



Département de psychiatrie
Centre de neurosciences psychiatriques
Site de Cery
CH-1008 Prilly - Lausanne

Centre de Neurosciences Psychiatriques

CNP SEMINAR

ANNOUNCEMENT

Friday, December 15, 2017, 14:00

“Peripersonal space as the space of the self”

Prof. Andrea Serino

Department of Clinical Neuroscience, CHUV
Center for Neuroprosthetics, EPFL, Lausanne
MindMaze, SA

Invited by Kim Do
(Kim.Do@chuv.ch)

Salle Hironnelle
Hôpital Psychiatrique de Cery
Site de Cery, CH-1008 Prilly-Lausanne

Abstract:

The experience of our embodied Self is not limited to the physical constraints of our body, but it extends into the space where the body interacts with the environment and with other people, i.e. within the peripersonal space (PPS).

While previous studies conceived PPS as a low-level sensory-motor interface for hand-objects interaction, I propose that the human brain builds a global representation of PPS around the whole body as a primary extension of the self in space. To support this view, I will first show how a whole-body PPS, centered at trunk, exists, and incorporates body parts specific PPSs around the hand and the face. I will then demonstrate that if we induce a spatial shift in the experienced location of the self, by manipulating multisensory bodily inputs, as during the Full Body Illusion, the whole body PPS congruently shifts from the location of the physical body to that of the experienced self. Finally, I will present new data suggesting that such experimentally induced shift in self-location and PPS representation affects not only low-level sensory processing, but also high-level cognition, such as semantic processing and social cognition. Taken together, these findings will suggest a close relationship between the extent of PPS representation and Self-consciousness.

Selected publications:

1. Blanke O, Slater M, **Serino A**. Behavioral, neural, and computational principles of bodily self-consciousness. *Neuron*. 2015 88(1), 145-166.
2. **Serino A**. Variability in Multisensory Responses Predicts the Self-Space. *Trends Cogn Sci*. 2016 20(3):169-70.
3. Noel JP, Pfeiffer C, Blanke O, **Serino A**. Peripersonal Space as the space of the Bodily Self. *Cognition*. 2015;144:49-57
4. Teneggi C, Canzoneri E, di Pellegrino G, **Serino A**. The space between us: social modulation of Peripersonal space boundaries. *Current Biology*, 2013. 23(5):406-11.
5. Blanke O, Pozeg P, Hara M, Heydrich L, **Serino A**, Yamamoto A, Higuchi T, Salomon R, Seeck M, Landis T, Arzy S, Herbelin B, Bleuler H, Rognini G. Neurological and robot-controlled induction of an apparition. *Current Biology*, *Curr Biol*. 2014 ;24(22):2681-6.