



Satellite Event

Workshop 3: Standards for Neurotechnologies and Brain-Machine Interfacing

Organizers

Ricardo Chavarriaga
École polytechnique fédérale de Lausanne, Switzerland

Date

Monday, September 16, 2019

Location

Stremayrgasse 16 | 8010 Graz | Austria

Website

Registration via [Eventbrite](#)

Abstract

Brain-Machine Interfacing (BMI) is going through a very exciting period where the state-of-the-art in research is moving outside research labs to be tested with its intended users. This translation from research prototypes to viable clinical or consumer solutions entails multiple challenges. Furthermore, the possibility of deploying and commercialising BMI-based solutions requires researchers, manufacturers, and regulatory agencies to ensure these devices comply with well-defined criteria on their safety and effectiveness. In consequence, there is an increased interest on defining appropriate metrics to evaluate their performance and developing good practices and standards for BMI development.

Such endeavor is not trivial and requires all stakeholders to join efforts to identify priority areas that require standardization, and to devise incentives for adopting these standards early on at the development process. This workshop aims at discussing these topics and identify important elements to consider for proper standardization of both clinical and consumer applications. Participants will also get acquainted with the standards development process and identify way in which this process helps to improve research and accelerate technological transfer.

This workshop is technically sponsored by the IEEE Industry connections group on neurotechnologies and the IEEE Brain Initiative. The workshop will be composed of invited presentations from industry and academia complemented with group discussions and hands-on work. We intend to generate a clear picture of current challenges for standardization of neurotechnologies and possible strategies to overcome them.

List of Speakers

Carole Carey, IEEE EMB Standards Committee

Luigi Bianchi, U. La Sapienza, Chair Working group IEEE P2731™

Graeme Moffat (video), Chief Scientist, VP of regulatory affairs, Interaxon

Zach McKinney, Scuola Superiore Sant'Anna Pisa, Chair Working group IEEE
P2794™

Emil Hewage, BIOS health inc

Relevant Links

IEEE Industry connections group on neurotechnologies

IEEE Brain Initiative

Working group IEEE P2731™, Standard for a Unified Terminology for Brain-
Computer Interfaces

Working group IEEE P2794™, Reporting Standards for Neural Interface Research