CS 4620 Midterm Review

<u>Regular Exam</u>: Oct. 29th 7:30 – 9:00 pm   Gates G01

<u>Makeup Exam</u>:   ``     ``   5:30 – 7:00 pm   Hollister 362

<u>Extra-Time Exam</u>:   ``     ``   6:45 – 9:00 pm   (as per Ruojin's email)
                                    (?)

<u>Allowed</u>: 1 letter-sized cheat sheet, both sides

Materials Covered: Everything before fall break

  Total marks: 80 points

1. Ray tracing (35-40%)

   – Definition : difference from rasterization

   – Familiar w/ programming assignment

      – Ray-object intersection : triangle, sphere, bounding box

      – Pipeline: Recall the bugs you've run into

      – Ray acceleration : BVH tree / bounding box

2. Mesh (25%)   – Read through slides very carefully

   – OBJ file format   (v, vn, vt, f v/vt/vn)

   – Be careful with ordering   counter-clockwise

3. Transformations & Manipulators (25%)

  – Similar to written assignments

 – Characteristics of scale / rotation / transformation / reflection matrices

 – Rotation / scaling w.r.t. a given point

4. Filters (15% – 20%)

 – B-spline, cubic spline → Catmull-Rom spline

   – Behaviours   – Familiar w/ functions for each type of filter

- Very similar to written assignment
    - linear interpolation, nearest neighbors

Suggestions :

- Skip questions & come back to them later

- Read through descriptions carefully

- Don't be scared if you are given a set of images to compare