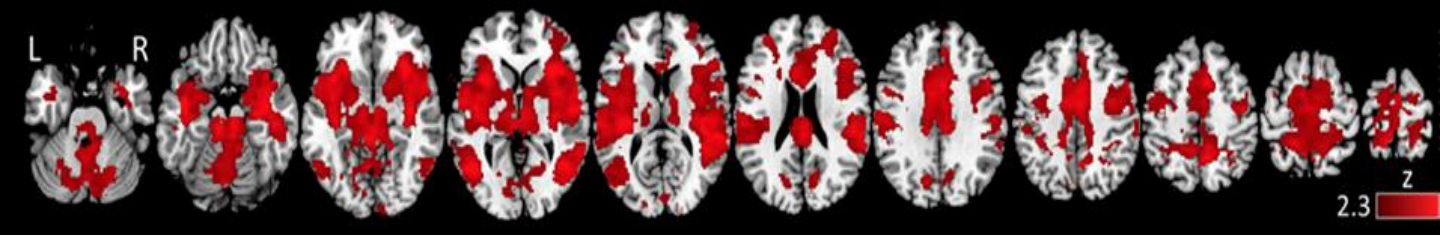


## 16 July 2018, 12.30 p.m.

**"DPG-1" Meeting Room**

"Psico-1" Building, *ground floor*

Via Venezia 8, Padova

# Giandomenico Iannetti

***University College London***

# From pain to defensive actions:

## saliency detection as a reactive process

The most important function of the nervous system is to relate us to the rest of the world through perception and action. Both consciously and unconsciously, nervous systems use information about the environment to make decisions that result in actions appropriate to cope with the world. Nervous systems are particularly sensitive towards the detection of salient environmental events that need to be rapidly acted upon, to facilitate survival and reproduction. The large electrocortical or blood-flow based brain responses elicited by salient stimuli reflect a basic mechanism through which the human brain detects and purposefully reacts to behaviourally-relevant sensory events, regardless of their perceptual quality. These neurophysiological responses elicited by salient stimuli have been traditionally interpreted within the sensory domain. We recently described a basic physiological mechanism coupling saliency-related cortical responses, which modulate motor output following a complex triphasic pattern. Thus, sudden environmental stimuli have an immediate effect on motor reactivity, suggesting that saliency detection is not merely perceptive but reactive, preparing the animal for subsequent appropriate actions.

Università degli Studi di Padova

**Department of General Psychology**