

Computer Graphics II

Geometric Modelling

Homework

**Due:**

**XXX**

Send email with archive containing pdf report and program sources

Email object: [MOSIG] CGII

Objective:

* Implement basic curve subdivision schemes
* Illustrate their convergence

1. Implement for a given closed polygon the following curve subdivision scheme:
   1. Chaikin
   2. Corner cutting (with parameters a and b)
   3. 4-point scheme
   4. Generalized 4-point scheme
   5. Uniform splines of degree 3
2. Compute a distance between a given polygon and its subdivision
3. Compute the angles at each vertices of a closed polygon
4. Write a short report (4 to 5 pages including illustrations), with illustration of the implemented subdivision schemes, together with plots showing the convergence of the scheme and the smoothness (C0, C1 or C2) of the limit