

# CMPT882: Recognition Problems in Computer Vision

Instructor: Greg Mori

Fall 2006

## Course website:

<http://www.cs.sfu.ca/~mori/courses/cmpt882>

## Grading scheme:

- 10% Class participation
- 10% Reading assignments: Students will be expected to submit summaries of the one or two papers assigned each week.
- 10% Paper presentation: Each student will be expected to present one paper (of his or her choosing) in class.
- 10% Assignment: There will be one programming assignment.
- 60% Project (10 proposal, 25 presentation, 25 report): The main component of this course is a substantial project, which may be done individually or in small groups. Students will give a presentation in the last week of classes, and submit a written report (3-8 pages).

## List of topics:

Week 1 (Sept. 6): Administrivia, Intro

Week 2 (Sept. 11, 13): Edge detection, texture

Week 3 (Sept. 18, 20): Shape

Week 4 (Sept. 25, 27): Shape (cont.)

Week 5 (Oct. 2, 4): Face detection, face recognition

Week 6 (Oct. 11): Recognition using local features

Week 7 (Oct. 16, 18): Recognition using local features (cont.)

Week 8 (Oct. 23, 25): Tracking

Week 9 (Oct. 30, Nov. 1): Detecting human figures

Week 10 (Nov. 6, 8): Detecting human figures (cont.), Activity recognition

Week 11 (Nov. 15): Activity recognition (cont.)

Week 12 (Nov. 20, 22): Context: recognizing scenes and locations

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**Week 13 (Nov. 27, 29):** Segmentation and recognition

**Week 14 (Dec. 4):** Project presentations

### **Assignment dates (tentative):**

**A1:** Out week 2, In week 4

**Project proposal:** Out week 4, In week 6

**Project report:** In Dec. 11

### **Textbooks:**

No required texts. The following two books have been placed on hold in the library for reference:

D. Forsyth and J. Ponce, "Computer Vision: A Modern Approach"

E. Trucco and A. Verri, "Introductory Techniques for 3-D Computer Vision"

B. Horn, "Robot Vision"