LEARNING BASED SINGLE IMAGE BLUR DETECTION AND SEGMENTATION

Kuldeep Purohit, Anshul B. Shah, and A. N. Rajagopalan

IPCV Lab, Department of Electrical Engineering Indian Institute of Technology Madras, India kuldeeppurohit3@gmail.com, ee13b068@ee.iitm.ac.in, raju@ee.iitm.ac.in

In this document, we present additional results for figures 2,3 and 4 of the main paper.

S1. REFERENCES

- Shaojie Zhuo and Terence Sim, "Defocus map estimation from a single image," *Pattern Recognition*, vol. 44, no. 9, pp. 1852– 1858, 2011.
- [2] Jianping Shi, Li Xu, and Jiaya Jia, "Discriminative blur detection features," in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2014, pp. 2965–2972.
- [3] Jinsun Park, Yu-Wing Tai, Donghyeon Cho, and In So Kweon, "A unified approach of multi-scale deep and hand-crafted features for defocus estimation," in *Proc. of Computer Vision and Pattern Recognition (CVPR)*, 2017, vol. 1.
- [4] Ayan Chakrabarti, Todd Zickler, and William T Freeman, "Analyzing spatially-varying blur," in *Computer Vision and Pattern Recognition (CVPR), 2010 IEEE Conference on*. IEEE, 2010, pp. 2512–2519.
- [5] Renting Liu, Zhaorong Li, and Jiaya Jia, "Image partial blur detection and classification," in *Computer Vision and Pattern Recognition*, 2008. CVPR 2008. IEEE Conference on. IEEE, 2008, pp. 1–8.
- [6] Jianping Shi, Li Xu, and Jiaya Jia, "Just noticeable defocus blur detection and estimation," in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2015, pp. 657–665.
- [7] Bolan Su, Shijian Lu, and Chew Lim Tan, "Blurred image region detection and classification," in *Proceedings of the 19th ACM international conference on Multimedia*. ACM, 2011, pp. 1397–1400.
- [8] Te-Li Wang, Kuan-Yun Lee, and Yu-Chiang Frank Wang, "Partial image blur detection and segmentation from a single snapshot," in Acoustics, Speech and Signal Processing (ICASSP), 2017 IEEE International Conference on. IEEE, 2017, pp. 1907– 1911.



Fig. S1. Qualitative comparison of various blur detection algorithms on partially motion blurred scenes.



Fig. S2. Our blur-based segmentation result and its comparison with ground truth on partially defocussed images.



Fig. S3. Qualitative comparison of various blur detection algorithms on partially motion blurred scenes.