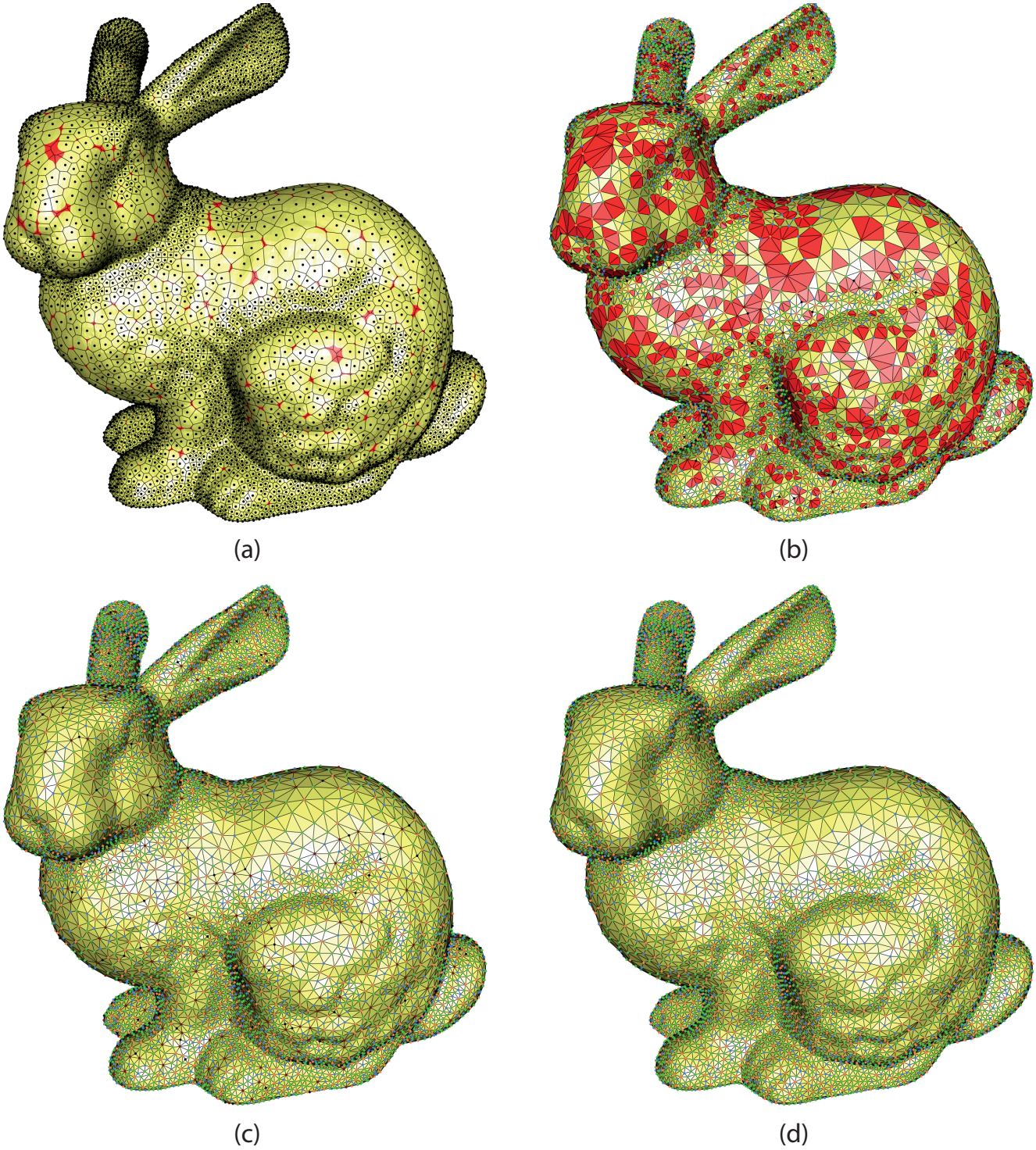

Fig. 1: *Illustration of gap computation and valence optimization of the Bunny model. (a) The RPD and gaps on the surface, (b) remeshed triangles correspond to the non-maximal samples (red), (c) maximal sampling without optimization, (d) optimized remeshing. (The vertices with valence 5 (v5) are shown in blue, v6 green and v7 orange. Vertices with other valences are shown in dark.*

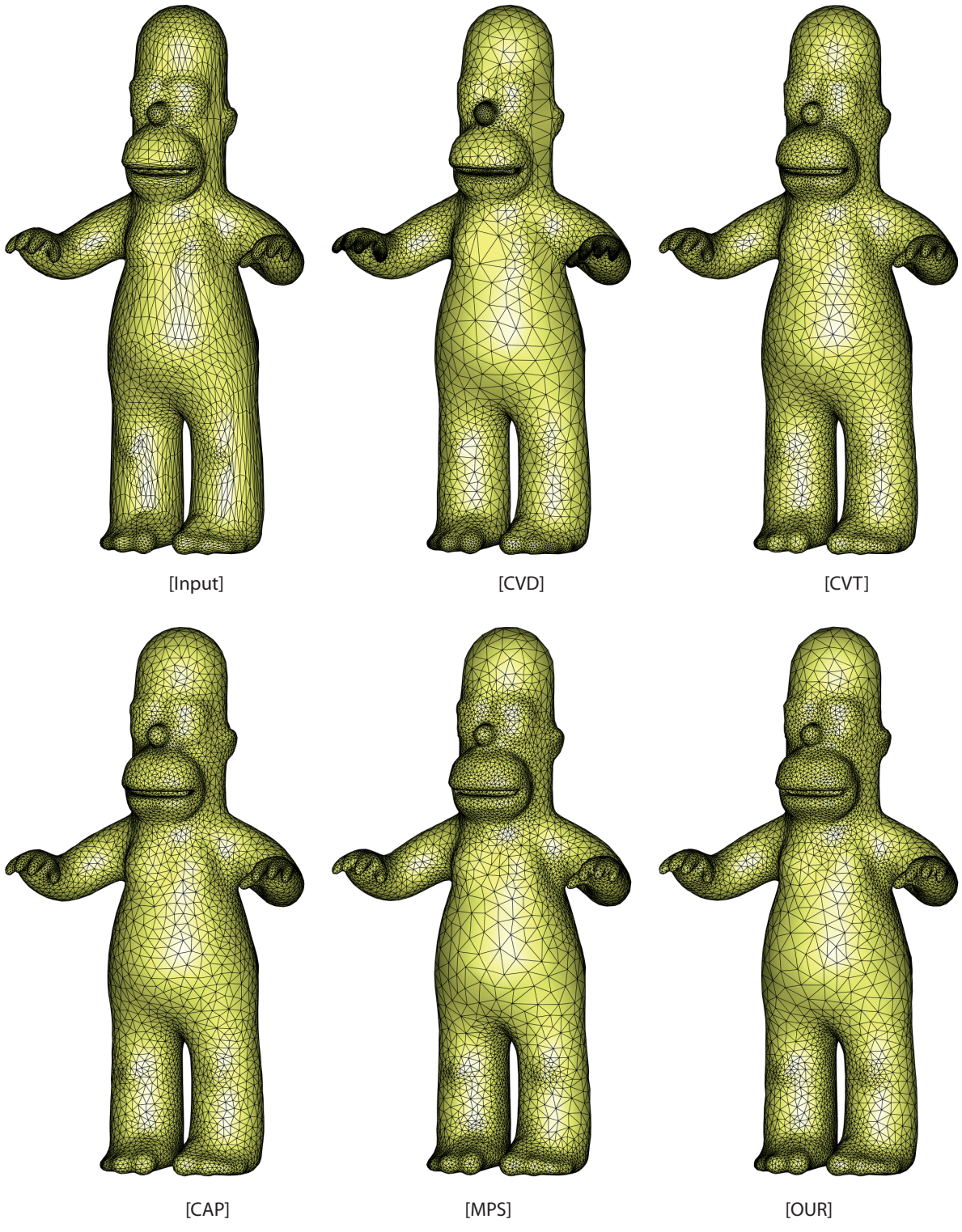

Fig. 2: *Remeshing results of the Homer model.*

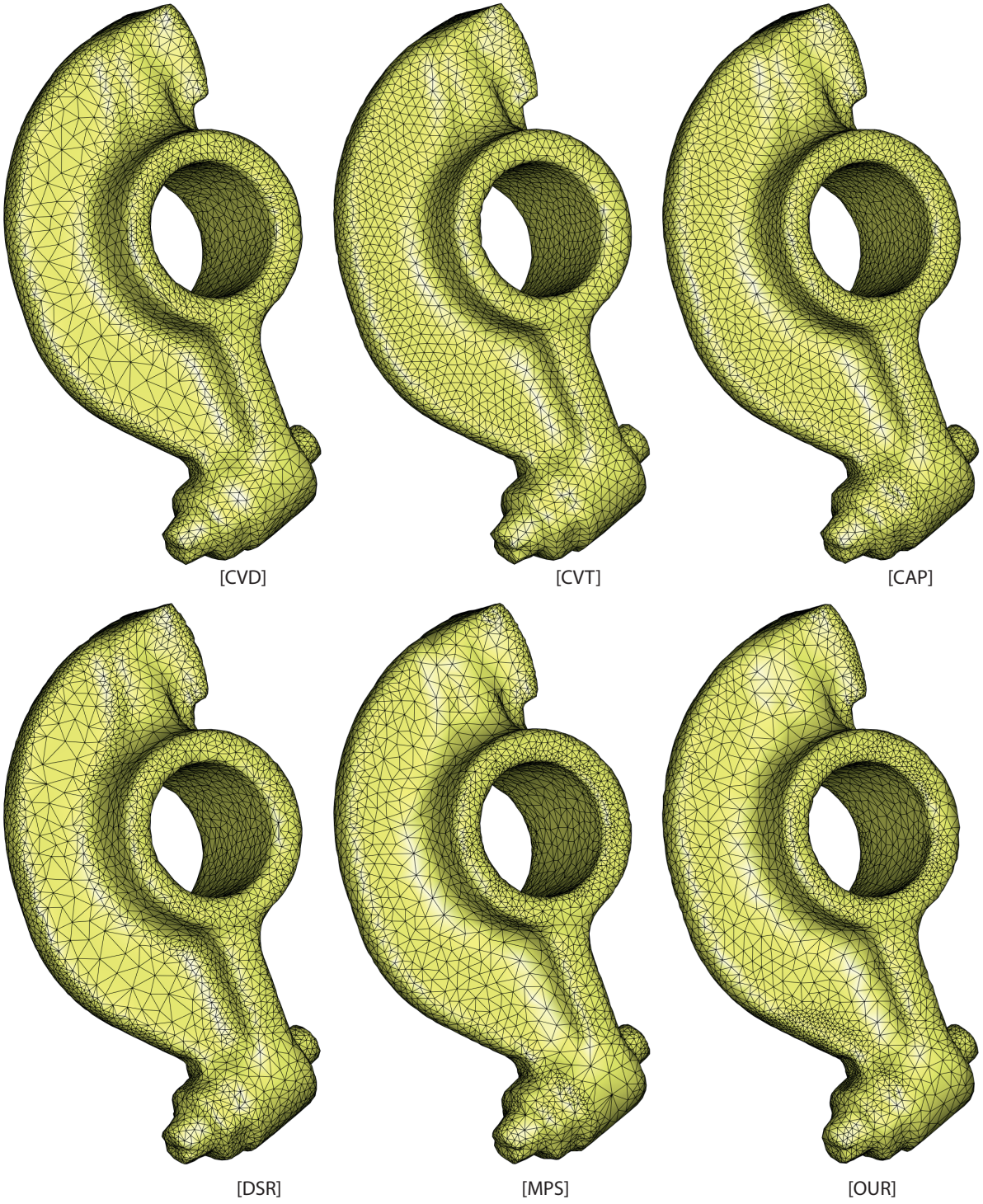

Fig. 3: *Remeshing results of the RockerArm model.*

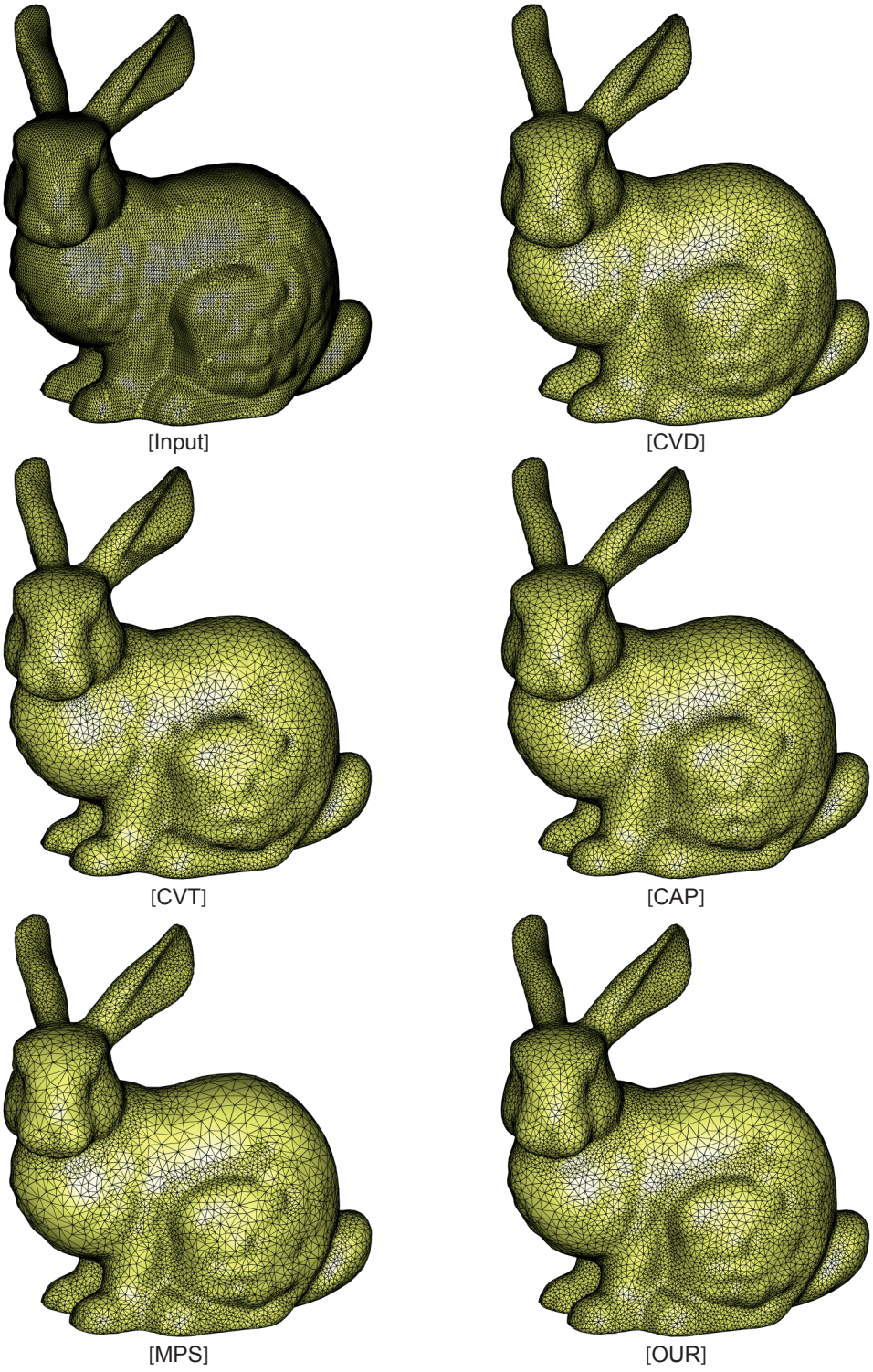

Fig. 4: *Remeshing results of the Bunny model.*

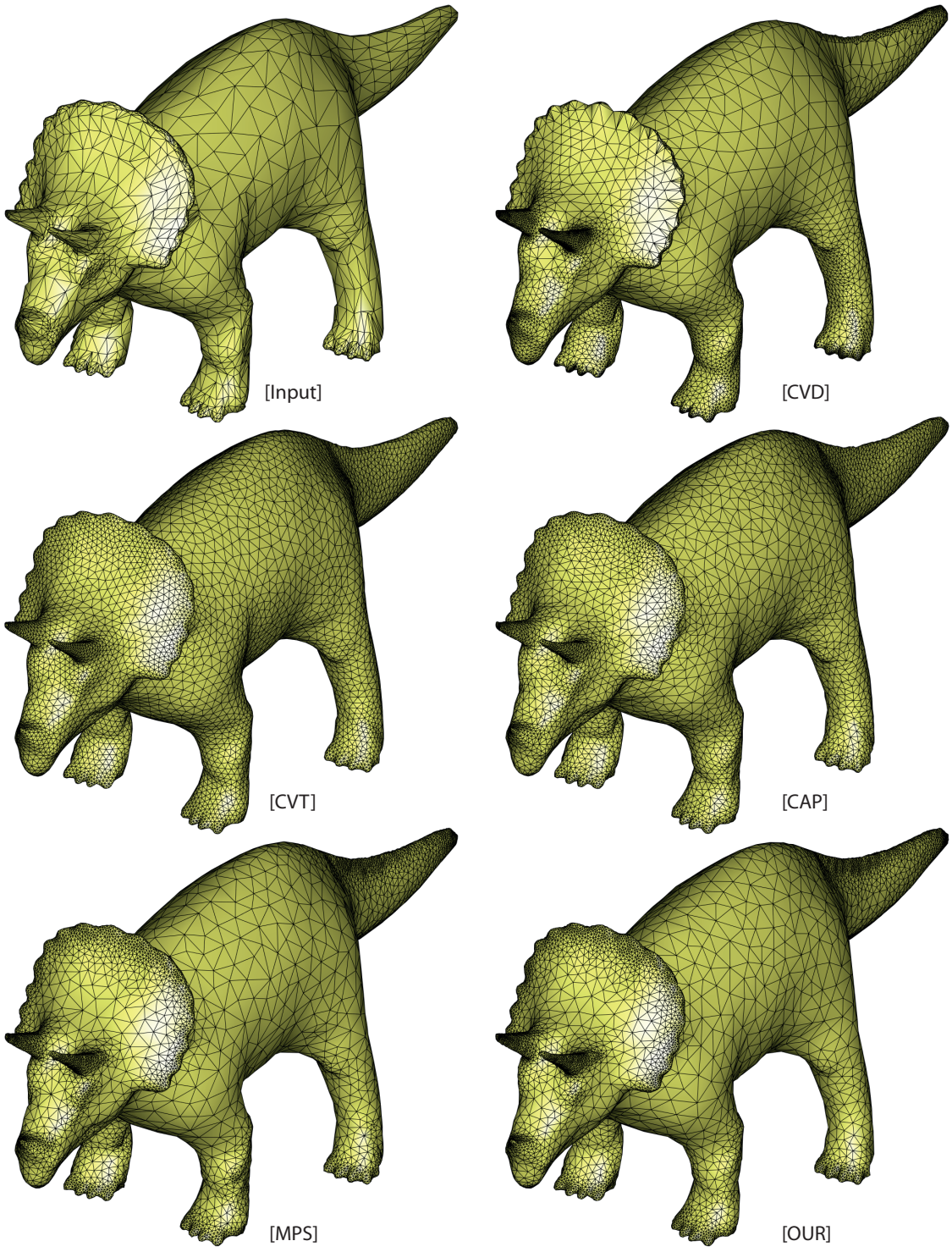

Fig. 5: *Remeshing results of the Triceratops model.*

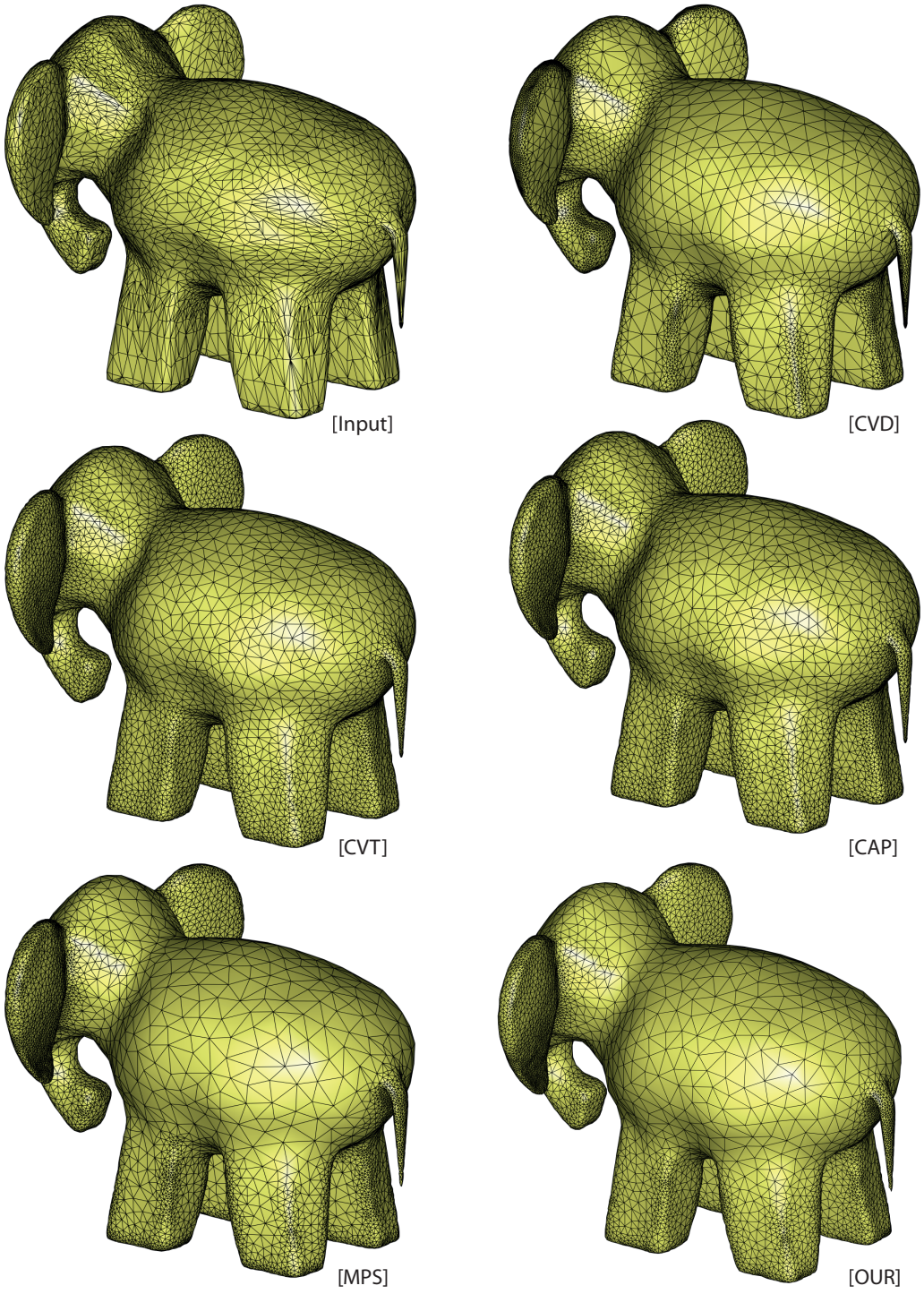

Fig. 6: *Remeshing results of the Elephant model.*

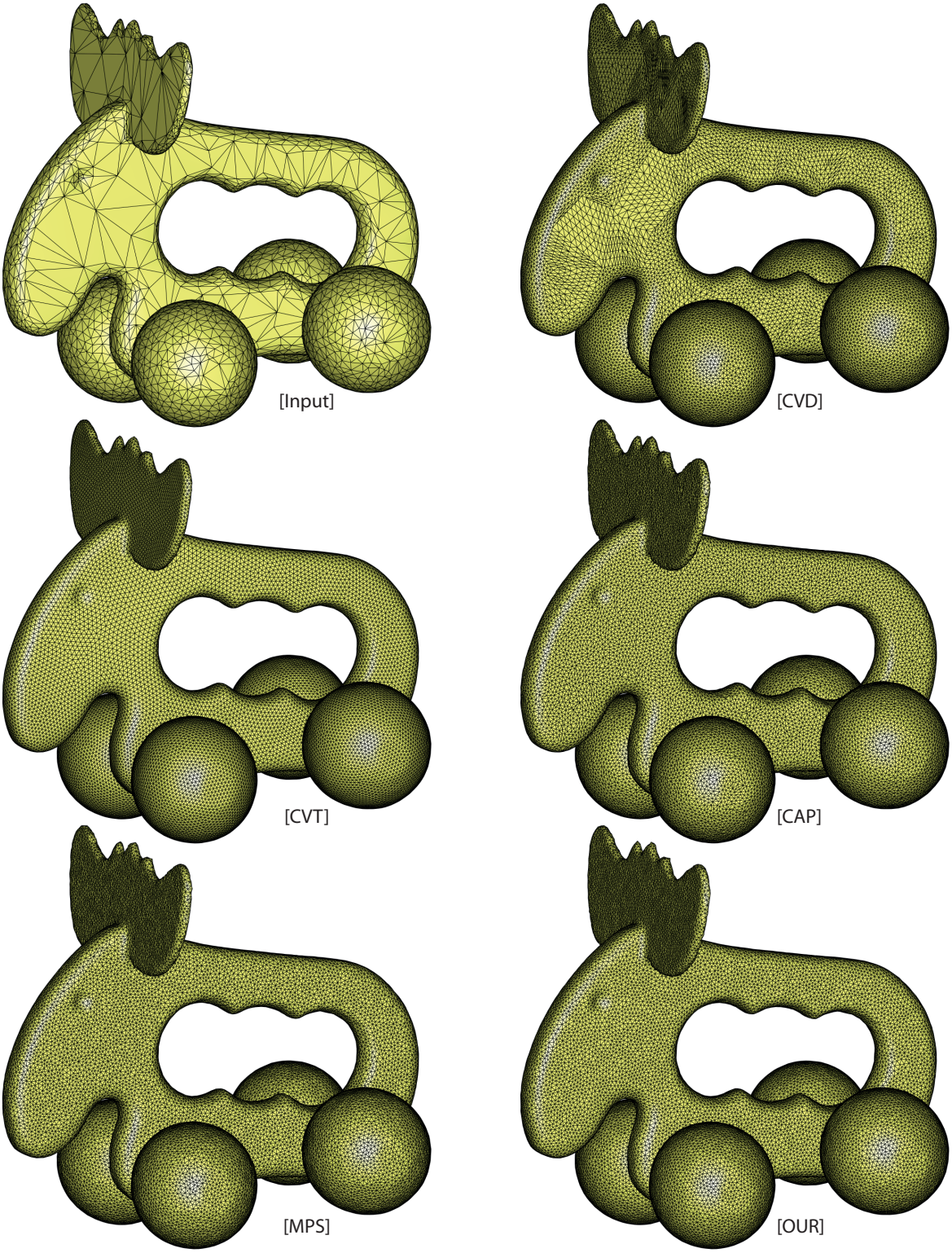

Fig. 7: *Uniform remeshing results of the Elk model. The angle bound of our result is* $[37^o, 98^o]$.

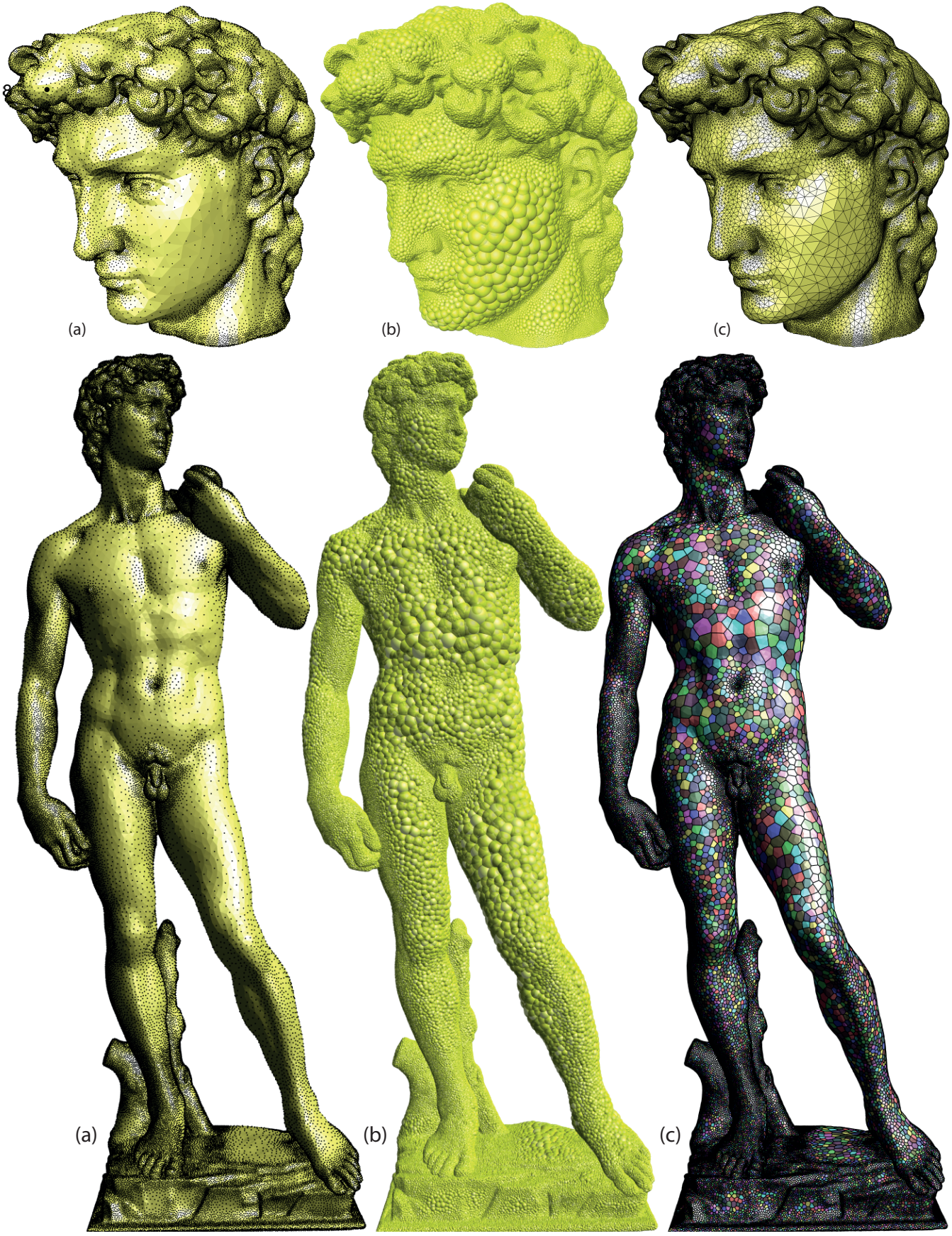

Fig. 8: *Top row: sampling of the David head. (a) Sample points, (b) spheres centered at points that cover the surface, (c) remeshing result. Bottom row: sampling results of the David model. (a) Sample points, (b) covering spheres, (c) restricted power diagram on the surface. The remeshed David has* $Q_{min} = 0.505$, $\theta_{min} = 32.0^o$ *and* $\theta_{max} = 115.0^o$.