WHITAKER BIOMEDICAL ENGINEERING INSTITUTE

DEPARTMENT OF BIOMEDICAL ENGINEERING
FRIDAY SEMINAR SERIES

David Ferster, Ph.D.

Professor
Department of Neurobiology & Physiology
Northwestern University

"How threshold shapes selectivity in the primary visual cortex"

DATE:	November 10, 2006
TIME:	1:00 p.m. – 2:00 p.m.
PLACE:	**Traylor 709** Videoconferenced to Clark 110
Host:	Xiaoqin Wang and Srivatsun Sadagopan

Abstract: Since Hartline described lateral inhibition in the the 1940's, it has been assumed to shape receptive field selectivity in many sensory domains. In visual cortex, lateral inhibition-in the form of cross-orientation inhibition-has been invoked to explain the sharpness of orientation tuning, cross-orientation suppression, contrast invariance of orientation tuning, and other nonlinear properties of cortical neurons. Intracellular recording from cortical neurons suggest, however, that the behavior of cortical simple cells can be accounted for by a simple feed-forward model, one that lacks lateral inhibition, but that incorporates the nonlinearities of the visual pathway, such as contrast saturation, rectification, neuronal threshold, and trial-to-trial variability of responses.

Any questions, contact 410-955-3132.
Check the web for a complete list. www.bme.jhu.edu/news/seminars

JOHNS HOPKINS UNIVERSITY
720 RUTLAND AVENUE, BALTIMORE, MD 21205

For Disability Access Information
Contact: Joyce Bankert: 410-955-3132: jbankert@bme.jhu.edu