



Workshop



Physiological
Controls
Research Center
Óbuda University



Brain-Computer Interface Workshop

Time & Date: Thursday May 9th , 9:00-14:00

Location: Óbuda Campus, Bécsi street 96/B, room F.09

About the workshop

Research groups all over the world have been successfully working on a direct connection between the human brain and a computer, a so-called Brain-Computer Interface (BCI). During this workshop, we will demonstrate major concepts in BCI systems, including types of sensors, signal processing, and applications. New trends like embodiment, coma assessment and communication, stroke rehabilitation, and invasive ECoG based systems will also be explained. We will invite people from the audience to participate in the live demonstrations in which they can try electrode caps and use BCIs.

Speakers

Francisco Fernandes, g.tec medical engineering GmbH,

Dr. Gergely Márton, MTA TTK, Institute of Cognitive Neuroscience, Comparative Psychophysiology

Dr. Tibor Nánási, MTA TTK, Institute of Cognitive Neuroscience, Comparative Psychophysiology

Francisco Fernandes is the International Sales Officer of g.tec medical engineering GmbH responsible for the Hungarian market.

Dr. Gergely Márton and **Dr. Tibor Nánási** are Research Fellows at the Comparative Psychophysiology group of Institute of Cognitive Neuroscience – an institute of the Hungarian Academy of Sciences.



Brain-Computer Interface Workshop

9:45 – 10:00	Introduction
10:00 – 11:00	Non-invasive/invasive brain-computer interface systems, including current and future applications – Francisco Fernandes
11:00 – 12:00	EEG lecture: Will the next generation of sensors and machine learning give rise to truly useful BCIs? - <i>Dr. Gergely Márton and Dr. Tibor Nánási</i>
12:00 – 12:45	Lunch break
12:45 – 14:00	Hands-on session, live BCI-experiments

Registration

The BCI Workshop participation is free of charge; however, it is subject to registration.

Registration form is available via:

<https://forms.gle/3CxLTpXF1x8p1nTP8>



Time & Date: Thursday May 9th, 9:00-14:00

Location: Óbuda Campus, Bécsi street 96/B, room F.09

For more information, please contact: Francisco Fernandes fernandes@gtec.at and György Eigner eigner.gyorgy@nik.uni-obuda.hu



Conceptions

BCI is one of those key technologies which will be determining in the next decade in the medical-engineering interdisciplinary field. EKIK would like to facilitate the BCI research activities. The first station of this activity is to host events which are useful for the Hungarian Research Community working on the field in order to map the possible connections and ways of contributions. The researchers at EKIK have good connections in the leaders of the international BCI community which can be exploited by possible contributors as well (e.g. via the IEEE SMCS BCI Technical Committee - <http://www.ieeesmc.org/technical-activities/human-machine-systems/brain-machine-interface-systems>).

EKIK does also have good connections to international firms connected to the EEG and BCI markets. One of our partners is g.tec GmbH an austrian firm and one of the leading companies of BCI technologies worldwide. The g.tec developed the first commercially available BCI system in 1999 and now sells this system in more than 60 countries worldwide. g.tec is a growing enterprise with two branches in Austria (Graz and Schiedberg), one branch in Spain (Barcelona), one branch in the US (Albany, New York) and distribution partners all over the world. All hardware and software developments are done in-house by researchers, engineers and developers, and work with all major BCI approaches (motor imagery, P300, SSVEP and slow cortical potentials). g.tec is an active member in a number of national and international research projects and scientific publishing. g.tec's BCI technologies have been tested on more than 500 subjects internationally to guarantee a perfect working system.