

课程视频: <https://www.bilibili.com/video/BV1B54y1B7Uc>

课程教材: Polygon Mesh Processing. Botsch et al.2010

课程主页: http://staff.ustc.edu.cn/~fuxm/course/2020_Spring_DGP/index.html

纸质版教材可到管理科研楼 1203 领取。

大家根据视频进行学习, 完成 13 次作业。具体安排如下:

1. Basic training

Reference: Shortest path (Dijkstra's algorithm) and minimal spanning tree on the triangular mesh

Deadline: 23:59 2020/9/27

2. Curvature estimation and visualization

Deadline: 23:59 2020/10/11

3. Mesh Smoothing

Reference: Bilateral Normal Filtering for Mesh Denoising

Deadline: 23:59 2020/10/18

4. Mesh Parameterization 1

Reference: Tutte's embedding method

Deadline: 23:59 2020/10/25

5. Mesh Parameterization 2

Reference: A Local/Global Approach to Mesh Parameterization

Deadline: 23:59 2020/11/1

6. Mesh Deformation

Reference: As-Rigid-As-Possible Surface Modeling

Deadline: 23:59 2020/11/15

7. Barycentric Coordinates

Reference: Mean value coordinates

Deadline: 23:59 2020/11/22

8. Mesh Interpolation

Reference: As-Rigid-As-Possible Shape Interpolation

Deadline: 23:59 2020/11/29

9. Mesh Simplification

Reference: Surface Simplification Using Quadric Error Metrics

Deadline: 23:59 2020/12/6

10. Cross Fields

Reference: Designing N-polyvector fields with complex polynomials

Deadline: 23:59 2020/12/20

11. Remeshing

Reference: A Remeshing Approach to Multiresolution Modeling

Deadline: 23:59 2020/12/27

12. Optimal Delaunay triangulation

Reference: Optimal Delaunay triangulation

Deadline: 23:59 2021/1/3

13. Lloyd's iteration algorithm

Reference: Variational shape approximation

Deadline: 23:59 2021/1/10

注意事项:

代码框架及数据可在<http://staff.ustc.edu.cn/~fuxm/> 找到。希望使用C++，主要依赖库：Qt, OpenMesh, Eigen。

作业deadline在每周日晚23:59。答疑时间为下一周的周二晚上：从21:20开始。