

# Fast and Robust Normal Estimation for Point Clouds with Sharp Features (Additional content)

paper1053

## 1 Effect of the neighborhood size on the model details

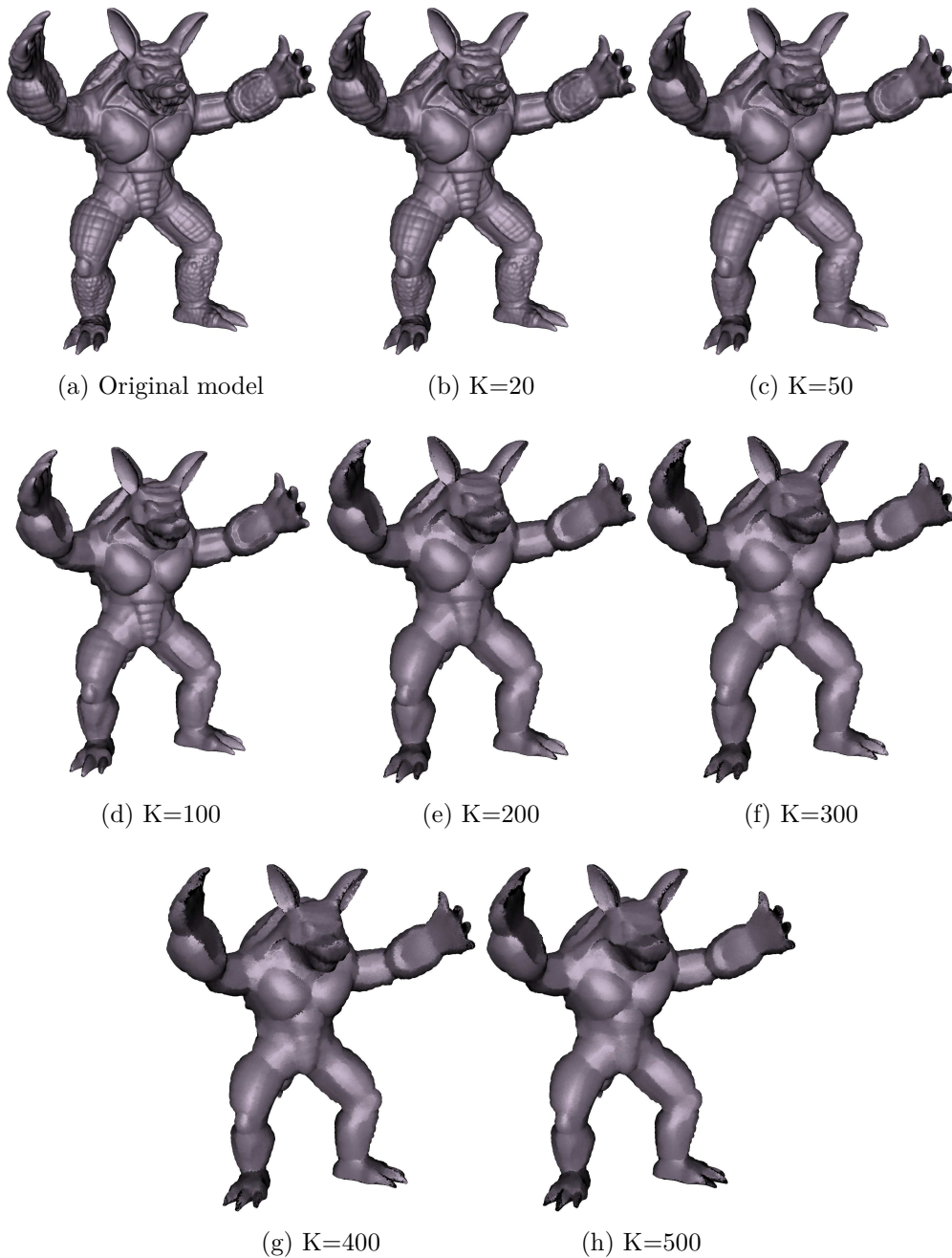


FIGURE 1 – Armadillo model (173k vertices) without noise, with different neighborhood sizes, using RRHT\_Points.

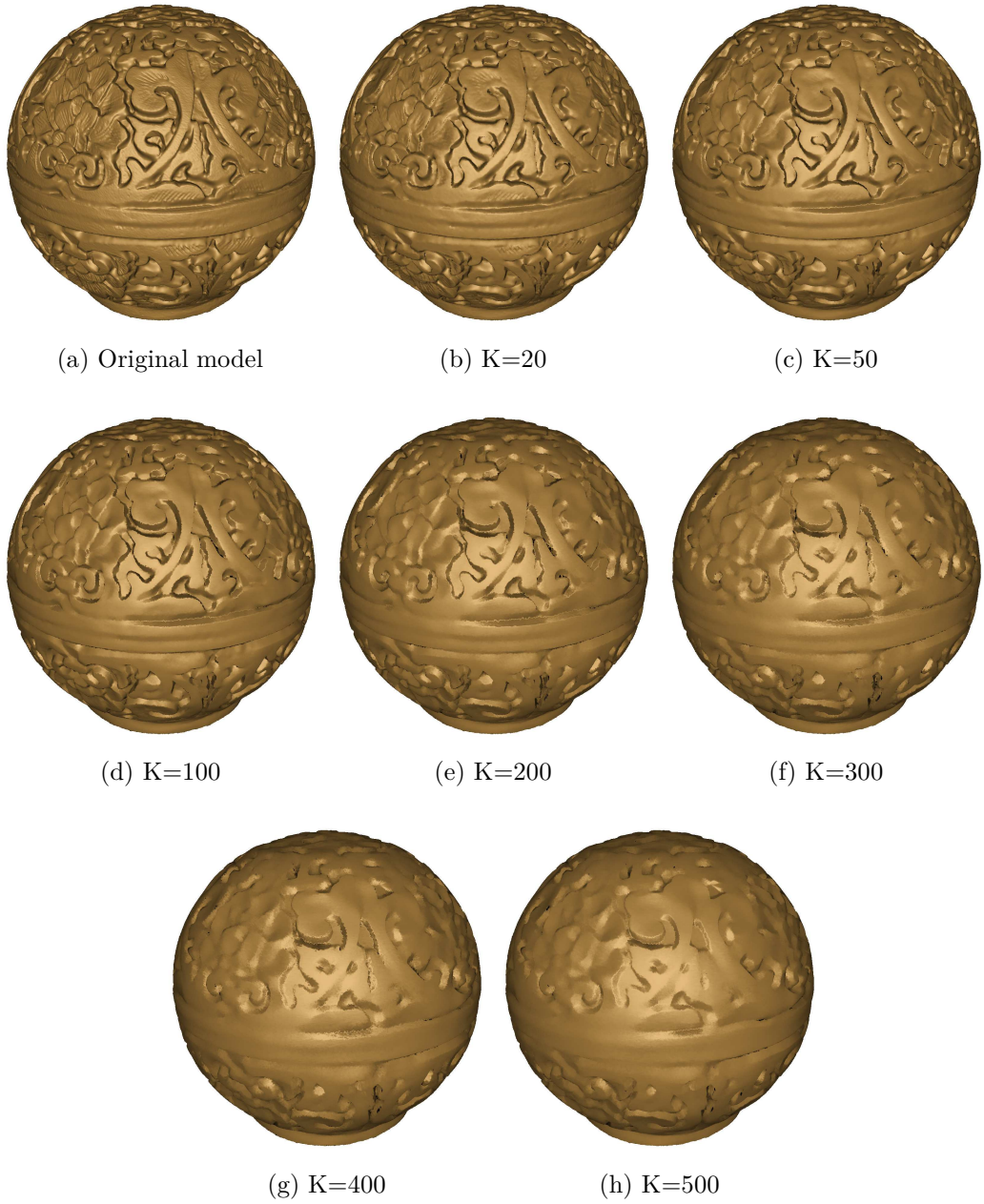


FIGURE 2 – Circular box model (701k vertices) without noise, with different neighborhood sizes, using RRHT\_Points.

## 2 Comparison of precision vs computation time parameters.

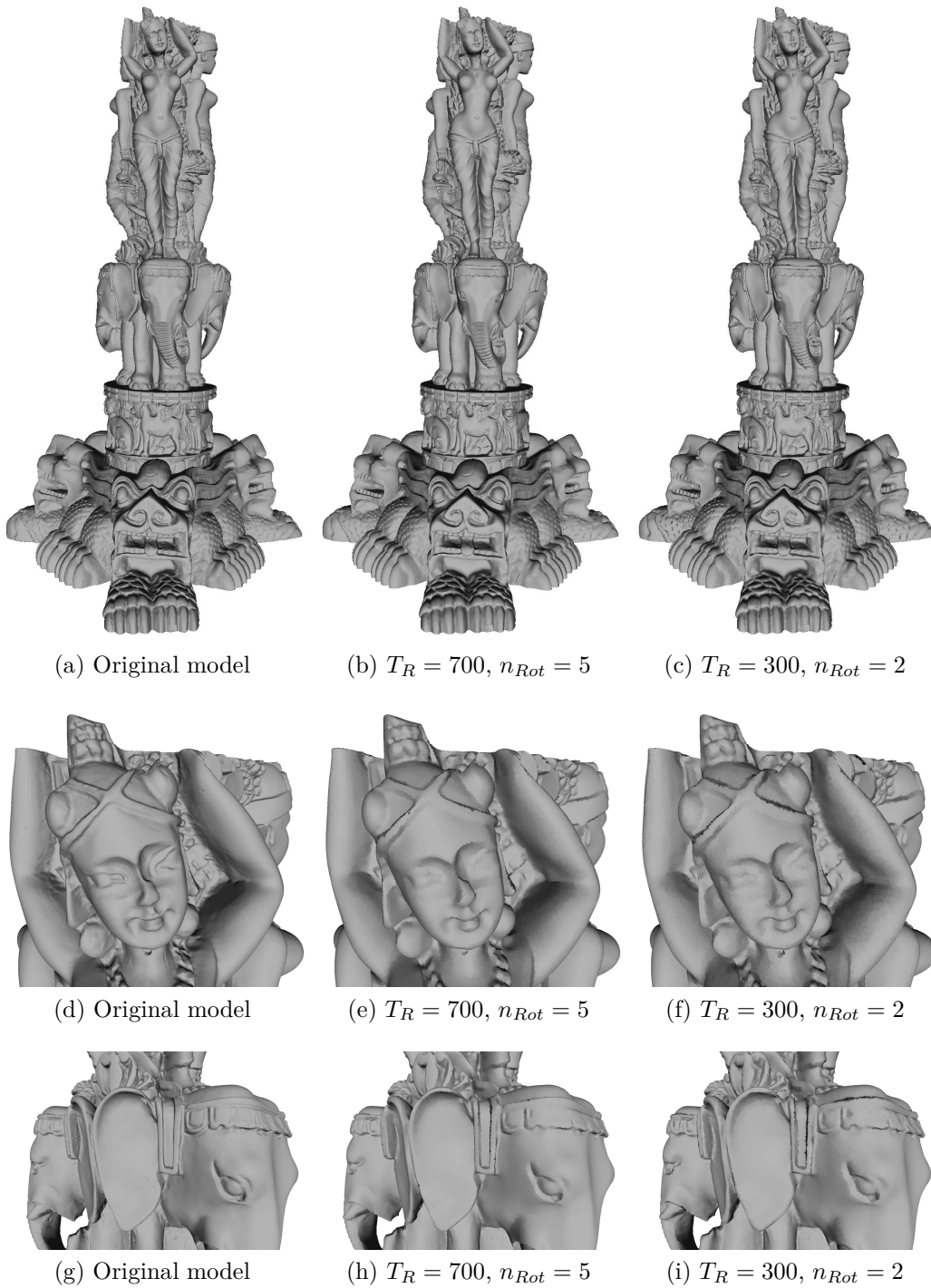


FIGURE 3 – Statuette model (5M vertices) without noise, using RRHT\_Points, with the same neighborhood ( $K = 100$ ), for two different pairs  $(T_R, n_{Rot})$ .

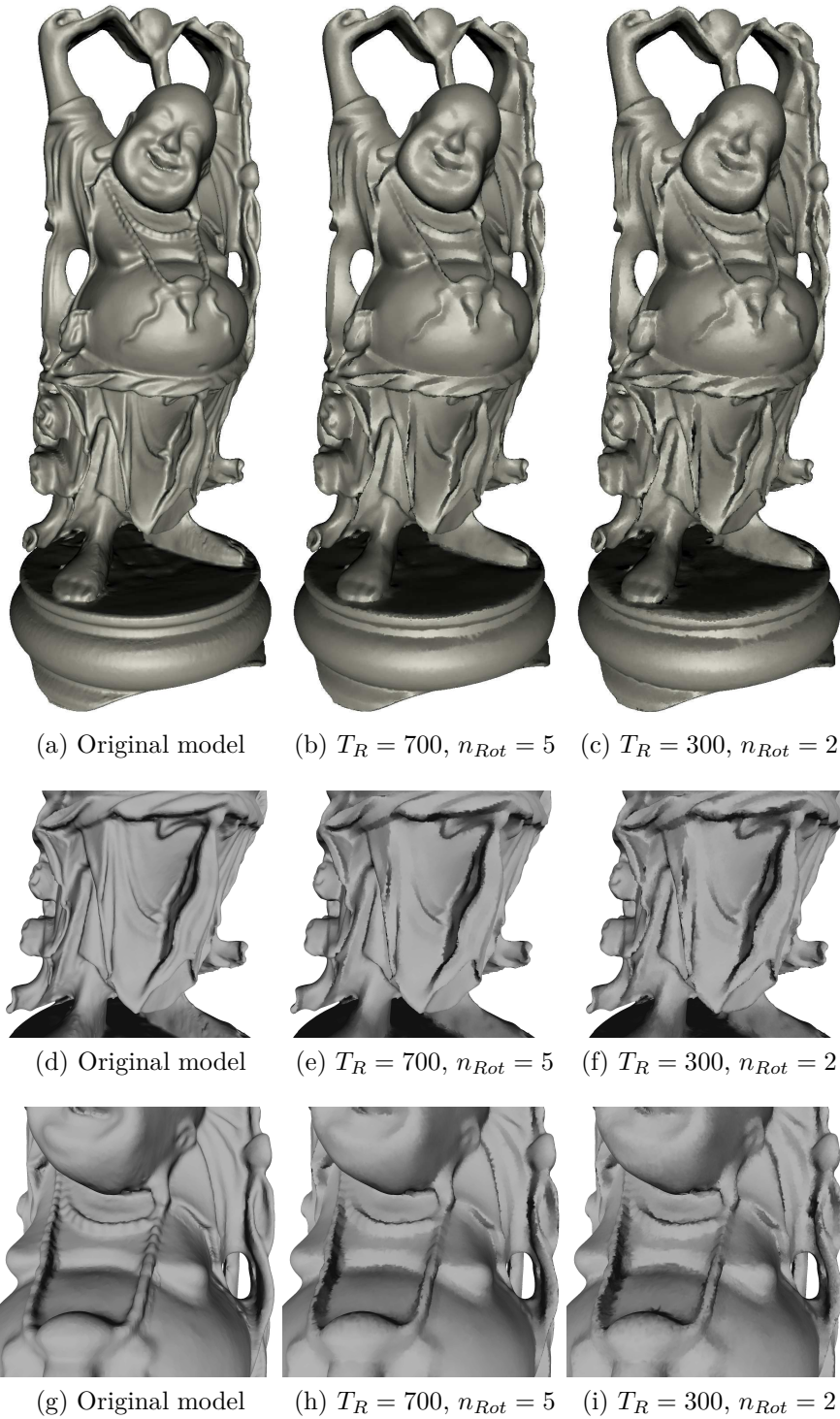


FIGURE 4 – Buddha model (543k vertices) without noise, using RRHT\_Points, with the same neighborhood ( $K = 100$ ), for two different pairs  $(T_R, n_{Rot})$ .

### 3 Effect of the neighborhood size with respect to noise

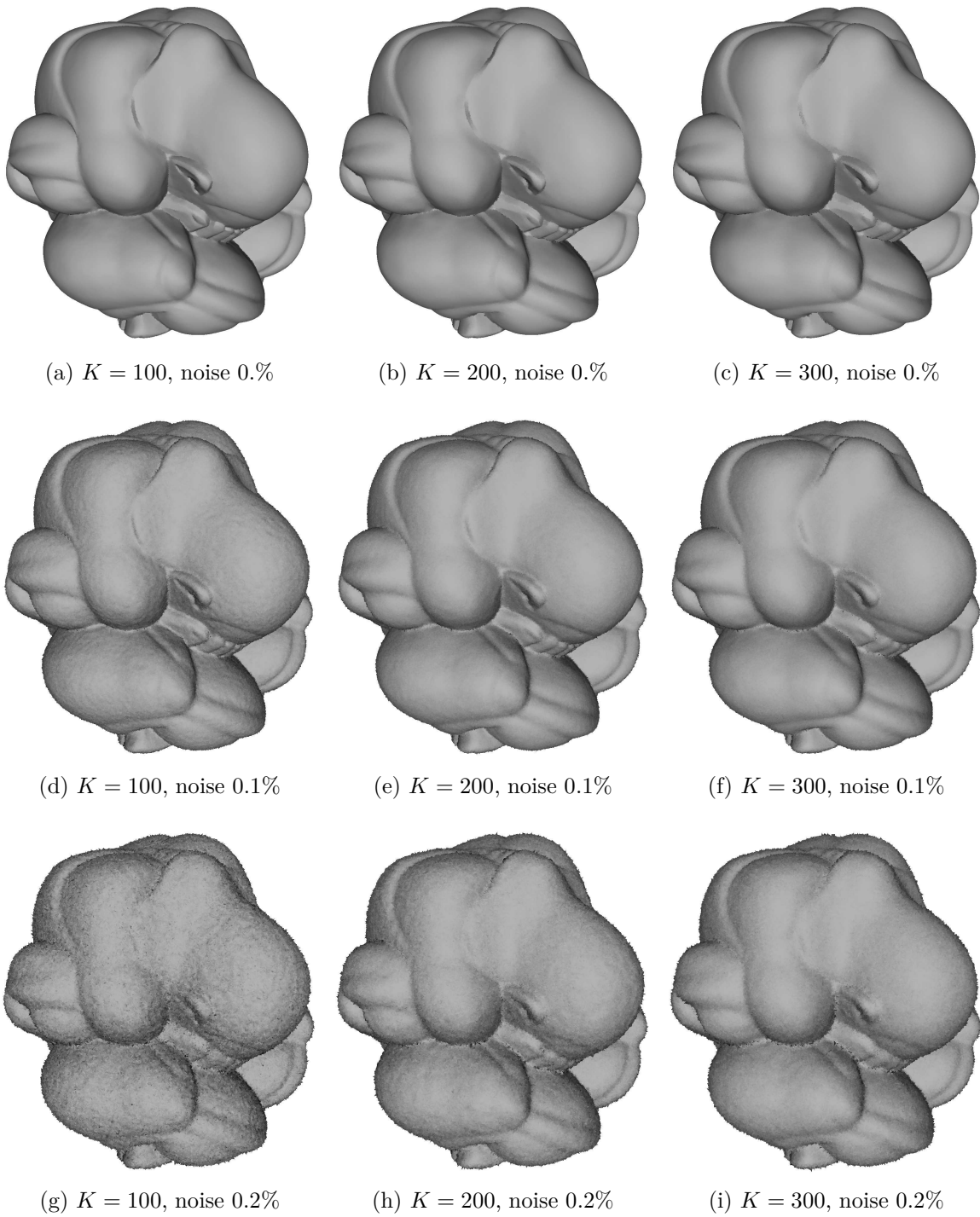


FIGURE 5 – Omotondo model (1M vertices), using RRHT\_Points, with  $T_R = 300$ ,  $n_{Rot} = 2$ , for different neighborhood sizes and values of noise.



(a)  $K = 100$ , noise 0.0% (b)  $K = 300$ , noise 0.0% (c)  $K = 500$ , noise 0.0% (d)  $K = 700$ , noise 0.0%



(e)  $K = 100$ , noise 0.1% (f)  $K = 300$ , noise 0.1% (g)  $K = 500$ , noise 0.1% (h)  $K = 700$ , noise 0.1%



(i)  $K = 100$ , noise 0.2% (j)  $K = 300$ , noise 0.2% (k)  $K = 500$ , noise 0.2% (l)  $K = 700$ , noise 0.2%

FIGURE 6 – Lucy model (14M vertices), using RRHT\_Points, with  $T_R = 300$ ,  $n_{Rot} = 2$ , for different neighborhood sizes and values of noise.