# Postdoctoral research associate position in medical data collection and biosignal analysis

**Starting date:** Summer 2022 (at the latest, September 1st, 2022)

**Duration:** One year

**Location:**

- PRISME laboratory, IRAUS department, Signal Processing Team at University of Orléans (IUT de Chartres), FR (https://www.univ-orleans.fr/fr/prisme/la-recherche/axe-signal)
- Faculty of Mechanics, Department of Biomechanical Engineering at Vilnius Gediminas Technical University, LT (https://vilniustech.lt/mechanics/6595?lang=2)
- Laboratory of Interdisciplinary Approaches for the Enhancement of Quality of Life (Quality of Life Lab), Department of Social Work at Hellenic Mediterranean University (HMU), Crete, GR (https://qualityoflifelab.hmu.gr)

**Description:** The postdoctoral appointment is supported by a grant from the French National Research Agency (ANR) and offers salary according the guidelines provided by the ANR. The successful candidate will work in the framework of the VR-MIRROR project (https://www.univ-orleans.fr/fr/prisme/les-projets/en-cours/projets-internationaux/mirror-vr-mirror) selected during the first call for collaborative research projects of the University of Orleans, France, within the ATHENA alliance. The focus is on the study of the mirror neuron's role in the rehabilitation of Parkinson's disease (PD) patients.

The VR-MIRROR research project aims at developing a virtual physical therapist for PD patients with upper extremities motor deficits. It will use an experimental protocol based on a rehabilitation method called Action Observation Training targeting upper limb function improvement and retention of the obtained skills even after therapy's completion.

For the collection of data on a group of PD patients and a group of control (CO) subjects, the successful candidate will participate in the development of the scenario of tasks to be performed by the subjects. He/she will be in charge of the set-up, the proper functioning and the collection of data from the sensors used, but will also participate on the computation of the attached kinematics and of the dynamic simulations made with OpenSim software and on the statistical post-treatment of the experimental data.

The candidate should have a strong background in one or more of the following fields: medical engineering, computer science, statistical signal processing/machine learning, electronics and a Ph.D. in Electrical Engineering, Math/Statistics, Signal Processing or in a related field. Familiarity with processing of medical data would be a plus.

The candidate, who must be certified in English, will be domiciled in France (Orléans or Chartres) and will spend between one and two months in Crete and share the rest of his/her time between Vilnius Tech and the University of Orléans.

**To apply**: Please send your application along with a complete CV and contact information of at least one reference to Michel Haritopoulos at michel.haritopoulos@univ-orleans.fr and include "Postdoctoral position – VR-MIRROR research project" in the subject line of your email.