. Specifically, we propose an iteratively reweighted coordinate descent algorithm that has no parameters. Simulation results demonstrate that the proposed approach compares favourably to state-of-the-art methods.