

**SAVE the DATE !**

**April 4-5 2022**

**Workshop on Human non-invasive neurostimulation and neuronavigation**

**Morning talks : Espace Pouillon (bât 6) Campus St Charles**

**Afternoon practical sessions in TMS setups in Campus St Charles and Campus Timone**

**Organizing committee : Anna Montagnini (INT), Marie-Hélène Grosbras (LNC), Mireille Bonnard (INS), Régis Mancini (LPC), Laure Spieser (LNC) and Françoise Vitu (LPC)**

**The complete program and registration site will be available soon on <https://neurostim-2022.sciencesconf.org/> (registration is free but mandatory, the maximum number of participants will be limited to 50). The workshop is intended for all interested people of the Neuroscience community, not only for experts of neurostimulation techniques. Students are warmly encouraged to participate.**

List of confirmed speakers

Antoni Valero-Cabré (Institut du Cerveau, Paris)

Sylvain Harquel (LPNC, Université Grenoble-Alpes)

Marco Davare (Brunel University, London)

Olivier David (INS, Aix-Marseille Université)

Chotiga Pattamadilok (LPL, Aix-Marseille Université)

Jacintha O'Shea (Oxford University)

Lorella Battelli (Harvard University and Istituto Italiano di Tecnologia) - Remote conference

Workshop description

Over the past 30 years, human non-invasive brain stimulation, including transcranial magnetic stimulation (TMS) and electrical stimulation (TES), has made important contributions in many disciplines, ranging from behavioral neuroscience to psycholinguistics. This tool allows us to question the causal relationship between brain structures and cognitive functions in humans. Moreover, thanks to MRI-based neuro-navigation the area targeted by the stimulation can now be localized with a remarkable spatial resolution. In parallel with fundamental research, the clinic has taken up these techniques in the treatment of psychiatric or neurological disorders. However, important technical and interpretative questions remain unanswered, such as the detailed characterization of the electromagnetic field induced by the stimulation in the brain and its consequences on neuronal physiology. A first objective of our workshop is to present to the Aix-Marseille community the principles as well as the recent evolution of non-invasive stimulation techniques, with a critical look at the still ill-defined points and the limits both from the point of view of brain studies and clinical applications. These topics will be addressed during two mornings of presentations from internationally renowned scientists in this field, as well as by a roundtable and remote conference in the afternoon. In addition, "hands-on" workshops on the use of stimulators and neuronavigation equipment will be conducted by expert researchers, as well as by technical staff, during two afternoon sessions.