Visual Object Recognition
Computational Models and Neurophysiological Mechanisms
Neurobiology 130/230. Harvard College/GSAS 78454

Web site: http://tinyurl.com/visionclass
→ Class notes, Class slides, Readings Assignments

Location: Biolabs 2062
Time: Mondays 03:00 – 05:00

Lectures:
Faculty: Gabriel Kreiman and invited guests
TA: Emma Giles

Contact information:
Gabriel Kreiman  Emma Giles
gabriel.kreiman@tch.harvard.edu  emmagiles@g.harvard.edu
617-919-2530
Office Hours: After Class. Mondays 5pm, or by appointment
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GRADING

Class participation 15%
Comments on class notes* 15%
Homework* 50%
Final paper* 20%

Reading assignments. [60% of grade]
One paper per class.
Total of 11 reading assignments.
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GRADING. Comments on class notes* 15%

Lecture notes available at:
klab.tch.harvard.edu/academia/classes/Neuro230/2018/Neuro_130_230_Notes_2018.html

Maximum grade per week = 10 points.

- Spelling/grammar/wrong citation/wrong figure reference/etc: 1 point
- Undefined word in text, undefined variable in equation: 2 points
- Error in equation: 5 points
- Erroneous statement: 5 points
- Suggestion for figure improvement: 4 points
- Specific clarification question: 3 points
- Relevant work missing in notes: 3 points

Filename: <YOURNAME>_LECTURE<LECTURENUMBER>_COMMENTS

Format: PDF, Word, Text, Latex

Lecture number, line number, your comments/edits

Due date: Monday, day of the lecture at midnight.

By email: emmagiles@g.harvard.edu
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GRADING. Homework* 50%

One reading assignment per class.
Original scientific literature
Total of 11 reading assignments
Write two paragraphs about the paper:

Paragraph 1: Discuss one missing control or one problem with the interpretation.

Paragraph 2: Discuss a logical follow-up question.
Note: Do NOT copy and paste the paper. We have already read it.

Filename: <YOURNAME>_Assignment<AssignmentNumber>
Format: PDF, Word, Text, Latex
Due date: One week after assignment discussion in class.
   Monday, midnight. See specific dates on website.
By email: emmagiles@g.harvard.edu
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Class 1 [09/10/2018]. Introduction to pattern recognition [Kreiman]
Class 2 [09/17/2018]. Why is vision difficult? Natural image statistics. The retina. [Kreiman]
Class 3 [09/24/2018]. Lesions and neurological studies [Kreiman].
Class 4 [10/01/2018]. Psychophysics of visual object recognition [Sarit Szpiro]

October 8: University Holiday

Class 5 [10/15/2018]. Primary visual cortex [Hartmann]
Class 6 [10/22/2018]. Adventures into terra incognita [Frederico Azevedo]
Class 7 [10/29/2018]. High-level visual cognition [Diego Mendoza-Haliday]
Class 8 [11/05/2018]. Correlation and causality. Electrical stimulation in visual cortex [Kreiman]
Class 12 [12/03/2018]. The operating system for vision. [Xavier Boix]

Recommended books

Suggested Books


Other good books

Academic Integrity Policy

All reading assignments will be discussed in class. During class, collaboration and discussion is not only permitted but actually encouraged.

After class, each student must prepare the homework on his/her own. Students should be aware that in this course collaboration of any sort on any work submitted for formal evaluation is not permitted. This means that you may not discuss your problem sets, paper assignments, exams, or any other assignments with other students. All work should be entirely your own.

The use of textbooks, books and articles is encouraged. Students must use appropriate citation practices to acknowledge the use of books, articles, websites or lectures, that were consulted to complete your assignments.
Reading Assignment 1


Reading assignment due: Monday 09/24

Reading Assignments Link