

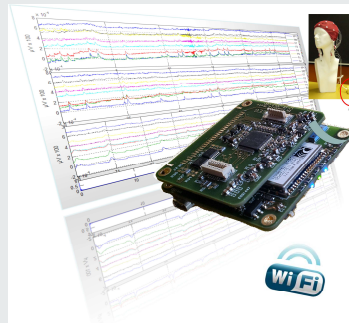
A neuro-phenomenological approach in sport

Developing a mobile and reliable EEG acquisition system to study athletes' feelings and sensations during sport performance in a real world settings

This project combines efforts of three institutions around the Olympic City of Lausanne: The University of Lausanne, the Ecole Polytechnique Fédérale de Lausanne and the School of Engineering and Management Vaud HEIG-VD. The main goal is to tackle key issues at the forefront of research in sport neurosciences and psychology. Therefore we articulate, sport psychology, neuroscience and bioengineering to advance our understanding of various level of organization of situated activity in sport. This project is supported by the CROSS program, College of Humanities (CDH) at EPFL.

Project description

This project leverages the know-how of the three laboratories to bring technological and methodological tools to study the consciousness of being-and-acting in sporting world. Importantly these tools will allow to perform experimental work on ecological settings.



The μEEG is:

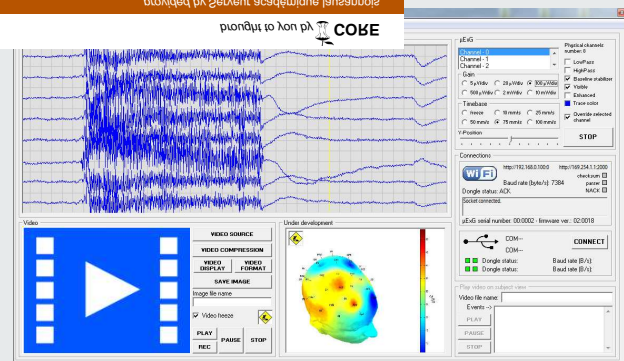
- a complete medical grade device
- wireless machine in a pills-box size.
- able to send from 8 to 64 channels in real time at data rate of 1Mbit/sec

The core of our approach is to combine first and third person approaches "share" what your brain does in relation to experience in situation

In particular, we will combine first and third person approaches in psychology and neurosciences to examine and identifying brain activity in different situated experiences. Development of a wearable electroencephalography (EEG) equipment designed by Prof. Enrico Staderini (HEIGVD), combined with expertise in advanced EEG analysis (Prof. José del R. Millán, EPFL) and in sport psychology (Prof. Denis Hauw, UNIL) will allow us to study the brain signature of various efficient of being-and-acting in sport worlds. Methodology borrowed from the User Experience concept.



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