

The Department of Cell Biology and Neuroscience presents:

Departmental Seminar

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Querying for Relevant Stimuli: *“What you show is what you get!”*

Friday, Feb. 1st, 2008 - 2:00pm
108 Ag/Plant Bioscience Building

Can the characteristics of behaviorally relevant stimuli be determined objectively by querying the sensory systems themselves, without making strong a-priori assumptions concerning the nature of these stimuli? Conversely, do the stimuli presented to an animal affect the conclusions about its sensory capabilities? I believe the answer is “Yes” in both cases. I show how in simple models the classic techniques of sensory physiology can produce a distorted view of the sensory systems' function. I use adaptive sampling tools to guide the stimulus to its "optimal" distribution, thus characterizing the unbiased functional properties of sensory systems. The methods are then applied to observations from the cricket cercal (Miller) and cat visual (Gray) systems.