

Appendices

A. Run time experiments

We document the run time of our proposed algorithm and compare it to that of our baselines, using the implementations provided by the authors (*c.f.* footnote 1 in the main paper). The timings are for images of size 512×512 pixels, and running all iterative methods for 500 iterations. We average over 15 runs on a single Nvidia GeForce GTX 1080Ti. The results are shown in Tab. 2. Naturally, one-shot feed-forward methods are a lot faster to compute, at the cost of a bit lower image quality. Among the iterative methods, the differences are practically negligible. Ours is on par with the two competitors, adding $<10\%$ of computational overhead over Gatys’ original method; while being slightly faster than MM, due to a more efficient implementation.

AdaIN*	Gatys	MM	OST*	WCT*	Ours
0.58s	30.51s	35.49s	2.40s	1.93s	33.59s

Table 2: Run time of different NST methods, in seconds.

B. Influence of the learning rate

We further investigate the influence of varying learning rates. As can be seen from Fig. 6, increasing the learning rate has a similar effect as reducing the weight α of the content loss in (1). This is expected, as the style loss can be decreased more rapidly when disregarding the “constraint” to preserve the content, encoded in the content loss. With too high learning rate, only barely recognisable traces of the image content are preserved, as can be seen towards the right side of Fig. 6. Also, training becomes increasingly unstable, as often for deep networks one must balance learning speed against learning success.

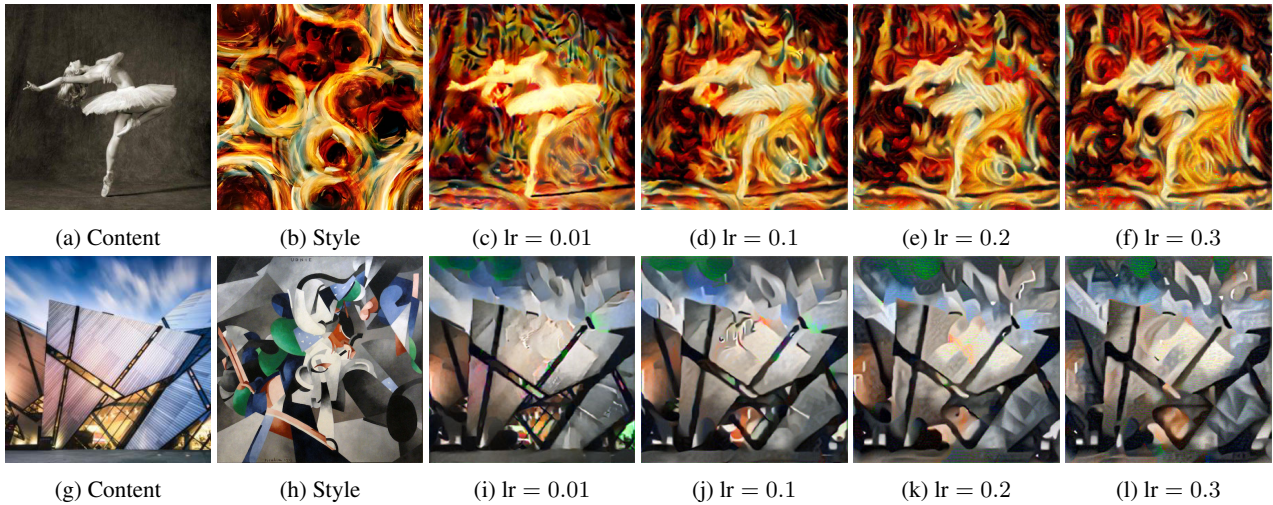


Figure 6: Impact of learning rate on the output of our CMD method.

C. Additional qualitative results



Figure 7: Additional qualitative style transfer results of our CMD algorithm. All examples shown also formed part of the user study. Best viewed on screen. Please zoom in to appreciate style details.

D. Additional qualitative comparison

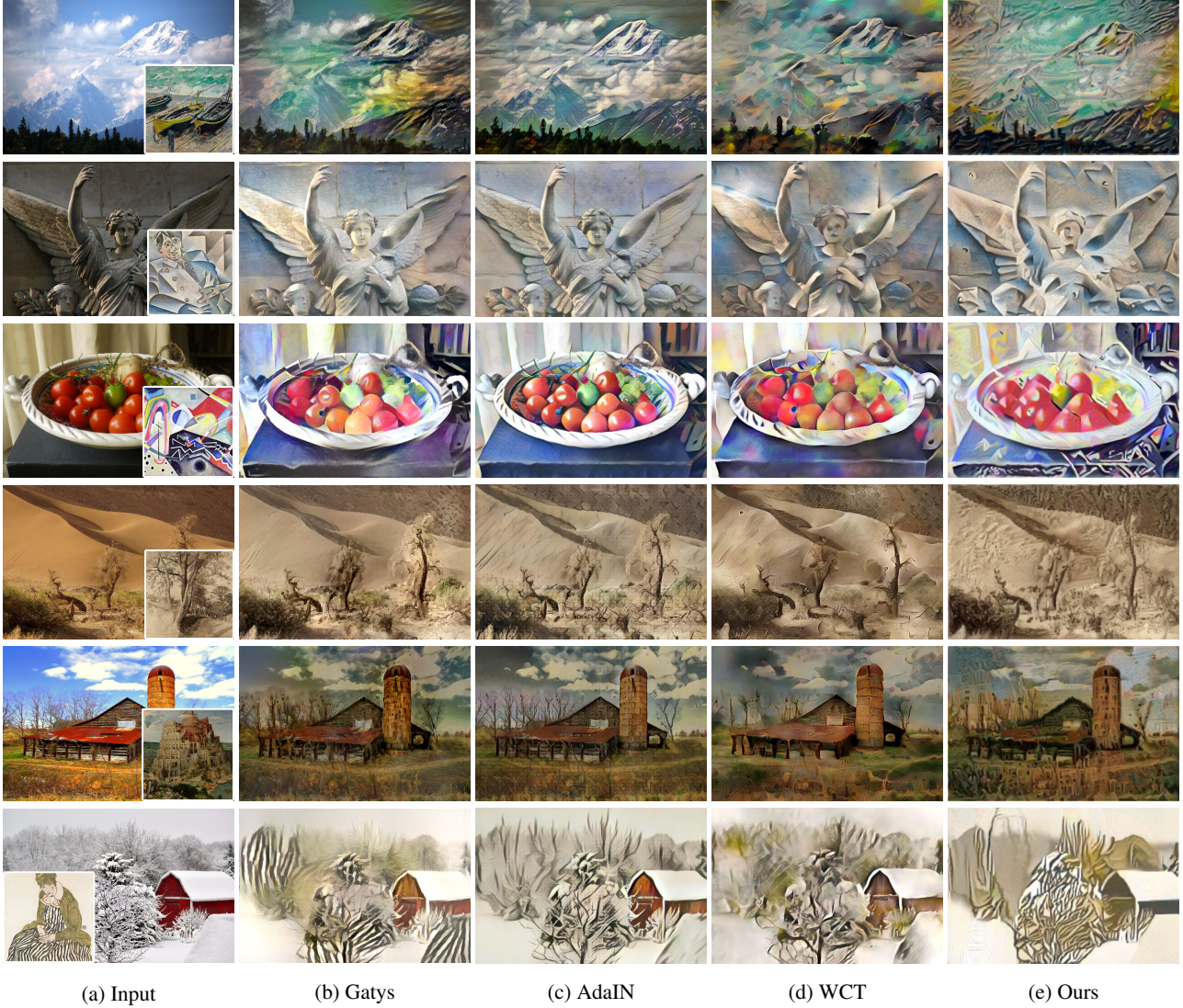


Figure 8: Style transfer results with our algorithm, and with one competing method per category (MM: AdaIn [15]; MMD: Gatys [9]; OT: WCT [24]). The displayed results for those methods were made available in [16]. Best viewed on screen. Please zoom in to appreciate style details.