Bayesian View Synthesis and Image-Based Rendering Principles
Supplementary material

Sergi Pujades, Frédéric Devernay
Inria - PRIMA Team,
Univ. Grenoble Alpes, LIG, F-38000 Grenoble, France,
CNRS, LIG, F-38000 Grenoble, France.

Bastian Goldluecke
Heidelberg Collaboratory for Image Processing

1. Results

We present the full resolution images corresponding to the closeups in figure 4 in the paper, reproduced here as figure 1. In figures 2 to 7, we show for each data set the ground-truth image (if available), the disparity map used for novel view synthesis, the view generated with the approach in Wanner *et al*. [26], as well as the view generated by the proposed method. Results of the previous method where obtained using the public released implementation of the code available at http://sourceforge.net/projects/cocolib/.
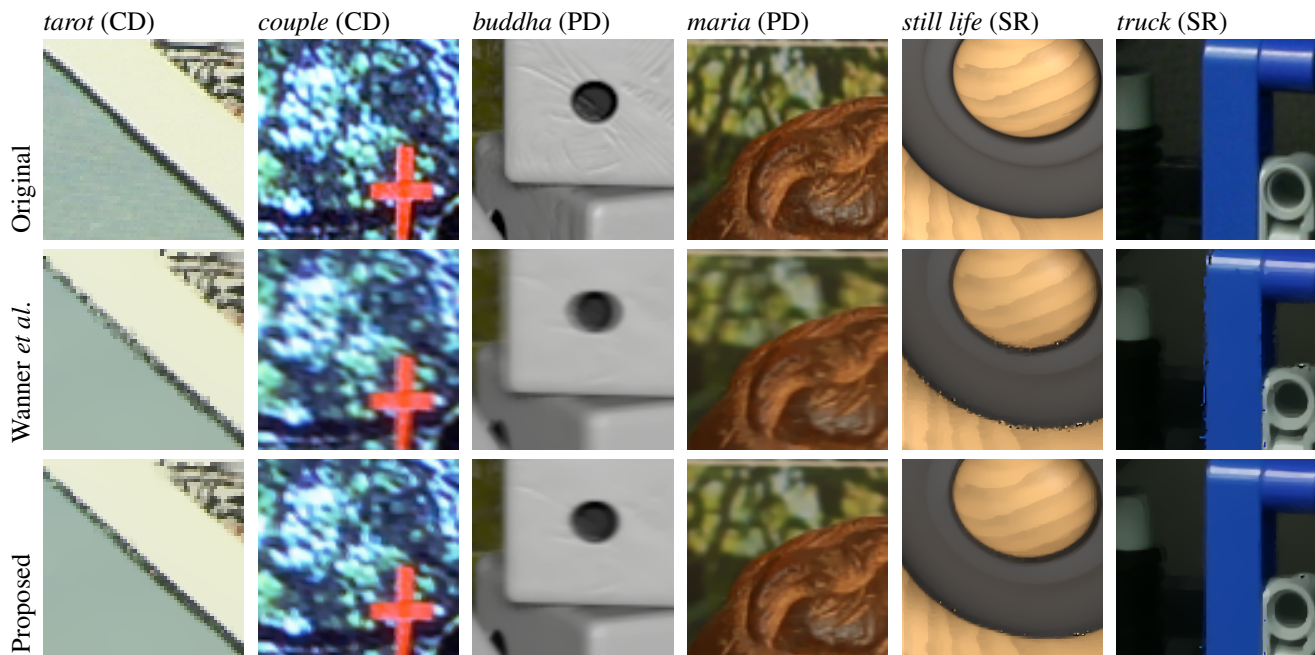

Figure 1. Visual comparison of novel views obtained for different light fields. From top to bottom, the rows present closeups of the ground truth images, the results obtained by Wanner *et al*., and our results. CD stands for computed disparity, PD for planar disparity and SR for super-resolution, see text for details. Full resolution images can be found in the additional material. The results obtained by the proposed method are visibly sharper, in particular along color edges.

Original

Estimated disparity map
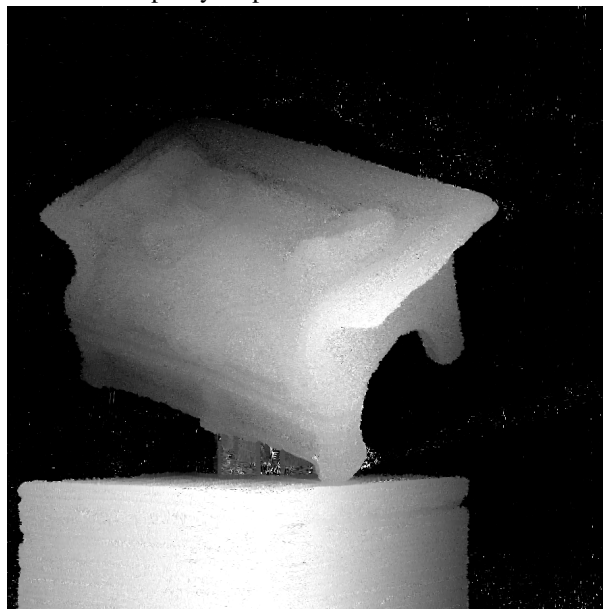
Previous

Proposed

Figure 2. Novel view of the Stanford gantry data set "Tarot" (fine configuration). Synthesized at x1 resolution using the estimated disparity map.

Original

Estimated disparity map

Previous

Proposed

Figure 3.   Novel view of the HCI gantry data set "Couple". Synthesized at x1 resolution using the estimated disparity map.

Original

Flat geometric proxy

Previous

Proposed

Figure 4. Novel view of the HCI raytraced data set "Buddha". Synthesized at x1 resolution using a plane in the center of the scene as geometric proxy.
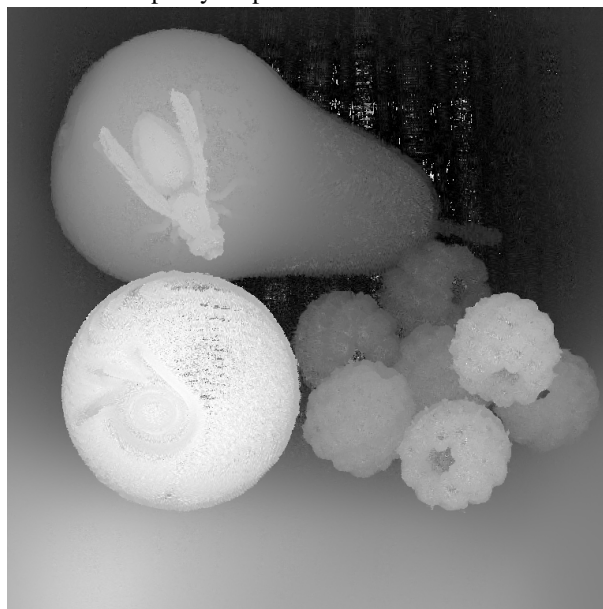
Original

Flat geometric proxy

Previous

Proposed

Figure 5. Novel view of the HCI gantry data set "Maria". Synthesized at x1 resolution using a plane in the center of the scene as geometric proxy.
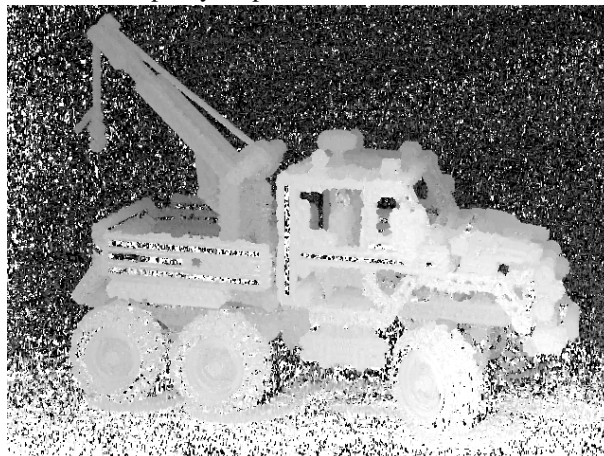
Figure 6. Novel view of the HCI gantry data set "Still life". Synthesized at x3 resolution using the estimated disparity map. An original hi-resolution image is not available, so we present the low-resolution version of the corresponding view.

Original

Estimated disparity map

Previous

Proposed

Figure 7. Novel view of the Stanford gantry data set "Truck". Synthesized at x3 resolution using the estimated disparity map. An original hi-resolution image is not available, so we present the low-resolution version of the corresponding view.