
MAROM BIKSON

CV

PARTICIPANT AT:

A DIALOGUE WITH THE CEREBRAL CORTEX: CORTICAL FUNCTION AND INTERFACING

April, 29th-30th, 2015, Barcelona

Marom Bikson, Professor, Department of Biomedical Engineering, **The City College of New York**, New York City, USA

Catell Professor of Biomedical Engineering at The City College of New York. Co-Director of the Translational Medical Device Development Program and Neural Engineering group at the New York Center for Biomedical Engineering. Fellow American Institute for Medical and Biological Engineering. Author of more than 140 articles and 30 patents. Co-inventor of High-Definition transcranial Direct Current Stimulation (HD-tDCS) and Limited Total Energy tDCS (tDCS-LTE). Co-founder and CEO of Soterix Medical Inc. Scientific Advisory Board of Boston Scientific Inc. and consultant to numerous medical device companies and agencies. Technology Editor for Brain Stimulation Journal. Founding chair Neuromodec NYC Neuromodulation conference and co-director Neuromodec tDCS Workshop.

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ABSTRACT

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Modulating Brain Processing and Learning with Targeted Non-Invasive Electrical Stimulation

Abstract: Over the past decade, new technologies that allow painless non-invasive modulation of brain function with electricity have been investigated to treat a broad range of neurological and psychiatric disorders, facilitate rehabilitation after brain injury, and enhance cognitive performance in healthy individuals. In particular, transcranial Direct Current Stimulation (tDCS) is investigated in over 500 clinical trials. This talk explains the cellular mechanisms by which weak electrical current can modulate brain processing and enhance plasticity. “Functional Targeting” allows tDCS to boost specific brain networks activated by adjunct interventions such as rehabilitation and cognitive training. State-of-the-art techniques for clinical grade tDCS are presented including High-Definition tDCS (HD-tDCS) and methods to optimize and individualize stimulation.

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