

COST Action BM1309: European network for innovative uses of EMFs in biomedical applications (EMF-MED)

Call for abstracts

EMF interactions with excitable tissues can interfere with signalling activity. While some interactions are unintended (e.g., nerve stimulation by gradient field in MRI), EMF may be applied specifically to achieve beneficial effects, e.g., to induce, suppress, or synchronize (across neurons) spiking and signal propagation. Examples include deep brain stimulation with implanted electrodes, e.g., to manage chronic pain, tremor, dystonia, or Parkinson's disease; magnetic stimulation, and neuroprosthetics. The latter uses external or implanted electrodes to replace lost sensory functionality – e.g., retinal, vestibular, cochlear prostheses for blindness, balance loss, and hearing deficiencies, respectively – or motor action, e.g., to overcome paralysis. Simulating such applications – to develop and optimize devices, improve mechanistic understanding, or assess risk – requires the integration of dynamic neuron models in anatomical models, and coupling of EM and neuron simulations. Transcranial magnetic stimulation (TMS) and transcranial electric stimulation (such as transcranial direct current stimulation tDCS, or transcranial alternating current stimulation tACS) are techniques for non-invasive application of magnetic and electrical stimuli to induce electrical currents in brain tissue, modulating neuronal activity in the brain.

Topics List

- Transcranial Magnetic Stimulation
- Transcranial Direct Current Stimulation
- Neurophysiology
- Animal Studies
- In vitro studies
- Clinical Neurological Applications
- Advanced Modelling and Mechanisms

Venue

Instituto de Salud Carlos III
C/ Monforte de Lemos, 5
28029 Madrid SPAIN

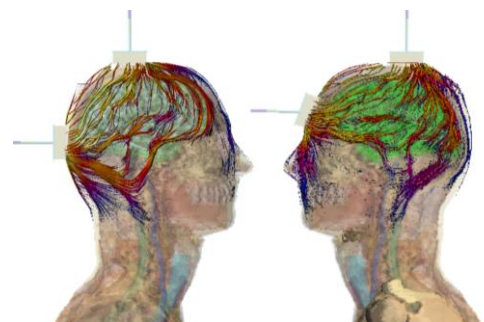
This 1-day workshop is a part of COST EMF-MED (Action BM1309) event:

www.COST-EMF-MED.eu

Keynote Lectures:

J. Patrick Reilly (Metatec Associates, USA):
"Open issues in electrostimulation modelling"

Thierry Keller (Tecnalia, Spain), President of the
International Functional Electrical Stimulation Society:
"Challenges in Functional Electrical Stimulation"



Abstract Submission:

The abstracts (max. 2 pages) must be submitted to COST-EMF-MED@fesb.hr by **13 February 2015**.

The [abstract template](#) can be downloaded from COST EMF-MED web site: www.COST-EMF-MED.eu

The authors will be informed about the abstract acceptance by **17 February 2015**.

Registration: Please register by contacting COST EMF-MED e-mail: COST-EMF-MED@fesb.hr.

Attendance to the workshop is free of charge.

