Linking Neural and Perceptual Systems
LIFS 6000B and ELEC6910U 1-credit
Instructor: Professor Cynthia Moss
Spring 2019: Wednesday 3-5 p.m.
Meeting Room: CYT G003

In this graduate seminar, we will read and critique original research articles concerned with the neural underpinnings of perception, with a focus on vision and audition. We will begin with a general discussion of "linking propositions" and then focus on special topics that bridge neurophysiological and perceptual data in different modalities. Students will work individually and in teams to select papers and lead discussions on the following topics:

Vision	**Audition**
Contrast sensitivity and acuity	Critical bands and critical ratios
Stereopsis	Pitch perception
Motion perception	Sound localization
Object recognition	The precedence effect
Color perception	Auditory scene analysis
Active vision	Active listening

Assignments: Each student will be responsible for ***selecting/presenting key research articles and leading class discussion on two topics*** during the course of the semester, preferably one in vision and another in audition. At the end of the semester, each student will submit a ***3-5 page reflection paper*** on a topic in which researchers attempt to relate perceptual states to physiological states. Students are expected to complete all requirements to earn credit for the course.

Schedule

January 30	Course introduction and organizational meeting
February 6	No class (holiday)
February 13	Discussion of Davida Teller's "Linking Propositions" (on Canvas)
February 20	Topic 1
February 27	Topic 2
March 6	Topic 3
March 13	Topic 4
March 20	Topic 5
March 27	Topic 6
April 3	Topic 7
April 10	Topic 8
April 17 (last meeting)	Topic 9

Recommended Resources

The Ecological Approach to Visual Perception
James J. Gibson
ISBN-13: 978-1848725782
ISBN-10: 1848725787

Visual Perception: Key Readings
Steve Yantis
ISBN-13: 978-0863775987
ISBN-10: 9780863775987

Visual Perception
Tom N. Cornsweet
Academic Press: New York

An Introduction to the Psychology of Hearing
Brian C. J. Moore
ISBN-13: 978-0125056281
ISBN-10: 0125056281

Auditory Scene Analysis
Albert S. Bregman
Cambridge, MA, US: The MIT Press

Fundamentals of Hearing
William Yost
ISBN-13: 978-9004236387
ISBN-10: 9789004236387

An Introduction to the Physiology of Hearing
James O. Pickles
ISBN-13: 978-9004243774
ISBN-10: 9004243771