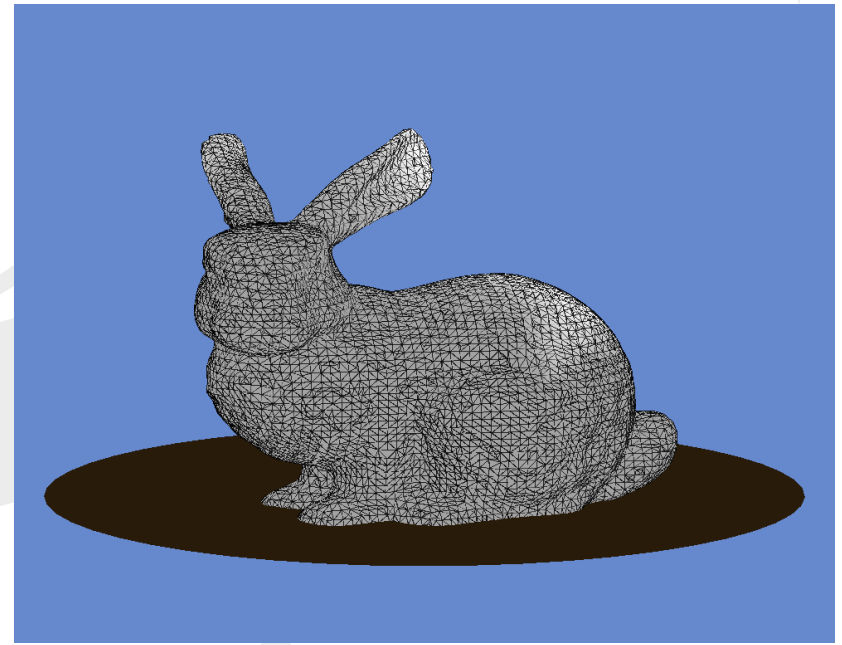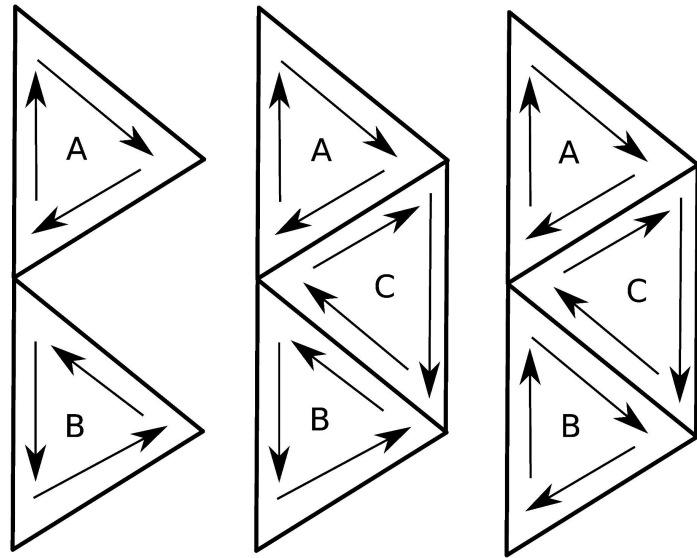# Triangle Mesh Vine

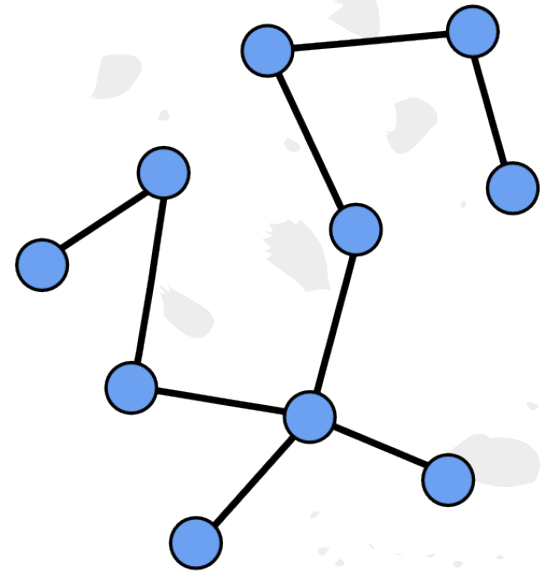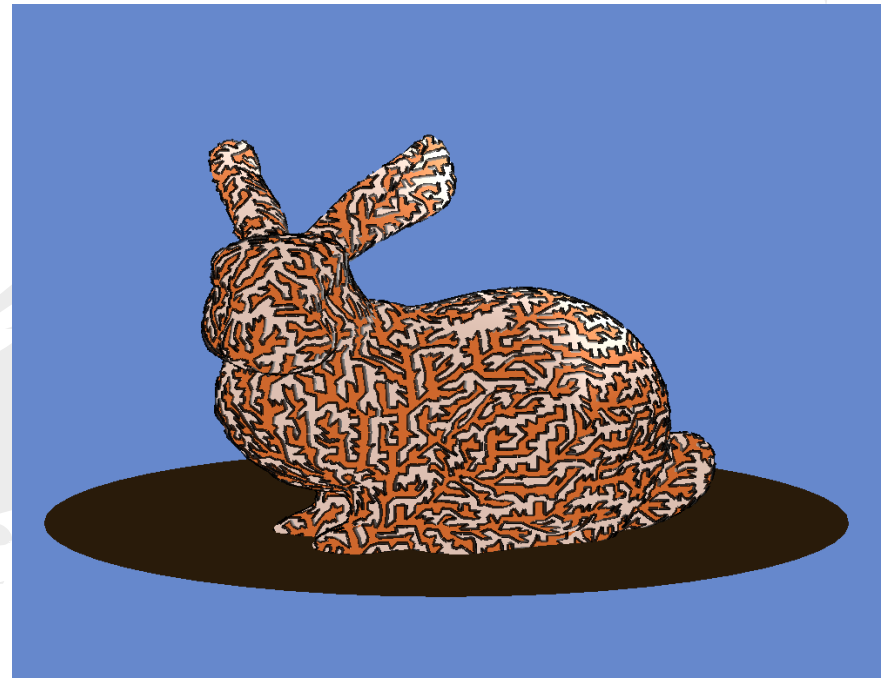*Christopher Martin*

Mesh structure

Triangles read from
`bun_zipper_res2.ply`

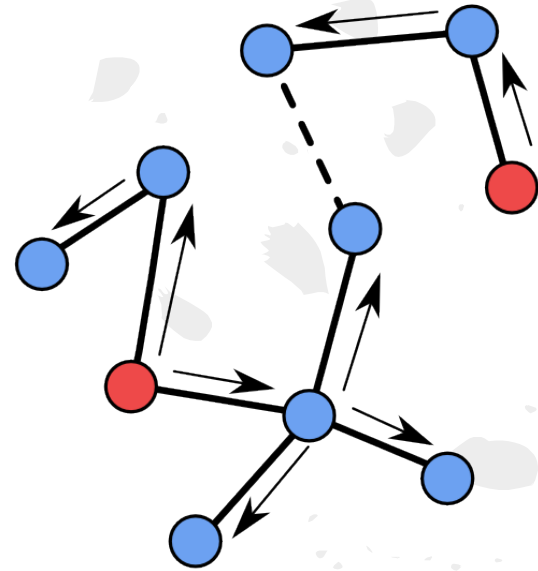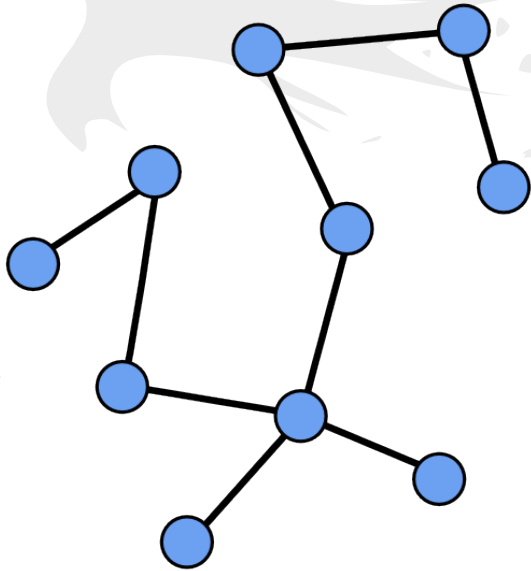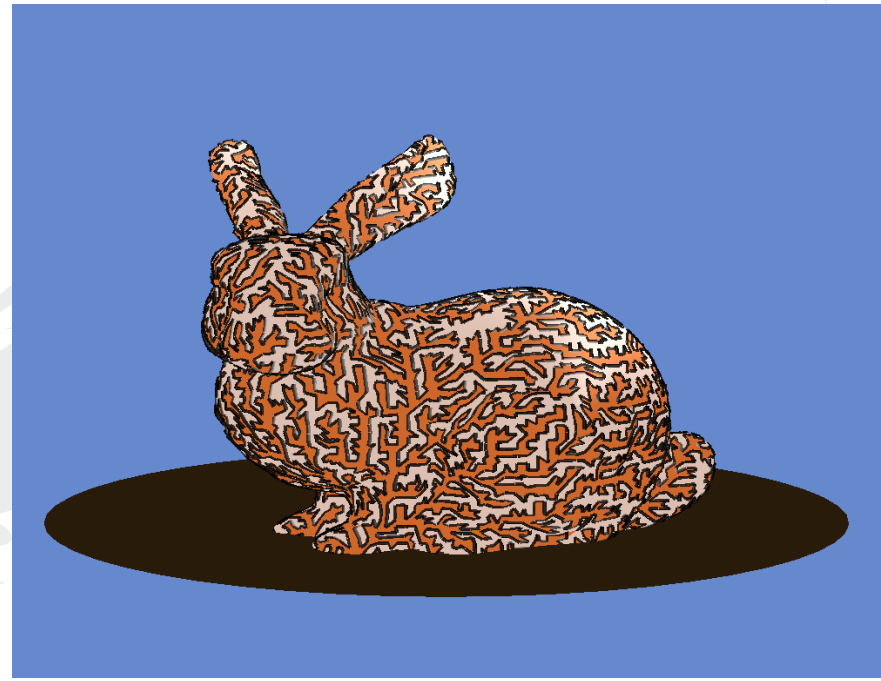When a triangle is added, corner orders are reversed as necessary

Triangle forest

Breadth-first LR construction starting at a point near bottom-center yields an undirected acyclic graph of triangles
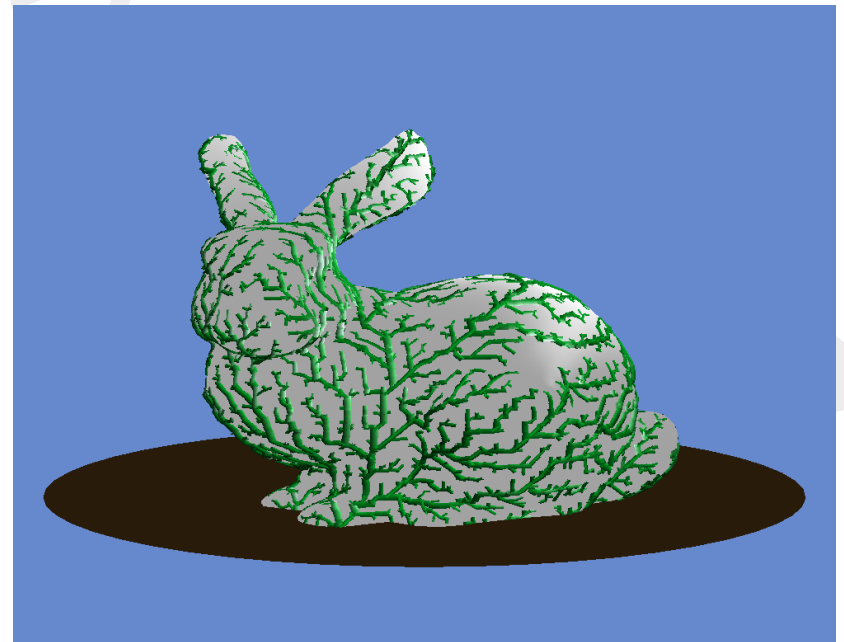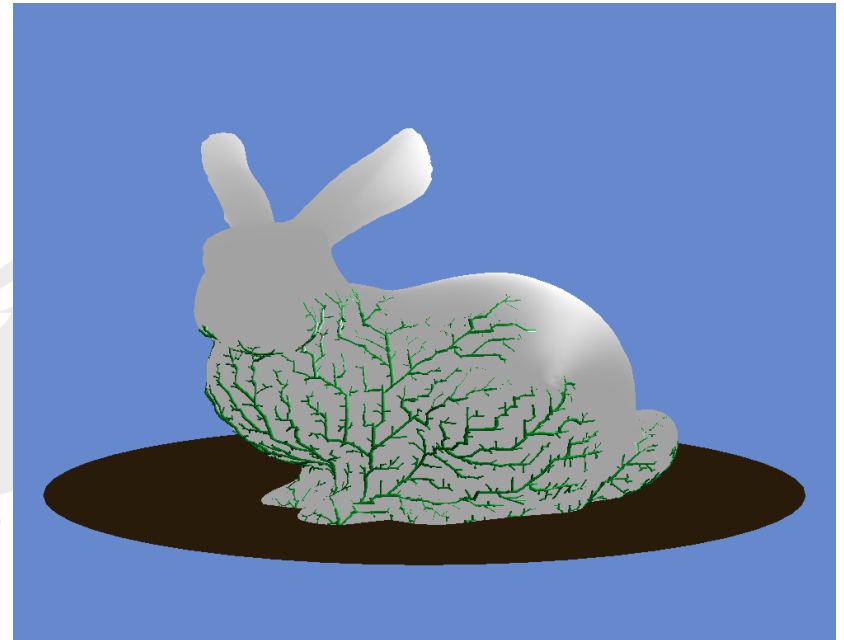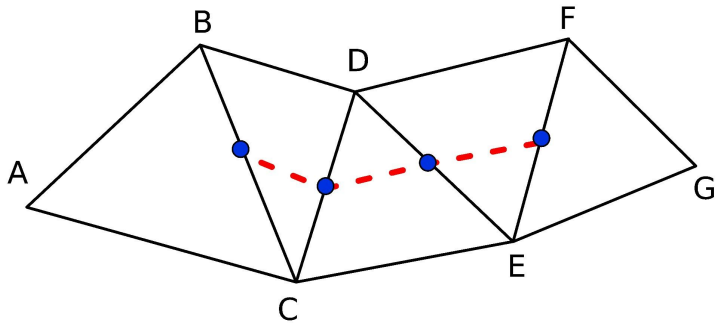
Triangle forest

Graph is split into a forest, using nodes close to the ground as tree roots.

Vine rendering

Draw cylinders
between midpoints of
shared triangle edges

Vine rendering

Vine thickness is a function of

- $\text{atan}(c - \text{distance from root})$
- $\text{atan}(c + \text{maximum distance from a leaf})$
- Time