
*Thursday, November 8th, 2012
13h30, Room SG 0213*

Computational Neuroscience Seminar

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**A compound mechanism of deprivation-mediated sensory surround
potentiation in the adult somatosensory cortex**

The responses of neurons in the auditory system to sounds depend not only on the sound itself but also on the temporal context in which the sound occurred. I will discuss here one manifestation of this context-sensitivity, Stimulus-specific adaptation (SSA). SSA is the reduction in the responses to a common sound which does not generalize, or generalizes only partially, to other, even rather similar sounds. I will show that SSA reflects information accumulation over tens of stimulus presentations and tens of seconds, and that it is sensitive to subtle features of the stimulus sequence. While SSA in subcortical stations may be accounted for by simple adaptation followed by frequency integration, cortical SSA cannot be accounted for by such mechanisms, and may reflect a true sensitivity to statistical surprise.