

Sapienza Neuroscience Webinar 2023-2024:

Webinar title: *EEG Correlates of Primary Consciousness: What Do They Tell Us?*

Core Contents:

An emerging property of the brain function is its electrical oscillatory activity in relation to the level of vigilance, consciousness, and sensory information processes. Non-invasive brain stimulations by transcranial magnetic stimulations (TMS) and high-resolution electroencephalographic (EEG) techniques can unveil neurophysiological mechanisms of consciousness in healthy persons and patients with brain disorders. Three experts will update and discuss the results of EEG experiments from a paradigmatic angle of human consciousness, unveiling the neurophysiological basis of the consciousness of sensory stimuli (i.e., the primary consciousness). They promise our actual view of neurophysiological mechanisms generating human consciousness may be significantly enriched from the fascinating angle of the Cognitive and Clinical Neurosciences.

Scientific Program:

***Dr. Maria Del Vecchio** (CNR of Parma), *EEG Correlates of Somatosensory Primary Consciousness* (20 minutes)*

***Prof. Claudio Babiloni** (Sapienza University of Rome), *EEG Correlates of Visual Primary Consciousness* (20 minutes)*

***General Discussion:** **Dr. Pietro Avanzini** (CNR of Parma), **Dr. Maria Del Vecchio**, and **Prof. Claudio Babiloni** (20 minutes)*

Date: *January 31, 2024, 03:00 at 04:00 pm CET*

Zoom Link:

<https://uniroma1.zoom.us/j/83930784441?pwd=ektNZ0EvQ0tGSnEzWjkzd3JWQzZIUT09>

Participants' Biosketches

***Dr. Maria Del Vecchio** holds a Master's Degree in Biomedical Engineering (2013) from Università degli Studi di Tor Vergata (Italy) and a Ph.D. in Neuroscience (2020) from Università degli Studi di Modena e Reggio Emilia (Italy). She is a former Marie-Sklodowska Curie Scholar (Finland). In 2023, she was appointed as a Research Engineer (Data Scientist) at Istituto di Neuroscienze - Consiglio Nazionale delle Ricerche (IN-CNR) in Parma (Italy). Her research interests cover the study of neurophysiological oscillatory mechanisms underlying sensory awareness and perception, mirror neuron systems, and action understanding by using advanced EEG techniques.*

Prof. Claudio Babiloni held a Master's Degree in Clinical Psychology (1986) from Sapienza Università di Roma (Italy) and a Ph.D. in Biomedical Sciences from Aalborg University (2000). He was appointed Associate Professor of Physiology at the University of Foggia (Italy) in 2007 and Full Professor of Physiology at the Sapienza University of Rome in 2022. His research interests cover the study of neurophysiological oscillatory mechanisms underlying visual primary consciousness and the transitions of vigilance/consciousness levels in healthy humans and their derangement in brain diseases, with a special focus on Alzheimer's, Parkinson's, and related disorders. He is the leader of the PDWAVES Consortium (www.pdwaves.eu) and the senior leader of the Special Interest Group in "Advanced EEG/MEG Techniques in Clinical Neurophysiology" of the International Federation of Clinical Neurophysiology (IFCN).

Dr. Pietro Avanzini holds a Master's Degree in Biomedical Engineering (2006) from Università di Bologna (Italy) and a Ph.D. in Neuroscience (2015) from Università degli Studi di Modena e Reggio Emilia (Italy). He was appointed as a Research fellow at Università di Parma (Italy) in 2008, a Research Scientist in 2016, and a Senior Research Scientist in 2020 at the Istituto di Neuroscienze - Consiglio Nazionale delle Ricerche (IN-CNR) in Parma. His research interests cover the study of cortical areas endowed with action observation and human consciousness by EEG and neuroimaging techniques. He is currently investigating how action observation can become an efficient and sustainable tool in neurorehabilitation, conducting studies on clinical populations like people with cerebral palsy, perinatal stroke survivors, and traumatological patients.