Prof. A. Zakhor          Spring 2018

EE225B – Digital Image Processing

Information Sheet

Lectures: Tuesday and Thursday, 9:30 am - 11:00 am.  
299 Cory

Lecturer: Professor A. Zakhor  
507 Cory Hall  
Ext. 3-6777  
Email: avz@eecs.berkeley.edu  
Office hours: Thursday, 11:00am - 12:00 pm in  
507 Cory

Texts:


Other useful references:

Outline of Topics:

1. * Image sensing and acquisition, sampling, quantization
2. * Spatial transformations, filtering in space domain and frequency domain.
3. * Image restoration, enhancement, reconstruction; computed tomography
4. * Wavelets and multi-resolution processing
5. * Image and video compression and communication; watermarking
6. * Morphological Image processing
7. * Color processing
8. * Edge detection; feature extraction; SIFT, MSER
9. * Image segmentation
10. * Neural networks and deep learning
11. * 3D image processing
12. * Applications to augmented reality and virtual reality

Homework:

Homework will be issued approximately once every one or two weeks. They will either consist of written assignments, Matlab assignments or C programming assignments. Homework will be graded, and will contribute 55% to the final grade. Homework handed in late will not be accepted unless consent is obtained from the teaching staff prior to the due date. There will be a project that will constitute 35% of your grade. The project can be individual or a group. You are to submit a proposal to the instructor by the end of March. More details on the project will be provided later, and a list of suggested topics will be provided. In addition, 10% of your grade will be for class participation.