

# ANT's active role in projects for technology of tomorrow





# Active Nanocoated DRY-Electrode for EEG Applications

**Funding:** FP7-PEOPLE-2013-IAPP

1 January 2014 – 31 December 2017

**Objective:** development of a new EEG system employing dry electrodes.

The new system will not require the use of conductive paste or gel, nor any skin preparation to obtain good skin-sensor contact.



# Active Nanocoated DRY-Electrode for EEG applications

## Coordinator:

Behavioral Imaging and Neural Dynamics Center  
University “G. d’Annunzio”, Chieti (Italy)

## Partners:

- Technische Universität Ilmenau (Germany)
- Universidade do Porto (Portugal)
- eemagine Medical Imaging Solutions GmbH (Germany)
- Casa di Cura Privata Villa Serena (Italy)

# Novel EEG system with dry electrodes

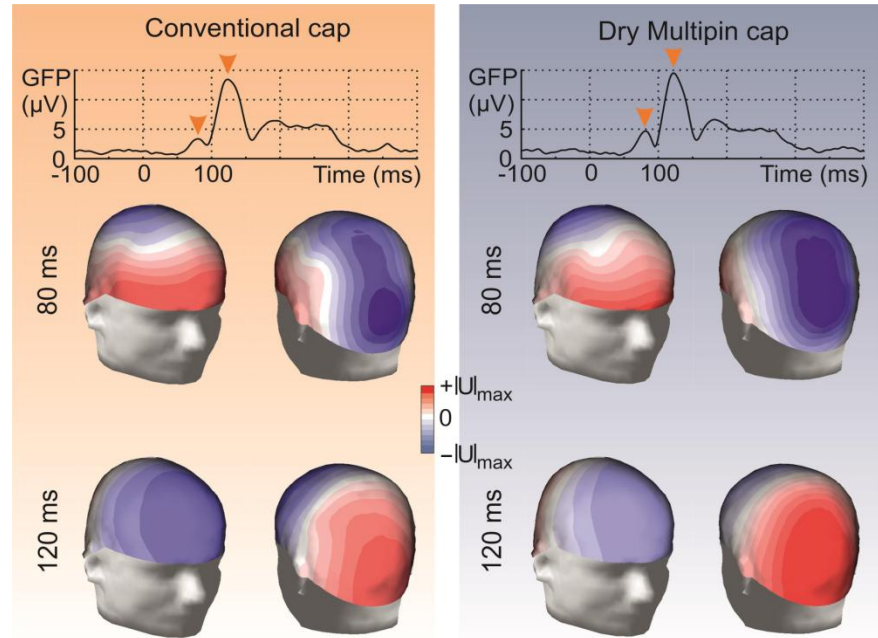


Multi-pin dry electrode with polyurethane substrate and Ag/AgCl coating

## Advantages:

- Good skin-sensor contact and good hair interfusion
- Extremely short application times
- No risk of skin allergies

# Novel EEG system with dry electrodes



The signal quality will be comparable to that of traditional EEG systems with use of conductive gel.

# Prototype validation



The prototype EEG system will be validated in different human populations, with different needs and artifact sources:

- neurological patients
- endurance athletes (cyclists and runners).

**Future applications in BCI, videogames, etc.**