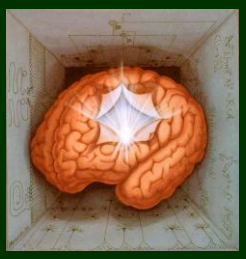

University of Rochester
School of Medicine and Dentistry

Department of Neurobiology & Anatomy **presents**

Elizabeth Doty Lecture

John H. R. Maunsell, PhD

Alice and Rodman W. Moorhead III
Professor of Neurobiology
Harvard Medical School

Attention, Perception, and the Representations of Visual Stimuli by Neuronal Populations

Visual attention improves perception at attended locations. It has long been known that attention is associated with stronger responses from neurons that represent stimuli at an attended location, but only recently has it been practical to record simultaneously from many neurons in animals while they direct their attention toward or away from a stimulus that drives them. These population recordings have revealed that attention is associated with a pronounced reduction in the correlated variability between pairs of neurons that respond to the same stimulus. Theoretical considerations suggest that this reduction in correlation can greatly increase the amount of information that a population of neurons represents about a stimulus, and is likely to be of much greater significance for perception than a change in the strength of their responses. Changes in population responses that are associated with improved perceptual reports provide valuable clues about the way sensory information is encoded in the brain.

Monday, 12 May 2014
4:00 PM
Class of 1962 Auditorium (G-9425)

Refreshments