The laboratory of Neurophysiology (http://neurophy.ulb.ac.be) at the Université libre de Bruxelles (ULB, Brussels), member of the ULB-Neuroscience Institute (https://uni.ulb.ac.be) is recruiting a **full time Research Engineer** with a **permanent position** (https://www.ulb.be/fr/travailler-et-collaborer/offres-d-emploi **Reference 2020/83**; https://efficy.ulb.ac.be/EFFICY.dll/guest?app=ULBRH&page=Publ.htm&kpubl=1691)

Our lab addresses scientific questions that explore a large scope of biological and neuroscience questions which challenge hardware and software producing data of diverse nature including imaging, neural data, behavioral features, genome sequencing… We particularly look into how do we define cell types? What information is encoded in neural populations? How neurons communicate with each other and how this is translated into specific behaviors? Our questions require careful processing and analysis of these data.

The functions include:
- Developing new systems to analyze ever-expanding datasets (data processing pipeline, programs, algorithms). It will require to perform independent literature search to keep abreast of appropriate methods and technologies on signal processing and data mining (large data analysis and integration, unsupervised/supervised learning, dimension reduction, statistics, deep learning techniques….).
- Support for the maintenance and implementation of new data acquisition systems and hardware. Our systems require the extraction of biological information (genome, transcriptome, single cell sequencing; worms and rodent behavioral phenotyping) and neural data from large populations of neurons (in vivo and in vitro electrophysiology; in vivo calcium imaging processing; 2D-3D reconstruction of whole brain neuronal mapping).
- Computer support for the various activities of the lab including the management of the local network and massive data flows (Tbs/year, increasing steadily), management of servers and workstations and update of the lab websites (http://neurophy.ulb.ac.be & http://celegans.ulb.ac.be/wordpress/), etc .
- Provide advice and support to researchers and students with data processing and programs, and assist in the transfer of knowledge.

Expected Profile:
- Master in Biology, Biomedical Sciences or equivalent, Master in Computer Science, Bio-informatics, Civil Engineering or Bio-Engineering with a solid background in programming and strong interest in developing systems. Ideally, the candidate will be familiar with different environment (PC, Mac, Linux) and common programming languages including Python, Java, JavaScript, C/C++, as well as proficient in a statistical analysis software, such as R or MatLab. A motivated young graduate with a solid background might be eligible for the position.

Qualifications and skills:
- Experience in professional software engineering and development, as well as knowledge and experience in image processing and analysis, statistical data modelling and analysis (including multimodal data), signal filtering, machine learning theory and practice are beneficial.
- Experience in research support or research in biological and/or neural data analysis are an asset.
- High motivation and interest for biomedical research.
- Friendly, outgoing personality and excellent communication skills.

- Strong team-playing abilities, adaptability to provide diverse needs and interact with researchers from many fields, including biology, physics, mathematics and computer science.
- Ability to show autonomy and work independently.
- Proficiency in written and spoken English is mandatory.

What we offer:
- A stimulating position in a lab research environment addressing diverse questions in Biology and Neuroscience, using pluridisciplinary approaches, open mind to new technologies.
- A vibrant, highly interactive working environment promoting learning and innovation, with a proactive team spirit.
- The ability to work with researchers from many disciplines of Neuroscience with international collaborations.
- Freedom to develop systems on your favorite platform (Matlab, Python, C/C++..).
- Access to various hardware resources (3D printer, high end microscopes, robotic equipment/Raspberry Pi, IR detection and videotracking, computer capabilities, optical tools).

Applications should be submitted on the following web page https://efficy.ulb.ac.be/EFFICY.dll/guest?app=ULBRH&page=Publ.htm&kpubl=1691 as a single PDF file that includes a motivation letter, the Curriculum Vitae, and the names and contact details of 3 references. Deadline to apply November 30th.
For any inquiries, contact Dr. Serge Schiffmann, serge.schiffmann@ulb.be