

EE637 Digital Image Processing

Spring 2012 - Lecture and Laboratory Schedule

Session # (Day)	Laboratory Due Dates	Topic
1. (Jan. 9)		Introduction
2. (Jan. 11)		CTFT and CSFT
3. (Jan. 13)		Rep/Comb Relations
*****Martin Luther King*****		
4. (Jan. 18)		Optical Imaging Systems
5. (Jan. 20)	Image Filtering Lab	Tomography
6. (Jan. 23)		Tomography
7. (Jan. 25)		Magnetic Resonance Imaging (MRI)
8. (Jan. 27)	2-D Random Processes	MRI and C Programming
9. (Jan. 30)		Discrete Transforms
10. (Feb. 1)		Sampling and Scanning
11. (Feb. 3)	Neighborhoods and Connect Comp.	2-D FIR and IIR Filtering
12. (Feb. 6)		2-D Random Processes and Spectral Estimation
13. (Feb. 8)		Filtered Random Processes and AR Models
14. (Feb. 10)	Pointwise Operations and Gamma	Image Topology and Edge Detection
15. (Feb. 13)		Connected Components Analysis
16. (Feb. 15)		Clustering and Segmentation
17. (Feb. 17)		EXAM
18. (Feb. 20)		Achromatic Vision
19. (Feb. 22)		Gamma Correction and Visual MTF
20. (Feb. 24)	Eigen Decomposition	Image Quality Metrics
21. (Feb. 27)		Introduction to Color Matching
22. (Feb. 29)		The Color Cube
23. (Mar. 2)		Subtractive Color
24. (Mar. 5)		Chromaticity Coordinates
25. (Mar. 7)		Chromaticity Diagrams
26. (Mar. 9)	Introduction to Colorimetry	White Point
27. (Mar. 19)		Color Transforms
28. (Mar. 21)		Opponent Color Spaces
29. (Mar. 23)		Perceptually Uniform Color Spaces
30. (Mar. 26)		1-D Decimation and Interpolation
31. (Mar. 28)		2-D Decimation and Interpolation
32. (Mar. 30)	Image Restoration	Optimum Linear Filtering
33. (Apr. 2)		Optimum Linear Filtering
34. (Apr. 4)		Nonlinear and Median Filtering
35. (Apr. 6)		EXAM
36. (April 9)		Digital Halftoning and Screening
37. (April 11)		Digital Halftoning and Error Diffusion
38. (April 13)	Image Halftoning	Introduction to Image Coding
39. (Apr. 16)		Lossless and Huffman Coding
40. (Apr. 18)		Lossless Predictive Encoding
41. (Apr. 20)		Transform Coding
42. (Apr. 23)		Quantization
43. (Apr. 25)		JPEG Encoding Scheme
44. (Apr. 27)	JPEG Image Coding	Review