

# ICCV 2011

# Supplementary material

Paper ID #953

**Figure #1**

Figure #1/High resolution Color



Figure #1/TOF depth map [1]



Figure #1/Diebel and Thrun's result [2]



Figure #1/Yang et al's result [3]



Figure #1/He et al's result [4]



Figure #1/Our result



Table #1 Quantitative comparisons using  
Middlebury Stereo dataset.

All results are generated with fully automatic  
method

# Table #1/High resolution Color



# Table #1/8x/Low res



# Table #1/8x/Diebel and Thrun's result [2]



Table #1/8x/Yang et al's result [3]

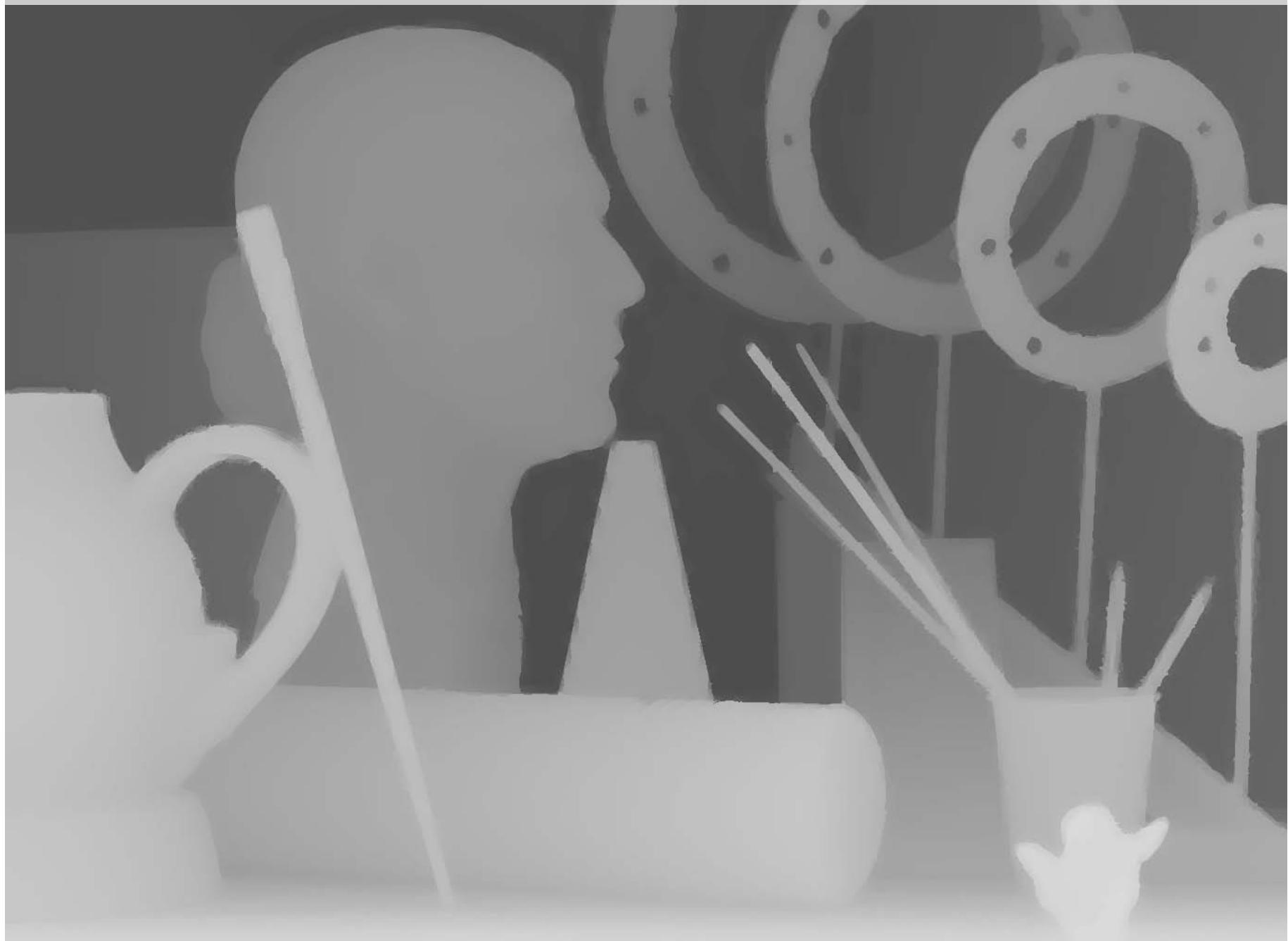
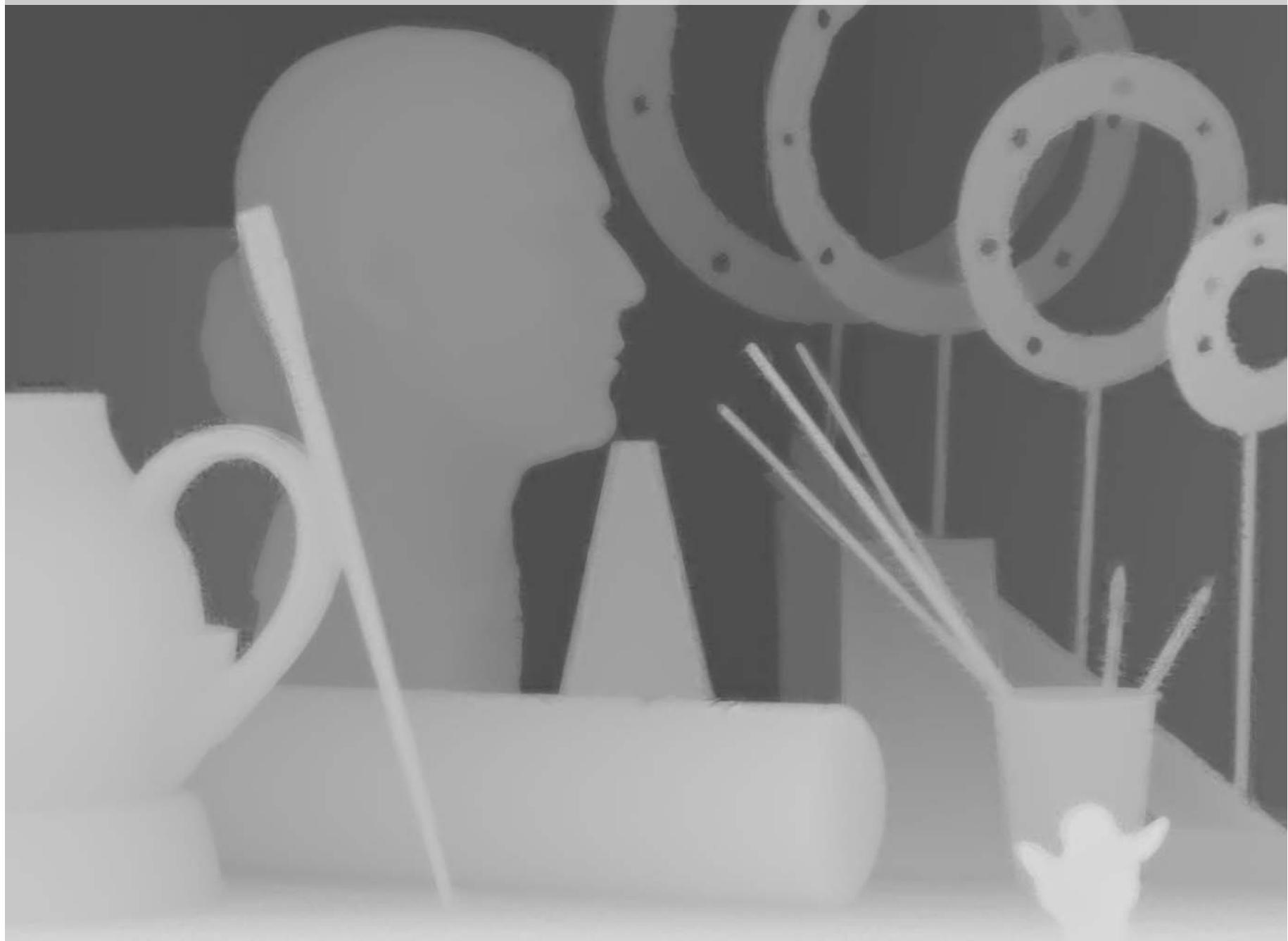
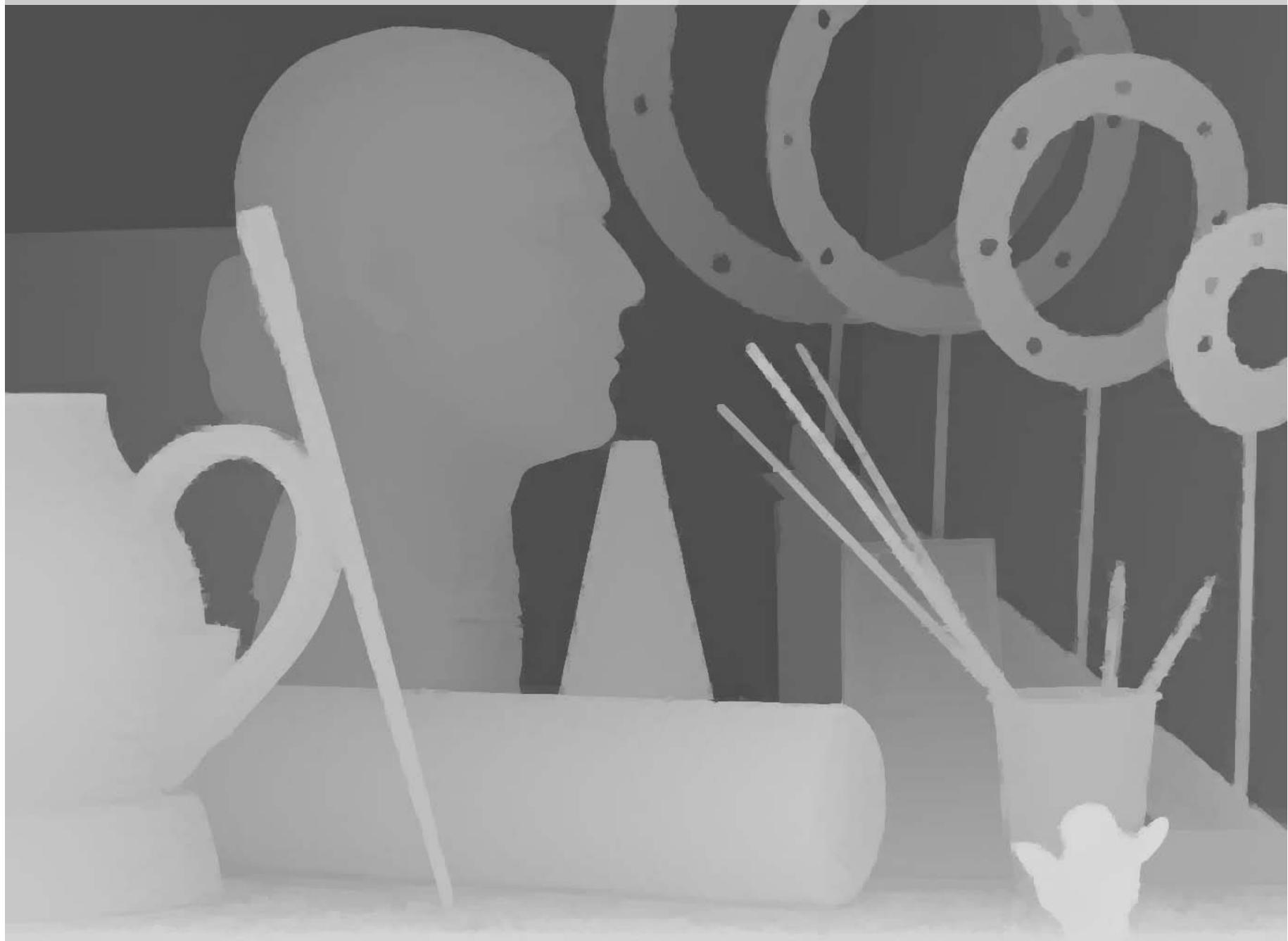


Table #1/8x/He et al's result [4]



# Table #1/8x/Our result



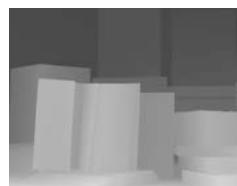
# Table #1/8x/Ground Truth



# Figure #1/High resolution Color



# Table #1/8x/Low res



# Table #1/8x/Diebel and Thrun's result [2]

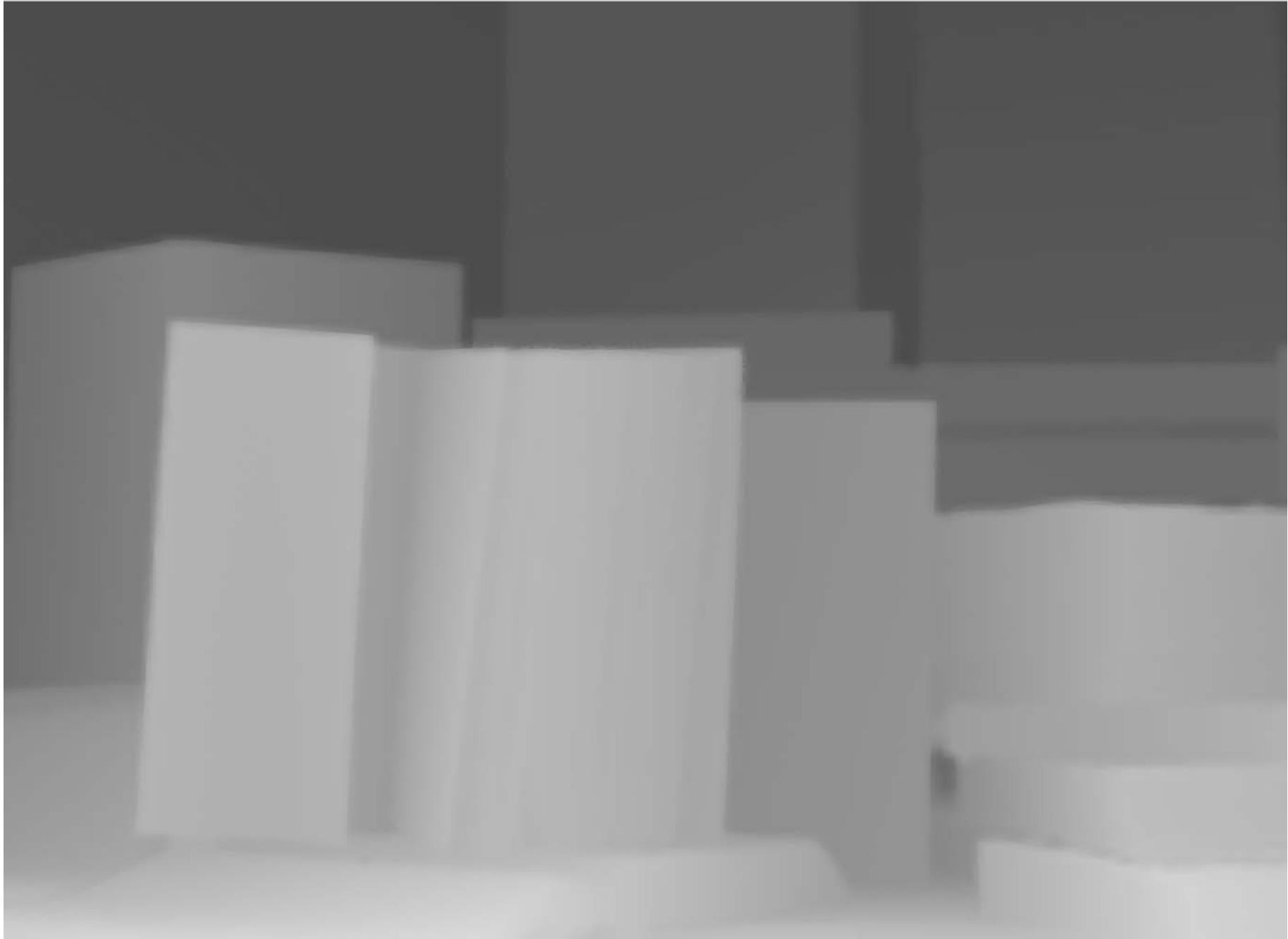
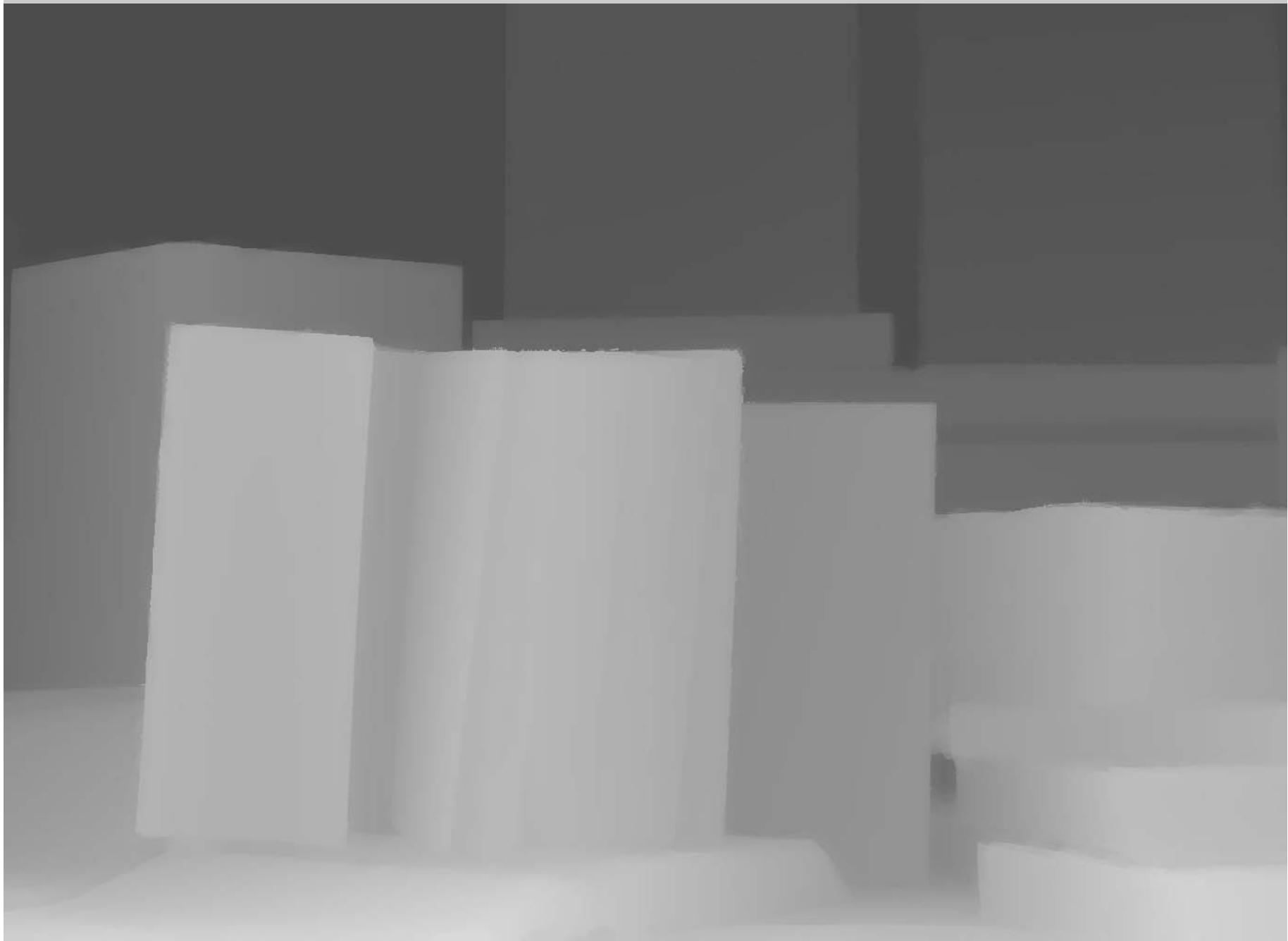
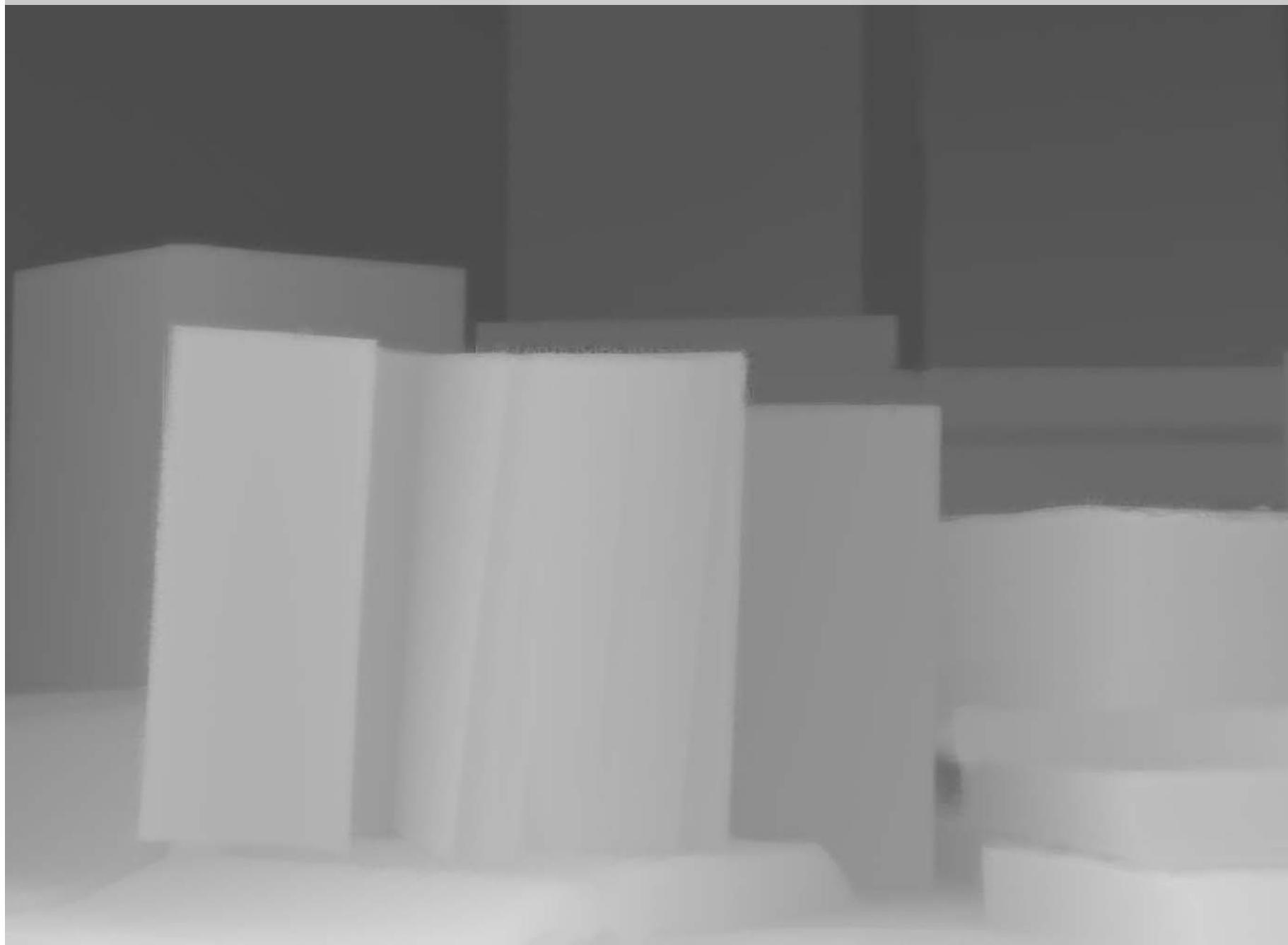


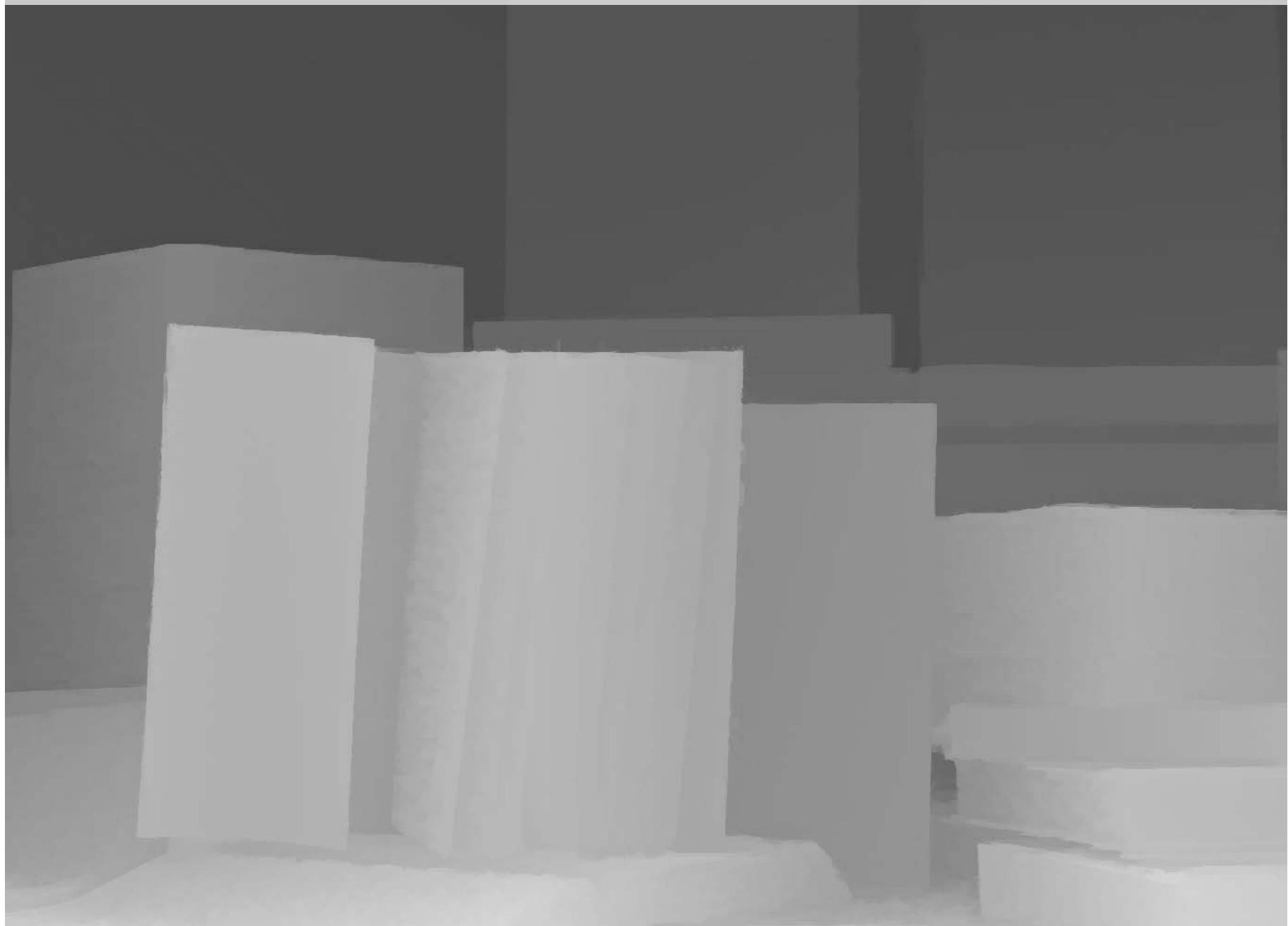
Table #1/8x/Yang et al's result [3]



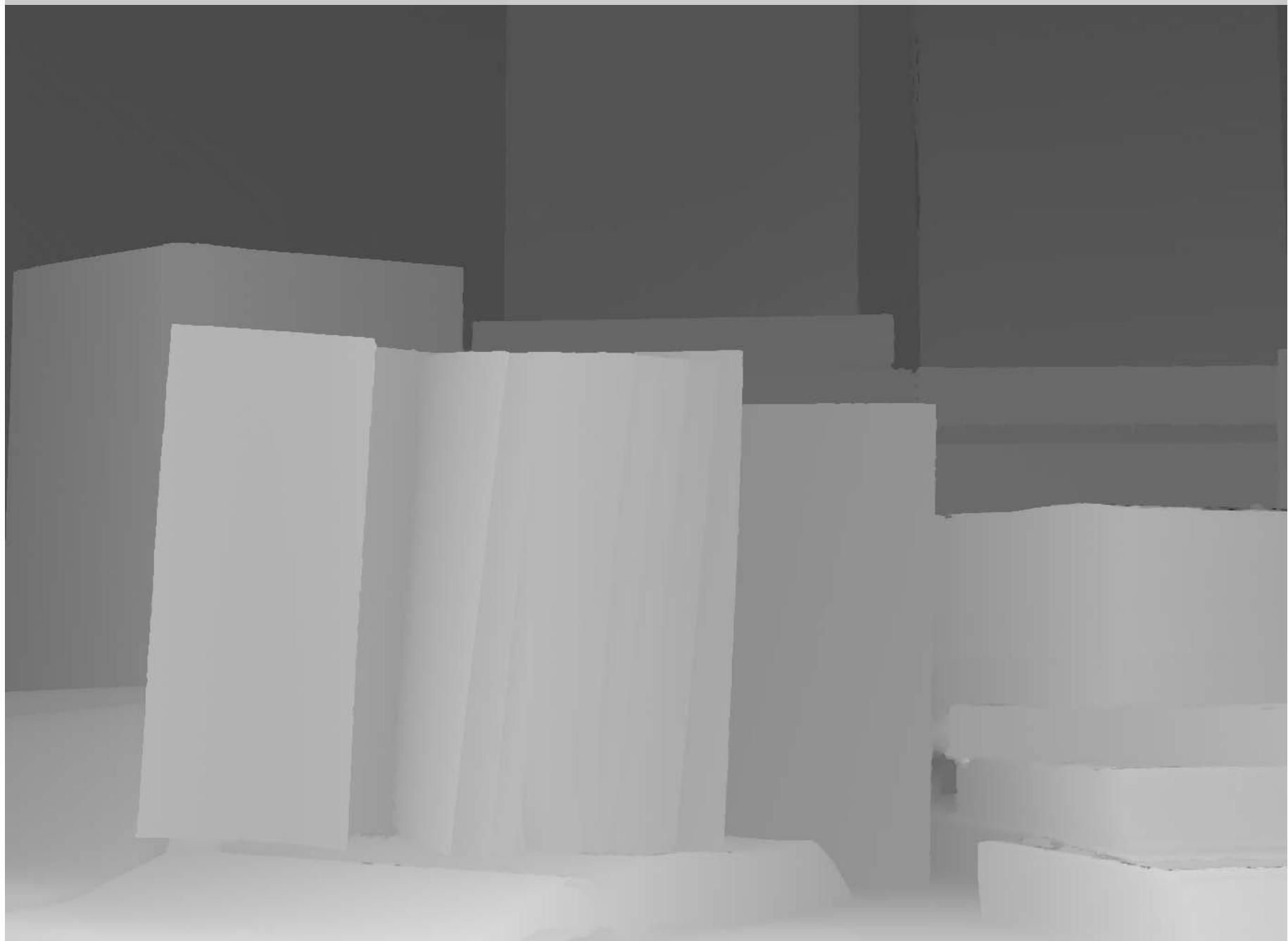
# Table #1/8x/He et al's result [4]



# Table #1/8x/Our result



# Table #1/8x/Ground Truth



# Table #1/High resolution Color



# Table #1/8x/Low res



# Table #1/8x/Diebel and Thrun's result [2]



Table #1/8x/Yang et al's result [3]



# Table #1/8x/He et al's result [4]



Table #1/8x/Our result



# Table #1/8x/Ground Truth



## Table #2 Results for noisy low resolution depthmap

All results are generated with fully automatic method

# Table #2/High resolution Color



# Table #2/8x/Low res



Table #2/8x/Diebel and Thrun's result [2]



Table #2/8x/Yang et al's result [3]



Table #2/8x/He et al's result [4]



Table #2/8x/Chan et al's result [5]



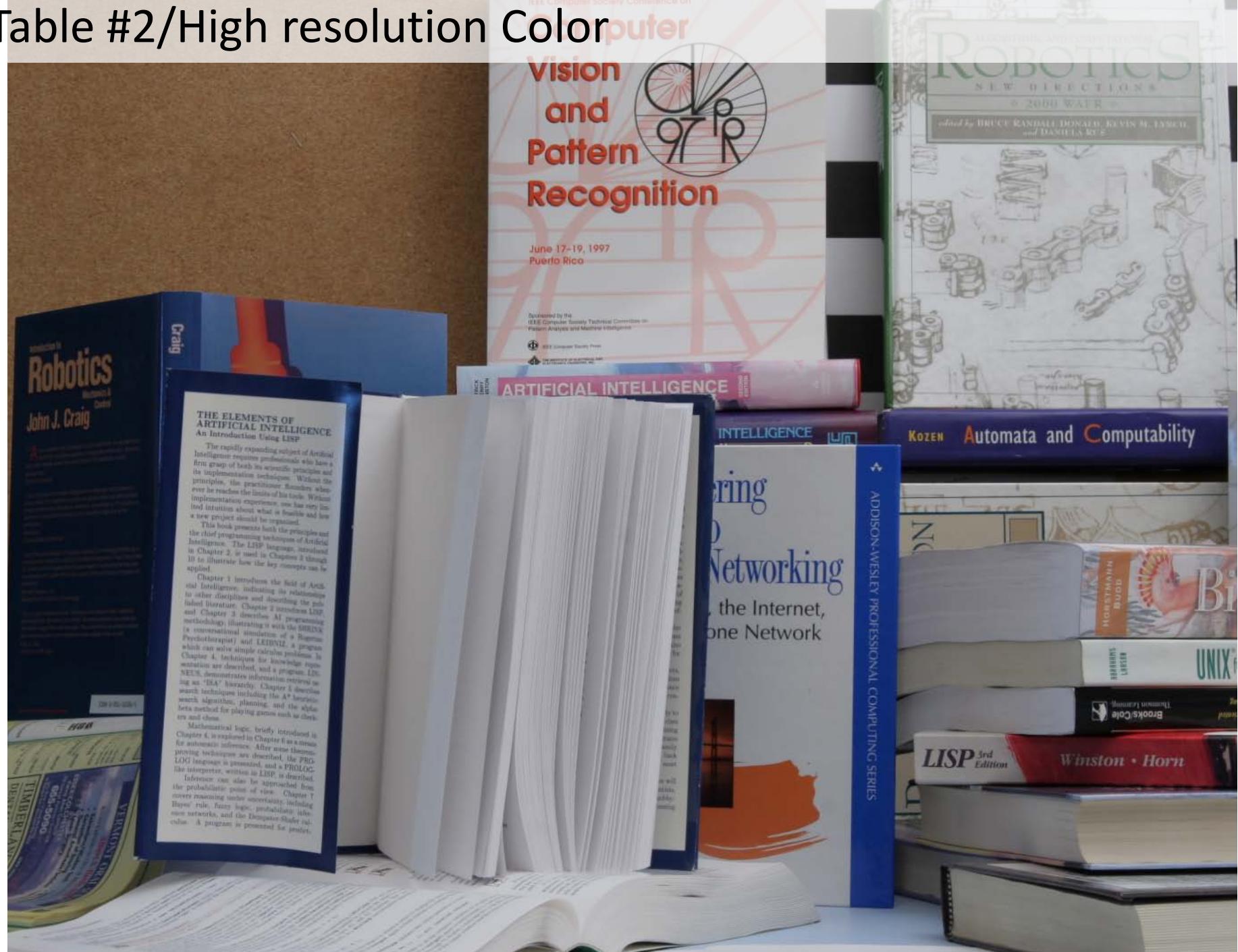
## Table #2/8x/Our result



# Table #2/8x/Ground Truth



# Table #2/High resolution Color



# Table #2/8x/Low res

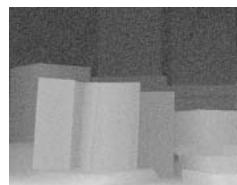
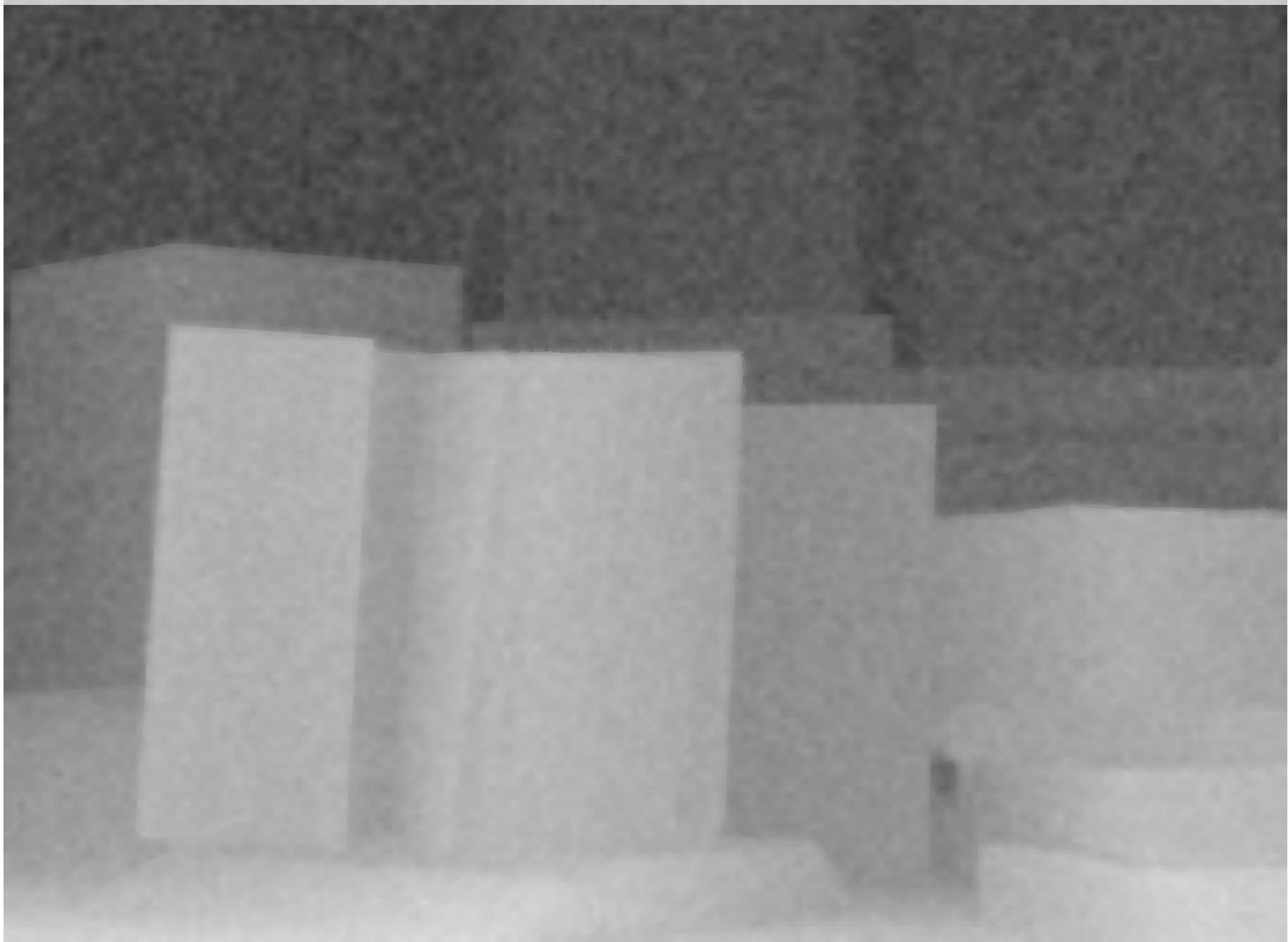
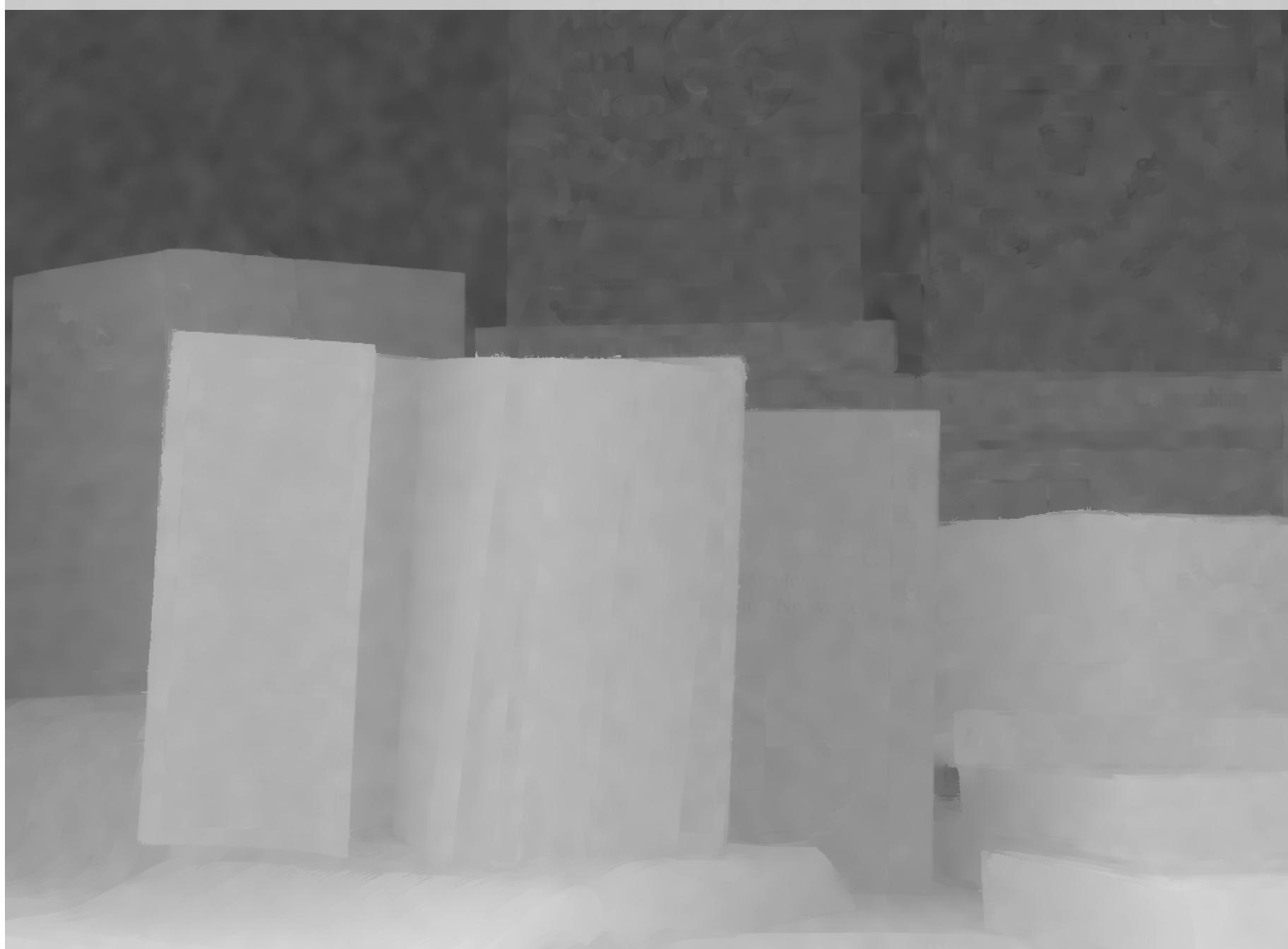


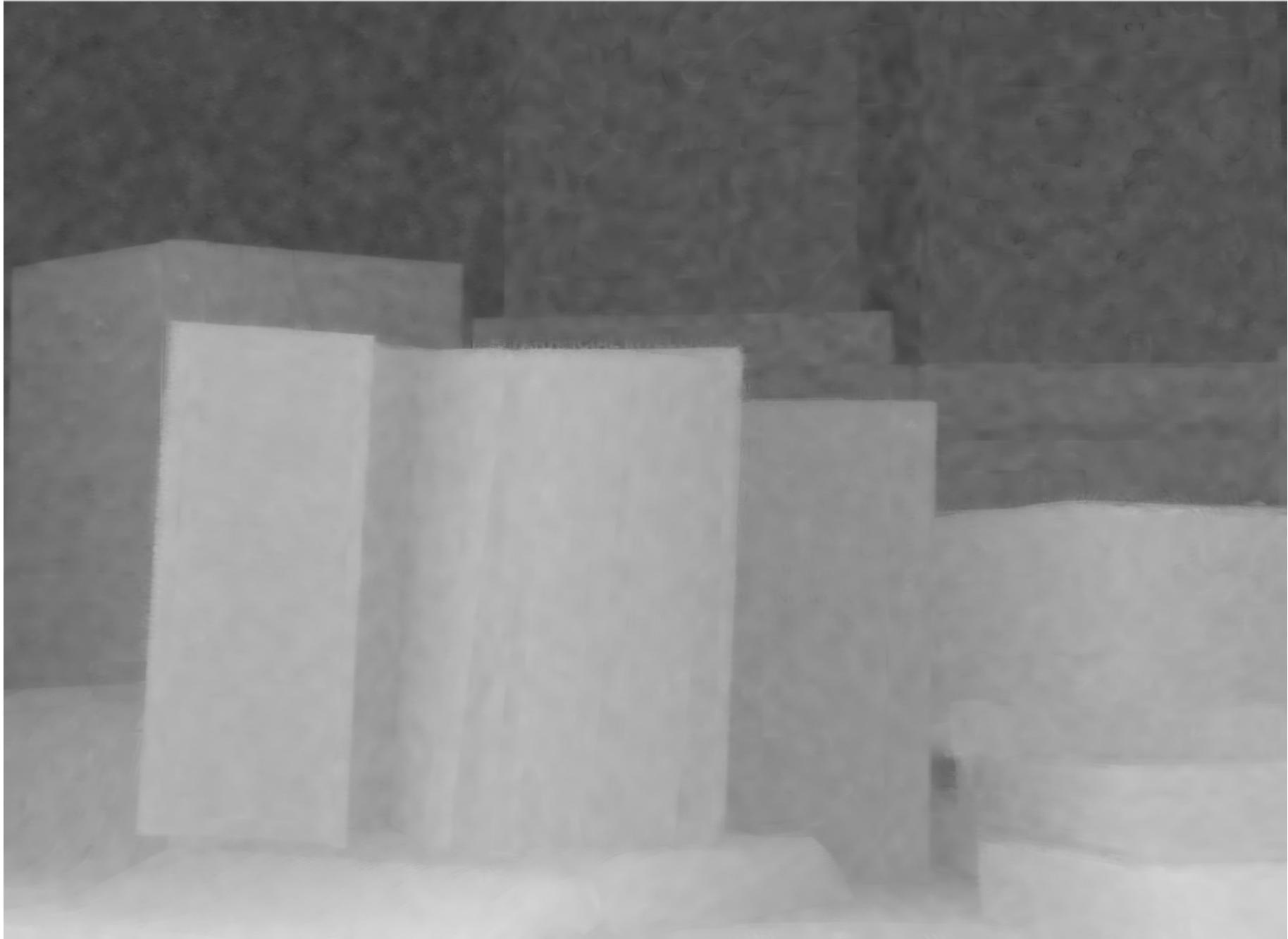
Table #2/8x/Diebel and Thrun's result [2]



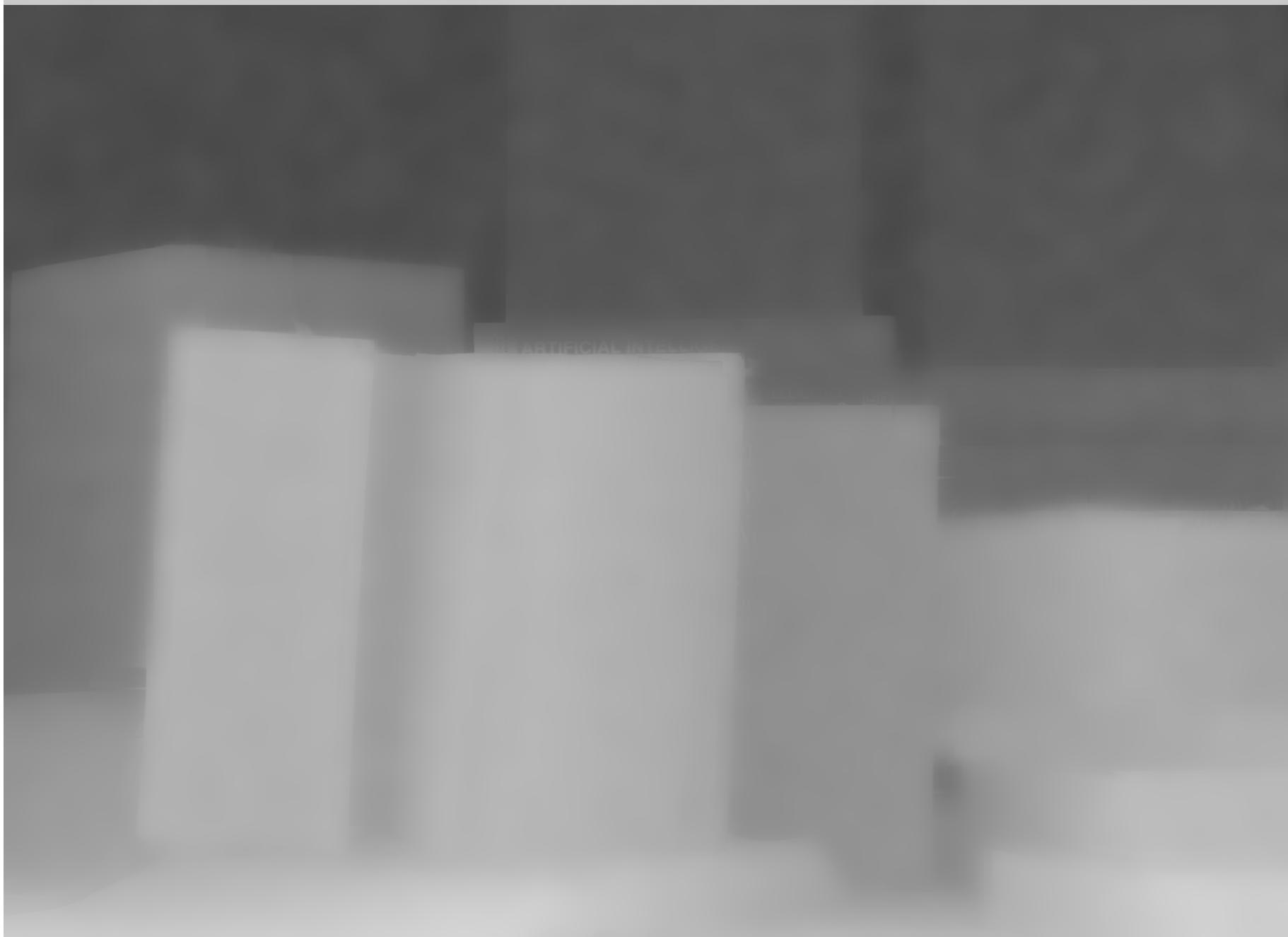
# Table #2/8x/Yang et al's result [3]



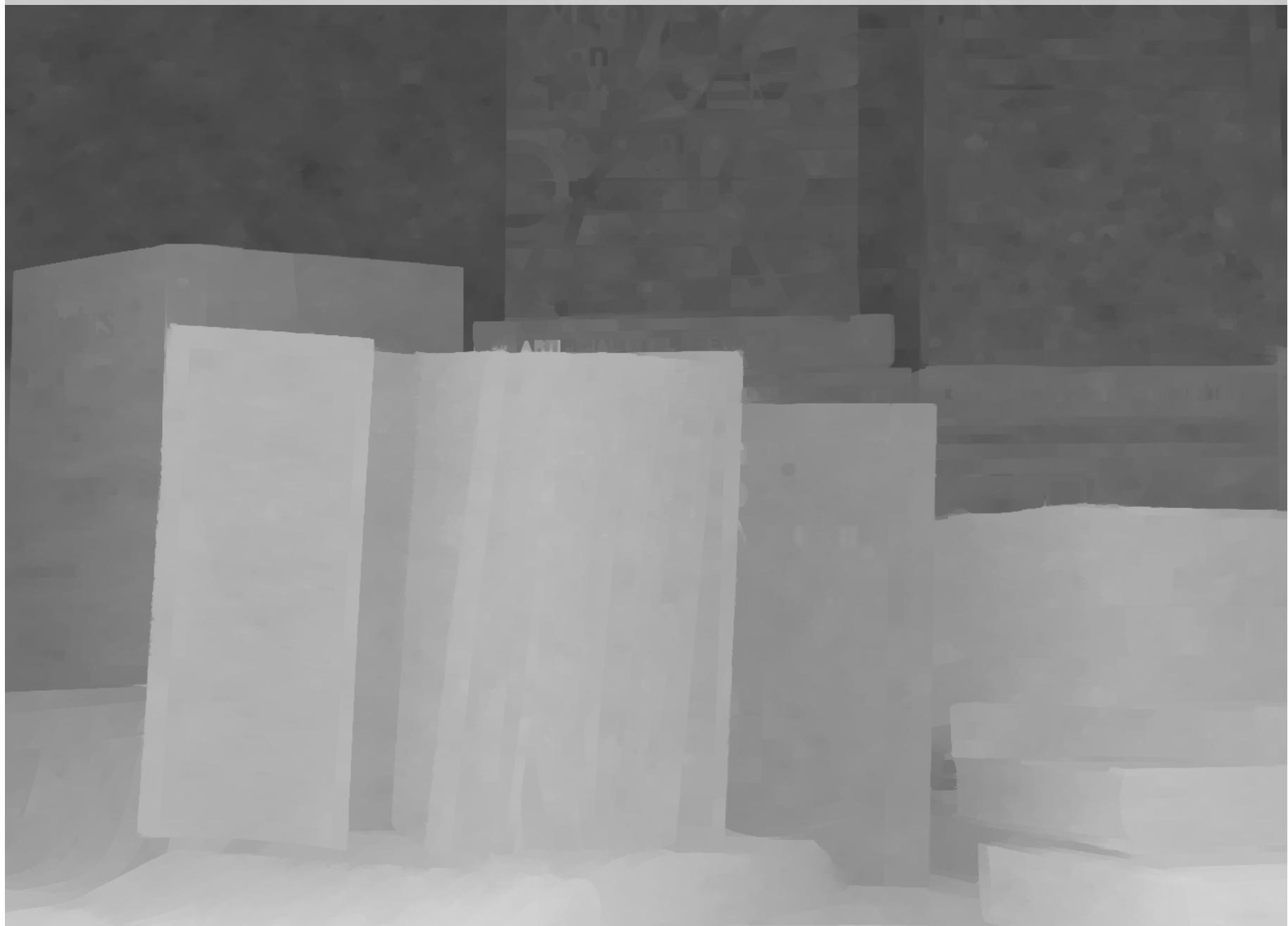
# Table #2/8x/He et al's result [4]



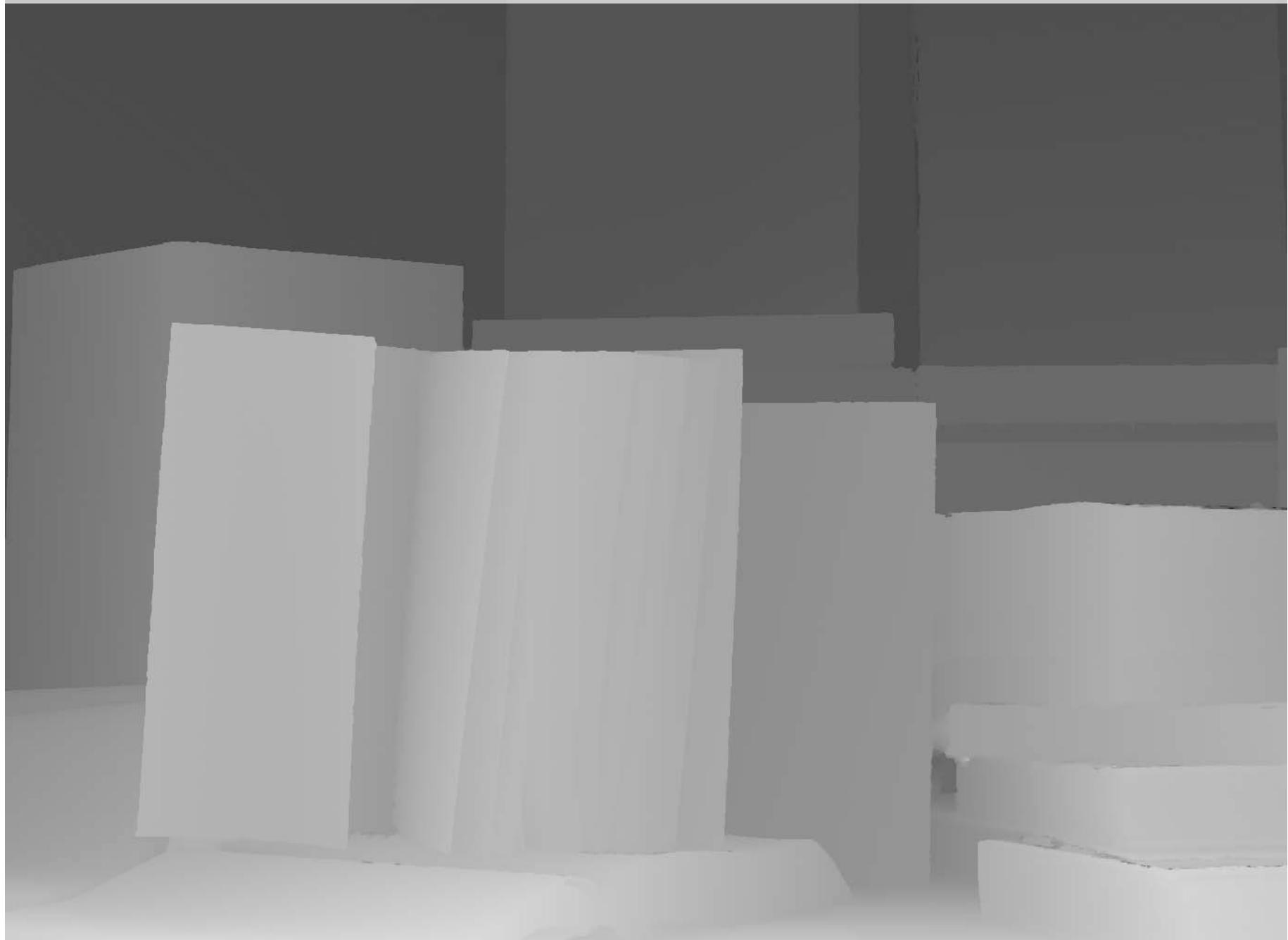
## Table #2/8x/Chan et al's result [5]



## Table #2/8x/Our result



# Table #2/8x/Ground Truth



# Table #2/High resolution Color



# Table #2/8x/Low res



## Table #2/8x/Diebel and Thrun's result [2]



Table #2/8x/Yang et al's result [3]



# Table #2/8x/He et al's result [4]



## Table #2/8x/Chan et al's result [5]



Table #2/8x/Our result



Table #2/8x/Ground Truth



## Figure #8 Real world examples

User corrections are included in our results. The among of user inputs can be found in the paper.

Figure #8/High resolution Color



Figure #8/TOF depth map [1]



Figure #8/Diebel and Thrun's result [2]



Figure #8/Yang et al's result [3]



Figure #8/He et al's result [4]



Figure #8/Our result



Figure #8/High resolution Color



Figure #8/TOF depth map [1]

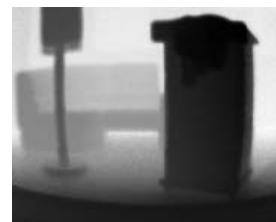


Figure #8/Diebel and Thrun's result [2]

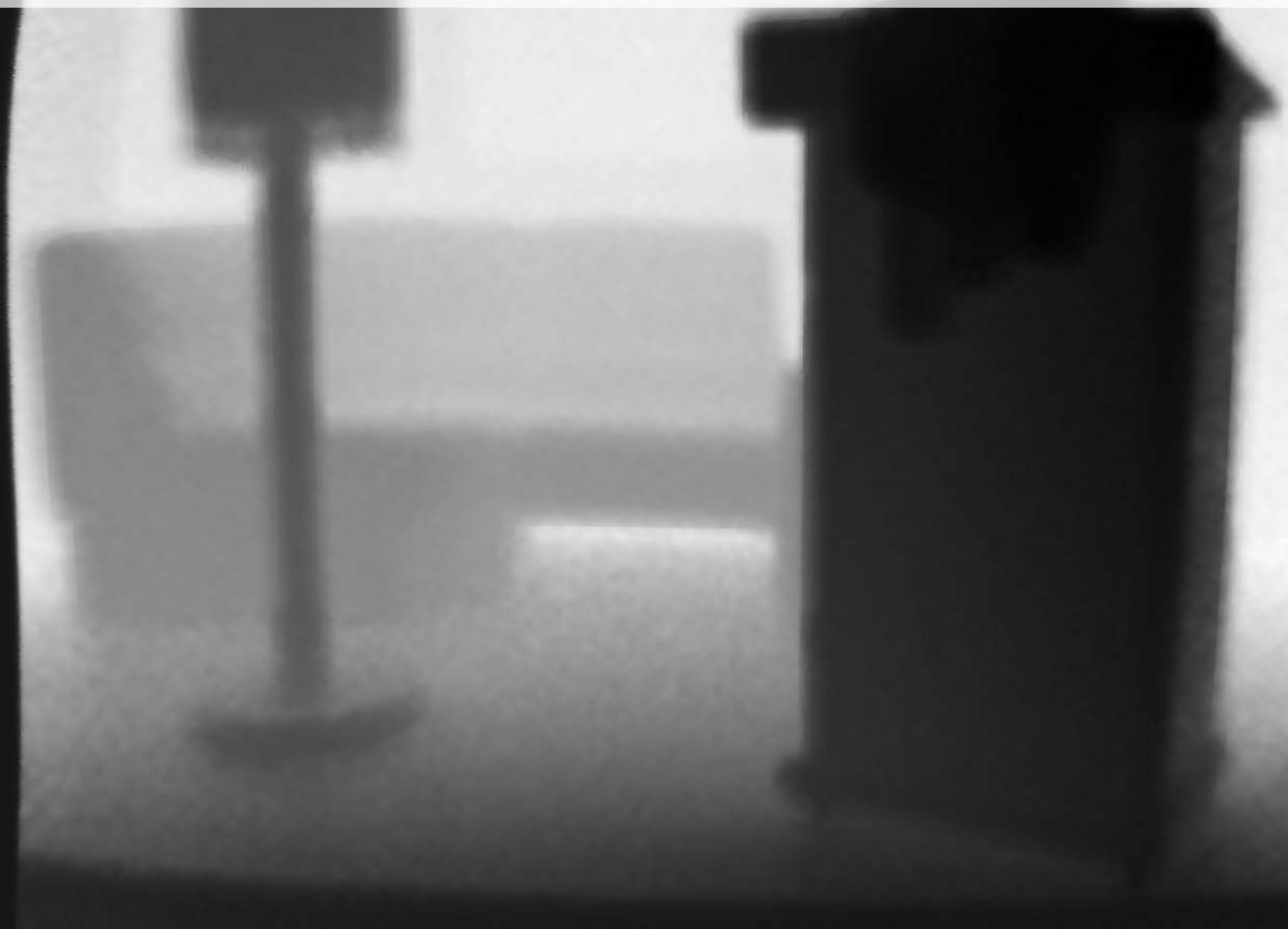


Figure #8/Yang et al's result [3]

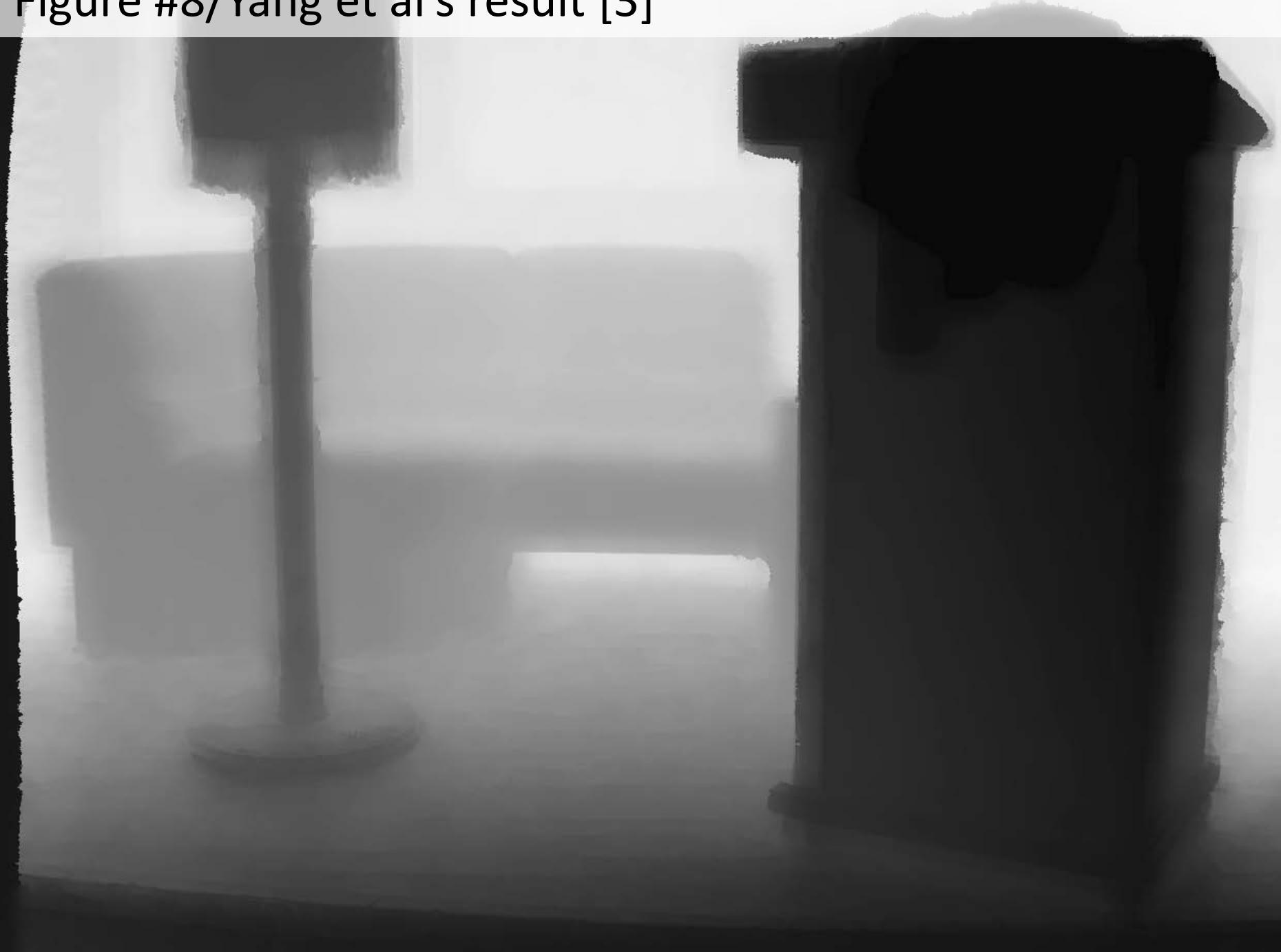


Figure #8/He et al's result [4]

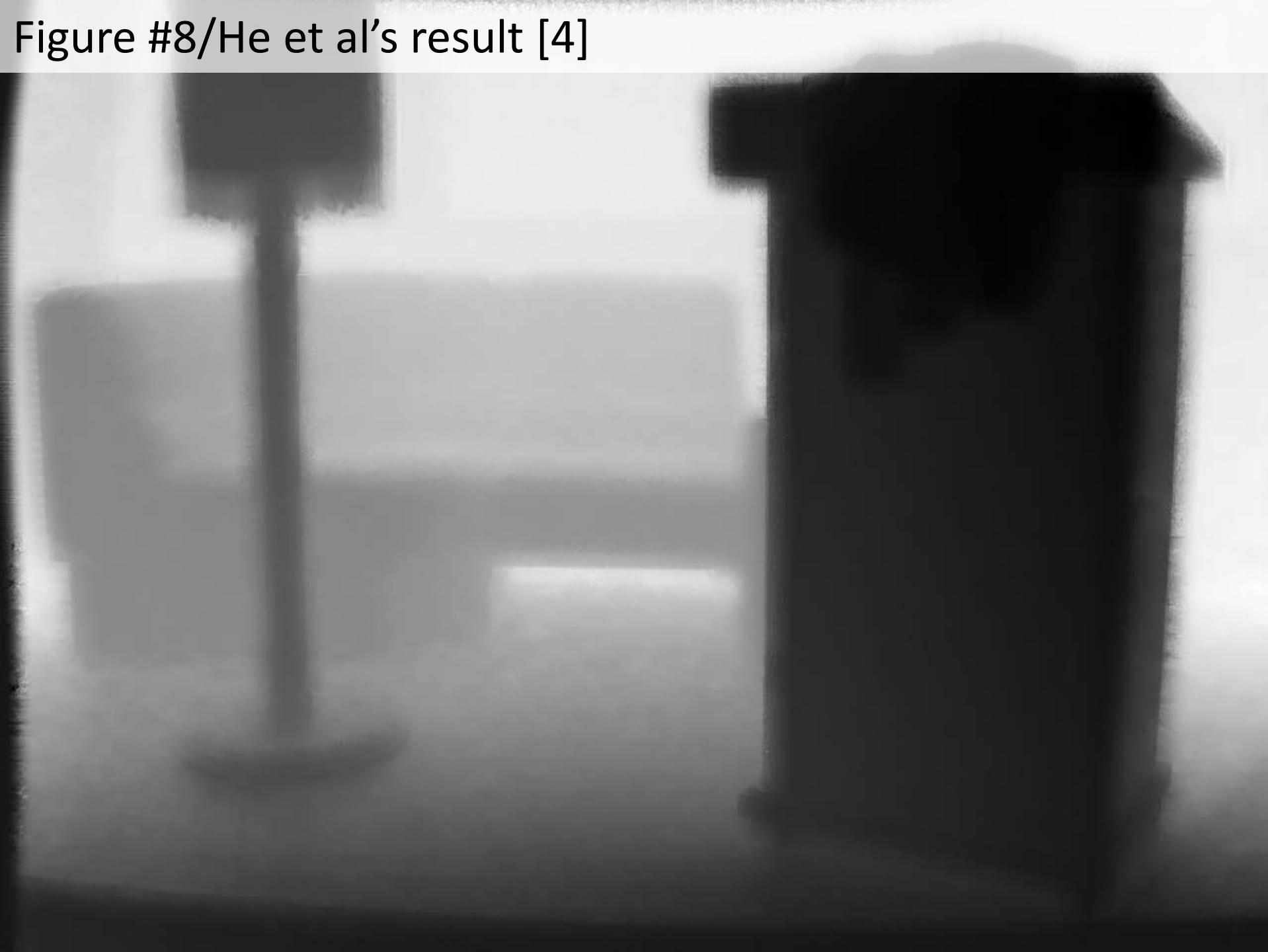


Figure #8/Our result



Figure #8/High resolution Color



Figure #8/TOF depth map [1]



Figure #8/Diebel and Thrun's result [2]



Figure #8/Yang et al's result [3]



Figure #8/He et al's result [4]



Figure #8/Our result



# References

- [1] SwissRangerTM SR4000 data sheet, <http://www.mesa-imaging.ch/prodview4k.php>
- [2] J. Diebel and S. Thrun. An application of markov random fields to range sensing. In NIPS, 2005
- [3] Q. Yang, R. Yang, J. Davis, and D. Nist' er. Spatial-depth super resolution for range images. In CVPR, 2007
- [4] K. He, J. Sun, and X. Tang. Guided image filtering. In ECCV, 2010
- [5] D. Chan, H. Buisman, C. Theobalt, and S. Thrun. A noise aware filter for real-time depth upsampling. In ECCV Workshop on Multicamera and Multimodal Sensor Fusion Algorithms and Applications, 2008.