

Programming Assignment # 4*due: 5-3***Beauty Contest**

Starting from the 3D mesh from your face scan, compute parabolic lines based on three discrete Gauss curvature algorithms:

1. using barycenters
2. using circumcenters
3. using incenters.

For the first two, check out this site:

<http://www.multires.caltech.edu/pubs/diffGeoOps.pdf>

and then the third one is simply replacing circumcenters with incenters.

To draw parabolic lines, compute the discrete Gauss curvature at each vertex. For neighboring vertices with a sign change, linearly interpolate the zero crossing. If using OpenGL, use a sufficiently large linewidth for your lines. Superimpose the parabolic lines on a smooth shaded display of your face, using the original (cleaned) data set and one which is decimated to about 1000 triangles.