

# Errata for JPEG Artifacts Reduction via Deep Convolutional Sparse Coding

Xueyang Fu  
February 14, 2020

We recently found an implementation bug in calculating the evaluation metrics, which led to inappropriate hyper-parameter settings and wrong results in previous experiments. Fortunately, this bug does not affect any of the theory or network architecture in our paper [2]. For a fairer comparison with state-of-the-art methods, we adjusted the network capacity and retrained the model. Our single trained model can now handle four JPEG compression factors, *i.e.*, 10, 20, 30 and 40. We use the evaluation code provided by ARCNN [1], and list the corrections and results as follows:

Table 1. PSNR | SSIM | PSNR-B results.

Dataset	Quality	Original model			Updated model		
Classic5	10	29.2488	0.8200	28.8714	29.6184	0.8270	29.2994
	20	31.4053	0.8763	30.9870	31.8113	0.8804	31.3441
	30	32.6071	0.8999	32.0826	33.0639	0.9030	32.4918
	40	N/A			33.8689	0.9153	33.2972
LIVE1	10	29.1667	0.8287	28.7310	29.3405	0.8317	29.0072
	20	31.4548	0.8934	30.8743	31.6979	0.8960	31.1806
	30	32.7451	0.9198	32.0232	33.0718	0.9218	32.4252
	40	N/A			34.0233	0.9354	33.3584
BSD500	10	28.8058	0.8026	28.3022	28.9499	0.8050	28.5500
	20	30.9336	0.8739	30.1760	31.1287	0.8758	30.4148
	30	32.1640	0.9044	31.2077	32.4226	0.9057	31.5230
	40	N/A			33.3044	0.9216	32.3101

We apologize for the confusion to readers.

## References

- [1] Chao Dong, Yubin Deng, Chen Change Loy, and Xiaoou Tang. Compression artifacts reduction by a deep convolutional network. In *ICCV*, 2015.
- [2] Xueyang Fu, Zheng-Jun Zha, Feng Wu, Xinghao Ding, and John Paisley. JPEG artifacts reduction via deep convolutional sparse coding. In *ICCV*, 2019.