



## The Fast-Changing Landscape of Electroencephalography - Half Day Workshop

Organized by *Walter Besio, Ph.D., CREmedical Corp. and University of Rhode Island*

Where: The 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS), MiCo - Milano Conference Center, Milan, Italy.

When: Tuesday, August 25<sup>th</sup>, 2015, 1:30pm to 5:30pm

This workshop will benefit both new users who are just entering the field of electroencephalography (EEG), and those that are well established. We will show some of the latest technologies that will put your research at the cutting edge. We also invite attendees of the workshop to predict what directions the EEG field will evolve to next.

The Fast-Changing Landscape of Electroencephalography workshop is designed to give both novice and experienced EEG users a synopsis of the latest innovations in EEG. EEG is the recording of brain electrical activity from the scalp. The EEG measures the difference in potentials between electrodes generated by ionic currents flowing within neurons of the brain. For many years, EEG has had limited use due to its poor signal quality, low spatial resolution, and non-portability. Even with these limitations, EEG is still a standard practice in clinical settings such as diagnosis of epilepsy and for research such as brain computer interfacing. In recent years, electrodes, signal acquisition hardware, and signal processing software have undergone major improvements allowing new and improved applications of EEG. We will provide presentations and demos from five industry innovators on their latest technologies for acquiring and processing EEG. The target audience of the workshop is the broad community of the IEEE EMBS Society and anyone interested in recording brain signals.

Cost: Workshop with conference registration: \$40 by 7/25/15; \$85 thereafter. Just the workshop without conference registration: \$100 by 7/25/15; \$150 thereafter.

Registration: <http://embc.embs.org/2015/workshop-tutorials-rates/>

Workshop website: <http://embc.embs.org/2015/w-hd-9/>

### Presentations:

- **The Many Faces of EEG Recording**  
*Nicola Soldati Ph.D., Brain Products GmbH, [office@brainproducts.com](mailto:office@brainproducts.com)*
- **Real-Time Processing of Biosignal Data for a Brain-Computer Interface**  
*Robert Prueckl, DI, g.tec Guger Technologies OG, [office@gtec.at](mailto:office@gtec.at)*
- **Recording Superior EEG data: Techniques and Lessons Learned**  
*Aleksandar Dimov, M.S., BioPac Systems, [alexnd@biopac.com](mailto:alexnd@biopac.com)*
- **Comfort vs. Signal Quality Tradeoff in Dry Electrode EEG: The role of electrode and headset design**  
*E. Ruben de Francisco, Ph.D., imec / Holst Centre, [Ruben.DeFranciscoMartin@imec-nl.nl](mailto:Ruben.DeFranciscoMartin@imec-nl.nl)*
- **Portable Wireless Tripolar Concentric Ring Electrode EEG (tEEG)**  
*Walter Besio, Ph.D., CREmedical Corp. and University of Rhode Island, [besio@uri.edu](mailto:besio@uri.edu)*