Instructor

- Dr. Wei Zeng
- Email: wzeng@cs.fiu.edu
- Office: ECS 357

URL: www.cs.fiu.edu/~wzeng/

Phone: 305-348-2019

Office Hours: Wednesday, 1:00-5:00pm, or by appointment

Lectures

- Time: Friday, 1:00-3:50pm
- Room: ECS 235
- Website: www.cs.fiu.edu/~wzeng/courses/2014-Fall/

Prerequisites

SCIS Graduate Standing (or equivalents, or permission of instructor)

Textbook

None required.

Reading Material


Course Objectives

Students will learn fundamental theories and computational algorithms for conformal geometry, and broad applications in engineering and biomedical fields. The seminar course aims at using computational approach and visualization techniques to teach abstract geometric theories and prepare for Graphics related research. Students will learn the hot topics in graphics and vision by hands-on projects.

Topics

1. Introduction to 2D/3D Computer Graphics: Rendering, Parameterization, Animation
2. Introduction to 3D Computer Vision: Reconstruction
3. Introduction to Geometry & Topology
4. Image Warping, Surface Mapping
5. Image/Surface Registration & Shape Analysis (e.g., face recognition)
7. Paper Reading, Project Discussion

Grading Policies

The grading is based on research projects. Project is created based on lecture content and graduate students' research interests and background, and skill accumulation.

- Midterm (project preparation: paper reading / outline / presentation): 40%
- Final (project implementation: programming / report / presentation / demo): 60%