

Disparity-Aware Domain Adaptation in Stereo Image Restoration

— Supplementary File

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This supplementary file mainly indicates more experimental results of the proposed stereo image restoration method and the compared state-of-the-art methods. We will demonstrate the visual comparisons on super-resolution, deblurring, and denoising tasks respectively.

1. Super Resolution

The visual comparison between our approach and other state-of-the-art super-resolution methods, including single image super-resolution SISR (VDSR [4], MemNet [6], EDSR [5], IDN [1]), stereo image SR (StereoSR [2], PASSRnet [8]), RefSR (SRNTT [9]), and video SR methods (SPMC [7], DUF [3]) works, are shown in Figure 3, Figure 2, Figure 1, Figure 4, Figure 6, and Figure 5. The proposed approach synthesizes finer texture and restores accurate details without distortions, compared to these SR works

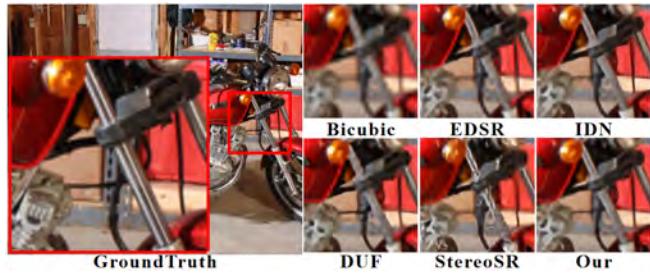


Figure 1: The $\times 4$ SR results on image "Motorcycle" from Middlebury.

2. Deblurring

Figure 7 and Figure 9 denotes the deblurring comparisons under different kernels on Middlebury.

^{*}This work was supported by NSFC (Grant No.: 61772137).

3. Denoising

The denoising results are depicted in Figure 7 and Figure 8.

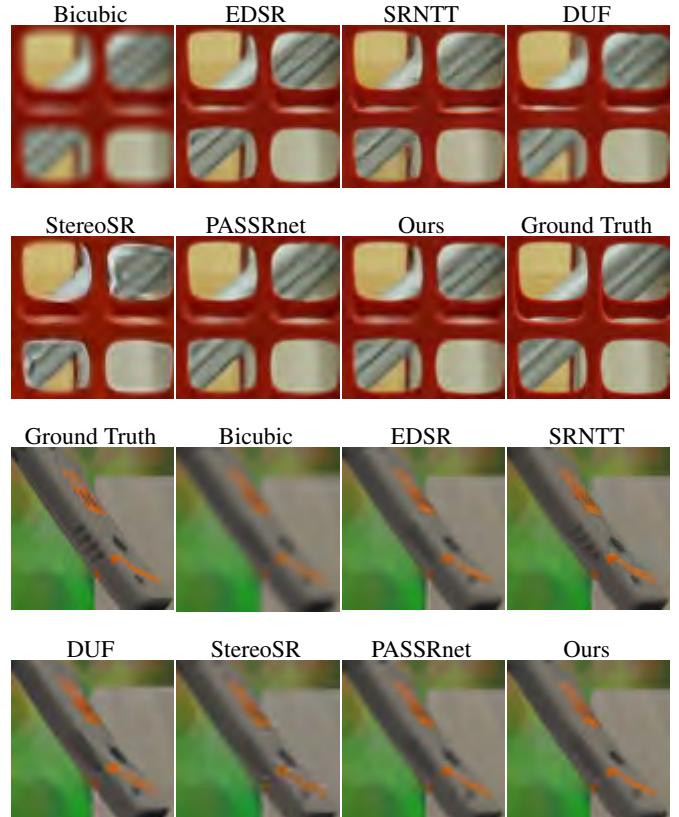


Figure 2: The $\times 4$ SR results on image "Sword" from Middlebury and image "B0008" from FlyingThings3D.



Figure 3: The $\times 3$ SR results on image "000003_10" from KITTI 2015. PSNR and SSIM values are shown under each result.

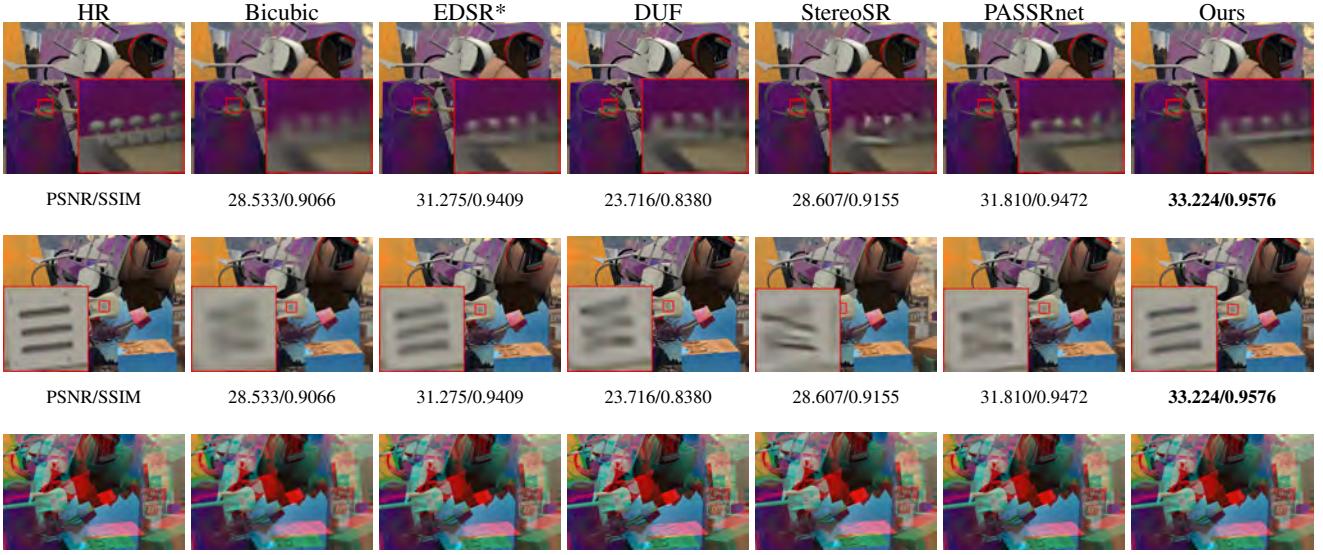


Figure 4: Visual Results on FlyingThings3D dataset. (a) The super-resolved left images "C0010.png", (b) Anaglyph images "C0007.png", viewed with red-green glasses. (c) The $\times 4$ SR results on left image "C0007.png" from FlyingThings3D dataset.

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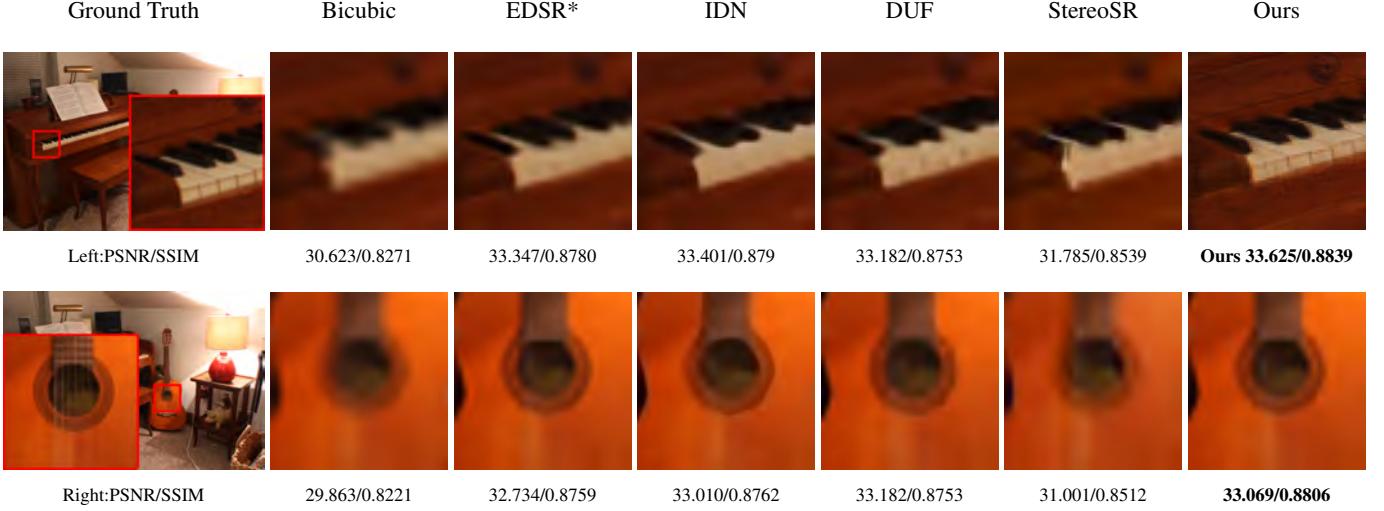


Figure 5: The $\times 4$ left and right SR results on image "Piano" from Middlebury. The results at the upper row are the super-resolved left images and the results at the lower row are the right images.

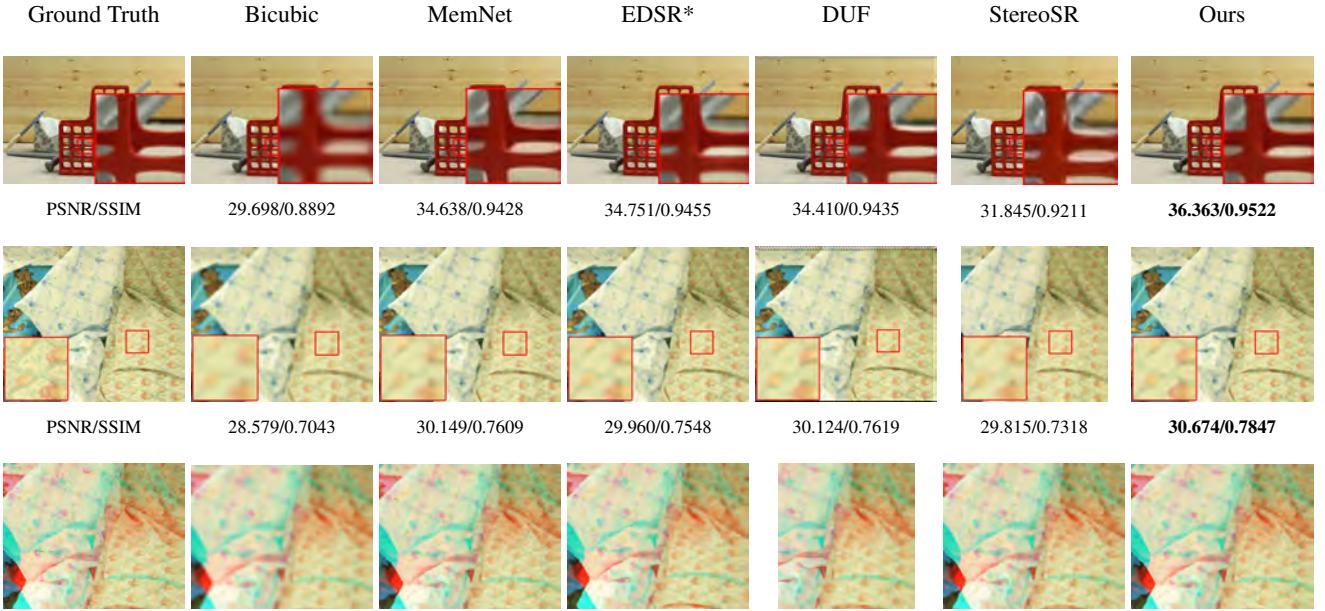


Figure 6: The $\times 4$ SR results on image "Cloth" and "Sword" from Middlebury. PSNR and SSIM values are shown under each result. (a), (b) The super-resolved left images of different SR methods, (c) Anaglyph images of the super-resolved stereo pairs, the images should be viewed with red-green glasses.

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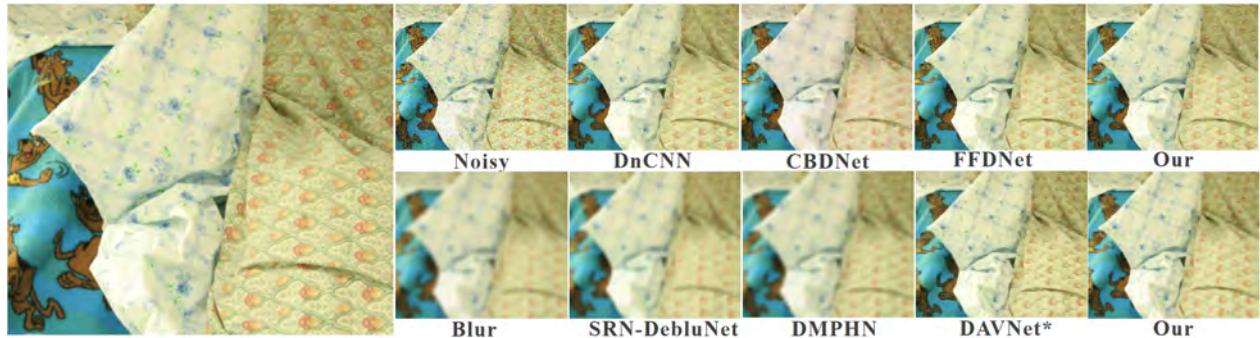


Figure 7: The denoising and deblurring results on images "Cloth.png" from Middlebury. The noise level is 30 and the blur kernel width $\sigma = 3.6$.

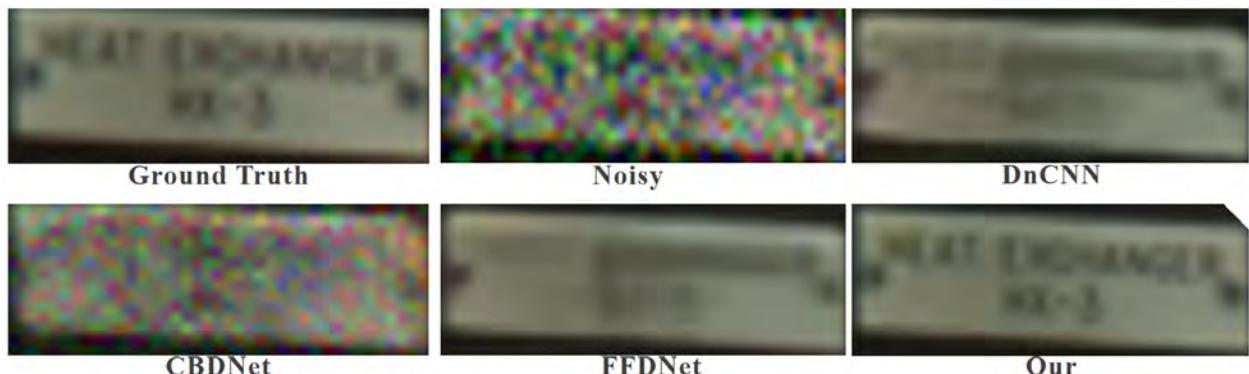


Figure 8: The denoising results on images "Pipes.png" from Middlebury with noise level 30.

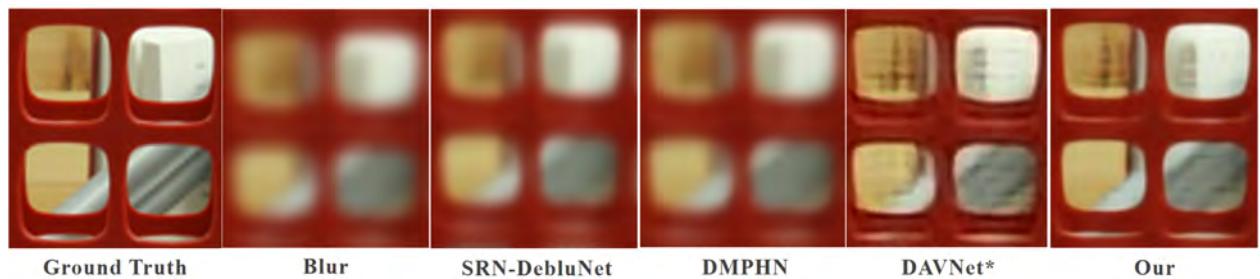


Figure 9: The deblurring results on images "Swords.png" from Middlebury with kernel width $\sigma = 3.6$.