

## FOUNDATION CAMPUS BIOTECH GENEVA

### JOB SPECIFICATION

**JOB TITLE:** FULL-TIME SOFTWARE ENGINEER POSITION IN  
ELECTROENCEPHALOGRAPHY AND BRAIN COMPUTER INTERFACE

**PLATFORM / TEAM:** Human Neuroscience Platform  
**FACILITY:** EEG/BCI Facility

The Campus Biotech houses numerous human neuroscience research groups of the Ecole Polytechnique Fédérale de Lausanne (EPFL) and of the University of Geneva. The EEG-BCI facility of the *Fondation Campus Biotech Geneva* offers state-of-the-art equipment and high-level expertise in EEG and BCI to these labs in order to give them the best possible environment to conduct their experiments.

The EEG-BCI facility is looking for a software engineer with strong experience in real-time signal processing, preferably of human electroencephalography (EEG) and brain computer interface (BCI), to develop, improve and maintain high-end closed-loop software. The work will be done in close collaboration with researchers of the Campus Biotech.

### KEY RESPONSIBILITIES

- Improve and maintain our existing closed-loop software to make it multi-platform and user-friendly
- Develop new solutions to integrate various EEG systems in the closed-loop
- Integrate other kinds of physiological signals (e.g. electromyography), non-physiological signals (e.g. accelerometers) and devices in the closed-loop system
- Customize the software in close collaboration with campus biotech researchers
- Advice researchers to setup and perform their EEG-BCI experiments

### COMPETENCES/QUALIFICATIONS

#### Education

- Master degree or equivalent in engineering and/or Computer Science

#### Technical skills and experience

- Strong experience with real-time processing
- Experience with signal processing and machine learning
- Experience with EEG and BCI
- Experience with high density EEG and source localization is a plus
- High skills with software development, including graphical interface and multi-OS porting
- High programming skills with Matlab, C/C++ and Python

### **Others skills**

- *Essential*
  - Team player, autonomous, creative, and solution-oriented
  - Proficient in English (mandatory) and in French (plus).
  
- *Desirable*
  - Experience of working on different projects at the same time.
  - Experience in multidisciplinary international groups
  - Interest in human neuroscience, cognitive science, experimental psychology

### **Application**

- Applications should include a CV, a cover letter and reference letters, and should be send by email to: [administration@fcbg.ch](mailto:administration@fcbg.ch)
- Permanent contract
- Start date: as soon as possible