



## Biomedical Engineering Seminar Series



Johns Hopkins School of Medicine and the Whiting School of Engineering

### **Paul E. Cisek, PhD**

Assistant Professor  
Department of Physiology  
University of Montreal  
Montreal, Canada

### **Monday, February 6, 2012, at 1:30**

Medicine Campus, Talbot Library, Traylor 709  
Video-teleconferenced to Homewood Campus,  
Rome Room, Clark 110

Host: Dr. Reza Shadmehr  
Light lunch will be served in Traylor 709



## **Neural mechanisms for committing to a choice about action**

### Abstract:

Classical psychological theories describe the functional architecture of behavior as a series of separate processes for perceiving and representing the world, then thinking about it, and finally acting upon it. However, this intuitive and influential view is not well-supported by neurophysiological data, in which sensory, cognitive, and motor functions appear distributed through diverse brain regions and often mixed within the activity of single neurons. As an alternative, I will describe a functional architecture based on theories from ethology, which suggests that behavior involves a continuous competition between potential ways to interact with the world. I will present the results of several neurophysiological studies supporting some of the key predictions of this alternative way of looking at how the brain implements behavior, focusing on studies of how we make decisions between actions.

### Upcoming Seminar

February 13: King Wai Yau, Johns Hopkins University

February 27: Michael Smith, Boston University

March 5: Graham Wright, University of Toronto

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