

AVAILABLE PHD POSITION

FOR INTER-FACULTY PROJECT, UNIVERSITY OF LIEGE, BELGIUM

HABITAGE: An integrative approach of habitat and health for seniors

Previous studies identified the **living environment** as potential protective factor for an individual's health and well-being trajectory. However, even though it impacts the individual's quality of life, a predictive model of the impact of housing typology on the loss of autonomy and changes in health status, especially in **seniors**, is still missing. By reflecting a major environmental and putatively modifiable factor, the living environment has the potential to interact with intrinsic biological and psycho-social predispositions of the individual. Both **physical activity and a consolidated sleep-wake cycle** are amongst those variables, that may depend on the individual's-built environment and hallmarked by increasing difficulties occurring when growing in age.

The HABITAGE project aims **at assessing the association and potential predictive value of the home environment on physical activity and sleep change over time**, these two factors being strong predictors of **the individual's autonomy trajectory**. To do so, the built environment of a cohort of older adults (aged 75 and over) will be characterized and the impact of the later on quantitative (e.g. actimetry-derived physical and rest-activity distribution) and qualitative (questionnaire-based; interview-based) outcomes will be examined. The project should allow to refine these variables as potential main drivers for quality of life and autonomy. The latter reflects a major determinant for institutionalization and is thereby of important societal relevance. The project will capitalize on the expertise of four partners (see below) pertaining to different fields which will be used and centered around the built environment. The candidate will participate to all the steps of the project. He/she will use a variety of approaches including actigraphy, questionnaires, and neuropsychological testing and work in an interdisciplinary environment and in direct interaction with the study participants.

Qualifications and requirements. Candidates with a MSc in any disciplines related to the topics of the call can apply (medicine, motor sciences, cognitive neurosciences, psychology, biomedical engineering, biostatistics etc.). Skills and experience in one or more of the following topics are considered as strength: coding abilities to contribute to the construction of the database and associated analysis pipelines (pre-processing and statistics), previous experience in the analysis of actigraphy data or similar time series data, experience in clinical or research practices in the field of gerontopsychology or associated domains. Considering that the candidate will be implicated in data acquisition, mastery of French is a serious asset.

Supervisors. The work will be mainly supervised by Prof. O. Bruyère at the Department of Public Health of the Faculty of Medicine and Dr. Christina Schmidt at the Sleep & Chronobiology laboratory (GIGA-CRC-IVI, Faculty of Psychology) in collaboration with the 2 other partners of the project.

Work environment. The candidate will work in an inter-disciplinary environment and in interaction with other team members that will be recruited for this project (a PhD and post-doc in architecture, a post-doc with data management abilities). The work will also benefit from the mutual expertise of the 4 partners (S.Adam, principal investigator: <https://www.senescence.uliege.be/>, Catherine Elsen: <https://www.interact.uliege.be/>, Olivier Bruyère: https://www.uliege.be/cms/c_9054334/en/directory?uid=u181224, Christina Schmidt: https://www.gigacrc.uliege.be/cms/c_4212477/en/gigacrc) involved in this project.

If you are interested in this position, please send your letter of motivation and CV by November 30th to christina.schmidt@uliege.be.

Project start: January 2024