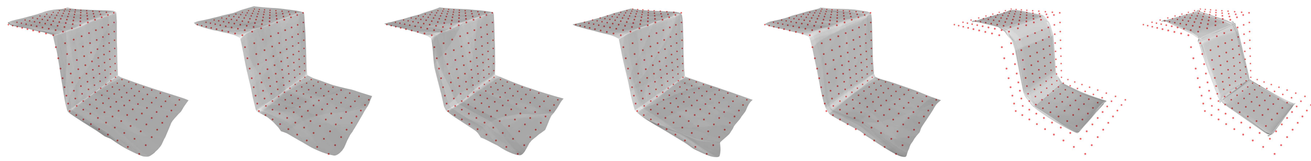

$\lambda = 0.001$ $W_2 = 2.46$ | $\lambda = 0.005$ $W_2 = 2.87$ | $\lambda = 0.01$ $W_2 = 3.26$ | $\lambda = 0.05$ $W_2 = 10.76$ | $\lambda = 0.1$ $W_2 = 20.98$ | $\lambda = 0.5$ $W_2 = 92.91$ | $\lambda = 1$ $W_2 = 174.09$

Figure 13. Effect of the parameter λ on the reconstruction and the loss W_2.

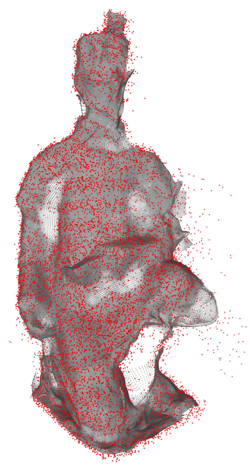

Figure 14. Example of reconstruction form Kinect data (red dots).

A. Supplementary Experiments

A.1. Effect of the parameter λ

In Figure 13, we demonstrate the effect of varying the Sinkhorn regularization parameter on the final reconstruction of a surface. Smaller values of λ yield a better approximation of the Wasserstein distance, and thus, produce better reconstructions of the original points.

A.2. Kinect reconstruction

To demonstrate the effectiveness of our technique on reconstructing point clouds with large quantities of noise and highly non-uniform sampling, we reconstruct a raw point cloud acquired with a Kinect V2 (Figure 14). In spite of the challenging input, we are still able to produce a smooth reconstruction approximating the geometry of the original object.

A.3. Surface Reconstruction Benchmark

We provide cumulative histograms for the results of the Surface Reconstruction Benchmark [5] on all 5 models shown in Figure 4. Figures 15 and 16 show respectively the percentage of vertices of $\widehat{\mathcal{Y}}$ and $\mathcal{X}$ such that $d_{\text{rec}\to\text{GT}}$ and $d_{\text{inp}\to\text{rec}}$ is below a given error.

A.4. Surface Reconstruction Benchmark Statistics

In addition to the cumulative histograms above, we tabulate the mean, standard deviation, and maximum values for each method and model in the benchmark. Table 1 show the distance from the input to the reconstruction ($d_{\text{inp}\to\text{rec}}$) and Table 2 show the distance from the reconstruction to the input ($d_{\text{rec}\to\text{GT}}$).

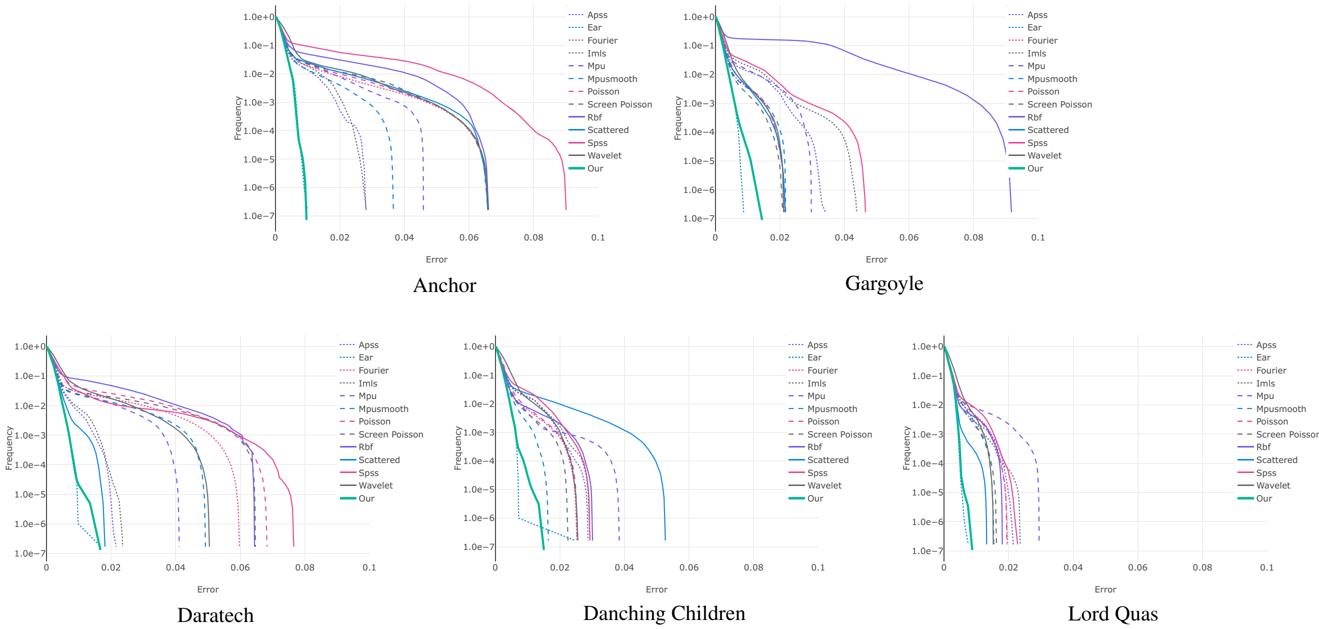

Figure 15. Percentage of fitted vertices (y-axis, log scale) to reach a certain error level (x-axis) for different methods. The errors are computed from the fitted surface to the ground truth.

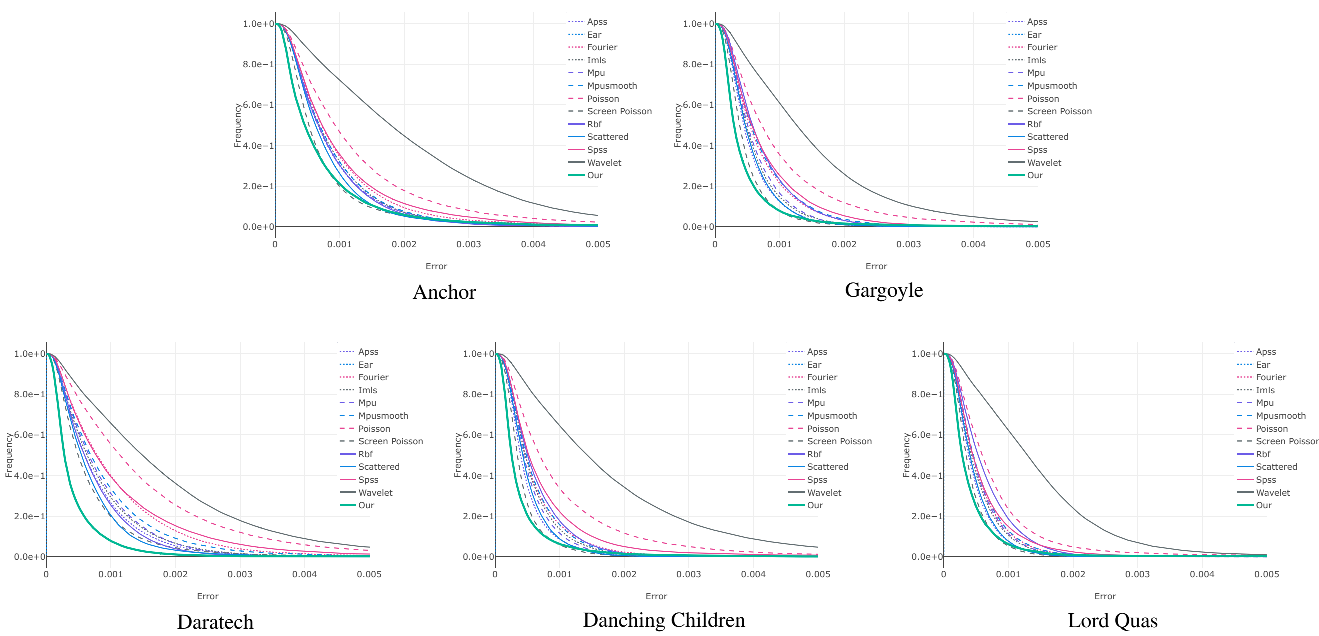

Figure 16. Percentage of fitted vertices (y-axis) to reach a certain error level (x-axis) for different methods. The errors are measured as distance from the input data to the fitted surface.