
*Wednesday, May 15th, 2013
10h30, Room: CM 011*

Computational Neuroscience Seminar

Joshua BROWN,
Dpt. of Psychological and Brain Sciences,
Indiana University

**Cognitive control as a process of prediction
and evaluation**

To err is human. People make mistakes and are able to recognize their mistakes. Furthermore people can learn when they are likely to make mistakes in the future, and sometimes they can avoid altogether situations in which things are likely to go wrong. The medial prefrontal cortex is a key part of a network involved in recognizing and avoiding mistakes. I will describe a recent computational neural model of how mistakes are anticipated and recognized. The model builds on the simple notion that the brain forms expectations about how things should work out and then compares those expectations against what actually happens (or fails to happen). I show how the model accounts for a variety of behavioral, neurophysiological, and neuroimaging data from humans and monkeys.

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