

COT5520: COMPUTATIONAL GEOMETRY

Homework # 0

Due date: Aug 31, Thursday. This homework is not to be graded. It should help you find a project topic. Once you are done, send me an e-mail (ungor@cise.ufl.edu) summarizing your experience with each of the problems.

1. Surf the web starting at

- *Geometry in Action* by David Eppstein
<http://www.ics.uci.edu/~eppstein/geom.html/>
- *The Geometry Junkyard* by David Eppstein
<http://www.ics.uci.edu/~eppstein/junkyard/>
- *Computational Geometry Pages* by Jeff Erickson
<http://compgeom.cs.uiuc.edu/~jeffe/compgeom/index.html>

2. Download, install and test-run at least one of the following software packages:

- *CGAL*
<http://www.cgal.org/>
- *Alpha shapes*
<http://biogeometry.duke.edu/software/alphashapes/index.html>
- *qhull*
<http://www.geom.uiuc.edu/software/download/qhull.html>
- *Triangle*
<http://www-2.cs.cmu.edu/~quake/triangle.html>
- *Voroglide*
<http://www.pi6.fernuni-hagen.de/GeomLab/VoroGlide>

3. Read the nineteen proofs of Euler's formula at

<http://www.ics.uci.edu/~eppstein/junkyard/euler/>

4. Skim through the Computational Geometry literature and pick two research papers that are of interest to you. Send their bibliographic information to me and start reading them.