

SEMINARIO / SEMINAR

Titolo / Title:

Neuromodulation of cognitive functions using visuomotor adaptation paradigms

Quando / When:

13 maggio, ore 15:00 / 13 May 2021 at 15:00 CET

Dove / Where:

Online (Microsoft Teams)

<https://teams.microsoft.com/l/meetup-join/19%3a0b724a844f004f47bbf9e6bfc4ccc1b8%40thread.tacv2/1619603669686?context=%7b%22Tid%22%3a%2241f8b7d0-9a21-415c-9c69-a67984f3d0de%22%2c%22Oid%22%3a%22aebf9932-2c06-4b91-862f-ae81e43ca747%22%7d>

Relatore / Speaker:

Massimiliano Oliveri, Department of Psychology, University of Palermo

Abstract:

Non-invasive neuromodulation techniques, such as TMS, tDCS and tACS, have been increasingly used to modulate brain excitability in both healthy subjects and patients with brain damage. Recent advances in this field of research proved the visuomotor adaptation using prismatic adaptation can also modulate cortical excitability depending on the direction of visual distortion, i.e. with increase of cortical excitability of parieto-frontal regions of the brain hemisphere ipsilateral to the visual field's deviation. I will review recent neurophysiological, functional neuroimaging and behavioral studies showing the applications of this new neuromodulation tool and its power for rehabilitation of cognitive deficits in a variety of populations with neurological damage.

Bio:

MD with a specialization on Neurology, after receiving a Ph.D. in neuropsychology from the University of Rome La Sapienza in 2001, Dr. Oliveri completed a post-doctoral fellowship at Harvard Medical School, working with Alvaro Pascual Leone and Alfonso Caramazza. For several years he worked as a researcher at Fondazione Santa Lucia IRCCS of Rome, where he led a brain stimulation group investigating the neurophysiological correlates of cognitive functions. He then joined the psychology department at the University of Palermo, where he is a full professor of cognitive neuroscience. Dr. Oliveri's main research interests are in the field of non-invasive neuromodulation, using techniques such as TMS, tDCS and tACS applied in both healthy subjects and patients with brain damage with rehabilitative purposes. Since 2009 he also started investigating the applications of visuomotor adaptation techniques, such as prismatic adaptation, in order to explore their ability to modulate the excitability of brain networks, in addition to the well-known application of rehabilitation of spatial disorders in right brain damaged patients with spatial neglect. In this field of research, he developed new tools for non-invasive neuromodulation based on the integration of prismatic adaptation with digital medicine solutions. Dr. Oliveri's work (over 130 publications) has been published in different international journals, including Brain, Science and Lancet.

