

STONY BROOK UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CSE 527: INTRODUCTION TO COMPUTER VISION

Spring 2008

CLASS INFORMATION:

Lectures: Tue/Thu 12:50-2:20
Location: Computer Science Bldg. room 2129

Instructor: Prof. M. Alex O. Vasilescu
Office Hours: Thu 3-4pm
Email: maov@cs.sunysb.edu

Course Description: Introduction to basic concepts in computer vision. Low level image analysis, image formation, edge detection, segmentation. Image transformations for image synthesis, methods for 3D scene reconstruction, motion analysis, object recognition.

Prerequisites: Linear Algebra, Probability, or consent of the instructor.

WWW: <http://www.cs.sunysb.edu/~maov/Classes/vision08/>

Grading:

	Option A	Option B
Problem Sets (~6) with lab exercises in Matlab. Problem sets may be discussed, but all written work and coding must be done individually.	30%	30%
Exams: Two take-home exams. No final exam. (Take-home exams may not be discussed.)	40%	0% No exams
Final Project: <ul style="list-style-type: none">• An original implementation of a new or published idea• A detailed empirical evaluation of an existing implementation of one or more methods Project proposal not longer than two pages must be submitted and approved before the end of March.	30%	70%

Textbooks and Reading material:

- Computer Vision: A Modern Approach, by David Forsyth and Jean Ponce., Prentice Hall, 2003.
- Robot Vision, by Berthold Horn, MIT Press 1986.
- Selected journal articles

Internet Resources:

Matlab:

- [University of Colorado Matlab Tutorials](#)
 - A decent collection of Matlab tutorials, including one focusing on **image processing**.
- [Matlab Image Processing Tutorial](#)
 - A short introduction to the manipulation of images in Matlab, including an introduction to principal components analysis via **eigenfaces**.

Computer Vision: [Computer Vision Homepage](#), [Face Recognition Homepage](#), [Face Detection Homepage](#)