

Open paid position

Comfortable EEG, EMG skin electrodes

Description of Group/Project

The Biomedical Applications Group (GAB) at the Institute of Microelectronics of Barcelona (IMB-CNM, CSIC) located at the UAB Campus is looking for a candidate to work in the field of skin wearable sensors development under the project **Tattoo4Sleep**. Tattoo4Sleep will explore a novel technology for building a next generation of skin electronics devices for non-invasive sleep monitoring. Our focus lies in the development of tattoo skin electrodes, aiming to provide improved comfort and wearability. We expect to monitor sleep disorders through advanced EEG and EMG recordings in real-life. The project also aims to explore the assembly of high-density electrodes in the tattoo to enhance the accuracy and efficiency of electromyography recordings.



The candidate will join a highly dynamic group in the area of sensors and microelectronic technologies. The GAB group is multidisciplinary and formed by engineers, chemists, physicists, biochemists, etc

Main tasks and responsibilities

Tattoo4Sleep is a highly multidisciplinary project. Depending on your background you can participate in several tasks of the project:

- Setup a fabrication process for skin electronics technology by means of printing technologies (inkjet printing, screen printing)
- Performance characterization of the manufactured prototypes: mechanical tests, electrical and/or electrochemical characterizations.
- Conduct breathability and biocompatibility evaluation of the prototypes
- Integration of the devices with the electronic system for signal processing
- Validate the devices and participate in the electrophysiological measurements (EEG and EMG recordings) in collaboration with experts in the field

Requirements/Background and skills

We are looking for enthusiastic candidates, ready to enjoy multidisciplinary research. Possibility to undergo a PhD. We are looking for candidates from Bachelor's or Master Degree in Mechanical Engineering, Industrial Engineering, Biomedical Engineering and Materials Science.

How to apply

All applications must be sent to gemma.gabriel@csic.es, with the subject TATTOO. Applications must include: CV and motivation letter. Reference letters will be appreciated.

Expected start date 1/03/2024

- This offer can be found on: <https://www.imb-cnm.csic.es/en/about-center/careers/open-positions>
- More information on IMB-CNM: <https://www.imb-cnm.csic.es/en/>

