

Internship proposal 2016-2017

Host laboratory: Laboratoire sur le Langage, le Cerveau et la Cognition (L2C2) - CNRS UMR5304, Institut des Sciences Cognitives "Marc Jeannerod"
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Internship supervisor: PAPEO Liuba, CR2 CNRS, liuba.papeo@isc.cnrs.fr, Tel. 04 37 91 12 47

Title of project: The neural and psychological representation of events

Summary of project: An event such as “reading” is both “following lines of print” (more concrete representation) and “gaining knowledge” (more general representation). Our research is built upon the fact that the same event can be represented at many levels, and that different cognitive and neural mechanisms are recruited in parallel to process different levels of representation. We study how the interplay between different cognitive processes (and brain areas) carrying different information determines the way in which individuals interpret events. Moreover, we know that individuals show a disposition to engage in more concrete or more general levels of representation of events. Our research aims at developing a neurocognitive framework that accounts for how individuals interpret events and why different individuals do it differently.

We take advantage of a combination of methodologies to study the human adults, including behavioral paradigms, non-invasive brain stimulation (Transcranial Magnetic Stimulation, TMS) and functional neuroimaging (functional Magnetic Resonance Imaging, fMRI).

During his/her M2 project, the student will be involved in the design of experiments on the perceptual and conceptual processing of events, and in the collection of behavioral data in healthy normal adults. She/he will acquire essential knowledge of descriptive and inferential statistics for data analysis. She/he could attend fMRI and/or TMS sessions to get familiar with the environment.

3-5 recent publications

Papeo L., Lingnau A., Agosta S., Pascual-Leone A., Battelli L., Caramazza A. (2014). The origin of word-related motor activity. *Cerebral Cortex*, doi: 10.1093/cercor/bht423

Papeo L., Lingnau A. (2015). First-person and third-person verbs in visual motion-perception regions. *Brain and Language*, 141, 135-141

Papeo L., Rumiati R.I., Cecchetto C., Tomasino B. (2012). On-line Changing of Thinking about Words: The Effect of Cognitive Context on Neural Responses to Verb Reading. *Journal of Cognitive Neuroscience*, 24, 2348-2362.

Papeo L., Vallesi A., Isaja A., Rumiati R.I.(2009). Effects of TMS on different stages of motor and non-motor verb processing in the primary motor cortex. *PLoS ONE* 4(2): e4508