Postdoctoral position in neuroimaging

qMRI biomarkers of Parkinson’s Disease

Laboratory for Neuroimaging Research, Lausanne University Hospital

A postdoctoral position is available within the Laboratory for Neuroimaging Research (LREN), Lausanne University Hospital (CHUV), Switzerland. We are seeking a highly motivated individual to join the Physics Group under the direction of Prof Antoine Lutti. The group specializes in the development of MRI acquisition methods including functional, structural and diffusion imaging.

**Project:** Quantitative MRI (qMRI) data are non-invasive biomarkers of microscopic properties of the brain, and allow the study of brain disease across multiple scales in-vivo in patient populations. The proposed project focuses on the investigation of novel qMRI biomarkers of Parkinson’s disease computed from relaxometry data, developed by our group using dedicated technologies. Tasks assigned to the successful applicant will include the design of numerical simulations of the MRI signal and the acquisition and analysis of MRI data. This multi-disciplinary project will be conducted in close collaboration with neurologists Prof. Draganski (CHUV) & Dr Accolla (Fribourg University Hospital), and Prof. Ileana Jelescu (CHUV).

**Environment:** The LREN neuroimaging laboratory hosts state-of-the-art facilities including a 3T MRI scanner (Siemens 3T Prisma) equipped with an optical system for prospective correction of subject motion (Kineticor), and an EEG system. The objective of LREN is the improved understanding of brain disease, with access to the clinical populations of CHUV. The post-holder will be closely integrated with the other members of the lab, whose expertise range from MRI data acquisition to multivariate data analysis and applications to fundamental and clinical neuroscience. The post-holder will be expected to actively contribute to the academic life of the laboratory, fostering a stimulating inter-disciplinary environment for scientific exchange.

**Funding:** The advertised position is funded by the Swiss National Science Foundation (SNSF 320030_184784) for a duration of 2 years. Salary is according to Swiss Public service regulations.

**Entry requirements:** Applicants must have completed a PhD degree in MRI physics, computational or imaging neuroscience, or a comparable topic. Strong programming skills (e.g. C++, Matlab) and previous training in the acquisition and analysis of MRI data are required. A strong mathematical background is a plus. Candidates should be fluent in spoken and written English, French is a plus. Candidates short-listed for an interview may be required to give a presentation about their academic training or previous research experience.

**Application procedures:** Application is by CV, publication list and motivation letter, including two referees’ contact details, emailed to: antoine.lutti@chuv.ch (contact for informal enquiries). The position will remain open until a suitable candidate is found. For more information: https://sites.google.com/view/antoinelutti/home