

Visual Guided Shape Optimization Using Differentiable Renderer

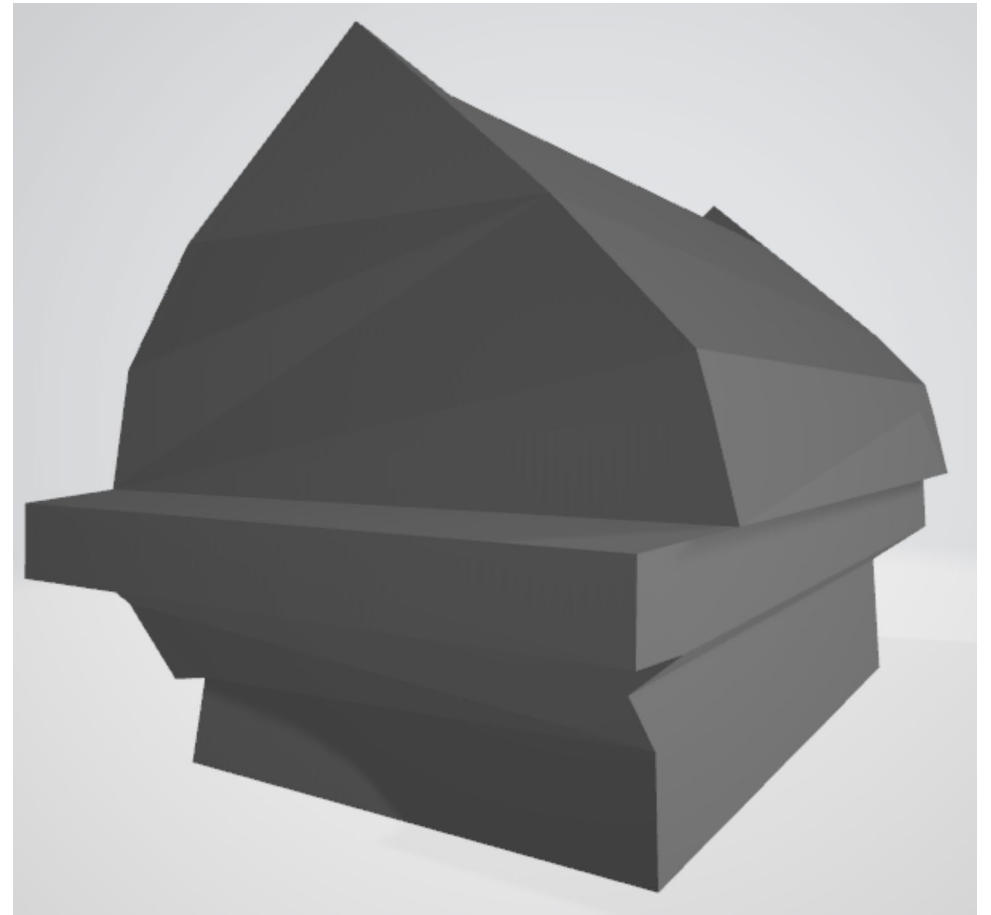
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Motivation: LOD rendering for game engines

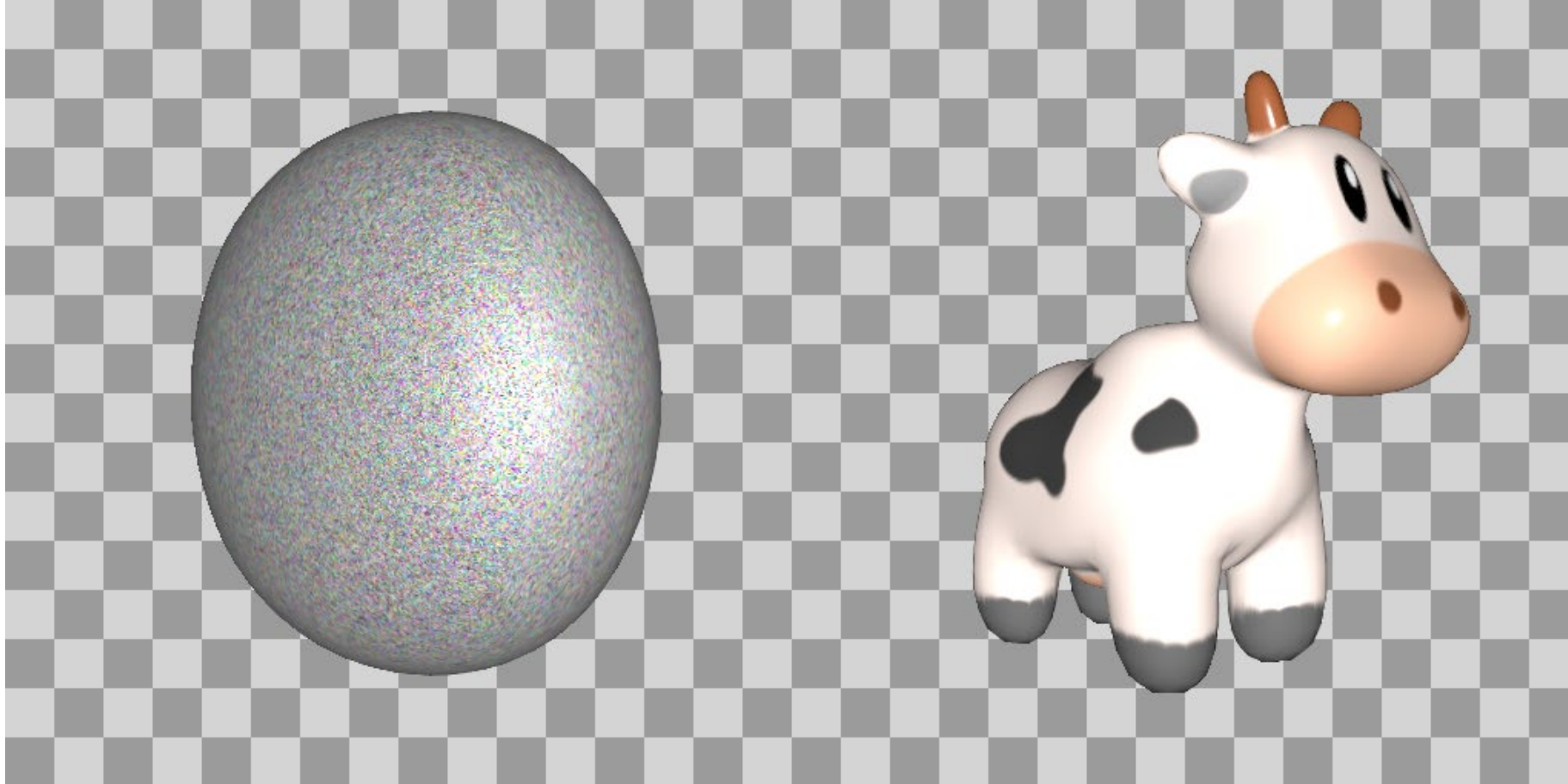
High Resolution Mesh



Low-Resolution Mesh, No texture



Experiment: Deform a sphere using diff renderer



Experiment: Deform a sphere



Experiment: Deform a sphere



Experiment: Deform a sphere



Challenging Task

- typologies of the two meshes are not homogeneous.
- ✗ • traditional algorithms on mesh simplification based on quadratic error metric.(e.g. half edge collapse, vertex cluster)
- self-intersection and other quadratic constraints

