MERTNET: MULTI-SCALE EFFICIENT RESIDUAL NETWORK ENCODER-TRANSFORMER DECODER NETWORK

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A. VISUAL IMAGES

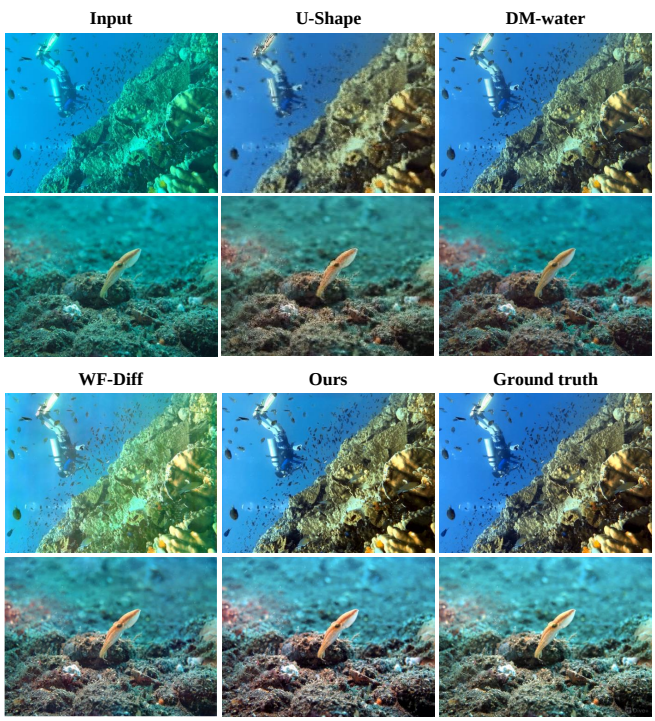

Fig. 1. More visual comparison on the UIEB dataset.

Due to the limited length of the main paper, we provide additional visual comparison images here. As shown in Fig.1, we compare various state-of-the-art (SOTA) UIE methods ([2, 3, 4, 5, 1]) on the UIEB dataset, while Fig.2 presents comparisons of multiple traditional ([6, 7, 8, 9]) and SOTA UIE methods on the LSUI dataset. Overall, as observed in Fig.1and 2, our method, MERT-Net, demonstrates strong competitiveness in both detail preservation and color enhancement.

B. DATASET TEST

We additionally conducted tests on the LSUI[4] split dataset provided by the WF-Diff[1] authors. The training set consists of 3,879 pairs of underwater images, while the remaining 400 pairs form the test set. As shown in Table 1, the PSNR and SSIM obtained from training and testing on this dataset are significantly higher than those from the cropped dataset provided by the U-shape authors. This experiment demonstrates that the outstanding performance of our method, MERT-Net, is by no means a coincidence. Additionally, we provide visual results from the LSUI test dataset offered by the WF-Diff authors. As shown in Fig.3, the images generated by MERT-Net exhibit exceptional performance in both detail preservation and color correction.

Table 1. PSNR and SSIM comparisons on the LSUI datasets.

Method	Dataset	PSNR↑	SSIM↑
ours-256-size	U-shape[4]	30.57	0.9337
ours-256-size	U-shape[4]	28.69	0.8920
ours-256-size	WF-Diff[1]	31.16	0.9423
ours-256-size	WF-Diff[1]	29.12	0.9080

Thanks to XYZ agency for funding.

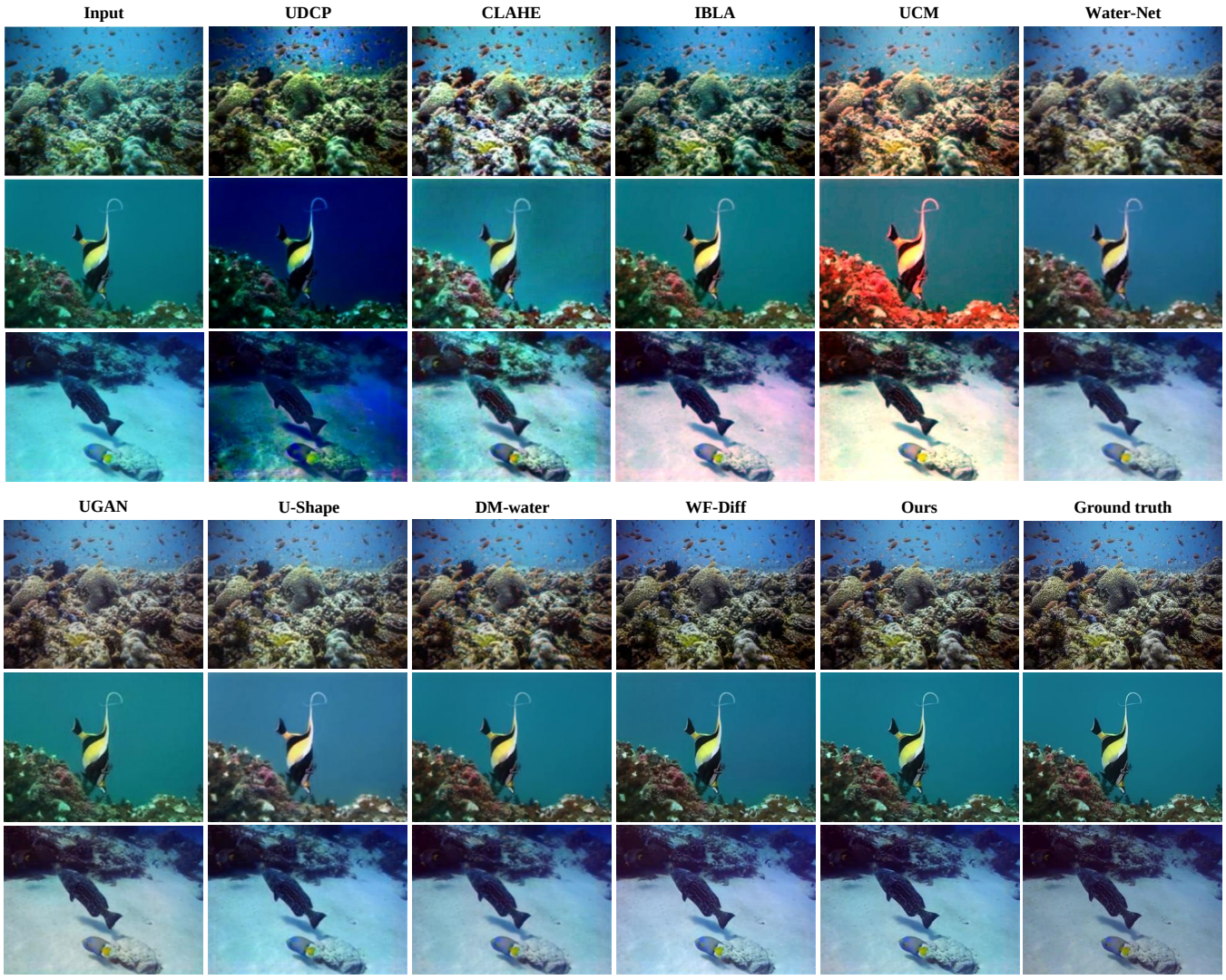

Fig. 2. More visual comparison on the LSUI dataset.

C. REFERENCES

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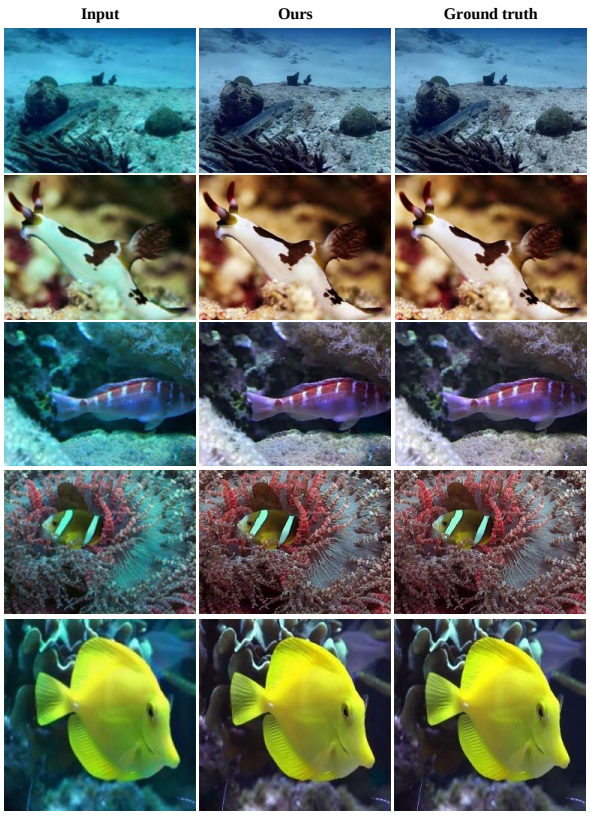

Fig. 3. More visual image for the LSUI test dataset split by WF-Diff[1].

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