Computing Science Course Outlines 2018 Spring

CMPT 822 - G100 Computational Vision

Instructor(s): Brian Funt

SFU Burnaby

Calendar Objective/Description:
A seminar based on the artificial intelligence approach to vision. Computational vision has the goal of discovering the algorithms and heuristics which allow a two dimensional array of light intensities to be interpreted as a three dimensional scene. By reading and discussing research papers - starting with the original work on the analysis of line drawings, and ending with the most recent work in the field - participants begin to develop a general overview of computational vision, and an understanding of the current research problems.

Instructor's Objectives:
Please note that the calendar description for CMPT 822 is completely out of date and does NOT accurately reflect the content of this course, which is specifically on computational colour, not computer vision in general. By reading and discussing recent research papers on colour, we will attempt to understand the recent advances in digital colour imaging, colour perception, colour printing, and colour-based object recognition. While all the different aspects and applications of colour research interrelate, our primary focus will be on computational models of colour perception. Colour is an area that touches on many fields beyond Computing Science---Psychology, Engineering Science, Physics, Mathematics, Communications---so, graduate students from these other fields are welcome in the seminar. There is no specific prerequisite for the seminar (other than being interested in colour). Math ability is an asset. Please feel free to contact me if you'd like to discuss your background or to get further details about the course. The course will run as a discussion seminar, not a lecture. Good preparation for discussion and a willingness to contribute actively to the seminar are crucial.

You can find a link to the course evaluations for CMPT 822 on http://www.cs.sfu.ca/~funt/

Prerequisites:
None

Grading:
Grading will be based primarily on participation in the class discussion. This will be discussed in detail at the first class. I try to make it safe and comfortable for everyone to contribute to the discussion, but some shy students have found fully participating in this course a little difficult. On go.sfu.ca you'll see a final exam time for this course, but there will NOT be a final exam.

Academic Honesty Statement:
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).