

# February 18, 2009

## Influence of on-line motor information and motor learning on perception

**Prof.ssa Lisa Scocchia**  
Milano Bicocca University  
Department of Psychology

### ABSTRACT OF THE TALK

Growing experimental evidence challenges the view that the motor system is exclusively dedicated to the control of actions, but it rather supports the idea of a dynamic interplay between the motor and the perceptual systems. This presentation will address this issue by illustrating original experimental results and by linking them to new research proposals.

We will first provide evidence for the use of on-line motor information when observers judge the position of a moving stimulus that they actively control: the flash-lag effect (FLE), a visual mislocalization of a moving stimulus relative to a static one, is influenced by the observer's direct control over the moving stimulus. Secondly, we will present a study that shows the effect of motor learning on heaviness perception: participants were required to perform a 2AFC force discrimination task over three experimental sessions and their differential thresholds were found to decrease across sessions. Finally, we will put forth new research ideas in light of the presented data and of the paradigms we employed to collect and analyze them. For instance, behavioural and electrophysiological methods may be used to test the role of motion simulation during motion perception within the FLE framework. Furthermore, we may exploit the paradigm used in the second study to compare the role of visual and motor learning and model their relative contribution in a motion inference task.