

Supplementary: Consistent Normal Orientation for 3D Point Clouds via Least Squares on Delaunay Graph

1. Implementation Details

We implemented our method in C++ using several external libraries. CGAL [1] is employed to perform the CGALMesh [3] for Delaunay graph construction, and Eigen [2] is utilized for solving the sparse linear system. We conducted experiments on a HP desktop equipped with a 2.6 GHz Intel Xeon CPU and 64 GB of RAM. We also

run comparisons for learning-based methods on an NVIDIA RTX A4500 GPU.

2. Gallery

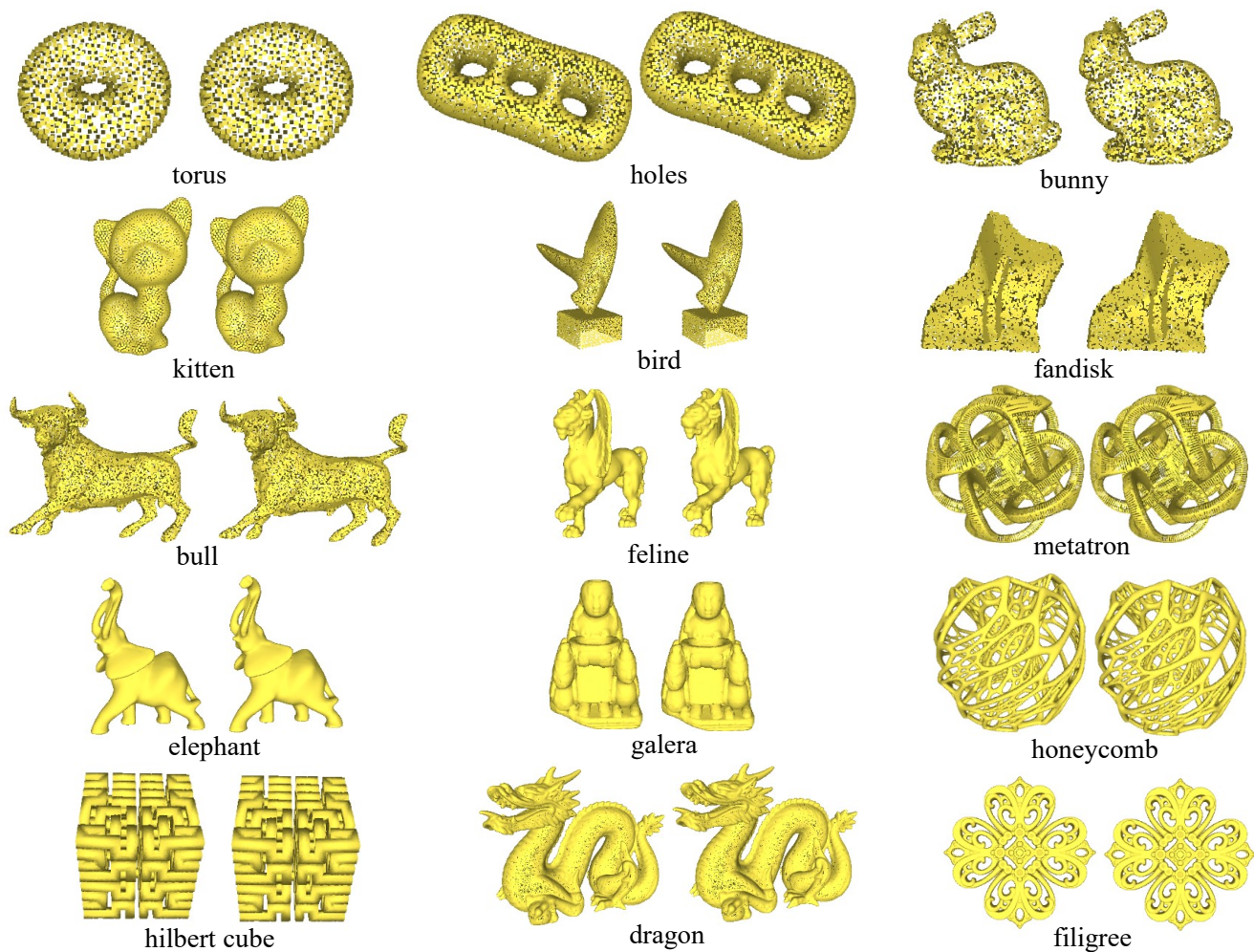


Figure 1. More visual results: for each pair, the left shows our results, while the right represents the ground truth.

References

- [1] CGAL. The computational geometry algorithms library. <https://www.cgal.org/>, 2009. 1
- [2] Gaël Guennebaud, Benoît Jacob, et al. Eigen v3. <http://eigen.tuxfamily.org>, 2010. 1
- [3] Clément Jamin, Pierre Alliez, Mariette Yvinec, and Jean-Daniel Boissonnat. CGALmesh: a generic framework for Delaunay mesh generation. *ACM Transactions on Mathematical Software (TOMS)*, 41(4):1–24, 2015. 1