ELE 491 Special Problems: GUI Based Image Processing Algorithms
Summer Session I, 2007
MW6:00 - 9:45PM  Kelley Hall Rm. 204/205

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Office Hours: MW 4-6 and by appointment just about anytime

Seul, O’Gorman and Sammon ($48.54 from Amazon - New)

Any C++ book for function and syntax reference
Tutorial - www.wxwidgets.org

Grading

Programming Exercises 10%  2 Exams 30%  Final Exam 35%  Project 25%

Week 1
Monday
Introduction
- Image processing
- wxWidgets Program

Wednesday
Grayscale
- Noise reductions
- Edges-Filters

Week 2
Monday Filters
Linear/Nonlinear
- Lowpass, Highpass, Median, …
- Programming filters

Wednesday
- 1-D and 2-D filtering Ch. 5,7
- Programming assignment 1 Handout
- Exam 1

Week 3
Monday - Frequency Analysis
- 2-D Fourier Transforms (Matlab)

Week 4
Monday
- Aliasing
- Windowing

Wednesday – Restoration
- Techniques for eliminating noise
- Geometric transformations

Week 5
Monday
- Matlab and wxWidgets
- Input
- Mouse/user interface

Wednesday
- Presentations
- Final Exam