COS598B/PSY594 Spring 2008:
Vision: From Neuronal Mechanisms to Computational Models

Syllabus
(last update: 2008.03.26)

Instructor: Prof. Fei-Fei Li
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Office hour: by appointment

Course website: http://www.cs.princeton.edu/courses/archive/spring08/cos598B/
Course mailing list signup: https://lists.cs.princeton.edu/mailman/listinfo/cos598b_spr08
Course location and time:
Monday, 1:30pm – 4:20pm, Room 301 CS Bldg

Course assignments:
A short summary of one-two papers assigned weekly (due the Sunday night before)
Paper presentations
1 final project

Grading policy:
Attendance and class participation: 20%
Summaries, and Paper presentations: 30%
Final project: 50%

Suggested readings:
Scientific papers

Important dates:
Final project write-up due (05/13/2008)

Scribe!

Syllabus:

<table>
<thead>
<tr>
<th>Date</th>
<th>Description and Readings</th>
<th>Readings</th>
<th>Lecturer</th>
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<tbody>
<tr>
<td>1 Mon, Feb 04</td>
<td>Administrative matter; A case study: natural scene categorization</td>
<td>Gross, 1992; Bear et al. Neuroscience (Chp. 9 &amp; 10), 2001</td>
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<tr>
<td>2 Mon, Feb 11</td>
<td>The primate visual pathway</td>
<td>Tanaka, 1996; Kanwisher et al, 1997; Gauthier et al. 1999; Tarr &amp; Gauthier 2000</td>
<td>Charlie Gross</td>
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<td>3 Mon, Feb 18</td>
<td>Object parts in IT; Faces in FFA</td>
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<td>5</td>
<td>Mon, Mar 3</td>
<td>Segmentation</td>
<td>TBA</td>
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<td>Mon, Mar 24</td>
<td>No class</td>
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<td>7</td>
<td>Mon, Mar 31</td>
<td>Computer Vision models for object recognition</td>
<td>Ullman et al. 2002; Felzenszwalb et al. 2005</td>
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<td>8</td>
<td>Mon, Apr 7</td>
<td>Objects in scenes; Attention and objects</td>
<td>Treisman &amp; Gelade 1980. Thorpe et al. 1996; Ahissar &amp; Hochstein 2004</td>
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<td>9</td>
<td>Mon, Apr 14</td>
<td>Modeling object-based attention</td>
<td>Itti et al. 1998; Lowe 2000, 2004</td>
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<td>10</td>
<td>Mon, Apr 21</td>
<td>Objects in context</td>
<td>Bierderman 2004; Bar 2003, 2004</td>
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<td>12</td>
<td>TBA</td>
<td>Course project presentation</td>
<td>TBA</td>
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<td>Tues, May 13</td>
<td>Dean’s Day</td>
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**References**

Lecture #2:

Lecture #3:

Lecture #4:


Lecture #6:


Lecture #7:


Lecture #8:


Lecture #9:


Lecture #10:

Lecture #11: