

# **CMPT882: Recognition Problems in Computer Vision**

**Instructor: Greg Mori**

**Fall 2007**

## **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. 5, 7):** Administrivia, intro

**Week 2 (Sept. 12, 14):** Edge detection, texture

**Week 3 (Sept. 19, 21):** Shape

**Week 4 (Sept. 26, 28):** Shape (cont.)

**Week 5 (Oct. 3, 5):** Face detection

**Week 6 (Oct. 10, 12):** Recognition using local features

**Week 7 (Oct. 17, 19):** No classes, Greg at ICCV

**Week 8 (Oct. 24, 26):** Pedestrian detection

**Week 9 (Oct. 31, Nov. 2):** Detecting human figures

**Week 10 (Nov. 7, 9):** Tracking

**Week 11 (Nov. 14, 16):** Activity recognition

**Week 12 (Nov. 21, 23):** Context, recognizing scenes and locations

**Week 13 (Nov. 28, 30):** Project presentations

**Assignment dates (tentative):**

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

**Project proposal:** Out week 4, in week 8

**Project report:** In Dec. 14

**Textbooks:**

No required texts. The following 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”