

Lecture #1: Monday, 29 March 2010
Topics: Course Outline
Lecturer: Leonidas Guibas

Course Outline

March

Mon 29 Introduction; Transformations I

Wed 31 Transformations II

April

Mon 5 Parametric Curve Representations

Wed 7 Polar Forms and Splines
Homework 1 out

Mon 12 Elementary Differential Geometry; Curvature

Wed 14 Sampled Shapes; Normal Estimation

Mon 19 Shape Registration

Wed 21 Shape Matching
Homework 1 due; Homework 2 out

Mon 26 Voronoi and Delaunay Diagrams; Distance Functions

Wed 28 Nearest Neighbor Search

May

- Mon 3 Surface Reconstruction from Density Data
- Wed 5 Surface Reconstruction from Point Sampled Data
Homework 2 due; Homework 3 out
- Mon 10 Remeshing and Smoothing
- Wed 12 Topology I – Classification of Spaces
- Mon 17 Topology II – Homology and Complexes
- Wed 19 In-class Midterm
- Mon 24 Collision Detection
- Wed 26 Motion Planning
- Mon 31 No class; Memorial Day Holiday

June

- Wed 2 No class